UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
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 December 31, 2017
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 No. 000-51401

FHLB Chicago | Federal Home Loan Bank of Chicago

(Exact name of registrant as specified in its charter)

Federally chartered corporation	**36-6001019**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
200 East Randolph Drive Chicago, IL	**60601**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(312) 565-5700**

Securities to be registered pursuant to Section 12(b) of the Act: **None**

Securities registered pursuant to Section 12(g) of the Act: **Class B Capital Stock, par value $100 per share**

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 Section 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 filings requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T 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, or a smaller reporting company. See the definitions of “large accelerated filer”, “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one)
Large Accelerated Filer ☐ Accelerated Filer ☐ Non-accelerated Filer ☒ Smaller Reporting Company ☐

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

Registrant's stock is not publicly traded and is only issued to members of the registrant. Such stock is issued and redeemed at par value, $100 per share, subject to applicable regulatory and statutory limits. At June 30, 2017, the aggregate par value of the stock held by current and former members was $1,828,755,701. As of January 31, 2018, registrant had 19,936,024 total outstanding shares of Class B Capital Stock, including mandatorily redeemable capital stock.

FHLB Chicago | Federal Home Loan Bank of Chicago

TABLE OF CONTENTS

Item 1. Business.

Where to Find More Information

The Federal Home Loan Bank of Chicago [a] maintains a website located at www.fhlbc.com where we make available our financial statements and other information regarding us and our products free of charge. We are required to file with the Securities and Exchange Commission (SEC) an annual report on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K. The SEC maintains a website that contains these reports and other information regarding our electronic filings located at www.sec.gov. These reports may also be read and copied at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. Further information about the operation of the Public Reference Room may be obtained by calling 1-800-SEC-0330. Information on these websites, or that can be accessed through these websites, does not constitute a part of this annual report.

A **Glossary of Terms** can be found on page 122.

Introduction

We are a federally chartered corporation and one of 11 Federal Home Loan Banks (the FHLBs) that, with the Office of Finance, comprise the Federal Home Loan Bank System (the System). The FHLBs are government-sponsored enterprises (GSE) of the United States of America and were organized under the Federal Home Loan Bank Act of 1932, as amended (FHLB Act), in order to improve the availability of funds to support home ownership.

Each FHLB operates as a separate entity with its own management, employees, and board of directors. Each FHLB is a member-owned cooperative with members from a specifically defined geographic district. Our defined geographic district consists of the states of Illinois and Wisconsin. We are supervised and regulated by the Federal Housing Finance Agency (FHFA), an independent federal agency in the executive branch of the United States (U.S.) government.

As a cooperative, we do business with our members and, under limited circumstances, our former members, as well as providing support for the members of other FHLBs through our role operating the Mortgage Partnership Finance® (MPF®) Program. All federally-insured depository institutions, insurance companies engaged in residential housing finance, credit unions, and community development financial institutions located in Illinois and Wisconsin are eligible to apply for membership. All members are required to purchase our capital stock as a condition of membership; our capital stock is not publicly traded.

As of December 31, 2017, we had 447 full time and 13 part time employees.

“Mortgage Partnership Finance”, “MPF”, “MPF Xtra”, “Downpayment Plus”, "DPP" and "Community First" are registered trademarks of the Federal Home Loan Bank of Chicago.

Mission Statement

Our mission is to partner with our member shareholders in Illinois and Wisconsin to provide them competitively priced funding, a reasonable return on their investment in the Bank, and support for community investment activities.

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[a] Unless otherwise specified, references to we, us, our and the Bank are to the Federal Home Loan Bank of Chicago.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Membership Trends

The following table presents the geographic locations of our members by type of institution:

	December 31, 2017				December 31, 2016			
	Number of Institutions				Number of Institutions			
	Illinois	**Wisconsin**	**Total**	**Percent**	Illinois	Wisconsin	Total	Percent
Commercial banks	**335**	**172**	**507**	**70%**	345	179	524	72%
Savings institutions	**54**	**24**	**78**	**11%**	57	24	81	11%
Credit unions	**43**	**45**	**88**	**12%**	39	40	79	11%
Insurance companies	**32**	**11**	**43**	**6%**	29	11	40	5%
Community Development Financial Institutions	**3**	**1**	**4**	**1%**	3	1	4	1%
Total	**467**	**253**	**720**	**100%**	473	255	728	100%

The following table presents our members by asset size. Community Financial Institution is defined by our regulator, the FHFA, as FDIC-insured institutions with no more than $1.148 billion (the limit during 2017) in average total assets over three years. This limit is adjusted annually for inflation. See the **Glossary of Terms** on page 122 for further details.

As of December 31,	**2017**	2016
Member Asset Size:		
Community Financial Institutions	**91.97%**	92.40%
Larger Non-CFI Institutions	**8.03%**	7.60%
Total	**100%**	100%

In 2017, our total membership declined by eight institutions.

We lost 27 members due to mergers and acquisitions, two of which resulted after the member was placed into receivership by its regulator. Although 23 of these members were acquired by other members in our district, four were acquired by out-of-district institutions. In addition, one institution voluntarily withdrew from membership and one institution terminated its membership due to relocation of its principal place of business.

We gained 21 new members by adding six commercial banks, one savings institution, 11 credit unions, and three insurance companies during 2017, as we continue to work toward our goal of building a stronger cooperative by adding new members.

In addition to having access to the Bank as a source of standby liquidity, 83% of our total number of members used one or more of our credit products such as advances, standby letters of credit, or the MPF Program at some point during each of 2017 and 2016.

Business Overview

Our mission-focused business is different from that of a typical financial services firm. As a cooperative, we use our resources to support member utilization of the cooperative, and to support the communities in which members operate. Our strategy revolves around two goals:

- Maintaining the member-focused Bank, which involves all areas of the Bank coming together to deliver excellent products and services to our members. Being member-focused means applying the resources of the Bank to enhance the value of membership.
- Building the MPF business, which is accepted by most of the other FHLBs as the mortgage aggregation platform for the FHLB System.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Mission Asset Ratio

The following table represents our view of the mission-focused business we do as a cooperative bank.

Average par value for the year ended December 31,	**2017**	2016
Advances	**$ 46,989**	$ 42,535
Mortgage assets (Acquired Member Assets - AMA)	**5,038**	4,727
Primary mission assets	**$ 52,027**	$ 47,262
Consolidated obligations	**$ 77,338**	$ 71,356
Core mission asset ratio	**67.3%**	66.2%

Supplemental mission assets and activities as of December 31,	**2017**	2016
MPF Program Loans held by other third party investors	**$ 18,424**	$ 16,972
Member standby letters of credit	**19,572**	10,828
Mission related liquidity	**6,327**	7,437
Small Business Administration investments	**1,710**	1,974
Housing authority standby bonds purchased and commitments outstanding	**367**	337
MPF Loan delivery commitments	**371**	417
Advance commitments	**151**	16
Member derivatives	**26**	82
Community First Fund loans and commitments	**44**	41
Supplemental mission assets and activities	**$ 46,992**	$ 38,104

We provide credit to members principally in the form of secured loans called advances (inclusive of forward starting advances), as well as through standby letters of credit. We provide liquidity for home mortgage loans to members approved as Participating Financial Institutions (PFIs) through the MPF Program. We also serve as a critical source of standby liquidity for our members.

Our primary funding source is proceeds from the sale to the public of FHLB debt instruments (consolidated obligations) which are, under the FHLB Act, the joint and several liability of all the FHLBs. Consolidated obligations are not obligations of the U.S. government, and the U.S. government does not guarantee them. Additional funds are provided by deposits, other borrowings, and the issuance of capital stock. We also provide members and non-members with correspondent services such as safekeeping, wire transfers, and cash management.

The FHFA has issued an advisory bulletin which provides guidance relating to a core mission asset ratio by which the FHFA will assess each FHLB's core mission achievement. The FHFA will assess core mission achievement by using a ratio of primary mission assets, which includes advances and mortgage loans acquired from members (also referred to as acquired member assets), to consolidated obligations. The core mission asset ratio will be calculated annually at year-end as part of the FHFA's examination process, using annual average par values. Based on this ratio, the FHFA has provided the following expectations for each FHLB's strategic plan:

- when the ratio is at least 70% or higher, the strategic plan should include an assessment of the FHLB's prospects for maintaining this level;
- when the ratio is at least 55% but less than 70%, the strategic plan should explain the FHLB's plan to increase its mission focus; and
- when the ratio is below 55%, the strategic plan should include an explanation of the circumstances that caused the ratio to be at that level and detailed plans to increase the ratio. If the FHLB maintains a ratio below 55% over the course of several consecutive reviews, then the board of directors should consider possible strategic alternatives.

Our core mission asset ratio for the year ended December 31, 2017, was 67.3%. During 2017, we held excess liquidity to generate additional net interest income to offset certain costs which resulted in a core mission asset ratio below the 70% level. However, we expect the need to hold excess liquidity will decrease over time and the Bank has set a strategic target to achieve a core mission asset ratio of at least 70% for the year 2019.

In 2016, the FHFA issued a final rule making captive insurance companies ineligible for FHLB membership. Under this rule, our three captive insurance company members will have their memberships terminated by February 2021. As a result of this regulatory change, once our three captive insurance company members have their membership terminated and their advances mature, our core mission asset ratio will be negatively impacted unless we experience an increased demand for advance products.

Member-Focused Business

Member credit products, which include advances, standby letters of credit, and other extensions of credit to borrowers, are discussed in detail below.

Advances

We provide credit to members principally in the form of secured loans, called advances. Our advances to members:

- serve as a reliable source of funding and liquidity;
- provide members with enhanced tools for asset-liability management;
- provide interim funding for those members that choose to sell or securitize their mortgages;
- support residential mortgages held in member portfolios;
- support important housing markets, including those focused on very low-, low-, and moderate-income households; and
- provide funds to member community financial institutions (CFI) for secured loans to businesses, farms, agri-businesses, and community development activities.

We make secured, fixed- or floating-rate advances to our members. Advances are secured by mortgages and other collateral that our members pledge. We determine the maximum amount and term of advances we will lend to a member as follows:

- we value the types of collateral eligible to be pledged to us and apply a margin to secure our advances to members, based on our assessment of the member's creditworthiness and financial condition; and
- we conduct periodic collateral reviews with members to establish the amount we will lend against each collateral type.

We are required to obtain and maintain a security interest in eligible collateral at the time we originate or renew an advance. For further detail on our underwriting and collateral guidelines, see **Establishing Credit Limits** on page 60.

We offer a variety of fixed- and adjustable-rate advances, with maturities ranging from one day to 30 years. Examples of standard advance structures include the following:

- Fixed-Rate Advances: Fixed-rate advances have maturities from one day to 30 years.
- Variable-Rate Advances: Variable-rate advances include advances that have interest rates that reset periodically at a fixed spread to an FHLB discount note rate-based index, LIBOR, Federal Funds, or some other index. Depending upon the type of advance selected, the member may have an interest-rate cap embedded in the advance to limit the rate of interest the member would have to pay.
- Putable Advances: We issue putable, fixed- and floating-rate advances in which we maintain the right to terminate the advance at predetermined exercise dates at par.
- Callable Advances: We issue callable, fixed-rate advances in which members have the right to prepay the advance on predetermined dates without incurring prepayment or termination fees.
- Other Advances: (1) Open-line advances are designed to provide flexible funding to meet our members' daily liquidity needs and may be drawn for one day. These advances are automatically renewed. Rates are set daily at the close of business. (2) Fixed amortizing advances have maturities that range from one year to 30 years, with the principal repaid over the term of the advances monthly, quarterly, or semi-annually. (3) Fixed Rate with Floating Spread advances are designed to meet our members' liability duration needs at lower cost than regular fixed rate advances.

We also offer features designed to meet our members' business needs such as the following:

- Symmetrical prepayment feature where the member would either pay a prepayment fee or prepay the advance below par upon termination, depending on the structure of the advance at the time of termination.
- Commitment feature, called "forward-starting advances", to fund an advance on a negotiated funding date at a predetermined interest rate.
- Expander feature, which allows a member one or multiple opportunities to increase the principal amount of the advance.

The FHLB Act authorizes us to make advances to eligible non-member housing associates. By regulation, such housing associates must: (i) be approved under Title II of the National Housing Act; (ii) be chartered institutions having succession; (iii) be subject to the inspection and supervision of some governmental agency; (iv) lend their own funds as their principal activity in the mortgage field; and (v) have a financial condition such that advances may be safely made to it. We must approve a housing associate applicant in order for it to be eligible to borrow. We currently have approved four non-member housing associates that are eligible to borrow from the Bank. We had $22 million in advances outstanding to non-member housing associates at December 31, 2017, and $36 million at December 31, 2016.

Competition

Demand for our advances is affected by, among other things, the cost of other sources of funding available to our members, including our members' customer deposits. We compete with suppliers of both secured and unsecured wholesale funding. These competitors may include investment banks, commercial banks, and other FHLBs when our members' affiliated institutions are members of other FHLBs. Under the FHLB Act and FHFA regulations, affiliated institutions in different FHLB districts may be members of different FHLBs.

Some members may have limited access to alternative funding sources while other members may have access to a wider range of funding sources, such as repurchase agreements, brokered deposits, commercial paper, covered bonds collateralized with residential mortgage loans, and other funding sources. Some members, particularly larger members, may have independent access to the national and global credit markets.

The availability of alternative funding sources influences the demand and pricing for our advances and can vary as a result of a number of factors, such as market conditions, products, members' creditworthiness, and availability of collateral. We compete for advances on the basis of the total cost of our products to our members (which include the rates we charge, required capital stock purchases, and any dividends we pay), credit and collateral terms, prepayment terms, product features such as embedded options, and the ability to meet members' specific requests on a timely basis.

In addition, our competitive environment continues to be impacted by the Federal Reserve's low interest-rate environment and the extent to which our members use our advances primarily as a back-up source of liquidity as opposed to part of their primary funding strategies. For further discussion of the impact of these and other factors on demand for our advances, see **Risk Factors** on page 16.

Standby Letters of Credit

We provide members with standby letters of credit (also referred to herein as letters of credit) to support obligations to third parties to facilitate residential housing finance, community lending, to achieve liquidity, and for asset-liability management purposes. In particular, members often use letters of credit as collateral for deposits from federal and state governmental agencies. Letters of credit are generally available for terms of up to 20 years or for a one year term renewable annually. If we are required to make payment for a beneficiary's draw, these amounts either must be reimbursed by the member immediately or may be converted to an advance. Our underwriting and collateral requirements for letters of credit are the same as the underwriting and collateral requirements for advances. Letters of credit are not subject to activity capital stock purchase requirements. If any advances were to be made in connection with these standby letters of credit, they would be made under the same standards and terms as any other advance. For more details on our letters of credit see **Note 17 - Commitments and Contingencies** to the financial statements.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Mortgage Partnership Finance® Program

MPF Program Overview

We developed the MPF® Program to provide an additional source of liquidity to our members and to allow us to invest in mortgages to help fulfill our housing mission. The MPF Program is a secondary mortgage market structure under which we purchase mortgage loans from our members and housing associates and members and housing associates of other FHLBs (together with us, the MPF Banks) that participate in the MPF Program (collectively, Participating Financial Institutions or PFIs). These mortgage loans are conventional and government mortgage loans secured by one-to-four family residential properties with maturities ranging from 5 to 30 years or participations in such mortgage loans that are acquired under the MPF Program (MPF Loans).

We purchase MPF Loans to retain in our portfolio for investment, to sell to third parties, or to securitize Government Loans into Ginnie MBS. Our regulatory limit for our investment in MPF Loans held in our portfolio is the lesser of eight times retained earnings or 20% of total assets. Our MPF Loan products are outlined in the chart below:

MPF Product	Mortgage Type	Loan Balance	Held in our Portfolio for Investment?
MPF Original [a], MPF 35, MPF 100 [b]; MPF 125 and MPF Plus [b]	Conventional	Conforming	Yes
MPF Government [c]	Government	Determined by the applicable government agency eligibility guidelines	Yes
MPF Xtra	Conventional	Conforming	MPF Loans are concurrently sold to the Federal National Mortgage Association (Fannie Mae).
MPF Direct	Conventional	Non-conforming (jumbo - up to $2,500,000)	MPF Loans are concurrently sold to a third party investor.
MPF Government MBS	Government	Determined by the applicable government agency eligibility guidelines	Government Loans are held in our portfolio for a short period of time until such loans are pooled into Ginnie Mae MBS.

a PFIs share in the associated credit risk of these MPF Loan products in accordance with the FHFA Acquired Member Assets (AMA) regulation requirements.

b MPF 100 and MPF Plus are not currently offered.

c Government Loans are insured or guaranteed by one of the following government agencies: the Federal Housing Administration (FHA); the Department of Veterans Affairs (VA); Rural Housing Service of the Department of Agriculture (RHS); or Department of Housing and Urban Development (HUD) (collectively, Government Loans).

We provide programmatic and operational support in our role as the administrator of the MPF Program on behalf of the other MPF Banks for a fee. MPF Banks may acquire whole loans from their PFIs to retain on their balance sheet and may purchase or sell participations in MPF Loans with other MPF Banks. With participations, the rights and obligations related to the MPF Loans are shared between the MPF Banks based upon their respective percentage participation interest in the related Master Commitment (MC). As of December 31, 2017, 31% of the overall unpaid principal balance of MPF Loans we own represents participations in other MPF Banks' MPF Loans. See **Risk Factors** on page 16 for more information about participations. Other MPF Banks' PFIs that participate in off balance sheet products sell MPF Loans directly to us.

Member PFIs

Members and eligible housing associates become PFIs of their respective MPF Bank by executing a PFI Agreement that provides the MPF Loan selling and servicing terms and conditions. The MPF Guides supplement the PFI Agreement and provides additional requirements for PFI eligibility including maintenance of anti predatory lending policies, errors and omissions insurance and a fidelity bond. All of the PFI's obligations under the PFI Agreement are secured under its advances agreement with the MPF Bank. A PFI is required to deliver collateral for their credit enhancement obligation (as further discussed below) and an MPF Bank can request additional collateral to secure the PFI's other obligations under the PFI Agreement, if necessary.

Mortgage Standards

For conventional MPF Loans held in our portfolio, PFIs are required to deliver mortgage loans that meet the underwriting and eligibility requirements in the PFI Agreement and the MPF Guides, unless a PFI is granted a waiver that exempts such PFI from complying with a specific requirement. MPF Loan requirements include:

- A maximum loan-to-value (LTV) ratio of 95%;
- Mortgage Loans with LTVs greater than 80% must be insured by primary mortgage insurance (PMI);
- Compliance with all applicable laws documented using standard Fannie Mae/Freddie Mac Uniform Instruments; and
- Meeting the definition of a Qualified Mortgage under the Truth and Lending Act (TILA).

Mortgage loans that are classified as high cost, high rate, or Home Ownership and Equity Protection Act loans, or loans in similar categories defined under predatory lending or abusive lending laws are not eligible under the MPF Program. We perform a quality assurance review of a selected sample of MPF Loans for each PFI in order to determine that the loans complied with the MPF Program requirements at the time of acquisition.

For our off balance sheet products and Government Loan product, PFIs are required to deliver mortgage loans that meet the applicable investor or government agency eligibility and underwriting requirements outlined in the MPF Guides.

We make customary representations and warranties regarding the eligibility of the off balance sheet MPF Loans to third party investors. If a loan eligibility requirement or other warranty is breached, these third parties could require us to repurchase the MPF Loan or provide an indemnity. PFIs make the same representations and warranties to us with respect to the MPF Loans. When a PFI sells a mortgage loan under any MPF Loan product that fails to comply with the representations and warranties, the PFI may be required to provide an indemnification covering related losses or to repurchase the MPF Loans if the failure cannot be cured. See **Risk Factors** on page 16 and **Mortgage Repurchase Risk** on page 65 for further information about MPF Loans repurchases.

Loss Structure for Credit Risk Sharing Products

For conventional MPF Loan products held in our portfolio, PFI's are required to share in the credit risk associated with the mortgage loans. Each MPF Loan delivered by a PFI is linked to a Master Commitment (MC) and losses arising from a mortgage loan are allocated to the appropriate loss layer in that MC. Credit losses not absorbed by the borrower's equity in the property and any primary mortgage insurance (if available), are allocated between a PFI and their MPF Bank in the following order:

- <u>The PFI's performance based CE Fees</u>. The PFI is paid a monthly credit enhancement fee for sharing the credit risk associated with these mortgage loans (CE Fees) and some of this fee may be performance based. CE Fees vary between 6 to 14 basis points depending on the product. We will withhold a PFI's scheduled performance based CE Fee in order to reimburse ourselves for any losses allocated to the First Loss Account (FLA).
- <u>The MPF Bank's First Loss Account (FLA)</u>. The FLA functions as a tracking mechanism for our first layer of credit loss exposure before the PFI's credit enhancement obligation (CE Amount) would cover the next layer of losses. The amount of the FLA is agreed upon when an PFI begins to sell loans into an MC depending on the product. Our FLA exposure varies by MPF Loan product type and it can build over the life of the MC by 3-6 basis points annually or it can be fixed from 35-100 basis points.
- <u>The PFI's CE Amount</u>. The PFI's CE Amount is a direct liability of the PFI to pay credit losses up to a specified amount, which may include proceeds from a provider of supplemental mortgage guaranty insurance (SMI). The CE Amount is determined by the MPF Bank consistent with the AMA Regulation. For further details, see **Setting Credit Enhancement Levels** on page 63.
- <u>The MPF Bank</u>. After the CE Amount has been exhausted, the MPF Bank will absorb any further losses.

MPF Servicing

PFIs can retain the rights and responsibilities for servicing MPF Loans sold under the MPF Program or choose a servicing released option. If PFIs chose to retain servicing rights for MPF Loans sold under the MPF Xtra and MPF Government MBS products, we are contractually obligated to Fannie Mae and Ginnie Mae, respectively, with respect to servicing those loans. The MPF Direct product is servicing released only and we do not have any responsibilities related to the servicing of MPF Loans delivered under the MPF Direct product.

We monitor servicers that service (1) MPF Loans held in our portfolio and (2) MPF Loans that are sold under MPF Xtra and MPF Government MBS when we are contractually responsible to Fannie Mae or Ginnie Mae, respectively, for the loan servicing. If a servicer fails to comply with the servicing requirements, we can charge fees, require mortgage loan repurchase, request indemnification or terminate the servicer's right to service the MPF Loans.

Competition

We face competition in the markets for conventional loans, non-conforming loans, government loans, and loans with credit risk sharing arrangements from secondary market participants. Secondary market participants include, but are not limited to, dealers, banks, hedge funds, money managers, insurance companies, large mortgage aggregators, private investors, and other GSEs such as Fannie Mae and Freddie Mac. Some of these competitors have greater resources, larger volumes of business, and longer operating histories. As a result, our ongoing revenue derived from MPF Loan products may be affected by the volume of business done by our competitors.

Other Activities

Investments

We maintain a portfolio of investments for liquidity purposes and to provide additional earnings. To ensure the availability of funds to meet member credit needs, we maintain a portfolio of short-term liquid assets, principally overnight Federal Funds sold, and securities purchased under agreements to resell, entered into with or issued by highly rated institutions and other eligible counterparties. For further discussion of unsecured credit exposures related to our short-term investment portfolio, see **Unsecured Short Term Investments** on page 70.

Our longer-term investment securities portfolio includes securities issued by the U.S. government, U.S. government agencies, and GSEs, as well as investments in Federal Family Education Loan Program (FFELP) student loan asset-backed securities (ABS), and mortgage-backed securities (MBS) that are issued by GSEs or that were rated “AAA/Aaa” or “AA/Aa” from Moody's Investors Service (Moody's), Standard and Poor's Rating Service (S&P), or Fitch Ratings, Inc. (Fitch) at the time of purchase. For a discussion of how recent market conditions have affected the carrying value and ratings of these securities, see **Investment Securities by Rating** on page 67. For this purpose, GSE includes Fannie Mae, Freddie Mac, and the Federal Farm Credit Banks Funding Corporation. Securities issued by GSEs are not guaranteed by the U.S. government.

Under FHFA regulations, we are prohibited from trading securities for speculative purposes or engaging in market-making activities. Additionally, we are prohibited from investing in certain types of securities or loans, including:

- instruments, such as common stock, that represent an ownership in an entity, other than common stock in small business investment companies, or certain investments targeted to low-income persons or communities;
- instruments issued by non-United States entities, other than those issued by United States branches and agency offices of foreign commercial banks;
- non-investment grade debt instruments, other than certain investments targeted to low-income persons or communities, or instruments that were downgraded after purchase;
- whole mortgages or other whole loans, other than, (1) those acquired under our MPF Program, (2) certain investments targeted to low-income persons or communities, (3) certain marketable direct obligations of state, local, or tribal government units or agencies, that are investment quality, (4) MBS or asset-backed securities backed by manufactured housing loans or home equity loans; and, (5) certain foreign housing loans authorized under the FHLB Act;
- interest-only or principal-only stripped securities;
- residual-interest or interest-accrual classes of securities;
- fixed-rate MBS or eligible ABS, or floating-rate MBS or eligible ABS, that on the trade date are at rates equal to their contractual cap and that have average lives that vary by more than six years under an assumed instantaneous interest rate change of 300 basis points; and
- non-United States dollar-denominated securities.

FHFA regulations further limit our investment in MBS and ABS by requiring that these investments may not exceed 300% of our previous month-end regulatory capital on the day we purchase the securities and we may not exceed our holdings of such securities in any one calendar quarter by more than 50% of our total regulatory capital at the beginning of that quarter. For purposes of calculating the limit on our MBS/ABS portfolio, we value our investments in accordance with FHFA regulations based on amortized cost for securities classified as held-to-maturity or available-for-sale and on fair value for trading securities. Regulatory capital consists of our total capital stock (including the mandatorily redeemable capital stock) plus our retained earnings. This limitation does not apply to newly issued Ginnie Mae securities that have been created through the MPF Government MBS product that are temporarily owned by the Bank.

As we transitioned our primary business to advances, the FHFA previously temporarily waived our regulatory investment limitations to permit us to reinvest a portion of the proceeds from prepayments and maturities of our mortgage assets to purchase MBS issued by GSEs and approved our purchase of FFELP student loan ABS. For further discussion of how this may impact us, see **Risk Factors** on page 16.

We expect to resume making MBS and ABS investments, sometime in 2018, subject to regulatory limitations.

Derivative Activities

We engage in most of our derivative transactions with major broker-dealers as part of our interest rate risk management and hedging strategies. Additionally, we also enter into interest rate derivatives with our members in order to provide them with indirect access to the derivatives market. In instances where we do not use interest rate derivatives for our own hedging purposes, we act as an intermediary for our members by entering into an interest rate derivative directly with the member and then entering into an offsetting interest rate derivative transaction with a non-member counterparty. We do not act as a dealer in derivative transactions involving members.

The FHFA's regulations and our internal derivatives and hedging policies all establish guidelines for our use of interest rate derivatives. These regulations prohibit the speculative use of financial instruments authorized for hedging purposes. They also limit the amount of counterparty credit risk allowed. See **Item 7A. Quantitative and Qualitative Disclosures About Market Risk** on page 73.

Community Investment Activities

We provide financing and direct funding tools that support the affordable housing and community lending initiatives of our members that benefit very low, low, and moderate income individuals, households, businesses and neighborhoods. Outlined below is a more detailed description of the mission-related programs that we administer and fund:

Affordable Housing Program (AHP) - We offer AHP subsidies in the form of direct grants to members to stimulate affordable rental and homeownership opportunities for households with incomes at or below 80% of the area's median income, adjusted for family size. By regulation, we are required to contribute 10% of our income before assessments to fund AHP. Of that required contribution, we may allocate up to the greater of $4.5 million or 35% to provide funds to members participating in our homeownership set-aside programs.

Direct grants are available primarily under our competitive AHP to members in partnership with community sponsors and may be used to fund the acquisition, rehabilitation, and new construction of affordable rental or owner-occupied housing. We awarded competitive AHP subsidies of $26 million for the year ended December 31, 2017, and $26 million for the year ended December 31, 2016, for projects designed to provide housing to 2,366 and 2,260 households, respectively.

In addition, direct grants are available to members under our Downpayment Plus® homeownership set-aside programs and may be provided to eligible homebuyers to assist with down payment, closing, counseling, or rehabilitation costs in conjunction with an acquisition. During the years ended December 31, 2017 and 2016, we awarded $18 million and $16 million through our Downpayment Plus programs to assist 3,122 and 2,703 very low to moderate income homebuyers.

During 2018, we anticipate having $36 million available in total for our Downpayment Plus programs and grants through our competitive AHP.

Community Development Advance/Community Housing Advance Program and related letters of credit - We offer two programs where members may apply for advances or letters of credit to support affordable housing or community economic development lending. These programs provide advance funding at interest rates below regular advance rates for terms typically up to 10 years. Our Community Development Advance and Community Housing Advance programs may be used to finance affordable home ownership housing, multi-family rental projects, industrial and manufacturing facilities, agricultural businesses, healthcare, educational centers, public or private infrastructure projects, or commercial businesses. As of December 31, 2017, and 2016, we had $914 million and $824 million respectively, in advances outstanding under the Community Development Advance and Community Housing Advance programs and related letters of credit outstanding of $142 million and $164 million.

Community First® Fund - Our Board of Directors approved $50 million in 2011 to supplement our current affordable housing and community investment programs, which became the foundation for the Community First Fund (the Fund). The Fund is an innovative revolving credit facility designed to provide low cost, longer term financing to Community Development Financial Institutions, community development loan funds, and state housing finance authorities promoting affordable housing and economic development in our district. We approved our first loans under the Fund in 2014 and as of December 31, 2017, had $34 million in funded loans outstanding and $10 million in unfunded loan commitments.

Deposits

We accept deposits from our members, institutions eligible to become members, any institution for which we are providing correspondent services, other FHLBs, and other government instrumentalities. We offer several types of deposits to our deposit customers including demand, overnight, and term deposits. For a description of our liquidity requirements with respect to member deposits see **Liquidity** on page 48.

Funding

Consolidated Obligations

Our primary source of funds is the sale to the public of FHLB debt instruments, called consolidated obligations, in the capital markets. Additional funds are provided by deposits, other borrowings, and the issuance of capital stock. Consolidated obligations, which consist of bonds and discount notes, are the joint and several liability of the FHLBs, although the primary obligation is with the individual FHLB that receives the proceeds from issuance. Consolidated obligations are issued to the public through the Office of Finance using authorized securities dealers. Consolidated obligations are backed only by the financial resources of the FHLBs and are not guaranteed by the U.S. government. See **Funding** on page 49 for further discussion.

Competition

We compete with the U.S. government, Fannie Mae, Freddie Mac, and other GSEs, as well as corporate, sovereign, and supranational entities, including the World Bank, for funds raised through the issuance of unsecured debt in the domestic and global debt markets. Increases in the supply of competing debt products may, in the absence of increases in demand, result in higher debt costs or lesser amounts of debt issued at the same cost than otherwise would be the case. For example, a change in the types or an increase in the amounts of U.S. Treasury issuance may affect our ability to raise funds because it provides alternative investment options. Furthermore, to the extent that investors perceive Fannie Mae and Freddie Mac or other issuers as having a higher level of government support, their debt securities may be more attractive to investors than FHLB System debt.

The FHLBs have traditionally had a diversified funding base of domestic and foreign investors, although investor demand for our debt depends in part on prevailing conditions in the financial markets. For further discussion of market conditions and their potential impact on us, see **Risk Factors** on page 16 and **Funding** on page 49.

Although the available supply of funds from the FHLBs' debt issuances has kept pace with the funding requirements of our members, there can be no assurance that this will continue to be the case.

Business Environment

Our financial condition and results of operations are influenced by the interest rate environment, global and national economies, local economies within our districts of Illinois and Wisconsin, and the conditions in the financial, housing, and credit markets. In particular, our net interest income is affected by several external factors, including market interest rate levels and volatility, credit spreads and the general state of the economy. We endeavor to manage our interest rate risk by entering into fair value hedge relationships utilizing interest rate derivative agreements to hedge a portion of our advances, available for sale securities, and debt. We are exposed to the variability in the total net proceeds received from forecasted zero-coupon discount note issuances, which is attributable to changes in the benchmark interest rate, London Interbank Offering Rate ("LIBOR). As a result, we enter into cash flow hedge relationships utilizing derivative agreements to hedge the total net proceeds received from our "rolling" forecasted zero-coupon discount note issuances attributable to changes in LIBOR. Additionally, we enter into economic hedges using derivative agreements to hedge our mortgage-related assets, which are sensitive to changes in mortgage rates.

Our profitability is significantly affected by the interest rate environment. We earn relatively narrow spreads between yields on assets and the rates paid on corresponding liabilities. A large portion of our advance business is based on our funding costs plus a narrow spread. We also expect our ability to generate significant earnings on capital and short-term investments will be affected by the Federal Reserve's policy of setting the short-term Federal Funds rate. Short-term interest rates also directly affect our earnings on invested capital.

Our operating results are affected not only by rising or falling interest rates, but also by the particular path and volatility of changes in market interest rates and the prevailing shape of the yield curve. A flattening of the yield curve tends to compress our net interest margin, while steepening of the curve offers better opportunities to purchase assets with wider net interest spreads. The performance of our MPF Loans held for investment portfolio is particularly affected by shifts in the 10-year maturity range of the yield curve, which heavily influences mortgage rates and potential refinancings. Yield curve shape can also influence the pace at which borrowers refinance or prepay their existing loans, as borrowers may select shorter-duration mortgage products in a refinancing. In addition, our higher yielding private label MBS portfolio continues its expected runoff. As higher coupon MPF Loans mature along with higher yielding private label MBS, the return of principal may not be invested in assets with a comparable yield, resulting in a potential decline in the aggregate yield on the remaining MPF Loans held for investment portfolio and investment securities and a possible decrease in our net interest margin.

Lastly, the volume related to our MPF Xtra and MPF Direct programs as well as our Ginnie Mae MBS issuances also are influenced by the interest rate environment, global and national economies, local economies within our districts of Illinois and Wisconsin, and the conditions in the financial, housing and credit markets.

Oversight, Audits, and Legislative and Regulatory Developments

Regulatory Oversight

We are supervised and regulated by the FHFA, an independent federal agency in the executive branch of the U.S. government. The FHFA's operating and capital expenditures are funded by assessments on the FHLBs; no tax dollars or other appropriations support the operations of our regulator. To assess our safety and soundness, the FHFA conducts annual, on-site examinations as well as periodic on-site reviews. Additionally, we are required to submit monthly financial information on our condition and results of operations to the FHFA.

The Government Corporations Control Act, to which we are subject, provides that before a government corporation issues and offers obligations to the public, the Secretary of the Treasury (Secretary) shall prescribe the form, denomination, maturity, interest rate, and conditions of the obligations, the method and time issued, and the selling price. The FHLB Act also authorizes the Secretary discretion to purchase consolidated obligations up to an aggregate principal amount of $4.0 billion. No borrowings under this authority have been outstanding since 1977.

We must submit annual management reports to Congress, the President, the Office of Management and Budget, and the Comptroller General. These reports include a statement of financial condition, a statement of operations, a statement of cash flows, a statement of internal accounting and administrative control systems, and the report of the independent public accounting firm on our financial statements.

Pursuant to FHFA regulations, we plan to publish the results of our annual severely adverse economic conditions stress test to our public website at www.fhlbc.com between November 15 and November 30.

Regulatory Audits

The Comptroller General has authority under the FHLB Act to audit or examine us and to decide the extent to which we are fairly and effectively fulfilling the purposes of the FHLB Act. Furthermore, the Government Corporations Control Act provides that the Comptroller General may review any audit of the financial statements conducted by an independent registered public accounting firm. If the Comptroller General conducts such a review, then the results and any recommendations must be reported to the Congress, the Office of Management and Budget, and the FHLB in question. The Comptroller General may also conduct a separate audit of any of our financial statements.

Recent Legislative and Regulatory Developments

Minority and Women Inclusion

On July 25, 2017, the FHFA published a final rule, effective August 24, 2017, amending its Minority and Women Inclusion regulations to clarify the scope of the FHLBs' obligation to promote diversity and ensure inclusion. The final rule updates the existing FHFA regulations aimed at promoting diversity and the inclusion and participation of minorities, women, and individuals with disabilities, and the businesses they own (MWDOB) in all FHLB business and activities, including management, employment, customer outreach and access, MWDOB participation in financial transactions with the FHLB, and contracting. The final rule encourages the FHLBs to expand contracting opportunities for MWDOBs and minorities, women, and individuals with disabilities through subcontracting arrangements and to track the cumulative spend associated with such diverse subcontracting arrangements. In addition, the final rule requires each FHLB to:

- develop stand-alone, board-approved diversity and inclusion strategic plans or incorporate diversity and inclusion principles into its existing strategic planning processes and adopt strategies for promoting diversity and ensuring inclusion;
- amend its policies on equal opportunity in employment by adding sexual orientation, gender identity, and status as a parent to the list of protected classifications;

- establish a process to grant or deny requests for accommodations to employees and job applicants based on their religious beliefs or practices;
- provide information in its annual reports to the FHFA about its efforts to advance diversity and inclusion through identifying and selecting MWDOB firms for participation in financial transactions with the FHLB, identifying ways in which it may give consideration to MWDOB business with the FHLB when reviewing and evaluating vendor contract proposals, and enhancing customer access by MWDOB businesses (including through the FHLB's affordable housing and community investment programs;
- report data regarding the number of diverse individuals currently in supervisory or managerial positions and its strategies for promoting the diversity of supervisors and managers;
- classify and provide additional data in its annual reports about the number of, and amounts paid under, its MWDOB contracts, as well as demographic data regarding the categories of MWDOB entities to which it awards vendor contracts; and
- provide data to the FHFA regarding the type of contracts it considers exempt from these diversity and inclusion requirements.

We do not expect this final rule to materially affect our financial condition or results of operations, but we anticipate that it may result in increased costs and substantially increase the amount of data tracking, monitoring, and reporting that will be required of us.

FHLB Capital Requirements

On July 3, 2017, the FHFA published a proposed rule to adopt, with amendments, the Finance Board regulations pertaining to the capital requirements for the FHLBs. The proposed rule would carry over most of the existing regulations without material change, but would substantively revise the credit risk component of the risk-based capital requirement, as well as the limitations on extensions of unsecured credit and derivative exposure. The main revisions would remove requirements that the FHLBs calculate credit risk capital charges and unsecured credit limits based on ratings issued by an NRSRO, and instead require that the FHLBs establish and use their own internal rating methodology. With respect to derivatives, the proposed rule would impose a new capital charge for cleared derivatives, which under the existing rule do not carry a capital charge, and would change the way that the capital charge and risk limits are calculated for uncleared derivatives, in both cases to align with the Dodd-Frank Act’s clearing mandate and derivatives reforms. The proposed rule also would revise the percentages used in the regulation’s tables to calculate credit risk capital charges for advances and for non-mortgage assets. The FHFA proposes to retain for now the percentages used in the tables to calculate capital charges for mortgage-related assets, and to address at a later date the methodology for residential mortgage assets. While a March 2009 regulatory directive pertaining to certain liquidity matters would remain in place, the FHFA also proposes to rescind certain minimum regulatory liquidity requirements and address these liquidity requirements in a new regulatory directive.

We submitted a joint comment letter with the other FHLBs on August 31, 2017. We do not expect this rule, if adopted substantially as proposed, to materially affect our financial condition or results of operations. Additionally, to date, the FHFA has not yet formally proposed new liquidity requirements; however, to the extent that new regulations or guidance increase our liquidity requirements in the future, our business activities and operations could be adversely affected.

Information Security Management Advisory Bulletin

On September 28, 2017, the FHFA issued Advisory Bulletin 2017-02, which supersedes previous guidance on an FHLB’s information security program. The Advisory Bulletin describes three main components of an information security program and reflects the expectation that each FHLB will use a risk-based approach to implement its information security program. The Advisory Bulletin contains expectations related to (i) governance, including guidance related to roles and responsibilities, risk assessments, industry standards, and cyber-insurance; (ii) engineering and architecture, including guidance on network security, software security, and security of endpoints; and (iii) operations, including guidance on continuous monitoring, vulnerability management, baseline configuration, asset life cycle, awareness and training, incident response and recovery, user access management, data classification and protection, oversight of third parties, and threat intelligence sharing.

We do not expect this Advisory Bulletin to materially affect our financial condition or results of operations, but we anticipate that it may result in increased costs relating to enhancements to our information security program.

Mandatory Contractual Stay Requirements for Qualified Financial Contracts (QFCs)

On September 12, 2017, the FRB published a final rule, effective November 13, 2017, requiring certain global systemically important banking institutions (GSIB) regulated by the FRB to amend their covered QFCs to limit a counterparty’s immediate termination or exercise of default rights under the QFCs in the event of bankruptcy or receivership of the GSIB or an affiliate of the GSIB. Covered QFCs include derivatives, repurchase agreements (known as “repos”) and reverse repos, and securities lending and borrowing agreements. On September 27, 2017, and on November 29, 2017, the FDIC and OCC respectively adopted final rules that are both substantively identical to the FRB rule, both effective January 1, 2018, with respect to QFCs entered into with certain FDIC- and OCC-supervised institutions.

Although we are not a covered entity under these rules, as a counterparty to covered entities under QFCs, we may be required to amend QFCs entered into with FRB-regulated GSIBs or applicable FDIC- and OCC-supervised institutions. These rules may impact our ability to terminate business relationships with covered entities and could adversely impact the amount we recover in the event of the bankruptcy or receivership of a covered entity. However, we do not expect these final rules, or the proposed amendments to the Swap Margin Rules (defined below), to materially affect our financial condition or results of operations.

OCC, FRB, FDIC, Farm Credit Administration, and FHFA Proposed Rule on Margin and Capital Requirements for Covered Swap Entities

On February 21, 2018, OCC, FRB, FDIC, Farm Credit Administration, and FHFA published a joint proposed amendment to each agency's final rule on Margin and Capital Requirements for Covered Swap Entities (Swap Margin Rules) to conform the definition of "eligible master netting agreement" in such rules to the FRB's, OCC's, and FDIC's final QFC rules, and to clarify that a legacy swap will not be deemed to be a covered swap under the Swap Margin Rules if it is amended to conform to the QFC Rules.

Comments on the proposed rule are due by April 23, 2018. We continue to evaluate the proposed rule, but we do not expect this rule, if adopted substantially as proposed, to materially affect our financial condition or results of operations.

Taxation and AHP Assessments

We are exempt from all federal, state, and local taxation except for real estate property taxes, which are a component of our lease payments for office space or on real estate we own as a result of foreclosure on MPF Loans. In lieu of taxes, we set aside funds for our AHP at a calculated rate of 10% of income before assessments. For details on our assessments, see **Note 11 - Affordable Housing Program** to the financial statements.

Item 1A. Risk Factors.

Business Risks

A prolonged downturn in the U.S. housing markets and other economic conditions, and related U.S. government policies may have an adverse impact on the business of many of our members, and our business and results of operations.

Our business and results of operations are sensitive to the U.S. housing and mortgage markets, as well as international, domestic and district-specific market and economic conditions. Although in 2017, U.S. economic activity expanded and the Federal Reserve raised interest rates three times, the Federal Reserve continues to monitor global economic and domestic inflation and employment developments closely. If these conditions deteriorate, including as a result of domestic conditions or global instability, our business and results of operations could be adversely affected.

In 2017, conditions in the U.S. housing market continued to improve, as evidenced by the level of decreased unemployment, home price appreciation and lower mortgage delinquency rates. If adverse trends reappear in the mortgage lending sector and general business and economic conditions deteriorate significantly, these factors could result in deterioration of our members' credit characteristics, which could cause them to become delinquent or to default on their advances and other credit obligations. As of February 28, 2018, we have not experienced any member payment defaults. In addition, declines in real estate prices or loan performance trends or increases in market interest rates could result in a reduction in the fair value of our collateral securing member credit and the fair value of our mortgage-backed securities investments. This change could increase the possibility of under-collateralization and the risk of loss in case of a member's failure, or increase the risk of loss on our mortgage-backed securities investments because of additional credit impairment charges. Also, deterioration in the residential mortgage markets could negatively affect the value of our mortgage loan portfolio and result in possibly additional realized losses if we are forced to liquidate our mortgage portfolio. Moreover, a negative trend in the housing and mortgage markets could result in a decline in advance levels and adversely affect our financial condition, results of operations, or ability to pay dividends or redeem or repurchase capital stock.

Our business and results of operations are also affected by the fiscal and monetary policies of the federal government and its agencies in response to adverse economic conditions, including the Federal Reserve, which regulates of the supply of money and credit in the United States. These policies directly and indirectly influence the yield on interest-earning assets and the cost of interest bearing liabilities and the demand for FHLB debt, which could adversely affect our financial condition, results of operations, and ability to pay dividends.

The Bank and our members are subject to and affected by a complex body of laws and regulations, which could change in a manner detrimental to our business operations, and adversely affect our financial condition.

We are a GSE organized under the authority of the FHLB Act and are governed by Federal laws and regulations of the FHFA. From time to time, Congress has amended the FHLB Act and adopted other legislation in ways that have significantly affected the FHLBs and the manner in which the FHLBs carry out their housing finance mission and business operations. New or modified legislation enacted by Congress or regulations or guidance adopted by the FHFA or other agencies could have a negative effect on our ability to conduct business or our costs of doing business.

The FHFA's extensive regulatory authority over the FHLBs includes, without limitation, the authority to liquidate, merge, consolidate, or redistrict the FHLBs. The FHFA also has authority over the scope of permissible FHLB products and activities, including the authority to impose limits on those products and activities. We can not predict whether the FHFA may issue future rule changes that could impact our business or our members.

Changes in our statutory or regulatory requirements or policies or in their application could result in changes in, among other things, our membership base, our cost of funds; liquidity requirements; retained earnings and capital requirements; accounting policies; debt issuance limits; dividend payment limits; the form of dividend payments; capital redemption and repurchase limits; permissible business activities; advance pricing and structure; compliance requirements; operational processes; and the size, scope, or nature of our lending, investment, or MPF Program activities; all and any of which could be detrimental to our business operations and financial condition. See **Recent Legislative and Regulatory Developments** on page 13 for more information about recent regulatory developments.

In addition, as Congress continues to consider possible reforms to the U.S. housing finance system, including the resolution of Fannie Mae and Freddie Mac, any future legislation could directly or indirectly impact GSEs that support the U.S. housing market, including the FHLBs.

Moreover, new or modified legislation or regulations governing or impacting our members and counterparties may affect our ability to conduct business or cost of doing business. For example, the Bank, its members, and counterparties have been impacted by the regulations under the Dodd-Frank Act, which made significant changes to the overall regulatory framework of the U.S. financial system. Specifically, regulatory changes under Dodd-Frank have impacted how our insured depository members manage their liquidity and capital, and may impact the demand for our advances. Recently, there have been discussions relating to amending or repealing the Dodd-Frank Act. We cannot predict the prospects for the enactment of amendments to, or the repeal of, the Dodd-Frank Act, or how these changes may impact our business.

We face competition for advances and access to funding, which could adversely affect our business.

Our primary business is making advances to members. We compete with other suppliers of wholesale funding, both secured and unsecured, including investment banks, commercial banks, the Federal Reserve, and, in certain circumstances, other FHLBs with which members have a relationship through affiliates. While our advances increased significantly from 2013 through 2017, we cannot predict the volume of future advance borrowings of our members in the longer term. As many members continue to have sufficient levels of liquidity and funds through deposits and investments, decrease the size of their balance sheets to improve their capital positions, diversify or have access to alternative funding sources, our advance levels could decrease. Moreover, if we are unable to structure our advance products to satisfy the liquidity requirements of our depository members and the specific funding requirements of all members, our members may turn to other sources of liquidity and our advance levels could decrease.

We may make changes in policies, programs, and agreements affecting members' access to advances and other credit products, the MPF Program, the AHP, and other programs, products, and services. As a result of these changes some members may choose to obtain financing from alternative sources. For example, we may make changes to our collateral guidelines, including changes in the value we assign to collateral which members are required to pledge to secure their outstanding obligations, including advances. To the extent that members view this tightening of credit and collateral requirements as unfavorable, we may experience a decrease in our levels of business which may negatively impact our results of operations or financial condition. Further, many competitors are not subject to the same regulations as us, which may enable those competitors to offer products and terms that we are not able to offer. Any change made in pricing our advances to compete with these alternative funding sources may decrease our profitability on advances. Additionally, as we manage our refunding risk with respect to short-term discount notes, any resulting increase in advance pricing may decrease demand for our advances. State and federal regulators’ perception of the stability and reliability of our advances can also directly impact the amount of advances used by our members. A decrease in advance demand or a decrease in profitability on advances could adversely impact our financial condition and results of operations.

The FHLBs also compete with the U.S. government, Fannie Mae, Freddie Mac, and other government-sponsored enterprises (GSEs), as well as corporate, sovereign, and supranational entities, including the World Bank, for funds raised through the issuance of unsecured debt in the domestic and global debt markets. Increases in the supply of competing debt products may, in the absence of increases in demand, result in higher debt costs or lower amounts of debt issued at the same cost. Increased competition could adversely affect our ability to access funding, reduce the amount of funding available to us, or increase the cost and type of funding available to us. For example, a change in the types or an increase in the amount of US Treasury issuances, such as in response to the U.S. government's fiscal budgeting process or statutory debt limits, may affect our ability to raise funds because it provides alternative investment options. In addition, to the extent investors perceive Fannie Mae or Freddie Mac or other issuers as having higher levels of government support, their debt securities may be more attractive to investors than FHLB System debt. To the extent that the FHLB System experiences lower debt funding requirements, including in response to lower advance demands, our debt funding costs could increase. Any of these results could adversely affect our financial condition, results of operations, or ability to pay dividends or redeem or repurchase capital stock.

Our and our members’ inability to adapt products and services to evolving industry standards and customer preference amid a highly competitive and regulated landscape, while managing expenditures, could harm our business.

Our and our members’ success depend on the ability to adapt products and services to evolving industry standards and to meet customer needs, particularly amid a highly competitive and regulated landscape. The widespread adoption of new technologies could require substantial expenditures. We and our members are also faced with increasing operating costs in managing cybersecurity risks. We and our members may not be successful in developing or introducing new products, systems, and services to keep pace with larger competitors, in integrating new products, systems, or services into existing platforms, in responding or adapting to changes in customer behavior or preferences, and in reducing costs, all of which may harm our business and results of operations.

The loss of significant members could result in lower demand for our products and services, and negatively impact our financial condition and results of operation.

At December 31, 2017, our five largest advance borrowers held 59% percent of total advances outstanding. The loss of significant members or a significant reduction in the level of business they conduct with us would likely lower overall demand for our products and services in the future and adversely impact our financial condition and results of operations.

In 2016, the FHFA adopted regulatory changes that disqualified captive insurance companies from FHLB membership. This rule impacts our three captive insurance company members who will have their memberships terminated by February 2021. As of December 31, 2017, these captive insurance company members had $13.4 billion in advances outstanding at par, which was 28% percent of our total advances outstanding. The advances to our captive insurance company members, which may remain outstanding until they mature, have a weighted remaining tenor of 6.24 years as of December 31, 2017. However, after our captive insurance company members have their membership terminated and once their advances mature, advance and capital stock levels would decrease. Unless we experience an increased demand for our advance products from our current or future members, this will result in a material decrease in our outstanding advance levels and our results of operation may be adversely affected. Further, we could experience lower demand for advances and other products and services, including letters of credit, and our core mission asset ratio may be negatively impacted. The magnitude of the impact will depend, in part, on our size and profitability at the time of membership termination or maturity of related advances.

Additionally, statutory or regulatory requirements have contributed to consolidation in the financial industry, and could reduce the number of current and potential members in our district. Additionally, for a variety of reasons, including regulatory pressure to simplify their organizational structures, parent institutions may decide to dissolve our members or merge our members out of district, resulting in our loss of such members. We lost 27 members due to mergers and acquisitions in 2017(two of which resulted after the member was placed into receivership by its regulator). Twenty three of these members were acquired by other members in our district and four were acquired by out-of-district institutions. As the financial services industry continues to experience consolidation or the pressure to simplify their organizational structures, and to the extent new or modified legislation, the low interest rate environment, and technological challenges negatively impact our members, we may lose a member or members whose business and capital stock investments are significant to our business. This loss of business could negatively impact our business operations, financial condition, and results of operations.

Changes in the perception, status or regulation of GSEs and the related effect on debt issuance could reduce demand or increase the cost of the FHLBs' debt issuance and adversely affect our earnings.

The FHLBs are GSEs organized under the authority of the FHLB Act and are authorized to issue debt securities to fund their operations and finance housing development in the United States. In the past, negative announcements by any of the housing GSEs concerning topics, such as accounting problems, risk-management issues, or regulatory enforcement actions, have created pressure on debt pricing for all GSEs, as investors have perceived such instruments as bearing increased risk. Any such negative information or other factors could result in the FHLBs having to pay a higher rate of interest on consolidated obligations to make them attractive to investors, which could negatively affect the FHLBs' results of operations.

Furthermore, as the U.S. Congress continues to consider GSE and housing finance reforms, the FHLBs’ funding costs and access to funds could be adversely affected as a result of the uncertainty surrounding the timing and pace of any possible changes. Additionally, investor concerns about U.S. agency debt and the U.S. agency debt market may also adversely affect the FHLBs' competitive position and result in higher funding costs, which could negatively affect our earnings.

Failure to scale the size or composition of our balance sheet and our cost infrastructure to the economic environment or member demand for our products, and maintain an appropriate liquidity and funding balance between our assets and liabilities, may have a material adverse effect on our results of operations and financial condition.

During 2017, new MPF Loan purchases moderately exceeded pay downs and maturities within our MPF Loans held in portfolio. However, to the extent our new MPF Loan purchases are insufficient to offset pay downs in the future, our balance sheet would decrease over time. The same risk may apply to our investment securities portfolio in light of our regulatory limitations on purchasing MBS and ABS investments. Additionally, while our advances increased significantly from 2013 through 2017, we cannot predict the volume of future advance borrowings of our members in the longer term. If our increase in expenses outpaces our increase in income, or if we were to become a smaller sized institution, or the composition of our balance sheet significantly changes in some manner, whether as a result of the economic environment or other factors, we would be presented with challenges, such as reducing our cost infrastructure and creating a balance sheet with earning assets that would support that cost infrastructure while providing for future dividends at an appropriate level. Structuring such a balance sheet would be more challenging in a low interest rate environment. In addition, as we incur development and operating costs related to new products and initiatives, we may not generate enough member demand and volume to recover such costs. For example, costs related to operating some of our MPF products exceed the revenue generated by these products to date by an amount that is not currently material but which could become so in the future. Regulatory requirements, including our mission asset ratio requirement, as further described on page 5, may also have an effect on how we manage our balance sheet and cost infrastructure. If we are unable to successfully maintain our balance sheet and cost infrastructure at an appropriate composition and size scaled to member demand, our results of operations and financial condition may be negatively impacted.

We are sensitive to maintaining an appropriate liquidity and funding balance between our financial assets and liabilities, and we measure and monitor the risk of refunding such assets as liabilities mature (refunding risk). In measuring the level of assets requiring refunding, we take into account their contractual maturities. In addition, we make certain assumptions about their expected cash flows. However, our earnings and our ability to conduct our business may be adversely impacted to the extent we insufficiently maintain an appropriate liquidity to funding balance between our financial assets and liabilities.

Restrictions on the redemption, repurchase, or transfer of our capital stock could result in an illiquid investment for the holder.

Under the GLB Act and FHFA regulations, and our Capital Plan, our capital stock is subject to redemption upon the expiration of a five-year redemption period. Only capital stock in excess of a member's or former member's minimum investment requirement that was subject to a redemption request, capital stock of a member that has submitted a notice to withdraw from membership, or capital stock held by a member whose membership has been terminated may be redeemed at the end of the applicable redemption period. Further, we may elect to repurchase excess stock from time to time at our sole discretion without regard to the five-year redemption period. Beginning in 2017, we began repurchasing all excess class B2 membership stock on a weekly basis at par value, although members may continue to request repurchase of excess stock in addition to the automatic weekly repurchase.

If the redemption or repurchase of capital stock would cause us to fail to meet our minimum capital requirements or cause the member or former member to fail to maintain its minimum investment requirement, then such redemption or repurchase would be prohibited by FHFA regulations and our Capital Plan. We also may decide to suspend the redemption of capital stock if we reasonably believe that such redemptions would cause us to fail to meet our minimum capital requirements. All repurchases of excess stock, including automatic weekly repurchases, remain subject to our regulatory capital requirements, certain financial and capital thresholds, and prudent business practices. Accordingly, there is no guarantee that we will be able to redeem capital stock held by a shareholder even at the end of the redemption period or to repurchase excess capital stock.

In addition, since our capital stock may only be owned by our members (or, under certain circumstances, former members and certain successor institutions), and our Capital Plan requires our approval before a member or nonmember shareholder may transfer any of its capital stock to another member or nonmember shareholder, we cannot provide assurance that a member or nonmember shareholder would be allowed to transfer any excess capital stock to another member or nonmember shareholder at any time.

In addition, approval from the FHFA for redemptions or repurchases would be required if the FHFA or our Board of Directors were to determine that we incurred, or are likely to incur, losses that result in, or are likely to result in, charges against our capital. Under such circumstances, there can be no assurance that the FHFA would grant such approval or, if it did, upon what terms it might do so.

For further discussion of our minimum capital requirements, see **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)** to the financial statements.

Limitations on the payment of dividends and repurchase of excess capital stock or future changes to our capital stock requirements may adversely affect the effective operation of our business model.

Our business model is based on the goal of maintaining a balance between our housing mission and our objective to provide a reasonable return on our members' investment in the cooperative. We work to achieve this balance by delivering low-cost credit to help our members meet the credit needs of their communities while striving to pay a reasonable dividend on our Class B2 membership stock and a higher dividend on Class B1 activity stock in order to recognize those members that are using advances, which contributes to the overall health of the entire cooperative. See **Dividend Payments** on page 57. Typically, our capital grows when members are required to purchase additional capital stock as they increase their advances borrowings and our capital declines when we repurchase excess capital stock from members as their advances decline such as through our automatic weekly repurchase program.

Under FHFA regulations, the FHLBs may pay dividends on their stock only out of previously retained earnings or current net income, and our ability to pay dividends is subject to statutory and regulatory restrictions and is dependent upon our ability to continue to generate net income. Further, the level of our dividend payments is restricted by our retained earnings and dividend policy as further described under **Retained Earnings & Dividends** on page 57. If we are unable to maintain a reasonable level of net income, we may become unable to pay dividends or maintain a higher dividend on Class B1 activity stock or the level of dividends could be significantly reduced.

To the extent that current and prospective members determine that our dividend is insufficient or our ability to pay future dividends or repurchase excess capital stock becomes limited, we may be unable to expand our membership and may experience decreased member demand for advances requiring capital stock purchases and increased membership requests for withdrawals that may adversely affect our results of operations and financial condition.

In addition, in recent years we've made substantial changes to our Capital Plan to reduce the cost of membership through reduced membership stock requirements. We also offer the Reduced Capitalization Advance Program ("RCAP"), which reduces a member's activity stock requirement for certain advances as further discussed in **Reduced Capitalization Advance Program** on page 54. To the extent that we are unable to maintain our current capital stock requirements and continue to offer RCAP, or to the extent we effect future changes to our capital plan, member utilization of the Bank may be impacted, which in turn may adversely affect our results of operations and financial condition.

Members' rights in the event of a liquidation, merger, or consolidation of the Bank may be uncertain.

Under the GLB Act, holders of Class B Stock own the retained earnings, surplus, undivided profits, and equity reserves of the Bank. Our Capital Plan provides that, with respect to a liquidation of the Bank, after payment to creditors, Class B Stock will be redeemed at par, or pro rata if liquidation proceeds are insufficient to redeem all of the capital stock in full. Any remaining assets will be distributed on a pro rata basis to those members that were holders of Class B Stock immediately prior to such liquidation. With respect to a merger or consolidation affecting us, members will be subject to the terms and conditions of any plan of merger and/or terms established or approved by the FHFA. Our Capital Plan also provides that its provision governing liquidation or merger is subject to the FHFA's statutory authority to prescribe regulations or orders governing liquidation, reorganization, or merger of an FHLB. Although our members would have an opportunity to ratify any merger agreement in a voluntary merger between us and another FHLB, we cannot predict how the FHFA might exercise its authority with respect to liquidations or reorganizations, or whether any actions taken by the FHFA in this regard would be inconsistent with the provisions of our Capital Plan or the rights of holders of Class B Stock in the retained earnings of the Bank.

Compliance with regulatory contingency liquidity guidance could restrict investment activities and adversely impact net interest income.

We are required to maintain sufficient liquidity through short-term investments in an amount at least equal to our anticipated cash outflows under two hypothetical scenarios for the treatment of maturing advances as described in **Liquidity Measures** on page 48. This regulatory guidance is designed to provide sufficient liquidity and to protect against temporary disruptions in the capital markets that affect the FHLB System's access to funding. To satisfy this liquidity requirement, we maintain increased balances in short-term investments, which may earn lower interest rates than alternate investment options and may, in turn, negatively impact net interest income.

In certain circumstances, we may need to fund overnight or shorter-term investments and advances with discount notes that have maturities that extend beyond the maturities of the related investments or advances. Net interest income on investments and advances may be reduced. Also, to the extent that short-term advance pricing is increased, our short-term advances may be less competitive, which may adversely affect advance levels and our net interest income.

In July 2017, in connection with proposed modifications to certain FHLB risk-based capital requirements, the FHFA announced it would issue new liquidity requirements in a separate regulatory directive. To date, these liquidity requirements have not yet been formally proposed; however, to the extent that any new regulatory directive increases our liquidity requirements in the future, our business activities and operations could be adversely affected.

Failure to meet minimum regulatory capital requirements could affect our ability to conduct business and could adversely affect our earnings.

We are subject to certain minimum capital requirements under the FHLB Act, as amended, and FHFA rules and regulations that include total capital, leverage capital, and risk-based capital requirements. If we are unable to satisfy our minimum capital requirements, we could be subject to certain capital restoration requirements and prohibited from paying dividends and redeeming or repurchasing capital stock without the prior approval of the FHFA, which could adversely affect a member's investment in our capital stock. Furthermore, any suspension of dividends and/or capital stock repurchases and redemptions could decrease member confidence, which in turn could reduce advance demand and net income should members elect to use alternative sources of wholesale funding. As a result of a risk-based capital shortfall, investors could perceive an increased level of risk or deterioration in our performance, which could result in a downgrade in our outlook or our short- or long-term credit ratings**.** For further discussion of our minimum regulatory capital requirements, see **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)** to the financial statements.

FHFA regulations annually require us to perform stress tests under various scenarios and make the results of a severely adverse economic conditions test publicly available. The severity of the required scenarios is subject to the FHFA's discretion. We use such stress tests as part of our capital planning process and evaluate the adequacy of capital resources available to absorb potential losses arising from those risks. While we believe that our capital base is sufficient to support our current operations given our risk profile, future required scenarios, the results of the stress testing process, and the public disclosure thereof may affect our approach to managing and deploying capital, and the public's perception of us.

In July 2017, the FHFA published a proposed rule that would substantively revise the credit risk component of our risk-based capital requirement, as further discussed in **Recent Legislative and Regulatory Developments** on page 13. We cannot predict what this proposed rule will look like in its final form, and whether it will have a negative effect on our ability to conduct our business.

A decline and shift in mortgage originations, the shift from a mortgage loan refinancing market to a purchase market, and the loss of certain PFIs in the future may negatively impact our business.

Some forecasts suggest that mortgage originations are expected to decline in the near future, with the bulk of new originations coming from non-bank originators, like "FinTech" companies, who are not members of the FHLBs and therefore not eligible to participate in our MPF Program. To the extent these forecasts are accurate, we may experience a decrease in volume available to purchase from our PFIs. There has also been a shift from a mortgage loan refinancing market, in which our PFIs are more active, to a purchase market, in which our PFIs have been historically less active. To the extent a sufficient number of our PFIs experience a decline in new mortgage originations, we may incur a decrease in volume available to purchase from our PFIs.

During 2017, the top five PFIs, in the aggregate, accounted for 68% of our MPF on balance sheet purchases. To the extent we lose our business with these PFIs and cannot attract comparable replacements, our business may be adversely affected.

The loss of key personnel or difficulties recruiting and retaining qualified personnel could adversely impact our business and financial results.

Much of our future success depends on the continued availability and service of senior management personnel. The loss of any of our executive officers or other key senior management personnel could harm our business. Additionally, we must continue to recruit, retain and motivate a qualified and diverse pool of employees, both to maintain our current business, including succession planning, and to execute our strategic initiatives. If we are unable to recruit, retain and motivate such employees to maintain our current business and support our projected growth, our business and financial performance may be adversely affected.

Market Risks

To the extent that our MPF Loan portfolio decreases and as our investment securities mature, we may experience a future reduction in our net interest income, which may negatively impact our results of operations and financial condition.

While new MPF Loan purchases moderately exceeded pay downs of our MPF Loans held in portfolio in 2017, future MPF Loan purchases may be insufficient to offset pay downs and maturities of our MPF Loan portfolio. Moreover, FHFA regulations limit our investments in MBS and ABS as discussed in **Investments** on page 10. Once we resume purchasing MBS and ABS, any new investments may not be on as favorable terms or generate as much expected income as our maturing investments, on either a risk-adjusted or absolute basis. Thus, our overall earning potential may be negatively impacted to the extent that decreases in our MPF Loan portfolio and investments portfolios are not offset by new purchases.

A sustained period of low interest rates, rapid changes in interest rates, or an inability to successfully manage interest-rate risk could have a material adverse effect on our net interest income.

We realize net interest income primarily from the spread between interest earned on our outstanding advances, MPF Loans, and investments less the interest paid on our consolidated obligations and other liabilities. A very low interest-rate environment could adversely impact us in various ways, including lower market yields on investments and faster prepayments on our investments with associated reinvestment risk. Our investment income and, in turn, our financial condition and results of operations, could be adversely impacted as a result. Conversely, when interest rates increase, we may experience extension risk, which is the risk that our mortgage-based investments will remain outstanding longer than expected at below-market yields. Therefore, any rapid change in interest rates could adversely affect our net interest income. See **Item 7A. Quantitative and Qualitative**

Disclosures About Market Risk on page 73 for additional discussion and analysis regarding our sensitivity to interest rate changes and the use of derivatives to manage our exposure to interest-rate risk.

Our business and results of operations are affected significantly by the fiscal and monetary policies of the U.S. government and its agencies, including the Federal Reserve Board's policies, which are difficult to predict. Therefore, our ability to anticipate changes regarding the direction and speed of interest rate changes, or to hedge the related exposures, significantly affects the success of our asset and liability management activities and our level of net interest income. We use a number of measures in our efforts to monitor and manage interest rate risk, including income simulations and duration, market value, and convexity sensitivity analyses. Given the unpredictability of the financial markets, capturing all potential outcomes in these analyses is difficult. Key assumptions include, but are not limited to, loan volumes and pricing, market conditions for our consolidated obligations, interest rate spreads and prepayment speeds, implied volatility of options contracts, and cash flows on mortgage-related assets. These assumptions are inherently uncertain and they cannot precisely estimate net interest income and the market value of equity. Actual results will differ from simulated results due to the timing, magnitude, and frequency of interest rate changes and changes in market conditions and management strategies, among other factors. Volatility and disruption in the credit markets may have resulted in a higher level of volatility in our interest-rate risk profile and could negatively affect our ability to management interest-rate risk effectively.

We depend on the FHLBs' ability to access the capital markets in order to fund our business.

Our primary source of funds is the sale of FHLB consolidated obligations in the capital markets, including the short-term capital markets due to our increased reliance on discount note funding. Our ability to obtain funds through the sale of consolidated obligations depends in part on prevailing market conditions, such as investor demand and liquidity in the financial markets, which are beyond the control of the FHLBs. The severe financial and economic disruptions during the most recent financial crisis, and the U.S. government’s dramatic measures enacted to mitigate the effects, affected the FHLBs’ funding costs and practices. Our ability to operate our business, meet our obligations, and generate net interest income depends primarily on the ability of the FHLB System to issue debt frequently to meet member demand and to refinance our existing outstanding consolidated obligations at attractive rates, maturities, and call features, when needed. A significant portion of our advances are issued at interest rates that reset periodically at a fixed spread to an FHLB discount note rate-based index, so member demand for such advances may decrease to the extent that the FHLB System is unable to continue to issue debt at attractive rates.

The sale of FHLB consolidated obligations can also be influenced by factors other than conditions in the capital markets, including legislative and regulatory developments and government programs and policies that affect the relative attractiveness of FHLB consolidated obligations. For example, regulations related to capital and liquidity have impacted how debt dealers are managing their balance sheets. In addition, recent money market reform resulted in a significant increase in demand for government funds, agency debt, and FHLBs’ short-term consolidated obligations. While this increased demand benefited the FHLBs’ ability to raise short-term liquidity at attractive costs, such demand may be short-term in nature as money market investor risk and return preferences and money market regulatory requirements could change over time. To the extent that such regulatory changes or other developments impact dealer demand or capacity for FHLB debt, our funding costs and/or access to the capital markets may be adversely affected.

Additionally, we have a significant amount of discount notes outstanding with maturities of one year or less. We are exposed to liquidity risk if there is any significant disruption in the short-term debt markets. If a disruption were prolonged, we may not be able to obtain funding on acceptable terms. Any significant disruption that would prevent us from re-issuing discount notes for an extended period of time as they mature may require us to recognize into income up to $139 million of currently open (as of December 31, 2017) deferred hedge costs out of accumulated other comprehensive income. Without access to the short-term debt markets, the alternative longer-term funding, if available, would increase funding costs and could cause us to increase advance rates, potentially adversely affecting demand for advances. If we cannot access funding when needed on acceptable terms, our ability to support and continue operations could be adversely affected. As a result, our inability to manage our liquidity position or our contingency liquidity plan to meet our obligations, as well as the credit and liquidity needs of our members, could adversely affect our financial condition and results of operations, and the value of FHLB membership.

Our funding costs and/or access to the capital markets and demand for certain of our products could be adversely impacted by any changes in the credit ratings for FHLB System consolidated obligations or our individual credit ratings.

FHLB System consolidated obligations are rated Aaa/P-1 with a stable outlook by Moody's and AA+/A-1+ with a stable outlook by S&P. Rating agencies may from time to time change a rating or outlook or issue negative reports. Because all of the FHLBs have joint and several liability for all FHLB consolidated obligations, negative developments at any FHLB may affect these credit ratings or result in the issuance of a negative report regardless of the financial condition and results of operations of the other FHLBs. In addition, because of the FHLBs' GSE status, the credit ratings of the FHLB System, the FHLBs, and consolidated obligations are directly influenced by the long-term sovereign credit rating of the U.S. government. For example, downgrades to the U.S. sovereign credit rating or outlook may occur if the U.S. government fails to adequately address, based on the credit rating agencies' criteria, its fiscal budget process or statutory debt limit. As a result, if the U.S. sovereign credit ratings or outlooks are downgraded, similar downgrades in the credit ratings or outlook of the FHLBs and FHLB System consolidated obligations would mostly likely occur even though they are not obligations of, nor guaranteed by, the United States.

Future downgrades in credit ratings or outlook may result in higher FHLB funding costs and/or disruptions in access to the capital markets and our ability to maintain adequate liquidity. Any reduction in our individual Bank ratings may also trigger additional collateral posting requirements under certain of our derivative instruments. Further, member demand for certain of our products, such as letters of credit, is influenced by our credit rating and a downgrade of our credit rating could weaken member demand for such products.

Additionally, we are highly dependent on using derivative instruments to obtain low-cost funding and to manage interest rate risk. Negative credit rating events might also have an adverse affect on our ability to enter into derivative instruments with acceptable terms, increasing the cost of funding or limiting our ability to manage interest rate risk effectively.

To the extent that we cannot access funding when needed or enter into derivatives on acceptable terms to effectively manage our cost of funds and exposure to interest rate risk or demand for our products falls, our financial condition, and results of operations could be adversely impacted.

We are subject to various risks on our FFELP ABS investments.

Our FFELP ABS investments are securitizations of student loans that are guaranteed by guarantee agencies whose guaranties are reinsured by the U.S. Department of Education, or re-securitizations of such FFELP ABS. As of December 31, 2017, we held $4.2 billion of FFELP ABS investments.

We are subject to basis risk on these FFELP ABS because the Department of Education is responsible for making interest subsidy payments at a rate that is different from the 3-month LIBOR rate plus a spread on our FFELP ABS investments. Beginning in 2012, the Department of Education permitted holders of FFELP loans to permanently change this interest subsidy payment index rate from the previous 3-month commercial paper rate to a 1-month LIBOR rate plus a spread. All FFELP ABS that the Bank holds now reflect an interest subsidy payment rate of 1-month LIBOR plus a spread. Although the change in interest subsidy payments from a 3-month commercial paper rate to a 1-month LIBOR rate reduces the volatility in basis risk now that both the ABS and interest subsidy rates are indexed to LIBOR, we remain subject to basis risk to the extent that these different LIBOR tenors do not move together in the future.

Because the loans backing our FFELP ABS investments are supported by the U.S. Department of Education, the ratings of FFELP ABS are generally constrained by the sovereign credit rating of the U.S. government. In addition, ratings may be impacted by changes in rating agency criteria. For example, rating agencies re-evaluated their methodology around the receipt of final payment on student loans in response to borrower assistance plans which have resulted in slower repayment, in some cases beyond the debt’s original maturity date. To the extent that there are future downgrades to the U.S. sovereign credit rating or other rating agency actions which impact the ratings of our FFELP ABS, it may negatively impact the value of our investments.

We are also subject to servicing risk on these FFELP ABS because a guarantee agency may refuse to honor its guarantee if the servicer does not satisfy specific origination and servicing procedures, as prescribed by various U.S. federal and guarantor regulations. If default rates increase on the student loans backing our FFELP ABS, the yield and value on our securities may be negatively impacted to the extent guarantees are not honored by the guarantee agencies.

Changes to, and replacement of, the LIBOR benchmark interest rate could adversely affect our business, financial condition and results of operations.

In July 2017, the United Kingdom’s Financial Conduct Authority (FCA), a regulator of financial services firms and financial markets in the U.K., stated that they will plan for a phase out of regulatory oversight of LIBOR interest rate indices. The FCA has indicated they will support the LIBOR indices through 2021 to allow for an orderly transition to an alternative reference rate. Other financial services regulators and industry groups, including the International Swaps and Derivatives Association (ISDA), are evaluating the possible phase-out of LIBOR and the development of alternate interest rate indices or reference rates. A mechanism does not yet exist to convert the credit and tenor features of LIBOR into any proposed replacement rate, nor has a market been established which could facilitate such conversion. There is no guarantee that, if such a market were created and functioning at the time of the transition, the transition will be successful. The infrastructure necessary to manage hedging in an alternative reference rate does not yet exist, and any transition from one reference rate to another could also have accounting effects. For example, such a transition could have an effect on our hedge effectiveness, which could affect our results of operations. Additionally, our risk management measuring, monitoring and valuation tools factor in LIBOR as a reference rate. Disruptions in the market for LIBOR, and its regulatory framework, could have unanticipated effects on our risk management activities as well. As noted throughout this Form 10-K, many of the Bank's assets and liabilities are indexed to LIBOR. We are not able to predict whether or when LIBOR publication will be discontinued, whether the proposed alternative or replacement rates will become market standards, or what impact such a transition may be on our business, financial condition, and results of operations.

Credit Risks

Our financial condition and results of operations, and the value of Bank membership, could be adversely affected by our exposure to credit risk.

We are exposed to credit risk principally through advances or commitments to our members, MPF Loans and related exposures, derivatives counterparties, unsecured counterparties, and issuers of investment securities or the collateral underlying them. We assume secured and unsecured credit risk exposure associated with the risk that a borrower or counterparty could default, and we could suffer a loss if we are unable to fully recover amounts owed on a timely basis. In addition, we have exposure to credit risk because fair value of collateral may decline as a result of deterioration in the creditworthiness of the obligor or the credit quality of a security instrument, or because the value of the collateral may not be what we assigned to it (whether as a result of misrepresentation or inaccurate valuation). We have a high concentration of credit risk exposure to financial institutions and mortgage assets. If we have insufficient collateral before or after an event of default, or we are unable to liquidate the collateral for the value assigned to it in the event of default, we could experience a credit loss, which could adversely affect our financial condition and results of operations.

We follow guidelines established by our Board of Directors and the FHFA on unsecured extensions of credit, whether on- or off-balance sheet, which limit the amounts and terms of unsecured credit exposure to highly rated counterparties, the U.S. government, other FHLBs, and partners of our Community First Fund. However, there can be no assurance that these activities will prevent losses due to defaults on these assets.

Advances. Despite an improved U.S. economy and housing markets in 2017, some financial institutions, including some of our members, remain under financial stress exposing us to greater risk that one or more of our members may default on their outstanding obligations to us, including the repayment of advances.

To protect against credit risk for advances, we require advances to be collateralized and have policies and procedures in place to reasonably estimate the value of the collateral. In order to remain fully collateralized, we may require a member to pledge additional collateral, when deemed necessary. This requirement may adversely affect those members that lack additional assets to pledge as collateral. If members are unable to secure their obligations, our advance levels could decrease.

If a member defaults on its obligations, or the FDIC, or any other applicable receiver, fails either to promptly repay all of that failed institution's obligations or to assume the outstanding advances, then we may be required to liquidate the collateral pledged by the failed institution. The volatility of market prices and interest rates could affect the value of the collateral we hold as security for the obligations of our members. The proceeds realized from the liquidation of pledged collateral may not be sufficient to fully satisfy the amount of the failed institution's obligations or the operational cost of liquidating the collateral. Default by a member with significant outstanding obligations to us could adversely affect our results of operations and financial condition.

As we continue to work toward building a stronger cooperative and increasing advances by adding new members, we are actively focusing on institutions that have not traditionally been a large part of our membership, such as insurance companies, community development financial institutions, and housing associates. As we increase our membership to include more non-federally insured members and increase credit outstanding to such members, we face uncertainties surrounding the possible resolution of those members, in part due to our lack of experience in dealing with their regulators and any receivers and other liquidators that may be involved in the resolution of these members.

Also, as we update our collateral loan eligibility criteria to accept more complex loan structures and additional commercial loan property types, we face risks relating to valuing and liquidating collateral with these characteristics. Although we will closely monitor our credit and collateral agreement processes, we may experience credit losses and our business may be adversely affected if we are unable to sufficiently collateralize our risk exposures in the event of potential default by or resolution of these members.

Derivatives Counterparties. Our hedging strategies are highly dependent on our ability to enter into cleared and uncleared (over-the-counter) derivative instrument transactions with counterparties on acceptable terms to reduce interest-rate risk and funding costs.

If a counterparty defaults on payments due to us, we may need to enter into a replacement derivative contract with a different counterparty, which may be at a higher cost, or we may be unable to obtain a replacement contract. We may also be exposed to collateral losses to the extent that we have pledged collateral and its value changes.

The insolvency of one of our largest derivatives counterparties combined with an adverse change in the market before we are able to transfer or replace the contracts could adversely affect our financial condition and results of operations. Further, to the extent that we have pledged collateral under the requirements of the derivative contract and the fair market value of the collateral increases above the value of the derivatives contract, we may experience delays in having our collateral returned or could experience losses if the counterparty fails to return the collateral.

If we experience further disruptions in the credit markets, it may increase the likelihood that one of our derivatives counterparties fails to meet their obligations to us. See **Note 9 - Derivative and Hedging Activities** to the financial statements for a description of derivatives credit exposure.

Rating agencies may from time to time change our rating or issue negative reports, which may adversely affect our ability to enter into derivative transactions with acceptable counterparties on satisfactory terms in the quantities necessary to manage our interest-rate risk and funding costs. A reduction in our credit rating or of the FHLB System credit rating may also trigger additional collateral requirements under our derivative contracts. This could negatively affect our financial condition and results of operations and the value of FHLB membership.

Federal Funds. We invest in Federal Funds sold in order to ensure the availability of funds to meet members' credit and liquidity needs. Because these investments are unsecured, our credit policies and FHFA regulations restrict these investments to short-term maturities and certain eligible counterparties. If the credit markets experience disruptions, it may increase the likelihood that one of our Federal Funds counterparties could experience liquidity or financial constraints that may cause them to become insolvent or otherwise default on their obligations to us. For further discussion on our Federal Funds investments, see **Unsecured Short Term Investments** on page 70.

Securities Purchased Under Agreements to Resell. We also invest in securities purchased under agreements to resell in order to ensure the availability of funds to meet members' liquidity and credit needs. These investments are secured by marketable securities held by a third-party custodian. If the credit markets experience disruptions, it may increase the likelihood that one of our counterparties could experience liquidity or financial constraints that may cause them to become insolvent or otherwise default on their obligations to us. If the collateral pledged to secure those obligations has decreased in value, we may suffer a loss. See the table in **Investment Securities by Rating** on page 67 for a summary of counterparty credit ratings for these investments.

Our MPF Program products have different risks than those related to our traditional advances products, which could adversely impact our results of operations.

The MPF Program, as compared to our advances products, is more susceptible to credit losses. As the U.S. housing market continued to improve during 2017, our allowance for credit losses on our MPF Loan portfolio continued to decline consistent with the general positive trends in the housing markets and smaller portfolio of MPF Loans held on our balance sheet. However, to the extent that economic conditions weaken and regional or national home prices decline, we could experience higher delinquency levels and loss severities on our MPF Loan portfolio in the future.

We are exposed to losses on our conventional MPF Loans held in our portfolio through our obligation to absorb losses up to the FLA and to the extent those losses are not recoverable from PFIs from withholding performance based CE Fees (Recoverable CE Fees). Our FLA exposure as of December 31, 2017 is $122 million. The next layer of losses after the FLA is allocated to the PFI, or SMI, as applicable, through the CE Amount. If losses accelerate in the overall mortgage market, we may experience increased losses that are allocated to us through the FLA or that may otherwise exceed the PFI's CE Amount and Recoverable CE Fees. Further, the PFIs may experience credit deterioration and default on their credit enhancement obligations, which, to the extent not offset against collateral provided by the PFIs, could cause us to incur additional losses and have an adverse effect on our results of operations.

Under the MPF Government product, we absorb any associated credit losses if we are unable to recover from the servicer or the insuring or guarantying government agency. We have the same risk with respect to the MPF Government MBS loans we acquired from our members unless the servicing was sold under our servicing released option in which the new servicer assumes our Ginnie Mae issuer responsibilities.

We are exposed to mortgage repurchase liability in connection with our sale of MPF Loans to Fannie Mae under the MPF Xtra product, to third-party investors under the MPF Direct Product, and to Ginnie Mae for MPF Loans securitized in Ginnie Mae MBS. If a loan eligibility requirement or other warranty is breached, these third parties could require us to repurchase the MPF

Loan or provide an indemnity. If the PFI from which we purchased an ineligible MPF Loan is viable, we can require the PFI to repurchase that MPF Loan from us or indemnify us for related losses. Under the MPF Direct product, if a PFI is insolvent, our repurchase liability is limited to a PFI's failure to deliver the required loan documentation and excludes repurchases for breaches of loan level representations and warranties. In addition, if we purchase the ineligible MPF Loan from a PFI of another MPF Bank, the MPF Bank will indemnify us for any losses we may incur. As of December 31, 2017, we had $37 million of repurchase requests and indemnifications outstanding to PFIs related to MPF Xtra loans and no outstanding repurchase requests or indemnifications for our MPF Direct and MPF Government MBS products. Because repurchase requests from third-party investors may be made up until full repayment of a loan rather than when a purported defect is first identified, repurchase requests received as of a particular date may not reflect total repurchase liability for loans outstanding as of that date. In certain circumstances, third-party investors may not make a repurchase or indemnification request until a loan becomes past due or defaults. PFIs are also required to repurchase ineligible MPF Loans we hold in our portfolio, as further discussed in **Mortgage Repurchase Risk** on page 65.

Some of our PFIs from whom we may request repurchase or seek indemnification may be highly leveraged and may be adversely affected by economic and housing market conditions and disruptions in the financial and credit markets, which may impact their ability to fulfill their indemnification or repurchase obligations to us. Although we require members to pledge collateral to secure all outstanding credit obligations, only in certain cases do we require PFIs to collateralize repurchase obligations and indemnifications given their credit condition and size of their repurchase obligation or indemnification. In the event that a PFI becomes insolvent or otherwise defaults on its repurchase or indemnification obligation to us and we cannot offset the credit loss amount against collateral provided by the PFI or, alternatively, the FDIC, we could experience losses on MPF Loans.

We also have geographic concentrations of MPF Loans secured by properties in certain states. To the extent that any of these geographic areas experience significant declines in the local housing markets, declining economic conditions, or a natural or man-made disaster, we could experience increased losses. For further information on these concentrations, see **Geographic Concentration** on page 64.

For a description of the MPF Program, our obligations with respect to credit losses and the PFI's obligation to provide credit enhancement and comply with anti-predatory lending laws, see **Mortgage Partnership Finance Program** on page 8.

In certain circumstances, we may rely on other FHLBs to manage credit risk related to our former members and credit enhancement and servicing obligations of PFIs located outside of our district, and if those FHLBs failed to appropriately manage this credit risk or enforce a former member's or PFI's obligations, we could experience losses.

In certain circumstances, for example when a member leaves the Bank due to a merger and the acquiring entity is a member of another FHLB, the other FHLB may hold and manage the former member's collateral covering advances and any other amounts still outstanding to us. The other FHLB may subordinate to us collateral it receives from the member by entering into an inter-creditor agreement in an amount sufficient to cover our exposure. If the other FHLB were to inappropriately manage the collateral, we could incur losses in the event that the former member defaults. We may, however, have recourse against the other FHLB depending upon the circumstances surrounding our loss.

We hold a significant portfolio of participation interests in mortgage loans acquired under the MPF Program from other FHLBs. PFIs located in other FHLB districts provide servicing and credit enhancement for these MPF Loans and we rely on the FHLB from the district in which the PFI is located to manage the related credit risk and enforce the PFI's obligations. If there were losses arising from these MPF Loans and the other FHLB were to fail to manage the risk of PFI default or enforce the PFI's obligations, we could incur losses in the event of a PFI default.

We are jointly and severally liable for the consolidated obligations of other FHLBs.

Under the FHLB Act, we are jointly and severally liable with other FHLBs for consolidated obligations issued through the Office of Finance. If another FHLB defaults on its obligation to pay principal or interest on any consolidated obligation, the FHFA has the ability to allocate the outstanding liability among one or more of the remaining FHLBs on a pro rata basis or on any other basis that the FHFA may determine. The likelihood of triggering our joint and several liability obligation depends on many factors, including the financial condition and financial performance of other the other FHLBs. For example, to the extent one or more FHLBs had significant unsecured credit exposures outstanding at the time of counterparty failure, the affected FHLBs may fail to meet their obligations to pay principal or interest on consolidated obligations. If we were required by the FHFA to make payment on consolidated obligations beyond our primary obligation, our financial condition, and results of operations could be negatively affected.

The occurrence of a major natural or other disaster, especially one affecting our district, could negatively impact our business and results of operations.

The occurrence of a major natural or environmental disaster, terrorist attack, pandemic, or similar event (a "major disruptive event"), especially one affecting our district, could negatively impact our business and results of operations. A major disruptive event that either damages or destroys real estate securing mortgage loans or negatively impacts the ability of borrowers to continue to make principal and interest payments on mortgage loans could increase delinquency rates and default rates, and negatively impact our collateral, MPF Loan portfolio, MBS investments, community investment programs, or cause our members become delinquent or to default on their advances and other credit obligations to us. For example, during the third quarter of 2017, three significant hurricanes impacted the southeastern coasts of the United States and Puerto Rico. While we do not expect that the potential losses resulting from these hurricanes will have a material effect on our financial condition or results of operations in future periods, there can be no assurance that another major disruptive event, depending on its geographic impact, magnitude, scope and nature, will not generate significant losses to our business.

Additionally, a decline in the local economies in which our members operate resulting from a disruptive event could reduce members' needs for funding, which could reduce demand for our advances. We could be adversely impacted by the reduction in business volume that would arise from a decline in member funding needs.

Operational Risks

Our information systems may experience an interruption or breach in security.

Our operations rely on the secure processing, storage, and transmission of a large volume of personally identifiable information of mortgage loan borrowers, such as names, residential addresses, social security numbers, credit rating data, and other consumer financial information. We rely heavily on communications, information systems and internet to conduct our business. The continued occurrence of high-profile data breaches at other institutions provides evidence of an external environment with increasing attack vectors and sophisticated methods of personal data infiltration. Other companies have also reported breaches and other attacks, some severe, which have involved targeted attacks intended to disable or degrade service, or sabotage systems. This environment demands that we engage in ongoing monitoring of the effectiveness of our security controls, and implement changes as needed to mitigate security vulnerabilities. Despite these efforts, it is possible our security controls over personal data, our training of employees and vendors on data security, and other practices we follow may not prevent the improper disclosure of personally identifiable information that we or our vendors store and manage. We are also subject to the risk that our employees may intercept and transmit unauthorized confidential or proprietary information. Improper disclosure of this information could harm our reputation, lead to legal exposure to borrowers, or subject us to liability under laws that protect personal data, resulting in increased costs or loss of revenue. Additionally, cyberattacks, whether through computer hacking, vandalism, malware, phishing, or computer viruses may lead to shutdowns or disruptions in our systems. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate or timely preventative measures. Our cyber risk and other insurance might not be sufficient to cover us against claims related to security incidents, breaches, cyberattacks and other related events. Attempting to protect our information technology networks and systems may cause us to incur increasing costs, including costs to deploy additional personnel and protection technologies, to train employees, and to engage third party security experts and consultants.

We rely on quantitative models to manage risk, to make business decisions, and to value our assets and liabilities. Our business could be adversely affected if those models fail to produce reliable results.

We make significant use of both internal and external business and financial models to measure and monitor our risk exposures; including interest rate, prepayment, and other market risks, as well as credit risk. We also use models in determining the fair value of financial instruments when independent price quotations are not available or reliable. The information provided by these models is also used in making business decisions relating to strategies, initiatives, risk management, transactions, and products, and for financial reporting. Models are inherently imperfect predictors of actual results because they are based on available data and assumptions about factors such as future loan demand, prepayment speeds, default rates, severity rates, and other factors that may overstate or understate future experience. When market conditions change rapidly and dramatically, the assumptions used for our models may not keep pace with changing conditions. Inaccurate data or assumptions in these models are likely to produce unreliable results. For example, uncertainty in the housing and mortgage markets may increase our exposure to the inherent risks associated with the reliance on internal models that use key assumptions to project future trends and performance. Although we regularly adjust our internal models in response to changes in economic conditions and the housing market and rely on our vendors to adjust our external models, the risk remains that our models could produce unreliable results or estimates that vary considerably from actual results.

If these models fail to produce reliable results, we may not make appropriate risk management or business decisions, which could adversely affect our earnings, liquidity, capital position, and financial condition. Any strategies that we employ to attempt to manage the risks associated with the use of models may not be effective.

Failures or interruptions in our information systems and other technology, our controls, or our operating processes generally, may harm our business, financial condition, results of operations, and reputation.

Our business is dependent upon our ability to interface effectively with other FHLBs, members, PFIs, and other third parties. Our products and services involve a complex and sophisticated operating environment supported by operating systems and technologies, which may be purchased, custom-developed, or out-sourced. Maintaining the effectiveness and efficiency of the technology used in our operations, including our information systems, is dependent on the continued timely implementation of technology solutions (including security patches) and systems necessary to effectively manage the Bank and mitigate risk, which may require significant capital expenditures. If we are unable to maintain or improve these technological capabilities, including retention of key technology personnel and the development of necessary operating and management processes, we may not be able to remain competitive and our business, financial condition, and results of operations may be significantly compromised. To date, we have not experienced any material effect or losses related to significant interruptions in our information systems, cyber attacks or other breaches.

Additionally, failures in our controls, including internal controls over financial reporting, could result from human error, fraud, design flaws, breakdowns in information and computer systems, or natural or man-made disasters. Moreover, lapses in, and inadequacies with respect to, our operating processes, including manual processes and data management, could affect our overall operations, including collateral maintenance. If significant control failure were to occur, or if a significant lapse in any operating process were to occur, it could materially impact our financial condition and results of operations. We may not be able to foresee, prevent, mitigate, reverse, or repair the negative effects of such failures. If we are unable to correct material weaknesses or deficiencies in internal controls in a timely manner, our ability to record, process, summarize and report financial information accurately and within the time periods specified in the rules and forms of the SEC could be adversely affected. A failure in our internal control over financial reporting or a lapse in our operating processes could cause our members to lose confidence in our reported financial information, in our processes, or in us as a whole, subject us to government enforcement actions, and generally, materially, and adversely impact our business and financial condition.

We purchase a significant portion of our data center services, including disaster recovery capabilities, from third-party vendors, and if our vendors fail to adequately perform the contracted services in the manner necessary to meet our needs, our business, financial condition, and results of operations may be harmed. Additionally any failure in the operating systems of the Office of Finance could disrupt our ability to conduct and manage our business.

We have engaged various vendors to provide us with data center outsourcing services that include hardware, software support, and technology services. Any failure, interruption, or breach in security of these systems, or any disruption of service, could result in disruptions in our ability to conduct business. There is no assurance that if or when such failures do occur, that they will be adequately addressed by us or the third party vendors on whom we rely. The occurrence of any failures or interruptions could have a material adverse effect on our business, financial condition, and results of operations.

Additionally, we rely on the Office of Finance to facilitate the issuance and servicing of our consolidated obligations. A failure or interruption of the Office of Finance's operating systems as a result of breaches, cyberattacks, or technological risks could disrupt our access to funds, and may harm our business. Moreover, any operational failure of the Office of Finance could also expose us to the risk of loss of data or confidential information, or other harm, including reputational damage.

The performance of our MPF Loan portfolio depends in part upon third-party servicers and defaults by one or more of these third parties on its obligations to us could adversely affect our results of operations or financial condition.

Mortgage Servicing. We rely on PFIs and third-party servicers to perform mortgage loan servicing activities for our MPF Loans held in portfolio. With respect to the MPF Xtra and MPF Government MBS products, we are contractually obligated to Fannie Mae and Ginnie Mae, respectively, with respect to servicing of the related MPF Loans under certain servicing options.

Servicing activities include collecting payments from borrowers, paying taxes and insurance on the properties secured by the MPF Loans, advancing principal and interest under scheduled remittance options, maintaining applicable government agency insurance or guaranty, reporting loan delinquencies, loss mitigation, and disposition of real estate acquired through foreclosure or deed-in-lieu of foreclosure. If current housing market trends negatively decline, the number of delinquent mortgage loans serviced by PFIs and third party servicers could increase. Managing a substantially higher volume of non-performing loans could create operational difficulties for our servicers. In the event that any of these entities fails to perform its servicing duties, we could experience a temporary interruption in collecting principal and interest or even credit losses on MPF Loans or incur additional costs associated with obtaining a replacement servicer if the servicer fails to indemnify us for its breaches. Similarly, if any of our servicers become ineligible to continue to perform servicing activities under MPF Program guidelines, we could incur additional costs to obtain a replacement servicer. If a PFI servicer fails to perform its servicing responsibilities, we can potentially recover losses we incur from the collateral pledged to us under our Advances, Collateral Pledge and Security Agreement with the PFI; however, the amount of collateral pledged thereunder is not sized to cover a specific amount related to servicing obligations. If a third-party servicer is not one of our members, we would not have this additional remedy.

We offer servicing released alternatives for all of our MPF Loan products but currently we only have one servicing aggregator for particular products. If a servicing aggregator that is established as an approved servicer for the MPF Program exited the business or was not offering attractive servicing released premiums, or if we should decide to terminate our relationship with the servicer, our MPF Loan volume could be negatively impacted until we could engage replacement servicers.

Master Servicing. We act as master servicer for the MPF Program. In this regard, we have engaged a vendor for master servicing, Wells Fargo Bank N.A., which monitors the servicers' compliance with the MPF Program requirements and issues periodic reports to us. While we manage MPF Program cash flows, if the vendor should refuse or be unable to provide the necessary service, or if we should decide to terminate our relationship with the vendor, we may be required to engage another vendor which could result in delays in reconciling MPF Loan payments to be made to us or increased.

Item 1B. Unresolved Staff Comments.

Not applicable.

Item 2. Properties.

As of January 31, 2018, we occupy 95,105 square feet of leased office space at 200 East Randolph Drive, Chicago, Illinois 60601. We also maintain 5,518 square feet of leased space for an off-site back-up facility 15 miles northwest of our main facility, which is on a separate electrical distribution grid.

Item 3. Legal Proceedings.

On October 15, 2010, the Bank instituted litigation relating to 64 private label MBS bonds purchased by the Bank in an aggregate original principal amount of $4.29 billion. Of the three cases that were filed by the Bank, only the action filed in the Circuit Court of Cook County, Illinois remains active. As of December 31, 2017, the remaining litigation covers three private-label MBS bonds in the aggregate outstanding principal amount of $38 million. As of February 28, 2018, Morgan Stanley & Co., Incorporated, and certain of its affiliates, remain as the sole defendants in the Illinois action.

In this action, the Bank asserts claims for untrue or misleading statements in the sale of securities, signing or circulating securities documents that contained material misrepresentations, and negligent misrepresentation. The Bank seeks the remedies of rescission, recovery of damages, and recovery of reasonable attorneys' fees and costs of suit.

The Bank may also be subject to various other legal proceedings arising in the normal course of business. After consultation with legal counsel, management is not aware of any other proceedings that might have a material effect on the Bank's financial condition or results of operations.

Item 4. Mine Safety Disclosures.

Not applicable.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

PART II

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

Our members, and under limited circumstances former members, own our capital stock. Former members may continue to hold our capital stock when they have withdrawn from membership or have merged with out-of-district institutions. Our members elect our directors. We conduct our business almost exclusively with our members. Our stock can only be acquired and redeemed or repurchased at a par value of $100 per share. Our stock is not publicly traded and no market mechanism exists for the exchange of stock outside our cooperative structure.

We issue only one class of capital stock, Class B stock, consisting of two sub-classes of stock, Class B1 stock and Class B2 stock which, under our Capital Plan has a par value of $100 per share. As of January 31, 2018, we had 19,936,024 shares of capital stock outstanding, including mandatorily redeemable capital stock recorded as a liability, and we had 744 stockholders of record. For details on our Capital Plan, on member withdrawals and other terminations, and related amounts classified as mandatorily redeemable capital stock, see **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)** to the financial statements.

Information regarding our cash dividends declared in each quarter in 2016 and 2017, and information regarding regulatory requirements and restrictions on dividends, is set forth in the **Retained Earnings & Dividends** section on page 57.

The following table presents, by type of institution, the outstanding capital stock holdings of our members and former members. Our capital stock may be redeemed upon five years' notice from the member to the Bank, subject to applicable conditions. For a description of our policies and related restrictions regarding capital stock redemptions and repurchases, see **Capital Resources** on page 53.

As of	**December 31, 2017**	December 31, 2016
Commercial banks	**$ 967**	$ 1,148
Savings institutions	**174**	270
Credit unions	**149**	164
Insurance companies	**152**	128
Community Development Financial Institutions	**1**	1
Total GAAP capital stock	**1,443**	1,711
Stock reclassified as mandatorily redeemable capital stock (liability)	**311**	301
Total regulatory capital stock outstanding	**$ 1,754**	$ 2,012

We repurchased capital stock from members totaling $3.1 billion during 2017 and $1.2 billion in 2016, with the 2017 increase driven, in part, by our automatic weekly repurchases.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Item 6. Selected Financial Data.

Computation of Ratio of Earnings to Fixed Charges

For the years ended December 31,	**2017**	2016	2015	2014	2013
Net income (loss)	**$ 317**	$ 327	$ 349	$ 392	$ 343
Total assessments	**36**	37	39	44	33
Interest expense	**1,075**	803	744	841	1,061
Earnings, as adjusted	**$ 1,428**	$ 1,167	$ 1,132	$ 1,277	$ 1,437
Fixed charges:					
Interest expense	**1,075**	803	744	841	1,061
Total fixed charges	**$ 1,075**	$ 803	$ 744	$ 841	$ 1,061
Ratio of earnings to fixed charges	**1.33**	1.45	1.52	1.52	1.35

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Selected Financial Data

As of or for the years ended December 31,	2017	2016	2015	2014	2013
Selected statements of condition data					
Investments [a]	**$ 30,683**	$ 28,060	$ 28,324	$ 32,745	$ 36,402
Advances	**48,085**	45,067	36,778	32,485	23,489
MPF Loans held in portfolio, net	**5,193**	4,967	4,828	6,057	7,695
Total assets	**84,355**	78,692	70,671	71,841	68,797
Consolidated obligation discount notes, net	**41,191**	35,949	41,564	31,054	31,089
Consolidated obligation bonds, net	**37,121**	36,903	22,582	34,251	31,987
Mandatorily redeemable capital stock (MRCS) recorded as a liability	**311**	301	8	9	5
Capital stock	**1,443**	1,711	1,950	1,902	1,670
Retained earnings	**3,297**	3,020	2,730	2,406	2,028
Total capital	**$ 4,852**	$ 4,695	$ 4,652	$ 4,526	$ 3,765
Other selected data at period end					
Member standby letters of credit outstanding	**$ 19,572**	$ 10,828	$ 6,678	$ 3,617	$ 2,103
MPF Loans par value outstanding - FHLB System [b]	**51,563**	46,293	43,445	43,707	44,812
MPF Loans par value outstanding - FHLB Chicago PFIs [b]	**12,484**	11,624	10,577	10,767	11,169
FHLB systemwide consolidated obligations par value outstanding	**$1,034,260**	$989,311	$905,202	$847,175	$766,837
Number of members	**720**	728	740	751	759
Total employees (full and part time)	**460**	440	422	405	355
Selected statements of income data					
Net interest income after provision for (reversal of) credit losses	**$ 483**	$ 455	$ 503	$ 528	$ 452
Noninterest income	**44**	76 [c]	23	32	(1)
Noninterest expense	**174**	167	138	124	75 [d]
Net income	**$ 317**	$ 327	$ 349	$ 392	$ 343
Other selected data during the periods ended					
MPF Loans par value amounts funded - FHLB System [b]	**$ 11,915**	$ 10,872	$ 7,225	$ 5,387	$ 8,995
Number of PFIs funding MPF products - FHLB System [b]	**909**	873	843	819	832
MPF Loans par value amounts funded - FHLB Chicago PFIs [b]	**$ 2,521**	$ 3,145	$ 1,784	$ 1,191	$ 2,409
Number of PFIs funding MPF products - FHLB Chicago [b]	**204**	191	188	190	190
Selected ratios (rated annualized)					
Total regulatory capital to assets ratio	**5.99%**	6.40%	6.63%	6.01%	5.38%
Market value of equity to book value of equity	**107%**	108%	108%	114%	116%
Core mission asset ratio [e]	**67.3%**	66.2%	58.8%	n/a	n/a
Investments - % of total assets	**36%**	36%	40%	46%	53%
Advances - % of total assets	**57%**	57%	52%	45%	34%
MPF Loans held in portfolio, net - % of total assets	**6%**	6%	7%	8%	11%
Dividend rate class B1 activity stock-period paid	**3.19%**	2.75%	2.31%	1.58%	0.55%
Dividend rate class B2 membership stock-period paid	**1.10%**	0.60%	0.50%	0.45%	0.30%
Return on average assets	**0.38%**	0.42%	0.49%	0.55%	0.53%
Return on average equity	**6.84%**	7.18%	7.65%	9.35%	9.69%
Average equity to average assets	**5.58%**	5.87%	6.35%	5.83%	5.48%
Net yield on average interest earning assets	**0.59%**	0.59%	0.72%	0.74%	0.71%
Return on average Regulatory Capital spread to 3-month LIBOR index	**5.25%**	5.96%	7.55%	9.61%	9.74%
Cash dividends	**$ 40**	$ 37	$ 25	$ 14	$ 6
Dividend payout ratio	**12.62%**	11.31%	7.16%	3.57%	1.75%

[a] Include investment securities, interest bearing deposits, Federal Funds sold, and securities purchased under agreements to resell.

[b] Includes all MPF products, whether on or off our balance sheet. See **Mortgage Partnership Finance Program** beginning on page 8 for details on our various MPF products.

[c] Includes $38 million in litigation settlement awards. See **Litigation Settlement Awards** on page 44 for further details.

[d] In 2013 we reversed a $50 million charge (originally recorded as an expense in 2011) after we received approval from the FHFA and our Board of Directors to implement the Community First Fund as a revolving credit facility. See page 11 in **Item 1. Business** for more information.

[e] In 2015, the FHFA issued an advisory bulletin that provides guidance relating to a core mission asset ratio by which the FHFA will assess each FHLB's core mission achievement. See page 5 in **Item 1. Business** for more information.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Forward-Looking Information

Statements contained in this report, including statements describing the objectives, projections, estimates, or future predictions of management, may be “forward-looking statements.” These statements may use forward-looking terminology, such as “anticipates,” “believes,” “expects,” “could,” “estimates,” “may,” “should,” “will,” their negatives, or other variations of these terms. We caution that, by their nature, forward-looking statements involve risks and uncertainties related to our operations and business environment, all of which are difficult to predict and many of which are beyond our control. These risks and uncertainties could cause actual results to differ materially from those expressed or implied in these forward-looking statements and could affect the extent to which a particular objective, projection, estimate, or prediction is realized. As a result, undue reliance should not be placed on such statements.

These forward-looking statements involve risks and uncertainties including, but not limited to, the following:

- changes in the demand by our members for advances, including the impact of the availability of other sources of funding for our members, such as deposits;

- limits on our investments in long-term assets;

- the impact of new business strategies, including our ability to develop and implement business strategies focused on maintaining net interest income; the impact of our efforts to simplify our balance sheet on our market risk profile and future hedging costs; our ability to successfully transition to a new business model, implement business process improvements, and scale our size to our members' borrowing needs; the extent to which our members use our advances as part of their core financing rather than just as a back-up source of liquidity; and our ability to implement product enhancements and new products and generate enough volume in new products to cover our costs related to developing such products;

- the extent to which amendments to our Capital Plan, including our ability to implement reduced membership stock and advances activity stock requirements and continue to offer the Reduced Capitalization Advance Program for certain future advance borrowings, and our ability to continue to pay enhanced dividends on our activity stock, impact borrowing by our members;

- our ability to meet required conditions to repurchase and redeem capital stock from our members (including maintaining compliance with our minimum regulatory capital requirements and determining that our financial condition is sound enough to support such repurchases), and the amount and timing of such repurchases or redemptions;

- general economic and market conditions, including the timing and volume of market activity, inflation/deflation, unemployment rates, housing prices, the condition of the mortgage and housing markets, increased delinquencies and/or loss rates on mortgages, prolonged or delayed foreclosure processes, and the effects on, among other things, mortgage-backed securities; volatility resulting from the effects of, and changes in, various monetary or fiscal policies and regulations, such as those determined by the Federal Reserve Board and Federal Deposit Insurance Corporation; impacts from various measures to stimulate the economy and help borrowers refinance home mortgages; disruptions in the credit and debt markets and the effect on future funding costs, sources, and availability;

- volatility of market prices, rates, and indices, or other factors, such as natural disasters, that could affect the value of our investments or collateral; changes in the value or liquidity of collateral securing advances to our members;

- changes in the value of and risks associated with our investments in mortgage loans, mortgage-backed securities, and FFELP ABS and the related credit enhancement protections;

- changes in our ability or intent to hold mortgage-backed securities to maturity;

- changes in mortgage interest rates and prepayment speeds on mortgage assets;

- membership changes, including the withdrawal of members due to restrictions on our dividends or the loss of members through mergers and consolidations; changes in the financial health of our members, including the resolution of some members; risks related to expanding our membership to include more institutions with regulators and resolution processes with which we have less experience;

- increased reliance on short term funding and changes in investor demand for consolidated obligations and/or the terms of interest rate derivatives and similar agreements, including changes in the relative attractiveness of consolidated obligations as compared to other investment opportunities; changes in our cost of funds due to concerns over U.S. fiscal policy, and any related rating agency actions impacting FHLB consolidated obligations;

- political events, including legislative, regulatory, judicial, or other developments that affect us, our members, our counterparties and/or investors in consolidated obligations, including, among other things, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) and related regulations and proposals and legislation related to housing finance and GSE reform; changes by our regulator or changes affecting our regulator and changes in the FHLB Act or applicable regulations as a result of the Housing and Economic Recovery Act of 2008 (Housing Act) or as may otherwise be issued by our regulator; the potential designation of us as a nonbank financial company for supervision by the Federal Reserve;

- recent regulatory changes to FHLB membership requirements by the FHFA;

- the ability of each of the other FHLBs to repay the principal and interest on consolidated obligations for which it is the primary obligor and with respect to which we have joint and several liability;

- the pace of technological change and our ability to develop and support technology and information systems, including our ability to protect the security of our information systems and manage any failures, interruptions, or breaches in our information systems or technology services provided to us through third-party vendors;

- our ability to attract and retain skilled employees;

- the impact of new accounting standards and the application of accounting rules, including the impact of regulatory guidance on our application of such standards and rules;

- the impact of the application of audit independence rules to our independent auditor;

- the volatility of reported results due to changes in the fair value of certain assets and liabilities; and

- our ability to identify, manage, mitigate, and/or remedy internal control weaknesses and other operational risks.

For a more detailed discussion of the risk factors applicable to us, see **Risk Factors** on page 16.

These forward-looking statements are representative only as of the date they are made, and we undertake no obligation to update any forward-looking statement as a result of new information, future events, changed circumstances, or any other reason.

Executive Summary

2017 Financial Highlights

- We recorded net income of $317 million in 2017 compared to $327 million in 2016.
- Net interest income for 2017 was $483 million, which included $29 million of income from investment security prepayments during the period. For 2016, net interest income was $456 million, which included $47 million of income from investment security prepayments during the period. The increase in net interest income for 2017 was primarily the result of an increase in interest rates and growth in interest earning assets.
- Noninterest income was $44 million in 2017 compared to $76 million for 2016 due to $2 million in litigation settlement awards relating to our MBS portfolio in 2017 compared to $38 million in 2016.
- Noninterest expense was $174 million for 2017 compared to $167 million for 2016, driven mainly by an increase in compensation and benefits related expenses.
- Assets were $84.4 billion at year-end 2017 compared to $78.7 billion at year-end 2016. Growth in liquid investments such as Federal Funds sold and securities purchased under agreements to resell, advances, and a small net increase in MPF Loans held in portfolio helped offset the declines in investment securities.
- Advances outstanding were $48.1 billion in 2017, up 7% from the previous year-end level of $45.1 billion, reflective of member demand for competitive funding to support member investment and loan growth opportunities.
- MPF Loans held in portfolio increased to $5.2 billion in 2017 compared to $5.0 billion for 2016 as new MPF loan purchases continued to moderately outpace pay down and maturity activity.
- Total investment securities decreased 18% in 2017 to $17.3 billion, as our investment portfolio continued to pay down.
- Retained Earnings were $3.3 billion at year-end 2017, up from $3.0 billion at the end of 2016, and we remained in compliance with all of our regulatory capital requirements.
- Letter of Credit commitments increased to $19.6 billion in 2017, up from $10.8 billion at year-end 2016.

Summary and Outlook

Meeting Member Business Needs

We are committed to offering a suite of products that most appropriately support our members' businesses. Our success in doing so during 2017 is best illustrated by the growth in our advances and letters of credit products and member participation in MPF Program.

Our practice of providing the benefits of our funding advantage to our members and in designing products to fit our members' businesses contributed to the strong growth in advances. At year-end 2017, advances stood at $48.1 billion, up 7% from year-end 2016. Letters of credit also experienced significant growth as more members took advantage of those products, particularly the public unit deposit letters of credit. At year-end 2017, 199 members had letters of credit outstanding of $19.6 billion, up 81% from year-end 2016.

In 2017, the number of members that sold their single family mortgages into the MPF Program also rose. We served an increased number of PFIs, many of which are selling into the MPF conventional products. At year-end 2017, MPF Loans outstanding on our balance sheet were $5.2 billion, up 5% from year-end 2016. The Bank also supports other FHLBs and their members and growth also occurred on a total MPF Program level. The number of PFIs participating in the MPF Program grew by 4% and loans outstanding increased by 11% from year-end 2016. The MPF Program celebrated 20 years of providing liquidity to FHLB members during 2017.

Finally, our Board of Directors decided to increase the dividends declared on both classes of stock for the fourth quarter of 2017. We pay a higher dividend per share on Class B1 activity stock than on Class B2 membership stock to reward members that use our advances and, thereby, support the entire cooperative. The higher dividend received by members on Class B1 capital stock also has the effect of lowering their cost of borrowing from us.

Supporting Member Community Investment Goals

Supporting affordable housing is central to our mission to help our members support their communities. In 2017, 192 members reserved over $17.6 million in down payment assistance grants on behalf of approximately 3,122 homebuyers in their communities. Over $26.4 million was awarded through our competitive program to support 46 affordable housing projects located primarily in Illinois and Wisconsin. These awards will help our members' partners with the acquisition, rehabilitation, and new construction of over 2,366 housing units. Since 1989, we have awarded more than $427 million in competitive Affordable Housing Program grants and more than $173 million in Downpayment Plus grants that have provided down payment and closing cost assistance for income-eligible families.

Our commitment to assisting our members in serving their communities continued to expand in 2017 with the addition of the Community First Capacity-Building Grant Program. This program offers grants of $10,000 to $50,000 to assist qualifying nonprofit lenders to build their financial, operational, and human capital. In 2017, $250,000 was committed through this new program. True to the mission of our Community First platform, these grants are an opportunity to directly provide support to community development organizations working in our members' communities in an innovative and effective manner.

We have also committed $44 million of the $50 million revolving Community First Fund by year-end 2017 as part of our ongoing effort to directly fund CDFIs and community development loan funds (CDLFs). This past summer, Cinnaire Lending Corporation, a CDFI member of the Bank, became our ninth Fund partner and will use the funds to support multi-family affordable housing and community facilities throughout our district.

Critical Accounting Policies and Estimates

See **Note 2 - Summary of Significant Accounting Policies** and **Note 3 - Recently Issued but Not Yet Adopted Accounting Standards** to the financial statements for further details.

Estimating the Allowance for Credit Losses

See **Note 2 - Summary of Significant Accounting Policies and Note 8 - Allowance for Credit Losses** to the financial statements for further details.

Estimating Fair Value

See **Note 16 - Fair Value** to the financial statements for further details.

Controls over Internal Valuation Methodologies and Third-Party Pricing Vendors

Segregation of duties is a key control over our internal valuation methodologies and third-party pricing vendors. In this regard, our segregation of duties is outlined below.

- Senior management is responsible for our valuation policies. Senior management's responsibility is independent of our investing and treasury functions.
- The Asset/Liability Management Committee approves fair value policies and reviews the appropriateness of current valuation methodologies and policies. Model valuation is overseen by the Risk Management Committee of the Board of Directors.
- The Audit Committee of the Board of Directors oversees the remediation of gaps in models identified as a result of our governance process.
- The Risk Management Group prepares the fair value measurements of our financial instruments, evaluates the appropriateness of the fair values generated by pricing models, and assures the reasonableness and consistent application of valuation approaches and assumptions utilized in cases where unobservable inputs are utilized. In addition, the group performs control processes to ensure the fair values received from third-party pricing services are consistent with GAAP fair value measurement guidance.
- The Risk Management Group's responsibility is independent of our investing and treasury management functions.

Other control processes over our internal valuation methodologies include, but are not limited to, the following:

- Reviewing the pricing model's theoretical soundness and appropriateness by personnel with relevant expertise who are independent from the fair value measurement function.
- Back testing models to subsequent transactions (e.g. termination of a derivative), analysis of actual cash flows to projected cash flows, comparisons with similar observable positions, and comparisons with information received from pricing services for financial instruments where prices or valuations require unobservable inputs.

Other control processes over third-party pricing vendors, include, but are not limited to, the following:

- Understanding and evaluating the fair value measurements received on each major investment security type to ensure that the amounts reported in our financial statements as well as our fair value disclosures comply with GAAP.

- Utilizing all fair value inputs received from multiple third-party pricing vendors to determine the fair value of an individual security unless we determine that exclusion of a fair value input is appropriate based on our control processes.

- Discussions with our third-party pricing vendors to ensure that they are in compliance with fair value measurement guidance under GAAP. Such discussions focus on the following:

  - Understanding their pricing models to the extent possible, as some pricing models are proprietary in nature.
  - Understanding the principal or most advantageous market selected and our ability to access that market.
  - Assumptions and significant inputs used in determining the fair value measurement.
  - The appropriateness of the fair value hierarchy level as of the reporting date.
  - Whether the market was active or illiquid as of the reporting date.
  - Whether transactions were between willing buyers and sellers or distressed in nature as of the reporting date.
  - Whether the fair value measurements as of the reporting date is based on current or stale assumptions and inputs.

- Obtaining the third party pricing vendor methodologies and control reports.

- Challenging fair value measurements received that represent outliers to the fair value measurements received on the same financial instrument from a different third-party pricing service. We document these challenges on a monthly basis.

- Examining the underlying inputs and assumptions for a sample of individual securities across asset classes and average life.

- Identifying stale prices, prices changed significantly from prior valuations, and other anomalies that may indicate that a price may not be accurate.

- Performing implied yield analysis to identify anomalies.

Results of Operations

Net Interest Income

Net interest income is the difference between the amount we recognize into interest income on our interest earning assets and the amount we recognize into interest expense on our interest bearing liabilities. These amounts were determined in accordance with GAAP and were based on the underlying contractual interest rate terms of our interest earning assets and interest bearing liabilities as well as the following items:

- Net interest paid or received on interest rate swaps that are accounted for as fair value or cash flow hedges;
- Amortization of premiums;
- Accretion of discounts and OTTI reversals;
- Amortization of hedge adjustments;
- Advance and investment prepayment fees; and
- MPF credit enhancement fees.

The tables on the following page present the increase or decrease in interest income and expense due to volume or rate variances. The calculation of these components includes the following considerations:

- *Average Balance:* Average balances are calculated using daily balances. Amortized cost basis is used to compute the average balances for most of our financial instruments, including MPF Loans held in portfolio that are on nonaccrual status and available for sale securities. The calculation of the yield on our available for sale securities does not give effect to changes in fair value that are reflected as a component of accumulated other comprehensive income (AOCI). Fair value is used to compute average balances for our trading securities and financial instruments carried at fair value under the fair value option.

- *Total Interest:* Total interest includes the net interest income components, as discussed above, applicable to our interest earning assets and interest bearing liabilities.

- *Yield/Rate:* Effective yields/rates are based on total interest and average balances as defined above. Yields/rates are calculated on an annualized basis.

- Any changes due to the combined volume/rate variance have been allocated to volume.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

2017 compared to 2016

	2017			2016			Increase (decrease) due to		
For the years ended December 31,	**Average Balance**	**Total Interest**	**Yield/ Rate**	Average Balance	Total Interest	Yield/ Rate	**Volume**	**Rate**	**Net Change**
Investment securities	**$ 18,217**	**$ 656**	**3.60%**	$ 21,874	$ 719	3.29%	**$ (131)**	**$ 68**	**$ (63)**
Advances	**46,996**	**560**	**1.19%**	42,545	290	0.68%	**53**	**217**	**270**
MPF Loans held in portfolio	**4,946**	**213**	**4.31%**	4,721	218	4.62%	**10**	**(15)**	**(5)**
Federal funds sold and securities purchased under agreements to resell	**11,040**	**115**	**1.04%**	6,238	25	0.40%	**50**	**40**	**90**
Other interest bearing assets	**1,270**	**14**	**1.10%**	1,501	7	0.47%	**(2)**	**9**	**7**
Interest bearing assets	**82,469**	**1,558**	**1.89%**	76,879	1,259	1.64%	**107**	**192**	**299**
Noninterest bearing assets	**821**			743					
Total assets	**83,290**			77,622					
Consolidated obligation discount notes	**40,157**	**527**	**1.31%**	43,303	359	0.83%	**(40)**	**208**	**168**
Consolidated obligation bonds	**37,235**	**533**	**1.43%**	28,050	411	1.47%	**133**	**(11)**	**122**
Subordinated notes	**—**	**—**	**—%**	423	24	5.67%	**(24)**	**—**	**(24)**
Other interest bearing liabilities	**907**	**15**	**1.65%**	831	9	1.08%	**1**	**5**	**6**
Interest bearing liabilities	**78,299**	**1,075**	**1.37%**	72,607	803	1.11%	**83**	**189**	**272**
Noninterest bearing liabilities	**340**			459					
Total liabilities	**78,639**			73,066					
Net yield on interest bearing assets	**$ 82,469**	**$ 483**	**0.59%**	$ 76,879	$ 456	0.59%	**$ 27**	**$ —**	**$ 27**

- Interest income from investment securities declined as MBS/ABS matured or paid down and we were unable to make additional investments in MBS/ABS under FHFA regulatory limits as discussed in **Investments** on page 10. One of the limits is that our investment in MBS/ABS cannot exceed three times our total regulatory capital. We expect to resume making MBS and ABS investments, sometime in 2018, subject to regulatory limitations.

- Interest income from advances increased primarily due to a rise in interest rates, which resulted primarily from rate hikes by the Federal Reserve Bank in 2017. Interest income also increased as a result of higher member demand for advances.

- Interest income from MPF Loans held in portfolio declined due to lower average interest rates. The decline resulted from maturing higher yield MPF Loans being replaced with new lower yield MPF Loans. The new MPF Loans offset the decline by increasing the amount of MPF Loans outstanding.

- Interest income from Federal Funds sold and securities purchased under agreements to resell increased both due to higher volumes outstanding and increases in interest rates by the Federal Reserve Bank. The increase in the amounts of these liquid assets reflects the increase in mission related assets on our balance sheet.

- Interest expense on our shorter termed consolidated obligation discount notes increased due to rising short term interest rates but was partially offset as we shifted a portion of our funding to longer termed consolidated obligation bonds in 2017.

- Interest expense on our consolidated obligation bonds increased as we shifted a portion of our funding, on a daily average basis over the two years, to longer termed bonds. The rates on these bonds declined slightly in 2017 compared to 2016, primarily due to our increasing use of variable rate debt, which carries a lower interest rate than fixed rate debt. The average amount of variable rate debt outstanding in 2017 was approximately double that of 2016. See **Note 10 - Consolidated Obligations** to the financial statements for details.

- Our subordinated notes were paid off on June 13, 2016.

For details of the effect our fair value and cash flow hedge activities had on our net interest income see **Derivatives and Hedging Activities, and Instruments Held at Fair Value Option** on page 43.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

2016 compared to 2015

	2016			2015			Increase (decrease) due to		
For the years ended December 31,	Average Balance	Total Interest	Yield/ Rate	Average Balance	Total Interest	Yield/ Rate	Volume	Rate	Net Change
Investment securities	$ 21,874	$ 719	3.29%	$ 24,408	$ 805	3.30%	$ (84)	$ (2)	$ (86)
Advances	42,545	290	0.68%	33,306	181	0.54%	62	47	109
MPF Loans held in portfolio	4,721	218	4.62%	5,323	256	4.81%	(28)	(10)	(38)
Federal funds sold and securities purchased under agreements to resell	6,238	25	0.40%	6,254	8	0.13%	—	17	17
Other interest bearing assets	1,501	7	0.47%	1,466	2	0.14%	—	5	5
Interest bearing assets	76,879	1,259	1.64%	70,757	1,252	1.77%	99	(92)	7
Noninterest bearing assets	743			1,054					
Total assets	77,622			71,811					
Consolidated obligation discount notes	43,303	359	0.83%	36,274	294	0.81%	58	7	65
Consolidated obligation bonds	28,050	411	1.47%	28,955	396	1.37%	(14)	29	15
Subordinated notes	423	24	5.67%	944	54	5.72%	(30)	—	(30)
Other interest bearing liabilities	831	9	1.08%				9	—	9
Interest bearing liabilities	72,607	803	1.11%	66,173	744	1.12%	66	(7)	59
Noninterest bearing liabilities	459			1,080					
Total liabilities	73,066			67,253					
Net yield on interest-earning assets	$ 76,879	$ 456	0.59%	$ 70,757	$ 508	0.72%	$ 40	$ (92)	$ (52)

- Interest income from investment securities declined primarily due to the reduction in average balances as securities matured or paid down.

- Interest income from advances primarily increased due to higher member demand. Higher member demand was primarily driven by our Reduced Capitalization Advance Program (RCAP). Specifically, our RCAP makes the net borrowing cost for new advances more attractive to members by allowing them to borrow using less activity based capital stock. Interest income on advances also increased due to higher interest rates, primarily resulting from Federal Reserve Bank's actions at year end 2015.

- Interest income from MPF Loans held in portfolio declined primarily due to the reduction in average balances as MPF Loans continued to paydown during 2016; however, the decline in interest income on MPF Loans held in portfolio in 2016 was smaller compared to the decline in 2015. This is because MPF Loan purchases outpaced MPF Loan paydowns in the second half of 2016, which resulted in a small net increase in the current balance of MPF Loans held in portfolio at the end of 2016 compared to the end of 2015. Additionally, the paydown of our higher interest rate MPF Loans held in portfolio contributed to the decline in interest income from MPF Loans held in portfolio.

- Interest expense on our consolidated obligations primarily increased due to overall higher average balances required to match the increased advance lending to our members in 2016. Towards year end we began to replace shorter term discount notes with higher rate long term consolidated obligations, however the impact on average balances for the year was insignificant. The increase in consolidated obligation interest expense was slightly offset by the retirement of our higher cost subordinated debt, which matured in the second quarter of 2016.

- For details of the effect our fair value and cash flow hedge activities had on our net interest income during 2016 and 2015 see **Derivatives and Hedging Activities, and Instruments Held at Fair Value Option** on page 43.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Noninterest income

For the years ended December 31,	**2017**	2016	2015
Derivatives and hedging activities	**$ 8**	$ 1	$ (16)
Instruments held under fair value option	**(2)**	5	8
Litigation settlement awards	**2**	38	13
MPF fees, **20** , 17 and 11 from other FHLBs	**28**	27	17
Other, net	**8**	5	1
Noninterest income	**$ 44**	$ 76	$ 23

Derivatives and Hedging Activities, and Instruments Held Under Fair Value Option

Derivatives and hedging activities, and instruments held under the fair value option were not significant to our statements of income over the last three years. Instead, the majority of the effect from our derivatives and hedging activities is recorded in net interest income. The following table details the effect of all of these transactions on our results of operations.

	Advances	**Investments**	**MPF Loans**	**Discount Notes**	**Bonds**	**Other**	**Total**
Year ended December 31, 2017							
Recorded in net interest income	**$ (22)**	**$ (90)**	**$ (6)**	**$ (168)**	**$ 28**	**$ —**	**$ (258)**
Recorded in derivatives & hedging activities	**6**	**(8)**	**7**	**3**	**(1)**	**1**	**8**
Recorded on instruments held under fair value option	**(5)**	**—**	**(4)**	**—**	**7**	**—**	**(2)**
Recorded in other, net	**—**	**1**	**—**	**—**	**—**	**—**	**1**
Total net effect gain (loss) of hedging activities	**$ (21)**	**$ (97)**	**$ (3)**	**$ (165)**	**$ 34**	**$ 1**	**$ (251)**
Year ended December 31, 2016							
Recorded in net interest income	$ (60)	$ (122)	$ (9)	$ (195)	$ 59	$ —	$ (327)
Recorded in derivatives & hedging activities	14	1	6	2	(22)	—	1
Recorded on instruments held under fair value option	(7)	—	(4)	(2)	18	—	5
Recorded in other, net	—	(2)	—	—	—	—	(2)
Total net effect gain (loss) of hedging activities	$ (53)	$ (123)	$ (7)	$ (195)	$ 55	$ —	$ (323)
Year ended December 31, 2015							
Recorded in net interest income	$ (74)	$ (146)	$ (13)	$ (242)	$ 202	$ —	$ (273)
Recorded in derivatives & hedging activities	(2)	(13)	3	9	(13)	—	(16)
Recorded on instruments held under fair value option	(2)	—	(1)	2	9	—	8
Recorded in other, net	—	(1)	—	—	—	—	(1)
Total net effect gain (loss) of hedging activities	$ (78)	$ (160)	$ (11)	$ (231)	$ 198	$ —	$ (282)

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Litigation settlement awards

Litigation settlement awards were not material in 2017. In 2016 we received $38 million in settlement awards on our ongoing litigation related to our investment in private label mortgage backed securities as further discussed in **Note 5 - Investment Securities - Ongoing Litigation** to the financial statements on page F-31.

MPF fees (including from other FHLBs)

A majority of MPF fees are from other FHLBs that pay us a fixed membership fee to participate in the MPF Program and a volume based fee for us to provide services related to their on balance sheet MPF Loans. MPF fees also include income from off-balance sheet MPF Loan products and other related transaction fees. These fees offset a portion of the expenses we incur to administer the program. MPF fees have grown as off balance sheet MPF Loan volume increases.

Other, net

Other, net consists primarily of fee income we earn from member standby letters of credit products, as noted in **Item 6. Selected Financial Data,** where balances outstanding have grown.

Noninterest Expense

For the years ended December 31,	**2017**	2016	2015
Compensation and benefits	**$ 100**	$ 94	$ 81
Operating expenses	**62**	60	51
Other	**12**	13	6
Noninterest expense	**$ 174**	$ 167	$ 138

Compensation and benefits

Compensation and benefits increased due to increased employee headcount and increases in salaries and wages. We had 460 employees as of December 31, 2017, compared to 440 as of December 31, 2016, and 422 as of December 31, 2015. Our primary benefit is the Pension Plan. See **Note 15 - Employee Retirement Plans** to the financial statements for further details.

Operating expenses

Operating expenses continued to increase primarily due to increased information technology infrastructure and security spending, although the rate of the increase was less in 2017 than in 2016.

Other

Other consists primarily of our share of the funding for the FHFA, our regulator, and the Office of Finance, which manages our consolidated obligation debt issuances of the FHLBs. These costs have been steady at $9 million, $8 million, and $8 million for 2017, 2016, and 2015. In addition, Other includes legal fees we incurred related to settlements as noted in **Litigation settlement awards** on the top of the page. These legal costs were $2 million, $5 million, and $2 million for 2017, 2016, and 2015. In addition, Other includes MPF related non-operating expenses/gains on the sale of real estate owned.

Assessments

We record the Affordable Housing Program (AHP) assessment expense at a rate of 10% of income before assessments, excluding interest expense on MRCS. See **Note 11 - Affordable Housing Program** to the financial statements for further details.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Other Comprehensive Income (Loss)

	For the years ended December 31,			Balance remaining in AOCI as of
For the years ended December 31,	**2017**	2016	2015	**December 31, 2017**
Net unrealized gain (loss) available-for-sale securities	**$ (52)**	$ (199)	$ (402)	**$ 407**
Noncredit OTTI held-to-maturity securities	**34**	40	47	**(143)**
Net unrealized gain (loss) cash flow hedges	**165**	151	117	**(147)**
Postretirement plans	**1**	—	(7)	**(5)**
Other comprehensive income (loss)	**$ 148**	$ (8)	$ (245)	**$ 112**

Net unrealized gain (loss) on available-for-sale securities

The net unrealized loss on our available for sale (AFS) portfolio for 2017 is attributable to the reversal of net unrealized gains from prior reporting periods. The net unrealized gains on our AFS securities reverse as these securities approach maturity. This is because we expect to receive par value at the maturity of these AFS securities. The smaller unrealized loss during 2017 compared to 2016 and 2015 resulted from slight increases in longer term market interest rates from year to year. As of December 31, 2017, we had a net unrealized gain balance remaining in AOCI attributable to our AFS portfolio.

Noncredit OTTI on held-to-maturity securities

We recorded unrealized noncredit impairments on held-to-maturity securities during the last financial crisis. As the market has recovered and because we intend to hold these securities to maturity, we are recording accretion to write back up the carrying amount of the securities, reversing the remaining loss balance in AOCI. The annual accretion gains declined in 2017 and are expected to continue to decline as the securities near maturity.

Net unrealized gain (loss) on cash flow hedges

The net unrealized gain on cash flow hedges during the three years presented resulted from an increase in shorter term interest rates as a result of actions by the Federal Reserve Bank.

For further details on the activity in our Other Comprehensive Income (Loss) see **Note 14 - Accumulated Other Comprehensive Income (Loss)** to the financial statements.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Statements of Condition

As of	December 31, 2017	December 31, 2016
Cash and due from banks, interest bearing deposits, Federal Funds sold, and securities purchased under agreement to resell	$ 13,378	$ 7,376
Investment securities	17,347	21,035
Advances	48,085	45,067
MPF Loans held in portfolio, net of allowance for credit losses	5,193	4,967
Other	352	247
Assets	$ 84,355	$ 78,692
Consolidated obligation discount notes	$ 41,191	$ 35,949
Consolidated obligation bonds	37,121	36,903
Other	1,191	1,145
Liabilities	79,503	73,997
Capital stock	1,443	1,711
Retained earnings	3,297	3,020
Accumulated other comprehensive income (loss)	112	(36)
Capital	4,852	4,695
Total liabilities and capital	$ 84,355	$ 78,692

Cash and due from banks, interest bearing deposits, Federal Funds sold, and securities purchased under agreements to resell

Amounts held in these accounts will vary each day based on the following:

- Interest rate spreads between Federal Funds sold and securities purchased under agreements to resell and our debt;
- Liquidity requirements;
- Counterparties available; and
- Collateral availability on securities purchased under agreements to resell.

The increase in the amounts of these liquid assets reflects the increase in mission related assets on our balance sheet.

Investment Securities

Investment securities declined as securities matured or paid down and were not replaced, as noted in **Results of Operations** on page 41.

Advances

Advances increased to the highest outstanding balance in our history in 2017 due to strong market demand for funding in our district. While advance demand is strong, it is possible that member demand for our advances could decline in future periods should their funding needs change, or to the extent they elect alternative funding resources. In addition, as our advances with captive insurance companies mature, our total advance levels may decrease.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The following table sets forth the current period par amount of advances outstanding for the five largest advance borrowers:

As of	December 31, 2017	
One Mortgage Partners Corp. [a]	$ 11,000	22.9%
The Northern Trust Company	6,000	12.5%
BMO Harris Bank, NA	5,975	12.4%
Associated Bank, NA	3,184	6.6%
State Farm Bank, F.S.B.	2,349	4.9%
All other borrowers	19,512	40.7%
Total par value	$ 48,020	100.0%

[a] One Mortgage Partners Corp. is a subsidiary of JPMorgan Chase Bank NA.

The following table presents outstanding advances by type of institution. Former members may withdraw from membership or merge with out-of-district institutions but continue to hold advances.

As of	December 31, 2017	December 31, 2016
Members		
Commercial banks	$ 24,276	$ 22,672
Savings institutions	3,900	4,950
Credit unions	1,584	1,044
Insurance companies	18,203	16,220
Community Development Financial Institutions	32	10
Members total	47,995	44,896
Former members and Housing Associates	25	69
Total at par	48,020	44,965
Fair value hedging and other adjustments	65	102
Balance on the statements of condition	$ 48,085	$ 45,067

MPF Loans Held in Portfolio, Net of Allowance for Credit Losses

We had a small net increase in our outstanding MPF Loans from prior year end, as our purchases of new loans during 2017 offset maturities and paydowns experienced in our MPF Loan portfolio.

In addition to our MPF Loans held in portfolio, we have MPF Loan held for sale products, where we buy and concurrently resell MPF Loans to Fannie Mae or other third party investors or pool and securitize them into Ginnie Mae MBS. Demand for these products systemwide also increased.

Hurricanes and California Wildfires

During the third quarter of 2017, three significant hurricanes impacted the southeastern coasts of the United States and Puerto Rico. We also monitored the significant wildfires in California that occurred in October 2017. These events did not have a material impact on our financial condition or results of operation in 2017. Based on the information currently available, we do not expect that the potential losses resulting from these events will have a material effect in future periods. If additional information becomes available indicating that any of our assets have been impaired and the amount of the loss can be reasonably estimated, we will record appropriate reserves at that time.

Additionally, in response to the hurricanes and California wildfires, we communicated to mortgage loan servicers of our conventional MPF Loans held in portfolio that special relief would be available for certain borrowers, including forbearance or temporary suspension of mortgage payments for up to 90 days for borrowers whose income is affected by the disaster or for borrowers whose property is located in a FEMA disaster designated area. To assist individuals and households displaced by the hurricanes, we have announced that vacant AHP-assisted rental units may be temporarily leased to displaced individuals/households, regardless of income.

Liquidity, Funding, & Capital Resources

Liquidity

We establish our liquidity position primarily based on the factors outlined below.

- FHFA regulations and guidance.
- Policies established by our Board of Directors.
- Member demand for short- and long-term funds.
- Maturing consolidated obligations as well as obligations arising from our normal operating activities.

We seek to be in a position to meet our members' credit and liquidity needs without maintaining excessive holdings of low-yielding liquid investments or being forced to incur unnecessarily high borrowing costs.

Liquidity from Investments

Our sources of liquidity from investments are short-term liquid assets, primarily overnight Federal Funds sold and securities purchased under agreements to resell. Our ability to utilize these investments for liquidity purposes may be affected if the credit markets experience disruptions, as discussed below.

- Our ability to use Federal Funds sold is restricted under our current policy and FHFA regulations. Specifically, we restrict these investments to short maturities and eligible counterparties as discussed in **Unsecured Short Term Investments** on page 70 because such investments are unsecured. If the credit markets experience disruptions, and as a result one of our counterparties became insolvent or otherwise defaulted on their obligation to us, these investments would not satisfy our liquidity needs and we may incur a loss.

- Securities purchased under agreements to resell are secured by marketable securities held by a third-party custodian. If the credit markets experience disruptions, and as a result one of our counterparties became insolvent or otherwise defaulted on their obligations to us, these investments would not satisfy our liquidity needs if the collateral pledged to secure those obligations has decreased in value. In such cases, we also may suffer a loss. See **Investment Securities by Rating** on page 67 for further discussion and a summary of counterparty credit ratings for these investments.

Other sources of liquidity from investing activities include trading securities, maturing advances, and maturing MPF Loans.

Liquidity from Debt

Our source of liquidity from debt is the issuance of new consolidated obligation bonds and discount notes.

Liquidity Measures

We use different measures of liquidity as follows:

<u>Overnight Liquidity</u> - Our overnight liquidity requirement is established by our Asset/Liability Committee. Currently, our Asset/Liability Management Policy (ALM Policy) requires us to maintain overnight liquid assets at least equal to 3.5% of total assets. Under our ALM Policy, overnight liquidity includes money market assets, Federal Funds sold, paydowns of advances, MPF Loans with one day to maturity, and inter FHLB loans with one day to maturity. As of December 31, 2017, our overnight liquidity was $16.3 billion or 19.3% of total assets. This amount represents excess overnight liquidity of $13.3 billion over the minimum threshold of 3.5% of total assets.

<u>Deposit Coverage</u> - To support our member deposits, FHFA regulations require us to have an amount equal to the current deposits invested in obligations of the U.S. government, deposits in eligible banks or trust companies, or advances with maturities not exceeding five years. As of December 31, 2017, we had excess liquidity of $43.3 billion to support member deposits.

<u>Contingency Liquidity</u> - FHFA regulations require us to maintain enough contingency liquidity to meet our liquidity needs for five business days without access to the debt market. Contingent liquidity is defined as: (a) marketable assets with a maturity of one year or less; (b) self-liquidating assets with a maturity of seven days or less; (c) assets that are generally accepted as collateral in the repurchase agreement market; and (d) irrevocable lines of credit from financial institutions that are considered to be of investment quality. Our ALM Policy defines our liquidity needs for five business days as an amount equal to the total of all principal and interest payments on non-deposit liabilities coming due in the next five business days plus a reserve consisting of one-fourth of customer deposits and $1.0 billion. Our net liquidity in excess of our total uses and reserves over a cumulative

(Dollars in tables in millions except per share amounts unless otherwise indicated)

five-business-day period was $18.0 billion as of December 31, 2017.

In addition to the liquidity measures discussed above, FHFA guidance requires us to maintain daily liquidity through short-term investments in an amount at least equal to our anticipated cash outflows under two different scenarios. One scenario assumes that we cannot access the capital markets for 15 days and that during that time members do not renew any maturing, prepaid, and called advances. The second scenario assumes that we cannot access the capital markets for 5 days and that during that period we will automatically renew maturing and called advances for all members except for very large, highly rated members. These additional requirements are more stringent than the five business day contingency liquidity requirement discussed above and are designed to enhance our protection against temporary disruptions in access to the FHLB debt markets in response to a rise in capital markets volatility. As a result of this guidance, we are maintaining increased balances in short-term investments. We may fund certain overnight or shorter-term investments and advances with debt that has a maturity that extends beyond the maturities of the related investments or advances. For a discussion of how this may impact our earnings, see **Risk Factors** on page 16.

In July 2017, the FHFA announced it would issue new liquidity requirements as further discussed in **Recent Legislative and Regulatory Developments** on page 13. To the extent that new regulatory directives increase our liquidity requirements in the future, our business activities and operations could be adversely affected.

We are sensitive to maintaining an appropriate liquidity and funding balance between our financial assets and liabilities, and we measure and monitor the risk of refunding such assets as liabilities mature (refunding risk). In measuring the level of assets requiring refunding, we take into account their contractual maturities, as further described in the notes to the financial statements. In addition, we make certain assumptions about their expected cash flows. These assumptions include: calls for assets with such features, projected prepayments and scheduled amortizations for our MPF Loans held in portfolio, MBS and ABS investments. The following table presents the unpaid principal balances of (1) MPF Loans held in portfolio, (2) AFS securities, and (3) HTM securities (including ABS and MBS investments), by expected principal cash flows. The table is illustrative of our assumptions about the expected cash flow of our assets, including prepayments made in advance of maturity.

		Investment Securities	
As of December 31, 2017	**MPF Loans Held in Portfolio**	**Available-for Sale**	**Held-to-Maturity**
Year of Expected Principal Cash Flows			
One year or less	$ 841	$ 1,558	$ 1,896
After one year through five years	2,070	8,854	2,078
After five years through ten years	1,228	1,426	435
After ten years	981	570	114
Total	$ 5,120	$ 12,408	$ 4,523

We consider our liabilities available to fund assets until their contractual maturity. For further discussion of the liquidity risks related to our access to funding, see **Risk Factors** on page 16.

FHLB P&I Funding and Contingency Plan Agreement. We have entered into an agreement with the other FHLBs and the Office of Finance regarding the Federal Reserve's intraday funding process to provide a mechanism for the FHLBs to provide liquidity to avert a shortfall in the timely payment of principal and interest on any consolidated obligations by one or more FHLBs. We may increase our liquidity ratio for a designated month out of an 11 month rotation to mitigate the risk that we are required to fund under the FHLB P&I Funding and Contingency Plan Agreement. Through the date of this report, no FHLB has been required to fund under this contingency agreement.

Funding

We maintained ready access to funding throughout 2017.

Conditions in Financial Markets

In December 2017, the Federal Open Market Committee (FOMC) raised the target range for the federal fund rate by 25 basis points to a range of 1.25 percent to 1.50 percent. This is the fourth hike following 25 basis points increases in each of December 2016, March 2017, and June 2017. Additionally, in September 2017, the FOMC initiated its balance sheet normalization program to shrink its balance sheet by reducing reinvestment purchases of U.S. Treasuries and agency mortgage-backed securities. It appears that the FOMC is continuing to normalize policy rates in a gradual manner. The markets anticipate another 25 basis point increase in the target range for the federal fund rate in the first quarter of 2018.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

We maintained ready access to funding throughout 2017. However, the U.S. Treasury has projected that the statutory "debt ceiling" limit could be reached in the first quarter of 2018. In preparation for the possibility of disorderly markets caused by potential debt defaults of the U.S. Government, we will be monitoring our liquidity position.

Liquidity Analysis - Statement of Cash Flows

Our assets and liabilities support our mission to provide our member shareholders competitively priced funding, a reasonable return on their investment in our capital stock, and support for their community investment activities. Our assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by member-driven activities and market conditions. We believe the cash flows from our operating and financing activities are sufficient to fund both our operating and investing liquidity needs.

Cash flows from operating activities with significant year over year changes

For the years ended December 31,	**2017**	2016	Change	2015	Change
Net income	**$ 317**	$ 327	$ (10)	$ 349	$ (22)
Change in net fair value on derivatives and hedging activities	**311**	192	119	326	(134)
Other	**(88)**	(37)	(51)	(105)	68
Net cash provided by (used in) operating activities	**$ 540**	$ 482	$ 58	$ 570	$ (88)

The net cash flows provided by our operating activities was $540 million. This amount was primarily driven by our net income as adjusted by noncash transactions and partially offset by net cash outflows attributable to the securitizations of mortgage loans. The increase in net cash provided by operating activities in 2017 as compared to 2016 of $58 million primarily resulted from the noncash adjustment attributable to the change in fair value of derivatives and hedging activities, which was partially offset by the change in net cash flows from the securitizations of mortgage loans.

For 2016 compared to 2015, the $(88) million change in net cash provided by (used in) operating activities primarily resulted from the change in the fair value of our derivative instruments partially offset by reduced cash outflows from other operating assets and liabilities.

Cash flows from investing activities with significant year over year changes

For the years ended December 31,	**2017**	2016	Change	2015	Change
Net cash flows on interest bearing deposits, Federal Funds sold, and securities purchased under agreement to resell	**$ (6,311)**	$ (3,298)	$ (3,013)	$ 1,758	$ (5,056)
Net cash flows on investment securities	**3,604**	3,329	275	2,261	1,068
Net cash flows on advances	**(3,055)**	(8,361)	5,306	(4,301)	(4,060)
Net cash flows on MPF Loans held in portfolio	**(233)**	(142)	(91)	1,220	(1,362)
Other	**21**	33	(12)	31	2
Net cash provided by (used in) investing activities	**$ (5,974)**	$ (8,439)	$ 2,465	$ 969	$ (9,408)

Our investing activities predominantly include advances, MPF Loans held in portfolio, investment securities, and other short-term interest-earning assets.

Net cash used in investing activities for 2017 decreased by $2.5 billion compared to 2016 primarily from a net decrease in cash outflows on advances, offset by a increase in cash outflows on liquid assets (to match the increase in mission related assets on our balance sheet).

For 2016 compared to 2015, the $(9.4) billion change in net cash provided by (used in) investing activities primarily resulted from our continued emphasis on being member focused by acquiring liquid investment assets to meet the needs of our members, funding advances to our members, and resuming the purchase of MPF Loans to be held in portfolio.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Cash flows from financing activities with significant year over year changes

For the years ended December 31,	2017	2016	Change	2015	Change
Net cash provided by (used in) financing activities -					
Net cash flows on discount notes	**$ 5,216**	$ (5,627)	$ 10,843	$ 10,495	$ (16,122)
Net cash flows on consolidated obligation bonds	**209**	14,455	(14,246)	(11,679)	26,134
Payments for retiring of subordinated debt	**—**	(944)	944	—	(944)
Net cash flows on capital stock	**(263)**	61	(324)	50	11
Other	**(37)**	(136)	99	(248)	112
Net cash provided by (used in) financing activities	**$ 5,125**	$ 7,809	$ (2,684)	$ (1,382)	$ 9,191

Our financing activities primarily reflect cash flows related to issuing and repaying consolidated obligations. The proceeds from the net increases in our consolidated obligation discount notes and consolidated obligations bonds were primarily utilized to fund the net increases in our investing activities as noted above.

Net cash provided by financing activities changed by $(2.7) billion compared to 2016. Although we issued more consolidated obligations in 2017, net cash provided decreased due to the additional funding of advances to our members and the repurchase of capital stock from our members. We began repurchasing all excess Class B2 membership stock on a weekly basis at par in 2017.

For 2016 compared to 2015, the $9.2 billion change in net cash provided by (used in) financing activities primarily resulted from a net increase in our consolidated obligation debt outstanding to fund the increases in investing activities (with a shift in funding from our consolidated obligation discount notes to consolidated obligation bonds) and the retirement of our subordinated notes.

Sources of Funding

We fund our assets principally with consolidated obligations (bonds and discount notes) issued through the Office of Finance, deposits, and capital stock. As of December 31, 2017, our consolidated obligations were rated AA+ (with outlook stable) by S&P and Aaa (with outlook stable) by Moody's. Consolidated obligations have GSE status although they are not obligations of the United States and the United States does not guarantee them.

Reliance on short-term debt offers us certain advantages which are weighed against the increased risk of using short-term debt. Traditionally we have benefited from interest rates below LIBOR rates for our short-term debt which has resulted in a positive impact on net interest income when used to fund LIBOR-indexed assets.

The following table summarizes our short-term discount notes and consolidated obligation bonds with original maturities of one year or less. Weighted average rates exclude hedging adjustments.

	Discount Notes (carrying amount)			**Short-Term Consolidated Obligation Bonds (par value)**		
As of or for the years ended December 31,	**2017**	2016	2015	**2017**	2016	2015
Outstanding at period end	**$ 41,191**	$ 35,949	$ 41,564	**$ 9,595**	$ 11,365	$ —
Weighted average rate at period-end	**1.23%**	0.46%	0.22%	**1.33%**	0.61%	—%
Daily average outstanding for the year-to-date period	**$ 40,157**	$ 43,303	$ 36,274	**$ 11,790**	$ 7,050	$ 458
Weighted average rate for the year-to-date period	**0.88%**	0.28%	0.14%	**0.75%**	0.44%	0.07%
Highest outstanding at any month-end during the year-to-date period	**$ 45,460**	$ 46,528	$ 45,817	**$ 12,990**	$ 12,165	$ 3,000

We comply with FHFA regulations that require we maintain the following types of assets free from any lien or pledge in an amount at least equal to the amount of our consolidated obligations outstanding:

- cash;
- obligations of, or fully guaranteed by, the United States;
- secured advances;
- mortgages, which have any guaranty, insurance, or commitment from the United States or any agency of the U.S. government; and
- investments described in Section 16(a) of the FHLB Act, which, among other items, includes securities that a fiduciary or trust fund may purchase under the laws of the state in which the FHLB is located.

At December 31, 2017, we had eligible assets free from pledges of $84.2 billion, compared to our outstanding consolidated obligations of $78.3 billion.

The Office of Finance has responsibility for the issuance of consolidated obligations. It also services all outstanding debt, provides us with information on capital market developments, manages our relationship with ratings agencies with respect to consolidated obligations, and prepares the FHLBs' combined quarterly and annual financial statements. The Office of Finance will allocate the proceeds from the issuance of consolidated obligations that cannot be issued in sufficient amounts to satisfy all FHLB demand for funding during periods of financial distress and when its existing allocation processes are deemed insufficient. In general, the proceeds in such circumstances will be allocated among the FHLBs based on regulatory capital unless the Office of Finance determines that there is an overwhelming reason to adopt a different allocation method. As is the case during any instance of disruption in our ability to access the capital market, market conditions or this allocation could adversely impact our ability to finance our operations, which could thereby adversely impact our financial condition and results of operations.

Consolidated Obligation Bonds

Consolidated obligation bonds (bonds) satisfy term funding requirements and are issued under various programs. The maturities of these securities may range from less than one year to over 20 years, but they are not subject to any statutory or regulatory limits on maturity. The bonds can be fixed or adjustable rate, and callable or non-callable. We also offer fixed-rate, non-callable (bullet) bonds via the FHLBs' Tap issue program. This program uses specific maturities that may be reopened daily during a three month period through competitive auctions. The goal of the Tap program is to aggregate frequent smaller issues into a larger bond issue that may have greater market liquidity.

Although we issue fixed-rate bullet and callable bonds, we may also issue bonds that have adjustable rates, step-up rates that step-up or increase at fixed amounts on predetermined dates, zero-coupons, and other types of rates. See **Note 10 - Consolidated Obligations** to the financial statements for details. Bonds are issued and distributed daily through negotiated or competitively bid transactions with approved underwriters or selling groups.

We receive 100% of the net proceeds of a bond issued via direct negotiation with underwriters of FHLB debt when we are the only FHLB involved in the negotiation; we are the sole FHLB that is primary obligor on the bond in those cases. When we and one or more other FHLBs jointly negotiate the issuance of a bond directly with underwriters, we receive the portion of the proceeds of the bond agreed upon with the other FHLBs; in those cases, we are primary obligor for the pro rata portion of the bond based on proceeds received. The majority of our bond issuance is conducted via direct negotiation with underwriters of the FHLB bonds, some with, and some without, participation by other FHLBs.

We may also request specific bonds to be offered by the Office of Finance for sale via competitive auction conducted with underwriters in a bond selling group. One or more other FHLBs may request amounts of the same bonds to be offered for sale for their benefit via the same auction. We may receive from 0% to 100% of the proceeds of the bonds issued via competitive auction depending on:

- the amount and cost for the bonds bid by underwriters;
- the maximum cost we or other FHLBs participating in the same issue, if any, are willing to pay for the bonds; and
- guidelines for allocation of the bond proceeds among multiple participating FHLBs administered by the Office of Finance.

We also participate in the Global Issuances Program, under which the FHLB System, through the Office of Finance, maintains a process for scheduled issuance of global fixed-rate consolidated bonds. As part of this process, management from each FHLB determines and communicates a firm commitment to the Office of Finance for an amount of scheduled global debt to be issued on its behalf. If the FHLBs' orders do not meet the minimum debt issuance size, each FHLB receives an allocation of proceeds equal to the larger of the FHLB's commitment or the ratio of the individual FHLB's capital to total capital of all of the FHLBs. If the FHLBs' commitments exceed the minimum debt issuance size, then the proceeds are allocated based on actual commitment amount. The FHLBs can, however, pass on any scheduled calendar slot and decline to issue any global consolidated obligations under this program upon agreement of at least eight of the 11 FHLBs.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Consolidated Obligation Discount Notes

The FHLBs sell consolidated obligation discount notes (discount notes) in the capital markets to provide short-term funds for advances to members, for seasonal and cyclical fluctuations in savings flows, and for mortgage financing and investments. Discount notes have maturities up to 365 days and are sold through a selling group and through other authorized securities dealers. Discount notes are sold at a discount and mature at par.

On a daily basis, we may request specific amounts of discount notes with specific maturity dates to be offered by the Office of Finance at a specific cost for sale to underwriters in the selling group. One or more other FHLBs may also request an amount of discount notes with the same maturity to be offered for sale for their benefit on the same day. The Office of Finance commits to issue discount notes on behalf of the participating FHLBs when underwriters in the selling group submit orders for the specific discount notes offered for sale. We may receive from zero to 100% of the requested proceeds depending on: the maximum costs we or other FHLBs participating in the same discount notes, if any, are willing to pay for the discount notes; the amount of orders for the discount notes submitted by underwriters; and guidelines for allocation of discount note proceeds among multiple participating FHLBs administered by the Office of Finance.

Twice weekly, we may also request specific amounts of discount notes with fixed maturity dates ranging from four weeks to 26 weeks to be offered by the Office of Finance for sale via competitive auction conducted with underwriters in the selling group. The bi-weekly discount note auction uses a single-price (Dutch) award method to determine winning bids. One or more FHLBs may also request amounts of those same discount notes to be offered for sale for their benefit via the same auction. We may receive from zero to 100% of the requested proceeds depending on the amounts and costs for the discount notes bid by the underwriters and guidelines for allocation of discount note proceeds among multiple participating FHLBs administered by the Office of Finance. The majority of our issuances are conducted via the twice weekly auctions.

Deposits

We accept deposits from our members, institutions eligible to become our members, institutions for which we are providing correspondent services, other FHLBs, and other government instrumentalities such as the FDIC. We offer several types of deposits to our deposit customers including demand, overnight, and term deposits. Deposits are not a significant source of funding for our operations and are primarily offered for the convenience of our members doing business with us.

The following table presents average deposit balances and the rate paid for the past three years.

For the years ended December 31,	**2017**	2016	2015
Average outstanding interest bearing	**$ 599**	$ 602	$ 625
Average outstanding non-interest bearing	**56**	55	47
Interest expense	**5**	1	—
Weighted average rate interest bearing	**0.88%**	0.23%	0.02%

Capital Resources

Capital Rules

Under our Capital Plan our stock consists of two sub-classes of stock, Class B1 stock and Class B2 stock (together, Class B stock), both with a par value of $100 and redeemable on five years' written notice, subject to certain conditions.

Under the Capital Plan, each member is required to own capital stock in an amount equal to the greater of a membership stock requirement or an activity stock requirement. Class B1 stock is available to support a member's activity stock requirement. Class B2 stock is available to support a member's membership stock requirement and any activity stock requirement.

The following table reflects the ranges of capital stock requirements permitted under our Capital Plan and requirements during 2017.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Capital Plan Requirement during 2017		Range Permitted under Capital Plan [d]
Membership Stock Requirement	0.40% of a member's mortgage assets	0.20% to 2% of a member's mortgage assets, with a minimum requirement of $10,000
Cap on Membership Stock Requirement	$5 million [b]	The lesser of (1) a dollar cap set by the Board within a range of $10,000 and $75 million, and (2) 9.9% of our total capital stock outstanding as of the prior December 31.
Activity Stock Requirement for Advances	4.5% of outstanding advances [c]	4% to 6% of a member's outstanding advances, although the requirement may be set as low as 2% for those advances made through our Reduced Capitalization Advance Program (RCAP)
B2/B1 Threshold [a]	$10,000	$10,000 to $75 million

[a] The amount of a member's Class B2 stock that exceeds this "threshold" and is necessary to support advance activity is automatically converted to Class B1 stock.
[b] A member's investment in membership stock is subject to a cap.
[c] The activity stock requirement applies to all outstanding and new advances other than those advances made through the Bank's RCAP.
[d] Ranges reflected above are from our current Capital Plan, as last amended and restated effective October 1, 2015.

Our Capital Plan allows for an activity stock requirement for MPF Loans acquired for our portfolio within a range of 0% and 6%, which our Board has set at 0%. Should the Board decide to introduce this capital requirement, we intend to notify members sufficiently in advance of the change and apply that change only to future acquisitions.

Membership stock requirements will continue to be recalculated annually, whereas the activity stock requirement and any automatic conversion of Class B2 stock to Class B1 stock related to the threshold will apply on a daily basis.

We may only redeem or repurchase capital stock from a member if, following the redemption or repurchase, the member continues to meet its minimum investment requirement and we remain in compliance with our regulatory capital requirements discussed below.

Members that withdraw from membership must wait at least five years after their membership was terminated and all of their capital stock was redeemed or repurchased before being readmitted to membership in any FHLB.

Under the terms of our Capital Plan, our Board of Directors is authorized to amend the Capital Plan, and the FHFA must approve all such amendments before they become effective.

Reduced Capitalization Advance Program

During 2017, we continued to offer our Reduced Capitalization Advance Program (RCAP), which allows members to borrow both short-term and long-term advances with an activity stock requirement of only 2% for the life of the advance instead of the current 4.5% requirement under our Capital Plan's general provisions. As of December 31, 2017, RCAP advances outstanding total $24.7 billion to 158 members. We may implement future programs for advances with a reduced activity stock requirement that may or may not have the same characteristics as current RCAP offerings.

Minimum Capital Requirements

We are subject by regulation to the following three capital requirements:

- total regulatory capital ratio;
- leverage capital ratio; and
- risk-based capital.

For tables showing our compliance with the total capital ratio and leverage capital ratio as well as further details on all of our capital requirements, see **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)** to the financial statements.

Under the risk-based capital requirement, we must maintain permanent capital equal to the sum of our (i) credit risk capital requirement, (ii) market risk capital requirement, and (iii) operations risk capital requirement, as outlined below:

(Dollars in tables in millions except per share amounts unless otherwise indicated)

- Credit Risk Capital Requirement. The credit risk capital requirement is the sum of the capital charges for our assets, off-balance sheet items, and derivatives contracts. These capital charges are calculated using the methodologies and percentages assigned by the FHFA regulations to each class of assets.

- Market Risk Capital Requirement. The market risk capital requirement is the sum of (a) the market value of our portfolio at risk from movements in interest rates, foreign exchange rates, commodity prices, and equity prices that could occur during periods of market stress; and (b) the amount, if any, by which the market value of total capital is less than 85% of the book value of total capital.

- Operations Risk Capital Requirement. The operations risk capital requirement is 30% of the sum of our (a) credit risk capital requirement and (b) market risk capital requirement.

The following table summarizes our risk based capital amounts. Under the FHFA regulation on capital classifications and critical capital levels for the FHLBs, we were adequately capitalized.

As of	**December 31, 2017**	December 31, 2016
Capital stock	**$ 1,443**	$ 1,711
Mandatorily redeemable capital stock (MRCS) recorded as a liability	**311**	301
Retained earnings	**3,297**	3,020
Total permanent capital	**$ 5,051**	$ 5,032
Credit risk capital	**$ 643**	$ 705
Market risk capital	**184**	132
Operations risk capital	**248**	251
Total risk based capital requirement	**$ 1,075**	$ 1,088
Excess permanent capital stock over risk based capital requirement	**$ 3,976**	$ 3,944

On July 3, 2017, the FHFA published a proposed rule which, if adopted, would substantively revise the credit risk component of the risk-based capital requirement for FHLBs as further discussed in **Recent Legislative and Regulatory Developments** on page 13.

Statutory and Regulatory Restrictions on Capital Stock Repurchase and Redemption

In accordance with the FHLB Act, our capital stock is considered putable with restrictions given the significant restrictions on the obligation/right to redeem.

We cannot redeem shares of stock from any member if:

- the principal or interest on any consolidated obligation is not paid in full when due;

- we fail to certify in writing to the FHFA that we will remain in compliance with our liquidity requirements and will remain capable of making full and timely payment of all of our current obligations;

- we notify the FHFA that we cannot provide the required quarterly certification, or project that we will fail to comply with statutory or regulatory liquidity requirements, or will be unable to timely and fully meet all of our current obligations; or

- we actually fail to comply with statutory or regulatory liquidity requirements or to timely and fully meet all of our current obligations, or enter or negotiate to enter into an agreement with one or more other FHLBs to obtain financial assistance to meet our current obligations.

Additional statutory and regulatory restrictions on the redemption and repurchase of our capital stock include the following:

- In no case may we redeem or repurchase capital stock if, following such redemption, we would fail to satisfy our minimum regulatory capital requirements established by the GLB Act or the FHFA.

- In no case may we redeem or repurchase capital stock if either our Board of Directors or the FHFA determines that we have incurred, or are likely to incur, losses resulting or expected to result in a charge against capital stock. In addition to being able to prohibit capital stock redemptions and repurchases, our Board has a right to call for additional capital stock purchases by members, as a condition of continuing membership, as needed for us to satisfy our statutory and regulatory capital requirements.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The FHLB Act provides that, in accordance with rules, regulations, and orders that may be prescribed by the FHFA, we may be liquidated or reorganized and our capital stock paid off and retired, in whole or in part, after paying or making a provision for payment of our liabilities. The FHLB Act further provides that, in connection with any such liquidation or reorganization, any other FHLB may, with the approval of the FHFA, acquire our assets and assume our liabilities, in whole or in part.

Capital Amounts

The following tables, respectively, presents our five largest holders of regulatory capital stock and reconciles our capital reported in our statements of condition to the amount of capital stock reported for regulatory purposes. MRCS is included in the calculation of the regulatory capital and leverage ratios but is recorded as a liability in the statements of condition.

As of December 31, 2017	**Regulatory Capital Stock Outstanding**	**% of Total Outstanding**	**Amount of Which is Classified as a Liability (MRCS)**
BMO Harris Bank, N.A.	**$ 269** [a]	**15.3%**	**$ —**
One Mortgage Partners Corp.	**245**	**14.0%**	**245**
The Northern Trust Company	**170**	**9.7%**	**—**
State Farm Bank, F.S.B.	**91**	**5.2%**	**—**
Associated Bank, N.A.	**90**	**5.1%**	**—**
All other members	**889**	**50.7%**	**66**
Regulatory capital stock	**$ 1,754**	**100.0%**	**$ 311**

	December 31, 2017	December 31, 2016	Change
Capital Stock	**$ 1,443**	$ 1,711	$ (268)
MRCS	**311**	301	10
Regulatory capital stock	**1,754**	2,012	(258)
Capital stock	**$ 1,443**	$ 1,711	$ (268)
Retained earnings	**3,297**	3,020	277
Accumulated other comprehensive income (loss)	**112**	(36)	148
GAAP capital	**$ 4,852**	$ 4,695	$ 157

[a] One Mortgage Partners Corp. is a subsidiary of JPMorgan Chase Bank NA.

Accumulated other comprehensive income (loss) in the above table consists of changes in market value of various balance sheet accounts where the change is not recorded in earnings but are instead recorded in equity capital as the income (loss) is not yet realized. For details on these changes please see **Note 14 - Accumulated Other Comprehensive Income (Loss)** to the financial statements.

Although we had no OTTI year to date in 2017, credit deterioration may negatively impact our remaining private label MBS portfolio. We cannot predict if or when impairments will occur, or the impact these impairments may have on our retained earnings and capital position.

Components of total GAAP capital changed for the following reasons:

- The decrease in capital stock corresponds to our members' use of the Reduced Capitalization Advance Program; and our weekly repurchase of all excess Class B2 membership stock; see **Reduced Capitalization Advance Program** on page 54 and **Repurchases of Excess Capital Stock** on the next page.
- Total retained earnings increased due to our net income less dividends paid; see **Statements of Capital** on page F-7 for details.

Repurchase of Excess Capital Stock

On January 26, 2017, we began repurchasing all excess Class B2 membership stock on a weekly basis at par value, i.e., at $100 per share**.** Members may continue to request repurchase of excess stock on any business day in addition to the weekly repurchase. We intend to continue repurchases of excess stock, including automatic weekly repurchases, until otherwise announced, but repurchases remain subject to our regulatory requirements, certain financial and capital thresholds, and prudent business practices.

Repurchase of excess capital stock held by members is subject to compliance with the following financial and capital thresholds both before and after repurchase:

- The ratio of our total capital to total assets is greater than or equal to 4.25%;
- Our ratio of the Bank's market value of equity to book value of equity is at least 85% on a U.S. GAAP basis;
- Our risk-based capital is greater than or equal to 125% of the minimum amount required, as discussed in **Capital Resources** on page 53;
- Compliance with all of our minimum capital requirements and minimum liquidity requirements;
- Projected compliance with each of our minimum regulatory capital requirements for the next four quarters using the most recent expected case income projections; and
- Compliance with our contractual obligations under the Joint Capital Enhancement Agreement, as discussed in **Joint Capital Enhancement Agreement with other FHLBs** on page 58.

For further information on amounts of excess stock repurchased, see **Statements of Capital** to the financial statements and **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)**.

Retained Earnings & Dividends

Dividend Payments

FHFA rules state that FHLBs may declare and pay dividends only from previously retained earnings or current net earnings, and may not declare or pay dividends based on projected or anticipated earnings. Under our Capital Plan, any dividend declared on Class B1 shares must be greater than or equal to the dividend declared on Class B2 shares for the same period, and dividends may be paid in the form of cash or stock, or a combination of both. All dividends we have paid since 2011 have been in cash rather than stock. We have paid an enhanced dividend on Class B1 activity stock since the fourth quarter of 2013.

Although we continue to work to maintain our financial strength to support a reasonable dividend, any future dividend determination by our Board will be at our Board's sole discretion and will depend on future operating results, our Retained Earnings and Dividend Policy, and any other factors the Board determines to be relevant.

We may not pay dividends if we fail to satisfy our minimum capital and liquidity requirements under the FHLB Act and FHFA regulations. Further, under FHFA regulations, we may not pay any dividends in the form of capital stock if excess stock held by our shareholders is greater than 1% of our total assets or if, after the issuance of such shares, excess stock held by our shareholders would be greater than 1% of our total assets.

Retained Earnings and Dividend Policy

Our Board of Directors has adopted a Retained Earnings and Dividend Policy (Policy) which, as last updated in October 2017, establishes a target for retained earnings to provide a cushion against the potential for loss that could impact shareholder value. Specifically, the Policy requires us to establish an overall target for retained earnings incorporating the following components:

- Risk-based targets based on estimates using the greater of (1) modified regulatory-based estimates with components for credit risk and market risk, (2) results of our annual stress test, and (3) parametric value-at-risk estimates for credit and market risk. Each of these risk-based alternatives incorporates additional estimates for exposures related to (1) operational risk, (2) deterioration in market value resulting in the ratio of the Bank’s market-to-book value of equity on a U.S. GAAP basis of less than 100%, (3) repurchase risk arising from obligations to third party investors from loans originated under the MPF Program, (4) settlement risk relating to unsettled consolidated obligations and investment securities, (5) accounting risk related to hedge accounting and OTTI accounting and (6) the amount of loans outstanding under the Bank’s Community First Fund;

- Earnings-based targets that would allow the Bank to pay a reasonable return on member capital in low-rate and low-member utilization environments; and

(Dollars in tables in millions except per share amounts unless otherwise indicated)

- Target capital ratio of 4.5% of total regulatory capital to total assets which is higher than the 4.0% minimum required by FHFA regulation. The target capital ratio for purposes of the retained earnings target includes any estimates of losses from the adverse and severely adverse stress test scenarios.

Under the Policy, we may, but are not required, to pay a dividend out of our net income (with certain adjustments as described below) based on our attainment of the retained earnings target on a quarterly basis and management's assessment of the current adequacy of retained earnings. The Policy's dividend payout schedule provides for no dividend if we meet less than 70% of the risk-based requirement portion of the retained earnings target, with a maximum dividend of between 30-80% of adjusted net income depending on the level of the earnings-based component of the retained earnings target and the target capital ratio. For these purposes, adjusted net income is income resulting directly from certain business activities, excluding income from such activities as advance prepayments, transfers of debt to other FHLBs and gains or losses resulting from certain hedge practices. Dividends that are permitted under the Policy but not paid in any given quarter may be applied to subsequent quarters if certain requirements set forth in the Policy are met.

Our Board of Directors declared quarterly cash dividends at annualized percentage rates per $100 of par value as presented in the below table (based on the previous quarter's earnings).

	B1 Activity Stock		**B2 Membership Stock**	
Quarter in which dividend was declared (recorded) and paid	**Dividends**	**Annualized Rate**	**Dividends**	**Annualized Rate**
2017				
1st quarter	**$ 8**	**3.00%**	**$ 1**	**0.85%**
2nd quarter	**9**	**3.15%**	**1**	**1.05%**
3rd quarter	**10**	**3.30%**	**—**	**1.25%**
4th quarter	**11**	**3.30%**	**1**	**1.25%**
Total	**$ 38**	**3.19%**	**$ 3**	**1.10%**
2016				
1st quarter	$ 8	2.60%	$ 1	0.60%
2nd quarter	9	2.80%	1	0.60%
3rd quarter	8	2.80%	1	0.60%
4th quarter	8	2.80%	1	0.60%
Total	$ 33	2.75%	$ 4	0.60%

On January 23, 2018, our Board of Directors increased the dividend declared per share on both sub-classes of capital stock. Based on our financial results for the fourth quarter of 2017, the Board declared a cash dividend of 3.50% (annualized) for Class B1 activity stock (an increase of 20 basis points compared to the prior quarter) and a cash dividend of 1.50% (annualized) for Class B2 membership stock (an increase of 25 basis points compared to the prior quarter). This dividend, including dividends on mandatorily redeemable capital stock, totaled $15 million and was paid on February 15, 2018. The Board determined that our earnings for the fourth quarter of 2017 coupled with recent rising market interest rates - both short term and long term - merit the increased dividends.

Joint Capital Enhancement Agreement with other FHLBs

The FHLBs, including us, entered into a Joint Capital Enhancement Agreement (JCE Agreement) intended to enhance the capital position of each FHLB. The intent of the JCE Agreement is to allocate that portion of each FHLB's earnings to a separate retained earnings account at that FHLB. For more information on the JCE Agreement, see **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)** to the financial statements.

Although restricted retained earnings under the JCE Agreement are included in determining whether we have attained the retained earnings target under the Bank's Retained Earnings and Dividend Policy discussed above, these restricted retained earnings will not be available to pay dividends. We do not believe that the requirement to contribute 20% of our future net income to a restricted retained earnings account under the JCE Agreement will have an impact on our ability to pay dividends except in the most extreme circumstances. There is a provision in the JCE Agreement that if, at any time, our restricted retained earnings were to fall below the required level, we would only be permitted to pay dividends out of (1) current net income not required to be added to our restricted retained earnings and (2) retained earnings that are not restricted.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Off-Balance Sheet Arrangements

We provide members with letters of credit for a fee. If a beneficiary draws under a letter of credit, our member either reimburses us for the amount drawn or the drawn amount is converted into a collateralized advance to the member. If any advances were to be issued under these letters of credit, they would be made under the same standards and terms as any other advance.

We have entered into standby bond purchase agreements with the Illinois and Wisconsin state housing authorities. Upon request of the applicable authority, we enter into an agreement with them to purchase and hold the authority's bonds for a fee until the designated remarketing agent can find a suitable investor.

Refer to **Note 17 - Commitments and Contingencies** to the financial statements for further disclosures related to our commercial commitments, such as letters of credit and standby bond purchase agreements.

Contractual Cash Obligations

We enter into various contractual obligations that require us to make future cash payments. The following table summarizes our long-term contractual cash payments due by period:

	Contractual Cash Payments Due by Period				
As of December 31, 2017	**Less than 1 year**	**1-3 years**	**3-5 years**	**After 5 years**	**Total [a]**
Consolidated obligation bonds	$ 16,616	$ 10,653	$ 6,562	$ 3,516	$ 37,347
Mandatorily redeemable capital stock	1	3	9	298	311
MPF delivery commitments	371	—	—	—	371
Other	5	9	9	18	41
Total contractual cash obligations	$ 16,993	$ 10,665	$ 6,580	$ 3,832	$ 38,070

[a] Total excludes projected contractual interest payments for consolidated obligation bonds of $2.2 billion.

Risk Management

Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Fraud, legal, compliance, financial reporting, model and technology risks are components within the definition of operational risk. We have established programs to identify, measure, monitor, manage, and report operational risks such as comprehensive risk assessments, establishing policies and procedures, loss incident reporting and obtaining appropriate insurance coverage to mitigate the likelihood of, and potential losses from, such occurrences.

Governance and Control Activities

The Board of Directors has established Bank-wide policies governing operational risk, which include an Enterprise Risk Management Policy and an Enterprise Operational Risk Management Policy. Primary oversight responsibility for operational risk is vested with our management level Operational Risk Oversight Committee. Responsibilities of this committee include, but are not limited to, oversight and review of Bank-wide operational risks such as the management of business continuity, technology (including information security) risks, issues or updates, operational aspects of new business activities, analysis and mitigation of any operational loss, vendor management, oversight and direction to our compliance activities, and oversight to internal controls and procedures in compliance with the Sarbanes-Oxley Act of 2002. This Committee monitors the performance of these operational activities by reviewing management reports prepared by the responsible business manager on a periodic basis. Also, the Committee monitors the effectiveness of operational controls through the reporting of critical operational losses, events, risk assessments, operational risk metrics, and a quarterly certification of operational and internal controls over financial reporting.

Our executive officers provide periodic reports, as appropriate, to the following Board committees: Risk Management Committee, Operations and Technology Committee, and the Audit Committee.

Business Continuity

In order to ensure our ability to provide liquidity and service to our members and PFIs, we have business resumption plans designed to restore critical business processes and systems in the event of business interruption. We have transitioned key information systems infrastructure to vendors with reliable and consistent data recovery capabilities as well as more optimal geographic diversity to provide a more resilient technology infrastructure. We are party to a reciprocal arrangement with the FHLB Dallas to recover operations supporting key banking activities. Both the FHLB Dallas and our off-site recovery plans are subject to periodic testing.

Credit Risk

We define credit risk as the risk to our earnings or capital due to an obligor's failure to meet the terms of any contract with us, or to otherwise perform as agreed. We are exposed to credit risk principally through:

- Member credit products, such as advances, letters of credit, and other extensions of credit to borrowers;
- MPF Loans and related exposures;
- investment securities;
- securities purchased under agreements to resell;
- unsecured short-term investments; and
- derivatives.

Managing Our Credit Risk Exposure Related to Member Credit Products

Our member credit products credit risk exposure includes our secured credit extensions, such as advances, letters of credit, and related extensions of credit to members. See **Note 6 - Advances** and **Note 17 - Commitments and Contingencies** to the financial statements for further details on member credit products. We lend to our members in accordance with federal statutes and FHFA regulations. We manage our credit exposure to our member credit products using a risk-based integrated approach as discussed below. We utilize conservative collateral/lending policies to limit risk of loss while balancing members' needs for a reliable source of funding.

Establishing Credit Limits - Under our credit policy, a member's initial credit limit is set at 35% of their total assets, subject to modifications up or down based primarily on the following factors:

(Dollars in tables in millions except per share amounts unless otherwise indicated)

- The collateral value of eligible collateral a member has pledged. Collateral value represents the borrowing capacity assigned to the types of collateral we accept for member credit products. Collateral value does not imply fair value.

- A member's risk rating, which is determined by assessing their creditworthiness and financial condition utilizing financial information available to us, including the quarterly financial statement reports members file with their regulators. Additionally, we conduct an ongoing review of each borrower's financial condition.

- For increases to the initial credit limit, approval by the Credit and Collateral Committee or our CEO.

Member Credit Outstanding - We track total credit risk with our members. The total credit risk concentrated with members with 10% or more of our total member credit outstanding is as follows:

As of December 31, 2017	Total Credit Outstanding	% of Total
One Mortgage Partners Corp	$ 23,494 [a]	34.7%
BMO Harris Bank, NA	6,975	10.3%

[a] One Mortgage Partners Corp. is a subsidiary of JPMorgan Chase Bank NA.

Member Credit Risk Ratings - Our credit risk rating system focuses primarily on our member's overall financial health and takes into account the member's asset quality, earnings, and capital position. We utilize our credit risk rating system to assign each member a credit risk rating from one (lowest credit risk) to five (highest credit risk). Our credit risk rating represents our assessment of the risk of member insolvency rather than the risk of credit loss on the member's credit outstanding with us. We utilize the credit risk rating of a member to manage our credit risk through collateral controls, and as a result, we have never suffered a credit loss on a member credit product. Credit risk mitigation actions may be applied to members perceived to pose increased risk, including within the credit risk ratings of four and five. Specifically, these members may be:

- required to maintain higher amounts of collateral;
- required to deliver loan collateral to us or a third party custodian on our behalf;
- restricted from obtaining certain member credit products; and
- faced with more stringent collateral reporting requirements.

The following table presents the number of members and related credit outstanding to them by credit risk rating. Credit outstanding consists primarily of outstanding advances and letters of credit. MPF credit enhancement obligations, member derivative exposures, and other obligations make up the rest. Of the total credit outstanding, $48.0 billion were advances (par value) and $19.6 billion were letters of credit at December 31, 2017, compared to $45.0 billion and $10.8 billion at December 31, 2016.

	December 31, 2017					December 31, 2016				
Rating	Number of Borrowers	% of Total	Credit Outstanding	% of Total	Collateral Value	Number of Borrowers	% of Total	Credit Outstanding	% of Total	Collateral Value
1-3	495	97%	$ 67,105	99%	$ 116,810	483	97%	$ 55,750	100%	$ 106,814
4	7	1%	498	1%	577	7	1%	47	—%	103
5	11	2%	120	—%	234	11	2%	140	—%	390
Total	513	100%	$ 67,723	100%	$ 117,621	501	100%	$ 55,937	100%	$ 107,307

The majority of members assigned a 4 rating in the above table were required to submit specific collateral listings and the majority of members assigned a 5 rating were required to deliver collateral to us or a third party custodian on our behalf.

Nature and Amount of Collateral Pledged - Collateral arrangements may vary by type of member (e.g., depository versus non-depository institutions), lien structure, member credit quality, collateral availability, collateral type, results of periodic on-site reviews of collateral, and overall member credit exposure. The FHLB Act requires us to obtain sufficient collateral to fully secure member credit products. Eligible collateral includes whole first mortgages on improved residential property, or non-agency securities representing a whole interest in such mortgages; securities issued, insured, or guaranteed by the U.S. government or any of its agencies (includes MBS issued or guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae and FHLB consolidated obligations); cash or deposits; and other real estate related collateral (includes home equity loans and lines of credit and commercial real estate) that has a readily ascertainable value, can be reliably discounted to account for liquidation risk and can be liquidated in due course and that we can perfect a security interest in such collateral. We also accept pledges of secured business, farm, or agri-business loans from community financial institutions (CFIs), which is permitted under the FHLB Act.

In certain circumstances, such as when a member's membership is terminated due to a merger and the acquiring entity is a member of another FHLB; the other FHLB may agree to manage the former member's collateral covering advances and any other amounts still outstanding to us. The other FHLB will usually subordinate to us either certain collateral it receives from the member or certain categories of collateral. Likewise, if one of our members were to acquire the member of another FHLB, we may agree to manage the collateral for the other FHLB and subordinate our security interest in a certain category of collateral.

Our Advances, Collateral Pledge and Security Agreement requires that a member provide collateral value equal to its credit outstanding (unless we specifically require more for a particular member). The value assigned to securities and loan collateral is calculated as shown below. It should be noted that the applicable percentage margin utilized in the calculation for securities or loans vary based on the type of collateral being pledged, as well as factors (that vary whether the collateral is a security or loan) including model risk, broker fees, market volatility and liquidity, the type of collateral reporting, the member's risk rating, and whether the member is a depository or non-depository.

- For securities, we multiply the applicable percentage margin by the market value of each security; and
- For loans, we multiply the applicable margin by the unpaid principal balance of pledged loans, along with any applicable percentage applied to adjust for ineligible loans found during a member's collateral review.
    - In general members pledging loan collateral via blanket reporting will receive the maximum margins we publish based on the unpaid principal balance.
    - Members with listed and/or delivered loan collateral will generally receive the margins we publish, which will be applied as a percentage to the lower of par or market value of the unpaid principal balance of the reported loan collateral.

Controls over Pledged Collateral - We require delivery of all securities collateral and may also require delivery of loan collateral under certain conditions (for example, when a member's credit condition deteriorates).

The FHLB Act requires that each advance to a member be fully secured. We are required to obtain and maintain a security interest in collateral securing advances. The FHLB Act provides that any security interest granted to us by our members, or an affiliate of such member, is entitled to priority over the claims and rights of any party, including any receiver, conservator, trustee, or similar party having rights of a lien creditor other than claims and rights that would be entitled to priority under otherwise applicable law and are held by actual bona fide purchasers for value or by actual secured parties that are secured by actual perfected security interests. We perfect the security interests granted to us by members and affiliates by taking possession of securities collateral and by filing UCC-1 financing statements on all other collateral.

We generally require members to pledge collateral under a blanket lien under which our security interest in collateral is automatically released when the member has sold or otherwise transferred its interest in the collateral (unless otherwise notified by us) and such collateral is not required to secure a member's outstanding credit obligations and we have not required the member to list or deliver such collateral. Under the Advances, Collateral Pledge and Security Agreement with our members, a member must maintain collateral with a collateral value to fully cover its credit outstanding. If the collateral does not have collateral value sufficient to cover the credit outstanding, we require a member to pledge other assets as collateral to cover the shortage, this includes the pledging of types of collateral that are outside of our eligibility criteria. As a result, we may require listing or delivery of the additional collateral from the member at any time while there is credit outstanding. Additionally, we have a lien on their capital stock in us.

The method by which a member reports collateral is dependent upon the collateral status to which it is assigned, as well as the type of collateral being pledged. In order for a member to have borrowing capacity with us, the member must report its eligible collateral using one of the following methods. Under blanket reporting, a member that has granted us a blanket lien on certain categories of collateral may report the collateral types on a qualified collateral report. For members that list collateral, either by choice or as directed by us, the member must submit a listing of its collateral which includes loan-level detail of the collateral. Securities pledged to us must be delivered to us or an approved third party custodian pursuant to a collateral control agreement. Loan collateral pledged to us may be required to be delivered to an approved third party pursuant to a collateral control agreement. Regardless of the manner in which the collateral is pledged, all members must report their collateral to us at least quarterly.

We also conduct periodic on-site loan collateral reviews to confirm the collateral meets our eligibility requirements. On-site collateral verifications are performed on a schedule that varies based upon our assessment of the credit risk of the member, the size of the member's credit exposure, the types of collateral pledged, and the amount of collateral coverage.

We have not recorded any allowance for credit losses for our on-balance sheet member credit products nor any liabilities for our off-balance sheet member credit products in the periods presented based on the following factors:

- Our credit outstanding is sufficiently well collateralized as a result of the collateral and credit risk mitigation efforts described above;
- Our credit analyses of our members;
- The repayment history on member credit products; and
- No member credit products that were past due, on nonaccrual status, involved in a troubled debt restructuring, or otherwise considered impaired.

MPF Loans and Related Exposures

For a description of the MPF Program see **Mortgage Partnership Finance Program** on page 8.

Credit Risk Exposure - Our credit risk exposure on conventional MPF Loans held in portfolio is the potential for financial loss due to borrower default and depreciation in the value of the real estate collateral securing the MPF Loan, offset by our ability to recover losses from PMI, Recoverable CE Fees, and the CE Amount which may include SMI. The PFI is required to pledge collateral to secure any portion of its CE Amount that is a direct obligation of the PFI. The unpaid principal balances of our conventional MPF Loans held in portfolio exposed to credit losses was $4.1 billion at December 31, 2017, and $3.8 billion at December 31, 2016. Our actual credit exposure is less than these amounts because the borrower's equity, which represents the fair value of underlying property in excess of the outstanding MPF Loan held in portfolio balance, has not been considered.

Our MPF Loans held in portfolio includes conventional mortgage loans that may be viewed as having greater credit risk because the borrowers have weaker credit histories. The current MPF Program eligibility criteria for conforming conventional MPF Loans excludes loans to borrowers with a FICO score less than 620. Historically, we accepted MPF Loans from borrowers with FICO scores below 620 provided they met the underwriting standards set forth in the MPF Guides, which require compliance with applicable laws and regulations, including the Interagency Guidance on Nontraditional Mortgage Product Risks (issued October 4, 2006) and the Statement on Subprime Mortgage Lending (issued on July 10, 2007) issued by the Office of the Comptroller of the Currency, Office of the Thrift Supervision, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and the National Credit Union Administration. MPF Loans to borrowers with no FICO scores are also eligible for delivery under the MPF Program provided that acceptable alternate documentation of credit history is provided. We do not classify these MPF Loans internally as “subprime” because they are not higher-priced mortgage loans. Mortgages that meet the MPF Program's definition of higher-priced mortgage loans are not eligible for delivery under the MPF Program. MPF Loans with borrowers having no FICO scores or with FICO scores less than 660 represent a relatively small portion of our total conventional MPF Loan portfolio.

For MPF Loans, the MPF Program allows for varying levels of documentation with respect to borrower income, and the level of documentation is considered when determining the amount of credit enhancement required for each Master Commitment under the credit model we utilize to set the CE Amount. To date, we have not experienced material differences in loss or delinquency rates based on documentation levels of our conventional MPF Loans held in portfolio.

Under the MPF Government MBS product, we must advance the scheduled principal and interest payments to the securities holders of Ginnie Mae MBS that we issued if the servicing PFI defaults on its payment obligations to advance the scheduled remittances. Once MPF Government MBS loans are ninety days delinquent, we have the option to repurchase the mortgage loan out of the security and work with a servicer to mitigate the credit loss.

Setting Credit Enhancement Levels - For conventional MPF Loans held in portfolio, credit losses in a Master Commitment are first absorbed by the Bank’s FLA but, if applicable to the MPF product, we will withhold a PFI’s scheduled performance credit enhancement fee in order to reimburse ourselves for any losses allocated to the FLA. If the FLA is exhausted, the credit losses are then absorbed by the PFI’s CE Amount that is calculated by utilizing a third party’s credit model. For further details on the FLA and PFI’s CE Amount, refer to **Member PFIs** on page 8 and **MPF Risk Sharing Structure** on page F-16.

The PFI’s CE Amount is determined by the Bank, based on documented analysis, that the Bank has a high degree of confidence that it will not bear material losses beyond the losses absorbed by the Bank’s FLA, even under reasonably likely adverse changes to expected economic conditions. Loans are assessed by a third party’s credit model at acquisition and a credit enhancement is calculated based on loan attributes and our risk tolerance in light of our entire MPF portfolio. Credit losses on a loan may only be absorbed by the CE Amount in the Master Commitment related to the loan.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The CE Amounts and the FLA for certain conventional MPF Products held in our portfolio may be periodically reset lower for each Master Commitment after a required period of seasoning because the amount of credit enhancement necessary to maintain our risk of credit losses within our risk tolerance is usually reduced over time.

For the MPF Plus product, the PFI is required to provide an SMI policy covering the MPF Loans in the Master Commitment and having a deductible initially equal to the FLA. As of December 31, 2017, and 2016, the outstanding balances of MPF Loans under the MPF Plus product with SMI coverage were $540 million and $913 million and the amounts of SMI coverage provided against losses were $19 million and $32 million. The reduction in coverage was due to the resetting of SMI policies as provided in the MPF Plus product structure. In addition, certain SMI providers fell below the requirements in the MPF Guides and instead of replacing the SMI provider or indemnifying us for any losses, most PFIs elected to forfeit future performance CE fees. Credit losses associated with Master Commitments where the SMI coverage has been discontinued are incorporated into the allowance for credit losses calculation. Such credit losses are immaterial.

The following table shows the status of our credit enhancement structure on conventional MPF Loans held in portfolio. Unpaid principal balances in this table include REO, as losses in REO impact, and are impacted by, the credit enhancement structure of a Master Commitment. As defined, the CE Amount includes SMI on the MPF Plus product. Government Loans are excluded from the table as they are not directly credit enhanced by the PFI.

	As of December 31, 2017			
MPF Product Type	**Unpaid Principal Balance**	**90+ Days Delinquent**	**FLA [a]**	**PFI's CE Amount [b]**
100	$ **219**	**1.76%**	**5.08%**	**4.37%**
125	**1,438**	**0.17%**	**1.31%**	**1.54%**
Plus	**1,277**	**3.87%**	**6.38%**	**1.64%**
35	**53**	**—%**	**0.36%**	**3.07%**
Original	**1,164**	**0.71%**	**0.87%**	**6.91%**

[a] For each product above, except MPF Original, a portion of losses experienced at the FLA level may be recovered through the withholding of performance-based CE Fees from PFIs.
[b] Credit losses on a loan may only be absorbed by the CE Amount in the Master Commitment related to the loan. For further detail refer to **MPF Risk Sharing Structure** on page F-16.

Concentration Risks - In conjunction with assessing credit risks on the MPF Loan portfolio, we also assess concentration risks that could negatively impact this portfolio.

Geographic Concentration - While we have MPF Loans throughout the United States, our largest concentrations of conventional MPF Loans held in portfolio were secured by properties located in the five states shown in the following table. Amounts shown are based on outstanding par value. An overall decline in the economy, residential real estate market, or the occurrence of a natural disaster could adversely affect the value of the mortgaged properties in these states and increase the risk of delinquency, foreclosure, bankruptcy or loss on MPF Loans, which could negatively affect our business, results of operations, and financial condition.

As of December 31, 2017	Par Value	%
Wisconsin	$ **895**	**22%**
Illinois	**881**	**21%**
California	**804**	**19%**
Minnesota	**130**	**3%**
Michigan	**126**	**3%**
All other states	**1,297**	**32%**
Total unpaid principal balance of conventional MPF Loans	$ **4,133**	**100%**

For further discussion of how concentration risks may affect us, see **Risk Factors** on page 16.

Mortgage Repurchase Risk - We are exposed to mortgage repurchase risk in connection with our sale of MPF Loans to Fannie Mae under the MPF Xtra product, to third-party investors under the MPF Direct Product, and to Ginnie Mae for MPF Loans securitized in Ginnie Mae MBS if a loan eligibility requirement or other warranty is breached. We may require the PFI from which we purchased the ineligible MPF Loan to repurchase that loan from us or indemnify us for related losses or request indemnification from the PFI's MPF Bank as further discussed in the **Risk Factors** on page 16.

Our mortgage repurchase liability is an estimate of our losses associated with all mortgage loans previously sold in connection with the MPF Xtra, MPF Direct, and MPF Government MBS products for which a breach of representation or warranty has occurred. We consider factors based predominantly on our historical repurchase experience and only include mortgage loans for which we deem it probable that we will be required to either repurchase the mortgage loan or indemnify the applicable third party for losses. This assessment is primarily made during our quality assurance review process. Our estimate incorporates our experiences with third party repurchase demands, PFIs' historical ability to cure repurchase demands, and an assumed loss severity given default.

The methodology to estimate the associated mortgage repurchase liability for MPF Government MBS loans also considers potential repurchases based on delinquency activity or lack of final loan certifications within issued pools. We are expected to maintain delinquency rates on outstanding issuances below key thresholds and fulfill operational requirements published by Ginnie Mae.

We accrue a mortgage repurchase liability with an offsetting charge to noninterest expense when it is probable and reasonably estimable that we will be obligated to repurchase a loan or indemnify an investor.

Based on the above factors:

We recognized a mortgage repurchase liability of less than $1 million as of December 31, 2017, and December 31, 2016, on the MPF Xtra loans. We also recognized an offsetting receivable due from our PFIs, since we deem it probable that we will recover any losses from third parties (e.g., PFIs and other MPF Banks). We believe the estimate of reasonably possible losses is zero as of the end of this reporting period.

We have repurchased $4 million of unpaid principal balances related to mortgage loans sold as part of our off balance sheet MPF Loan products for the year ending December 31, 2017, compared to $10 million for 2016, and $18 million for 2015. These repurchases represent repurchase requests that have been resolved during the reporting period. Due to recoveries from PFIs, we incurred no material losses on these loans.

We have $37 million as of December 31, 2017, of unpaid principal with respect to MPF Xtra loans that represent unresolved claims with Fannie Mae, in which a repurchase demand may occur compared to $45 million at December 31, 2016; see **Note 17 - Commitments and Contingencies** to the financial statements.

Additionally, PFIs are required to repurchase ineligible MPF Loans held in our portfolio unless we either require the PFI to indemnify us or decide to continue to hold such loans in our portfolio. The PFI repurchase requirement is a factor in determining our allowance for credit losses. If a PFI is unable to repurchase ineligible MPF Loans or indemnify us, we would incur a loss to the extent a credit loss is not recovered from collateral provided by the PFI or, alternatively, from the FDIC. In this regard, we have not recorded an allowance for credit losses related to MPF Loans held in our portfolio, as we do not expect to incur any losses after factoring in our recovery claims from PFIs.

We record allowances for credit losses for MPF Loans held in portfolio based on available information of past events and the current economic conditions existing as of the date of our statements of condition. Such information includes, but is not limited to, delinquency rates, loss severities, and prepayment speeds consistent with the percentages of delinquent, nonaccrual, and impaired MPF Loans to total conventional MPF Loans. Our allowance for credit losses declined in 2015 compared to 2014 primarily as a result of change in regulatory guidance related to the timing of charge-offs. Refer to **Note 2 - Summary of Significant Accounting Policies** to the financial statements for details on our charge-off policy. Additionally, refer to **Note 8 - Allowance for Credit Losses** to the financial statements for further details on our allowance for credit losses.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Five year trend in our MPF Loans held in portfolio

The following table shows the five year trend in our MPF Loans held in portfolio.

	2017	2016	2015	2014	2013
Recorded investment as of December 31,					
MPF Loans past due 90 days or more and still accruing interest [a]	**$ 29**	$ 31	$ 25	$ 69	$ 178
Nonaccrual MPF Loans including nonperforming troubled debt restructurings (TDR)	**49**	74	107	163	221
TDRs performing - on an accrual basis	**36**	42	47	48	16
Total	**$ 114**	$ 147	$ 179	$ 280	$ 415
Interest on original terms (nonaccrual loans/performing TDRs)	**$ 4**	$ 5	$ 7	$ 9	$ 11
Interest recognized (performing TDRs only) [b]	**$ 2**	$ 2	$ 2	$ 2	$ 1
Allowance for credit losses for the years ended December 31,					
Balance, beginning of period	**$ 3**	$ 3	$ 15	$ 29	$ 42
Losses charged to the allowance [c]	**(1)**	(1)	(17)	(7)	(11)
Provision for (reversal of) credit losses	**—**	1	5	(7)	(2)
Balance, end of period	**$ 2**	$ 3	$ 3	$ 15	$ 29

[a] Includes loans which are well-secured and in the process of collection. MPF Loans that are on nonperforming status, and are collateral-dependent, are excluded. Collateral-dependent is when repayment is expected to be provided solely by the sale of the underlying property. Government Loans are included because repayment is insured or guaranteed by the government.
[b] We do not recognize interest on nonaccrual loans.
[c] The net (charge-off)/recovery rate was less than one basis point for all periods presented.

Investment Securities

On October 15, 2010, we instituted litigation relating to sixty-four private label MBS bonds purchased by us in an aggregate original principal amount of $4.29 billion. Our complaints assert claims for untrue or misleading statements in the sale of securities, and it is possible that the classifications of private-label MBS, as well as other statements made about the securities by the issuer, are inaccurate.

In the following tables, we classify our private-label MBS as prime, subprime, or Alt-A based upon the nature of the majority of underlying mortgages collateralizing each security based on the issuer's classification, or as published by an NRSRO, at the time of issuance of the MBS.

Category	**Majority of Underlying Mortgage Loans**	**Description of Mortgage Loans Underlying the Security and Security Features**
Prime	Prime	Mortgage loans meet the criteria of Ginnie Mae, Fannie Mae, or Freddie Mac and the securities have credit protection in the form of a guarantee from the U.S. government in the case of Ginnie Mae, or a guarantee from Fannie Mae or Freddie Mac.
Prime	Prime Fixed Rate/ Adjustable Rate	First-lien mortgage loans that typically conform to “prime” credit guidelines described above, but with a balance that exceeds the maximum allowed under programs sponsored by Ginnie Mae, Fannie Mae or Freddie Mac.
Prime	Interest First - Prime Fixed/Adjustable Rate	Mortgage loans typically conform to traditional “prime” credit guidelines described above, but may allow for principal deferment for a specified period of time.
Alt-A	Alternative Documentation Fixed/ Adjustable Rate	Mortgage loans generally conform to traditional “prime” credit guidelines described above, although the LTV ratio, loan documentation, occupancy status, property type, loan size, or other factors causes the loan not to qualify under standard underwriting programs. Typically includes less-than-full documentation.
Subprime	Subprime	Primarily first-lien mortgage loans that have lower credit scores, higher debt to income ratios, and higher loan to value ratios.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

In addition to private-label MBS, we also hold a variety of other investment securities we believe are low risk and mostly government backed or insured such as GSE debt and FFELP ABS.

Investment Securities by Rating

The carrying amounts of our investments are presented in the following table by the long term NRSRO credit rating of the counterparty.

	AAA	AA	A	BBB	Below Investment Grade	Unrated	Carrying Amount
December 31, 2017							
Investment securities-							
U.S. Government & other governmental related	$ —	$ 2,004	$ —	$ —	$ —	$ —	$ 2,004
State or local housing agency	—	30	—	—	—	—	30
FFELP ABS	41	4,173	—	—	—	—	4,214
MBS:							
GSE residential	—	8,949	—	—	—	—	8,949
Government-guaranteed residential	—	1,581	—	—	—	—	1,581
Private-label MBS residential	—	32	2	6	379	150	569
Total investment securities	41	16,769	2	6	379	150	17,347
Interest bearing deposits	—	—	775	—	—	—	775
Federal Funds sold	—	3,725	3,725	109	—	2	7,561
Securities purchased under agreements to resell	—	5,000	—	—	—	—	5,000
Total carrying amount of investments	$ 41	$25,494	$ 4,502	$ 115	$ 379	$ 152	$ 30,683
December 31, 2016							
Investment securities-							
U.S. Government & other governmental related	$ —	$ 3,074	$ —	$ —	$ —	$ —	$ 3,074
State or local housing agency	—	32	—	—	—	—	32
FFELP ABS	54	4,518	—	—	—	—	4,572
MBS:							
GSE residential	—	10,450	—	—	—	—	10,450
Government-guaranteed residential	—	2,172	—	—	—	—	2,172
Private-label MBS residential	—	29	11	6	679	10	735
Total investment securities	54	20,275	11	6	679	10	21,035
Interest bearing deposits	—	—	650	—	—	—	650
Federal Funds sold	—	700	3,125	250	—	—	4,075
Securities purchased under agreements to resell	—	1,800	500	—	—	—	2,300
Total carrying amount of investments	$ 54	$22,775	$ 4,286	$ 256	$ 679	$ 10	$ 28,060

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Investment Securities Issuer Concentration

The following table summarizes our investment securities by issuer with a carrying amount exceeding 10% of our stockholders' equity:

December 31, 2017	Carrying Amount	Fair Market Value
Fannie Mae	$ 6,928	$ 6,975
Freddie Mac	2,021	2,037
Ginnie Mae	1,496	1,502
SBA	1,719	1,746
SLM Student Loan Trust SLMA 2009-1 A	1,144	1,144
SLCLT 2009-1 Student Loan ABS	899	899
SLM Student Loan Trust SLMA 2009-2 A	966	966
SLC 2009-3 Student Loan ABS	644	644
SLM Student Loan Trust SLMA 2009-1 A1	520	520
All Others	1,010	1,295
Total Investment securities	$ 17,347	$ 17,728
Categorized as:		
Trading securities	$ 233	$ 233
Available-for-sale securities	12,957	12,957
Held-to-maturity securities	4,157	4,538

Aging and Carrying Amount

A table presenting the aging of our investments for the current year, as well as the carrying amounts for the previous two years can be found in **Note 5 - Investment Securities** to the financial statements. It also discloses the yields by aging categories for the current year.

Other-Than-Temporary Impairment Analysis - *Mortgage Backed Securities*

Significant Inputs Used to Determine OTTI

We assess an HTM or AFS private-label MBS security for OTTI whenever its fair value is less than its amortized cost basis as of the reporting date. Specifically, we generate cash flow projections utilizing key modeling assumptions, significant inputs, and methodologies provided by an FHLB System OTTI Committee, which was formed by the FHLBs to achieve consistency among the FHLBs in their OTTI analyses for private-label MBS. We then utilize these cash flow projections to determine OTTI on our private-label MBS; however, we are still responsible for making our own OTTI determination, which includes determining the reasonableness of assumptions, significant inputs, and methodologies used, and performing the required present value calculations using appropriate historical cost bases and yields.

Cash Flow Analysis

We perform a cash flow analysis for substantially all of these private-label securities utilizing two models provided by independent third parties as described below,

- First model. This model considers borrower characteristics and the particular attributes of the loans underlying the securities, in conjunction with assumptions about future changes in home prices and interest rates, prepayment rates, default rates, and loss severities. A significant input to the first model is the forecast of future housing price changes for the relevant states and core based statistical areas (CBSAs), which are based upon an assessment of the individual housing markets.

- Second model. This model uses the month-by-month projections of future loan performance derived from the first model and allocates the projected loan level cash flows and losses to the various security classes in the securitization structure in accordance with its prescribed cash flow and loss allocation rules.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

As of December 31, 2017, we had a short-term housing price forecast with projected changes ranging from -5.0% to +12.0% over the twelve month period beginning October 1, 2017 over all markets. For the vast majority of markets, the short-term forecast has changes ranging from +2.0% to +6.0%.

Based on these inputs and assumptions, we had no OTTI charge for the year ended December 31, 2017.

In addition to evaluating our private label MBS under a base case (or best estimate) scenario as discussed above, we also performed a cash flow analysis for each of these securities under a more stressful scenario, or adverse case scenario. This adverse case scenario was primarily based on a short-term housing price forecast that was five percentage points lower than the base case, followed by a path with annual rates of housing price growth that included rates which were 33.0% lower than the base case.

Based on the adverse scenario, we would not have had a material OTTI charge.

Other Credit Indicators:

The following table presents the unpaid principal balance and credit ratings on all of our private-label residential MBS by Prime, Alt-A, and Subprime as designated at time of issuance, whether or not an OTTI charge has been taken. For securities on which an OTTI charge has been taken, see **Note 5 - Investment Securities** to the financial statements. Except for an immaterial amount of fixed rate, these MBS are all variable rate securities.

As of December 31, 2017	Prime	Alt-A	Subprime	Total
Unpaid Principal Balance (UPB) by credit rating -				
AA	$ 26	$ —	$ 7	$ 33
A	—	—	2	2
BBB	3	—	4	7
Below investment grade	285	62	361	708
Unrated	252	—	1	253
Total unpaid principal balance	566	62	375	1,003
Amortized cost	461	40	201	702
Gross unrealized losses (incl. noncredit OTTI)	(108)	—	(36)	(144)
Gross unrealized gains	159	10	127	296
Fair value	$ 512	$ 50	$ 292	$ 854
For the year ended December 31, 2017				
Weighted average percentage fair value to unpaid principal balance	90%	81%	78%	85%
Original weighted average credit support	12%	17%	22%	16%
Current weighted average credit support	—%	1%	18%	7%
Weighted average collateral delinquency	12%	20%	22%	16%

At December 31, 2017, 37% of the total mortgage properties collateralizing our private-label MBS were located in California, which was the only state with a concentration exceeding 10% of this portfolio.

Securities Purchased Under Agreements to Resell

We invest in securities purchased under agreements to resell in order to ensure the availability of funds to meet members' liquidity and credit needs. Securities purchased under agreements to resell are secured by collateral of marketable securities held by a third-party custodian. If the fair value of the accepted collateral decreases below the fair value amount required as collateral, our counterparty is required to provide an equivalent amount of additional securities as collateral to make up the shortfall. If the credit markets experience disruptions, it may increase the likelihood that one of our counterparties could experience liquidity or financial constraints that may cause them to become insolvent or otherwise default on their obligations to us. If the collateral's fair value amount has decreased below the resale agreement's carrying amount, we may suffer a credit loss.

The credit ratings of securities purchased under agreement to resell are disclosed along with investment securities and unsecured short-term investments, in the **Investment Securities by Rating** table on page 67.

Unsecured Short Term Investments

We invest in unsecured short-term investments in order to ensure the availability of funds to meet members' credit and liquidity needs. We have credit risk exposure from our unsecured short-term investment portfolio, which may consist of commercial paper, certificates of deposit, and Federal Funds sold. We have established the following policies and procedures to limit and monitor our unsecured credit risk exposure.

- Eligible counterparties for short-term investments are:
  - other FHLBs;
  - other U.S. GSEs; and
  - FDIC-insured financial institutions, including U.S. subsidiaries of foreign commercial banks, or U.S. branches of foreign commercial banks whose most recently published financial statements exhibit at least $250 million of Tier 1 (or total) capital. Foreign banks shall be domiciled in a country whose sovereign rating is at least "Aa3" from Moody's or AA- from Standard & Poor's unless otherwise approved by the Bank's Credit and Collateral Committee, Chief Risk Officer or President.
- Our unsecured credit exposures to U.S. branches or agency offices of foreign commercial banks include the risk that, as a result of political or economic conditions in a country, the counterparty may be unable to meet their contractual repayment obligations. Our unsecured credit exposures to domestic counterparties and U.S. subsidiaries of foreign commercial banks include the risk that these counterparties have extended credit to foreign counterparties.
- Unsecured credit investments may have maturities up to nine months.
- We actively monitor our credit risk exposure and the credit quality of each counterparty, including an assessment of each counterparty's financial performance, capital adequacy, sovereign support (if applicable) and the current market perceptions of the counterparty. General macro-economic, political and market conditions may also be considered when deciding on unsecured exposure. As a result of this monitoring activity, we may limit or terminate existing unsecured credit exposure limits.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The following table presents the credit ratings of our unsecured investment credit exposures by the domicile of the counterparty or the domicile of the counterparty's parent for U.S. branches and agency offices of foreign commercial banks. This table does not reflect the foreign sovereign government's credit rating. The unsecured investment credit exposure presented in the table may not reflect the average or maximum exposure during the period as the table reflects only the balances at period end.

December 31, 2017	AAA	AA	A rated	BBB	Unrated	Total
Domestic U.S.						
Interest bearing deposits	$ —	$ —	$ 775	$ —	$ —	$ 775
Federal Funds sold	—	975	200	109	2	1,286
Foreign commercial banks - Federal Funds sold:						
Australia	—	2,000	—	—	—	2,000
Canada	—	250	1,150	—	—	1,400
France	—	—	450	—	—	450
Japan	—	—	700	—	—	700
Netherlands	—	—	525	—	—	525
Norway	—	—	600	—	—	600
Sweden	—	500	100	—	—	600
Total unsecured credit exposure	$ —	$ 3,725	$ 4,500	$ 109	$ 2	$ 8,336

All $8.336 billion of the unsecured credit exposure in the above table represent overnight investments and $782 million in the above table were with members and their affiliates. Any amounts related to members over a 10% concentration are included in the amounts in the **Member Credit Outstanding** table on page 61.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Managing Our Credit Risk Exposure Related to Derivative Agreements

Refer to **Note 9 - Derivatives and Hedging Activities** to the financial statements for a discussion of how we manage our credit risk exposure related to derivative agreements. We can have credit exposure on net asset positions where we have not received adequate collateral from our counterparties. We can also have credit exposure on net liability positions where we have pledged collateral in excess of our liability to a counterparty.

The following table presents our derivative positions where we have such credit exposures. The rating used was the lowest rating among the three largest NRSROs. Noncash collateral pledged consists of initial margin we posted through our FCMs, on behalf of the DCOs, for cleared derivatives and is included in our liability positions with credit exposure.

	Net Derivatives Fair Value Before Collateral	Cash Collateral Pledged	Noncash Collateral Pledged	Net Credit Exposure to Counterparties
As of December 31, 2017				
Nonmember counterparties -				
Undercollateralized asset positions -				
Bilateral derivatives -				
BBB	**$ 8**	**$ (8)**	**$ —**	**$ —** [a]
Overcollateralized liability positions -				
Bilateral derivatives -				
AA rated	**(52)**	**52**	**—**	**—** [a]
A rated	**(75)**	**76**	**—**	**1**
Cleared derivatives	**(6)**	**—**	**67**	**61**
Nonmember counterparties	**(125)**	**121**	**67**	**63**
Member counterparties	**1**	**—**	**—**	**1**
Total	**$ (124)**	**$ 121**	**$ 67**	**$ 64**
As of December 31, 2016				
Nonmember counterparties -				
Overcollateralized liability positions -				
Bilateral derivatives -				
AA	$ (60)	$ 60	$ —	$ — [a]
A rated	(57)	60	—	3
Cleared derivatives	(206)	198	97	89
Nonmember counterparties	(323)	318	97	92
Member counterparties	2	—	—	2
Total	$ (321)	$ 318	$ 97	$ 94

[a] Less than $1 million.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Market Risk Profile

Our financial assets and financial liabilities are subject to market risk. Specifically, the fair value of our financial assets may decline while the fair value of our financial liabilities may increase due to changes in market risk factors. Our exposure to interest rate risk, however, represents our most critical market risk factor since our earnings primarily are driven by net interest income.

Interest Rate Risk Management:

Our interest rate risk management objective is to manage our exposure to interest rate risk within appropriate limits rather than eliminate our entire exposure to interest rate risk. In this regard, we have established policies and procedures that include guidelines on the amount of exposure to interest rate changes we are willing to accept. Our Asset/Liability Management Committee provides oversight of these risk management practices and policies. This includes routine reporting to senior Bank management and the Board of Directors, as well as maintaining the Income and Market Value Risk Policy, which defines our interest rate risk limits. Our strategy to mitigate losses due to interest rate risk is outlined below.

Monitoring and Analyzing Interest Rate Risk:

- We monitor the risk to our net interest income, and average maturity of our interest bearing assets and liabilities.

- We measure and manage market exposure through four measurements: duration, convexity, curve, and volatility.

    - Duration measures our exposure to parallel interest rate shifts where changes in interest rates occur at similar rates across the yield curve. Duration of equity is a measure that expresses the interest rate sensitivity of the present value of the Bank's cash flow in terms of duration years of portfolio equity. We report the results of our duration of equity calculations to the FHFA each quarter. We measure duration of equity in a base case using the actual yield curve as of a specified date and then shock it with an instantaneous shift of the entire curve. Effective duration measures price sensitivity taking into account that the expected cash flows will change as interest rate change due to any prepayment options embedded within a financial instrument.

    - Convexity measures how fast duration changes as a function of interest rate changes. Convexity is largely driven by mortgage cash flows that vary significantly as borrowers respond to rate changes by either prepaying their mortgages or slowing such prepayments.

    - Curve quantifies our exposure to non-parallel shifts in the yield curve.

    - Volatility describes the degree to which the value of options, explicit or embedded, fluctuates. MPF Loans held in portfolio and MBS include options held by the mortgage borrowers to prepay their loans. As a result, we have effectively sold options by owning MPF Loans held in portfolio and MBS. Some consolidated obligations issued by us have effective purchased options that allow us to call the bonds prior to the contractual maturity date.

- We analyze the risk of our mortgage assets on a regular basis and consider the interest rate environment under various interest rate scenarios. We also perform analyses of the duration and convexity of the portfolio.

Mortgage-Related Assets

MPF Loans Held in Portfolio and MBS:

The predominant source of interest rate risk in our market risk profile is attributable to mortgage-related assets. Our mortgage-related assets include, but are not limited to, MPF Loans held in portfolio and MBS. Interest rate risk results from prepayment options embedded in mortgage-related assets. Specifically, changes in interest rates may result in extensions or contractions in the expected maturities of our mortgage-related assets. Interest rate swaps, swaptions, and futures contracts may be used to hedge the duration, convexity, and prepayment risk on MPF Loans held in portfolio. We issue both callable and noncallable debt to achieve cash flow patterns and liability durations similar to those expected on MPF Loans held in portfolio.

Economic Hedges:

An economic hedge is defined as a derivative that does not qualify (or was not designated) for hedge accounting, but is an acceptable hedging strategy for risk management purposes. These economic hedging strategies also comply with FHFA regulations that prohibit speculative hedge transactions. An economic hedge may introduce the potential for earnings volatility caused by the changes in fair value on the derivatives that are recorded in income but not offset by recognizing corresponding changes in the fair value of the economically hedged assets, liabilities, or firm commitments.

We utilize economic hedges to manage our duration, convexity, curve, and volatility. We hedge the duration and convexity of MPF Loans held in portfolio by using economic hedges or through the use of callable and noncallable debt. Convexity risks arise principally from the prepayment option embedded in our MPF Loans held in portfolio and MBS. As interest rates become more volatile, changes in our duration and convexity profile become more volatile. As a result, our level of economic hedging activity, as discussed below, may increase resulting in an increase in hedging costs.

Our primary risk mitigation tools include funding instruments, swaps, swaptions, futures, options on futures and mortgages, caps, floors and callable debt. We do not manage exposure to spreads. Based on our risk profile, we do not use our funding to match the cash flows of our mortgage related assets on a transaction basis. Rather, funding is used to address duration, convexity, curve, and volatility risks at either a portfolio or balance sheet level.

Economic hedges may be executed to reduce exposure or the risk associated with a single transaction or group of transactions. Our economic hedges are evaluated daily and adjusted as deemed necessary.

MPF Government MBS Product:

Each delivery commitment is hedged during the delivery commitment period and during the period while the loan is on the Bank's balance sheet by selling forward Ginnie Mae and Fannie Mae TBA contracts. These TBA contracts may be executed to reduce the market risk exposure associated with buying or holding an MPF Government MBS loan until it is securitized. The hedges are evaluated daily and adjusted as deemed necessary.

MPF Xtra and MPF Direct Products:

We enter into offsetting delivery commitments under the MPF Xtra and MPF Direct products, where we agree to buy mortgage loans from PFIs and simultaneously re-sell them to third party investors. Accordingly, we are not exposed to market risk with respect to these delivery commitments.

Advances

The optionality embedded in certain advances may create interest rate risk. When a member prepays an advance, we could suffer lower future income if the principal portion of the prepaid advance were invested in lower-yielding assets that continue to be funded by higher-cost debt. To protect against this risk, we generally charge a prepayment fee that makes us financially indifferent to a member's decision to prepay an advance or on some products, we structure the advance to address this risk. When we offer advances (other than short-term advances) that a member may prepay or expand (increase the par amount at a later date) without a fee, we may finance such advances with callable or noncallable debt or enter into a derivative to achieve hedge accounting treatment.

Cash Flow Hedges

We may use an option to hedge a specified future variable cash flow of variable-rate LIBOR-based advances. The option will effectively create a floor on the variable cash flow at a predetermined target rate. These hedges are considered perfectly effective since in each hedge relationship, the critical terms of the LIBOR floor completely match the related terms of the hedged forecasted cash flows. For effective hedges using options, the option premium is reclassified out of AOCI using the floorlet method. Specifically, the initial basis of the instrument at the inception of the hedge is allocated to the respective floorlets comprising the floor. All subsequent changes in fair value of the floor, to the extent deemed effective, are recognized in AOCI. The change in the allocated fair value of each respective floorlet is reclassified out of AOCI when each of the corresponding hedged forecasted transactions impacts earnings.

Fair Value Hedges

With issuances of certain putable advances, we purchase from the member an embedded option that enables us to extinguish the advance. We may hedge a putable advance by entering into a cancelable interest rate swap where we pay fixed interest payments and receive floating rate interest payments based off of LIBOR. This type of hedge is accounted for as a fair value hedge. We assess hedge effectiveness primarily under the long-haul method. However, in certain cases where all conditions are met, hedge effectiveness is assessed using the shortcut method. Currently, we principally apply shortcut accounting to certain nonputable fixed-rate advances. In the case of putable advances, the transactions are primarily hedged under a highly effective hedge relationship. In those cases, the swap counterparty can cancel the derivative financial instrument on the same date that we can put the advance back to the member.

We enter into fair value hedge relationships between forward starting advances, which represent firm commitments, and interest rate swaps. In such cases, we carry the forward starting advance at fair value with any changes in fair value recognized in non-interest gain (loss) on derivatives and hedging activities. Such changes in fair value are offset by the change in fair value of the interest rate swap (i.e., hedging instrument).

Economic Hedges

Interest rate swaps, swaptions, and futures contracts may be used to hedge the duration and convexity of the advances portfolio; as well as the prepayment risk on advances and the expander feature risk, which allows a member one or multiple opportunities to increase the principal amount of the advance. We issue both callable and noncallable debt intended to achieve cash flow patterns and liability durations similar to those expected on advances. We may also purchase cancelable swaps in an effort to minimize the prepayment risk embedded in the advances.

Non-MBS Investment Securities

Our major security types, excluding MBS, are based on the nature and risks of the security. These securities include, but are not limited to, the following:

- U.S. Government & other government related may consist of the sovereign debt of the United States; debt issued by government sponsored enterprises (GSE); and non-mortgage-backed securities of the Small Business Administration and Tennessee Valley Authority.
- Federal Family Education Loan Program - asset backed securities (FFELP ABS).
- State or local housing agency obligations.

We endeavor to manage the interest rate and prepayment risk associated with these non-MBS securities through a combination of debt issuance and derivatives.

Fair Value Hedges

We use interest rate swaps to hedge certain AFS securities to shorten our duration profile in an increasing interest rate environment. Our hedge strategy focuses on hedging the benchmark interest rate of LIBOR by effectively converting fixed-rate securities into floating rate assets to reduce our exposure to rising interest rates. This type of hedge is accounted for as a fair value hedge. We assess hedge effectiveness under the long-haul method. AFS securities are carried at fair value. Changes in fair value on AFS securities are recognized into AOCI in our statements of condition, except for AFS securities that are in a fair value hedge relationship. Changes in fair value on AFS securities in a fair value hedging relationship are immediately recognized into noninterest income on derivatives and hedging activities in our statements of income. Specifically, the adjustment to the AFS security's carrying amount for changes in the benchmark interest rate is the amount that is recognized in noninterest income on derivatives and hedging activities in our statements of income in order to offset the gain or loss on the hedging instrument. Any gain or loss on these AFS securities that is not attributable to changes in the benchmark interest rate is recognized into AOCI. Changes in fair value on the derivative hedging these AFS securities in a fair value hedging relationship also are immediately recognized into noninterest income on derivatives and hedging activities into our statements of income.

Economic Hedges

We may manage against prepayment and duration risk by funding investment securities with consolidated obligations that have call features, by economically hedging the prepayment risk with caps, floors, or by adjusting the duration of the securities by using derivatives to modify the cash flows of the securities.

We may also manage the risk arising from changing market prices and volatility of investment securities classified as trading securities by entering into derivative financial instruments (economic hedges) that offset the changes in fair value of the securities. The market value changes of both the trading securities and the associated derivatives are recognized in noninterest income.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Discount Notes

Cash Flow Hedges

We are exposed to the variability in the total net proceeds received from forecasted zero-coupon discount note issuances, which is attributable to changes in the benchmark interest rate, London Interbank Offer Rate ("LIBOR"). Our hedge objective/strategy is to hedge the total net proceeds received from "rolling" forecasted zero-coupon discount note issuances attributable to changes in LIBOR by entering into interest rate swap(s) to mitigate such risk. The life of the hedging relationship between the hedging instrument and the hedged item is from hedge inception until the hedge relationship ends, which is the last forecasted discount note issuance date of the hedge relationship. We are hedging the total net proceeds attributable to changes in LIBOR related to the forecasted issuance (and re-issuance) of zero-coupon fixed-rate discount notes with a three or six month tenor. We primarily use a pay-fixed interest rate swap or "swap" as the hedging instrument in which the interest rate resets every three or six months, whichever is applicable.

Consolidated Obligation Bonds

Fair Value Hedges

We endeavor to manage the fair value risk of a consolidated obligation by matching the cash inflow on the derivative with the cash outflow on the consolidated obligation bonds. For instance, when a fixed-rate consolidated obligation bond is issued, we may simultaneously enter into an interest rate swap in which we receive fixed cash flows from a counterparty designed to offset in timing and amount the cash outflows we pay on the consolidated obligation bond. We also hedge the LIBOR benchmark rate on callable fixed-rate step-up consolidated obligation bonds at specified intervals where we own a call option(s) to terminate the consolidated obligation bond. The hedging instrument is a fixed-rate interest rate swap with a matching step-up feature that converts the callable fixed-rate step-up bond into a floating rate liability and has an offsetting call option(s) to terminate the interest rate swap. Such transactions are treated as fair value hedges. We assess hedge effectiveness primarily under the long-haul method. However, in certain cases where all conditions are met, hedge effectiveness is assessed using the shortcut method. We apply shortcut accounting to certain noncallable fixed-rate consolidated obligations.

Fair Value Option

We may elect the fair value option for financial instruments, such as advances, MPF Loans held for sale, consolidated obligation discount notes and bonds, in cases where hedge accounting treatment may not be achieved due to the inability to meet the hedge effectiveness testing criterion. Electing the fair value option for a financial instrument allows us to better match the changes in fair value on that financial instrument with the interest rate swap economically hedging it.

Our Asset/Liability Management Committee provides oversight of risk management practices and policies. This includes routine reporting to senior Bank management and the Board of Directors, as well as maintaining the Income and Market Value Risk Policy, which defines our interest rate risk limits. The table below reflects the change in market risk limits under the policy.

	December 31, 2017		December 31, 2016	
Scenario as of	**Change in Market Value of Equity**	**Loss Limit**	Change in Market Value of Equity	Loss Limit
-200 bp	**$ 202**	**$ (370)**	$ 192	$ (370)
-100 bp	**66**	**(155)**	101	(155)
-50 bp	**31**	**(60)**	38	(60)
-25 bp	**16**	**(30)**	17	(30)
+25 bp	**(17)**	**(30)**	(17)	(30)
+50 bp	**(37)**	**(60)**	(36)	(60)
+100 bp	**(83)**	**(155)**	(76)	(155)
+200 bp	**(195)**	**(370)**	(167)	(370)

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The following table outlines our hedge activity by hedged item or economic risk exposure, hedging instrument, hedge type and notional amount by hedging activity.

As of December 31,			Notional Amount	
Hedged Item/Economic Risk Exposure [a]	**Hedge Type**	**Hedging Instrument**	**2017**	2016
Investment Securities	**Fair value**	Receive floating, pay fixed interest rate swap	**$ 3,267**	$ 3,551
	Economic	Receive floating, pay fixed interest rate swap	**—**	1,000
			3,267	4,551
Advances	**Fair value**	Receive-floating, pay fixed interest rate swap (without options)	**3,766**	3,795
		Receive-floating, pay fixed interest rate swap (with options)	**1,860**	847
	Economic	Pay fixed, receive floating swap	**1,306**	976
		Other	**48**	49
			6,980	5,667
MPF Loans	**Economic**	A combination of swaps, swaptions, caps, floors, futures, forward settlements and to-be-announced (TBA) forward contracts	**12,976**	15,200
Discount Notes	**Cash flow**	Receive-floating, pay fixed interest rate swap	**5,868**	5,968
	Economic	Receive-fixed, pay floating interest rate swap	**750**	6,375
			6,618	12,343
Consolidated Obligation Bonds	**Fair value**	Receive-fixed, pay floating interest rate swap (without options)	**4,726**	4,530
		Receive fixed, pay floating interest rate swap (with options)	**7,168**	7,308
	Economic	Receive-fixed, pay floating interest rate swap (without options)	**2,035**	2,027
		Receive fixed, pay floating interest rate swap (with options)	**3,446**	3,661
		Other	**80**	74
			17,455	17,600
Intermediary transactions on behalf of members with counterparties	**Economic**	Receive floating interest rate swap, pay-fixed	**26**	83
Mortgage purchase commitments	**Standalone**	Mortgage delivery commitment	**649**	760
Total			**$ 47,971**	$ 56,204

[a] Hedged item only applies to hedges that qualify for hedge accounting. Economic risk exposure applies economic hedges that are accounted for at fair value.

Measurement of Market Risk Exposure

To measure our exposure, we discount the cash flows generated from modeling the terms and conditions of all interest rate-sensitive securities using current interest rates to determine their fair values or spreads to the swap curve for securities where third party prices are used. This includes considering explicit and embedded options using a lattice model or Monte Carlo simulation. We estimate yield curve, option, and basis risk exposures by calculating the fair value change in relation to various parallel changes in interest rates, implied volatility, prepayment speeds, spreads to the swap curve and mortgage rates.

Our key interest rate risk exposures and interest rate risk within specific financial instruments are discussed below.

Key Interest Rate Risk Exposures:

- *Yield curve risk* - We are exposed to interest rate movements in certain yield curves, such as LIBOR and OIS, which are used to discount the future cash flows attributable to our financial instruments, including derivatives. We measure our yield curve risk as follows:
    - *Yield risk* - Change in market value for a one basis point parallel increase in the swap curve.
- *Option risk* - We are exposed to option risk as the value of option positions (explicit and embedded) vary due to changes in the implied volatility of the yield curve as well as the yield curve itself. We measure our option risk as follows:
    - *Option risk (implied volatility)* – Change in market value for a one percent parallel increase in the swaption volatility.
    - *Option risk (prepayment speeds)* – Change in market value for a one percent increase in prepayment speeds.
- *Basis risk* - We are exposed to basis risk as the yields on different assets, liabilities and derivatives are determined on different yield curves. This includes (1) differences between the swap curve and the Office of Finance cost of funds or consolidated obligation curve; (2) changes in individual securities' spreads to the swap curve as a result of changes in supply, demand, and credit quality of different securities in the market; and (3) changes in mortgage rates relative to the swap curve. We measure our basis risk as follows:
    - *Basis risk (spread to swap curve)* – Change in market value for a one basis point parallel increase in the spread to the swap curve.
    - *Basis risk (mortgage spread)* – Change in market value for a one basis point increase in mortgage rates.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The following table summarizes our sensitivity to various interest rate risk exposures in terms of changes in market value.

		Option Risk		Basis Risk	
	Yield Curve Risk	**Implied Volatility**	**Prepayment Speeds**	**Spread to Swap Curve**	**Mortgage Spread**
As of December 31, 2017					
Advances	**$ (4)**	**$ 1**	**$ —**	**$ (13)**	**$ —**
MPF Loans	**(2)**	**(5)**	**(1)**	**(2)**	**1**
Mortgage Backed Securities	**(1)**	**—**	**(1)**	**(2)**	**—**
Other interest earning assets	**(1)**	**—**	**—**	**(2)**	**—**
Interest-bearing liabilities	**6**	**6**	**—**	**6**	**—**
Derivatives	**1**	**(4)**	**—**	**—**	**—**
Total	**$ (1)**	**$ (2)**	**$ (2)**	**$ (13)**	**$ 1**
As of December 31, 2016					
Advances	$ (3)	$ —	$ —	$ (13)	$ —
MPF Loans	(2)	(3)	(1)	(1)	1
Mortgage Backed Securities	(3)	(1)	(1)	(4)	—
Other interest earning assets	(1)	—	—	(3)	—
Interest-bearing liabilities	7	7	—	7	—
Derivatives	1	(4)	—	—	—
Total	$ (1)	$ (1)	$ (2)	$ (14)	$ 1

As of December 31, 2017, our sensitivity to changes in implied volatility was $(2) million. At December 31, 2016, our sensitivity to changes in implied volatility was $(1) million. These sensitivities are limited in that they do not incorporate other risks, including but not limited to, non-parallel changes in yield curves, prepayment speeds, and basis risk related to differences between the swap and the other curves. Option positions embedded in our mortgage assets and callable debt impact our yield curve risk profile, such that swap curve changes significantly greater than one basis point cannot be linearly interpolated from the table above.

Duration of equity is another measure to express interest rate sensitivity. We report the results of our duration of equity calculations to the FHFA each quarter. We measure duration of equity in a base case using the actual yield curve as of a specified date and then shock it with an instantaneous shift of the entire curve. The following table presents the duration of equity reported by us to the FHFA in accordance with the FHFA's guidance, which prescribes that down and up interest-rate shocks equal 200 basis points. The results are shown in years of duration equity.

As of December 31, 2017			As of December 31, 2016		
Down 200 bps	**Base**	**Up 200 bps**	Down 200 bps	Base	Up 200 bps
2.9	**1.2**	**2.2**	2.3	1.3	1.8

As of December 31, 2017, on a U.S. GAAP basis, our fair value surplus (relative to book value) was $371 million, and our market value of equity to book value of equity ratio was 107%, compared to $388 million and 108% at December 31, 2016. Our market to book value of total capital for regulatory risk-based capital purposes differs from this GAAP calculation, as discussed in **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)** to the financial statements.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Item 8. Financial Statements and Supplementary Data.

Our **Annual Financial Statements and Notes,** including the **Report of Independent Registered Public Accounting Firm**, are set forth starting on page F-1.

Supplementary Data - Selected Quarterly Financial Data (Quarter amounts are unaudited)

	Year	4th	3rd	2nd	1st
2017					
Interest income	**$ 1,558**	**$ 437**	**$ 411**	**$ 373**	**$ 337**
Interest expense	**1,075**	**307**	**288**	**256**	**224**
Provision for (reversal of) credit losses	**—**	**—**	**(1)**	**1**	**—**
Net interest income after provision for (reversal of) credit losses	**483**	**130**	**124**	**116**	**113**
Noninterest income	**44**	**13**	**5**	**16**	**10**
Noninterest expense	**174**	**45**	**43**	**44**	**42**
Affordable Housing Program assessment	**36**	**10**	**9**	**9**	**8**
Net income	**$ 317**	**$ 88**	**$ 77**	**$ 79**	**$ 73**
2016					
Interest income	$ 1,259	$ 315	$ 309	$ 317	$ 318
Interest expense	803	203	196	206	198
Provision for (reversal of) credit losses	1	1	—	—	—
Net interest income after provision for (reversal of) credit losses	455	111	113	111	120
Noninterest income	76	15	14	50 [a]	(3)
Noninterest expense	167	39	42	46	40
Affordable Housing Program assessment	37	9	9	11	8
Net income	$ 327	$ 78	$ 76	$ 104	$ 69

[a] In the 2nd quarter of 2016 we received $38 million in litigation settlement awards related to our MBS investment portfolio. See **Litigation Settlement Awards** on page 44 for details.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures
Under the supervision and with the participation of management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, as of the end of the period covered by this report (the Evaluation Date). Based on this evaluation, the principal executive officer and principal financial officer concluded as of the Evaluation Date that the disclosure controls and procedures were effective such that information relating to us that is required to be disclosed in reports filed with the SEC: (i) is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and (ii) is accumulated and communicated to management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Controls over Financial Reporting
Management is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Exchange Act 13a-15(f). Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements.

Our management, which includes our principal executive officer and principal financial officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, management uses as guidance the framework developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in “Internal Control - Integrated Framework (2013)” and other authoritative guidance on governance and internal control. The assessment included extensive documenting, evaluating and testing the design and operating effectiveness of our internal control over financial reporting. Management concluded that based on its assessment, our internal control over financial reporting was effective as of December 31, 2017. The effectiveness of our internal control over financial reporting as of December 31, 2017, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report included herein.

Changes in Internal Control over Financial Reporting
For the quarter ended December 31, 2017, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Consolidated Obligations
Our disclosure controls and procedures include controls and procedures for accumulating and communicating information relating to our joint and several liability for the consolidated obligations of other FHLBs. Because the FHLBs are independently managed and operated, our management relies on information that is provided or disseminated by the FHFA, the Office of Finance or the other FHLBs, as well as on published FHLB credit ratings, in determining whether the FHFA's joint and several liability regulation is probable to result in a direct obligation for us or whether it is reasonably possible that we will accrue a direct liability.

Our management also relies on the operation of the FHFA's joint and several liability regulation that requires each FHLB to file with the FHFA a quarterly certification that it will remain capable of making full and timely payment of all of its current obligations, including direct obligations, coming due during the next quarter. In addition, if an FHLB cannot make such a certification or if it projects that it may be unable to meet its current obligations during the next quarter on a timely basis, it must file a notice with the FHFA. Under the FHLB Act and related regulation, the FHFA may order any FHLB to make principal and interest payments on any consolidated obligations of any other FHLB, or allocate the outstanding liability of an FHLB among all remaining FHLBs on a pro rata basis in proportion to each FHLB's participation in all consolidated obligations outstanding or on any other basis.

Based on these factors, we do not expect to pay any additional amounts on behalf of other FHLBs under our joint and several liability as of December 31, 2017, and as a result, we did not accrue a liability. For additional information, see **Note 10 - Consolidated Obligations** and **Note 17 - Commitments and Contingencies** to the financial statements.

Item 9B. Other Information.

PricewaterhouseCoopers LLP (PwC) serves as the independent registered public accounting firm for us and the other FHLBs. Rule 2-01(c)(1)(ii)(A) of Regulation S-X (the Loan Rule) prohibits an accounting firm, such as PwC, and any covered person in the firm, from having certain financial relationships with their audit clients and affiliated entities. Specifically, the Loan Rule provides, in the relevant part, that an accounting firm generally would not be independent if the accounting firm or any covered person in the firm receives a loan from a lender that is a "record or beneficial owner of more than ten percent of the audit client's equity securities."

PwC has advised the Bank that as of February 23, 2018, it and certain covered persons in the firm have borrowing relationships with three Bank members (referred to below as the "Lenders") who each own more than ten percent of the Bank's capital stock which could call into question PwC's independence with respect to the Bank. The Bank is providing this disclosure to explain the facts and circumstances of PwC's and its covered persons' relationships with these Lenders as well as PwC's and the Audit Committee's conclusions concerning PwC's objectivity and impartiality with respect to the audit of the Bank.

PwC advised the Audit Committee of the Bank that it believed that, in light of the facts of each borrowing relationship, its ability to exercise objective and impartial judgment on all matters encompassed within PwC's audit engagement is not impaired and that a reasonable investor with knowledge of all relevant facts and circumstances would reach the same conclusion.

PwC advised the Audit Committee that this conclusion is based in part on the following considerations with respect to borrowing relationships between two of the Lenders and PwC:

- the borrowings are in good standing and the Lenders do not have the right to take action against PwC, as borrower, in connection with the financings;
- the debt balances outstanding were immaterial/would appear to be insignificant to PwC and to each of the Lenders;
- PwC has borrowing relationships with a diverse group of lenders, therefore PwC is not dependent on any single lender or group of lenders;
- the PwC audit engagement team has no involvement in PwC's treasury function and PwC's treasury function has no oversight or ability to influence the PwC audit engagement team; and
- the Lenders have not influenced or made any attempt to influence the conduct of the Bank's audit or the objectivity or impartiality of any member of the PwC audit engagement team.

PwC has also advised the Audit Committee that it does not believe that the borrowing relationships among its firm partners and two of the Lenders that participate in a syndicate financing program to fund capital contribution requirements impair PwC's ability to exercise objective and impartial judgment. With respect to the syndicated loans, the Lenders cannot initiate any change to the terms of the loan without agreement of a majority of the syndicate lenders.

PwC advised the Audit Committee that with respect to borrowing relationships between one of the Lenders and engagement team members, its conclusion is based on factors listed above and the following considerations:

- the Lender has not made any attempt to influence the conduct of the audits or objectivity and impartiality of these engagement team members;
- each loan was obtained under the Lender's normal lending procedures, terms, and requirements;
- each loan is current; and
- mortgage loans are collateralized.

Additionally, PwC advised the Audit Committee that with respect to certain covered persons who do not play an active role in the Bank's audit and that have borrowing relationships with the Lenders, its conclusion is based on such professionals being required to disclose immediately any relationships that may raise issues about objectivity, independence, conflicts of interest, or favoritism.

Moreover, the Audit Committee of the Bank assessed PwC's ability to perform an objective and impartial audit, including consideration of the ownership and governance structure of the Bank, the limited voting rights of the Bank's members and the composition of the board of directors. In addition to the above listed considerations, the Audit Committee considered the following:

- although each of the Lenders owned more than ten percent of the Bank's capital stock, the voting power of each Lender's capital stock is less than ten percent;
- no individual officer or director of a member or independent director that served on the board of directors has the ability to significantly influence the Bank based on the composition of the board of directors; and
- no officer or director of any Lender served on the board of directors of the Bank.

Based on the Audit Committee's evaluation, the Audit Committee concluded that PwC's ability to exercise objective and impartial judgment on all issues encompassed within PwC's audit engagement has not been impaired.

If in the future, however, PwC is ultimately determined under the Loan Rule not to be independent with respect to the Bank, or permanent relief regarding this matter is not granted by the SEC, the Bank may need to take other actions and incur other costs in order for the Bank's previously filed Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q to be deemed compliant with applicable securities laws. Such actions may include, among other things, obtaining a new audit and review of our historical financial statements by another independent registered public accounting firm. Any of the foregoing could have an adverse impact on the Bank.

For further discussion of Bank members owning more than ten percent of the Bank's capital stock at December 31, 2017, please see **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)** to the financial statements. For a discussion of the voting rights of our members, please see **2017 Director Election** on page 85.

PART III

Item 10. Directors, Executive Officers, and Corporate Governance.

Our Board is comprised of a combination of industry directors elected by the Bank's member institutions (referred to as member directors) on a state-by-state basis and independent directors elected by a plurality of the Bank's members (referred to as independent directors). No member of the Bank's management may serve as a director of an FHLB. Our Board currently includes ten member directors and eight independent directors.

Nomination of Member Directors

Member directors are required by statute and regulation to meet certain specific criteria in order to be eligible to be elected and serve as Bank directors. To be eligible an individual must:

- be an officer or director of a Bank member institution located in the state in which there is an open Bank director position;
- the member institution must be in compliance with the minimum capital requirements established by its regulator; and
- the individual must be a U.S. citizen.

These criteria are the only permissible eligibility criteria that member directors must meet. The FHLBs are not permitted to establish additional eligibility criteria for member directors or nominees. For member directors, each eligible institution may nominate representatives from member institutions in its respective state to serve four-year terms on the Board of the Bank. As a matter of statute and regulation, only FHLB stockholders may nominate and elect member directors. FHLB Boards are not permitted to nominate or elect member directors, although they may appoint a director to fill a vacant directorship in advance of the next annual election. Specifically, institutions which are members required to hold capital stock in the Bank as of the record date (i.e., December 31 of the year prior to the year in which the election is held) are entitled to participate in the election process. With respect to member directors, under FHFA regulations, no director, officer, employee, attorney, or agent of the Bank (except in his/her personal capacity) may, directly or indirectly, support the nomination or election of a particular individual for a member directorship. Because of the structure of FHLB member director nominations and elections, we do not know what factors our member institutions consider in selecting member director nominees or electing member directors.

Nomination of Independent Directors

For independent directors, the members elect these individuals on an at large basis to four-year terms, subject to FHFA designation. Independent directors cannot be officers or directors of a Bank member, and must meet certain statutory and regulatory eligibility criteria. To be eligible to serve as an independent director, an individual must be a citizen of the United States and a bona fide resident of the district in which the Bank is located. FHFA regulations require that an independent director (other than a public interest independent director) must have experience in or knowledge of one or more of the following areas: auditing and accounting, derivatives, financial management, organizational management, project development, risk management practices and the law. In addition, the FHFA regulation requires a public interest independent director to have more than four years' experience representing consumer or community interests in banking services, credit needs, housing or consumer financial protection.

Under FHFA regulation, our members are permitted to nominate candidates to be considered by the Bank to be included on the nominee slate and our Board determines the nominees after consulting with the Bank's Community Investment Advisory Council (Advisory Council). FHFA regulations permit a Bank director, officer, attorney, employee or agent and our Board and Advisory Council to support the candidacy of any person nominated by the Board for election to an independent directorship. Our Board selected independent director nominees based on their qualifications as described in each independent director's biography below.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

2017 Director Election

Voting rights and process with regard to the election of member and independent directors are set forth in the FHLB Act and FHFA regulations. For the election of both member directors and independent directors, each eligible member institution is entitled to cast one vote for each share of capital stock that it was required to hold as of the record date; however, the number of votes that each institution may cast for each directorship cannot exceed the average number of shares of capital stock that were required to be held by all member institutions located in that state on the record date. The only matter submitted to a vote of shareholders in 2017 was the election of certain member and independent directors, which occurred in the fourth quarter of 2017 as described above. We conducted this election to fill two open member directorships and two open independent directorships for 2018 designated by the FHFA. In 2017, the nomination and election of member directors was conducted by mail. No meeting of the members was held in regard to the election. Our Board does not solicit proxies, nor are eligible member institutions permitted to solicit or use proxies to cast their votes in an election for member or independent directors. Information about the results of the election, including the votes cast, was reported in an 8-K filed on November 14, 2017, as amended by an 8-K/A filed on December 20, 2017.

Information Regarding Current Directors of the Bank

The following table provides information regarding each of our directors as of February 28, 2018.

Name	Age	Director Since	Expiration of Term as of December 31,
Michael G. Steelman, Chairman [a]	67	2011	2018
John K. Reinke, Vice Chairman [b]	66	2012	2019
James T. Ashworth [a]	66	2013	2020
Owen E. Beacom [a]	59	2012	2019
Edward P. Brady [d]	54	2009	2019
Mary J. Cahillane [d]	66	2011	2020
Mark J. Eppli [d]	56	2012	2021
Joseph Fazio III [b]	56	2017	2020
Michelle L. Gross [a]	47	2015	2020
James H. Hegenbarth [b]	54	2018	2021
Phyllis Lockett [d]	52	2015	2019
David R. Pirsein [a]	65	2015	2018
Leo J. Ries [c]	64	2009	2018
Lois Alison Scott [d]	57	2017	2019
William W. Sennholz [b]	52	2008	2018
Daniel G. Watts [a]	58	2018	2021
Gregory A. White [c]	54	2009	2021
Charles D. Young [d]	49	2015	2020

[a] Illinois member director.
[b] Wisconsin member director.
[c] Public interest independent director.
[d] Independent director.

James T. Ashworth joined CNB Bank & Trust, N.A. in 1978 and has served in many capacities, including as Vice Chairman since 1989 and as President and CEO from 1989 to 1997, as well as serving as Vice Chairman and President and CEO of its holding company, CNB Bank Shares, Inc. since 1989. Mr. Ashworth served as Chairman of the Community Bankers Association of Illinois and as an elected director of the Independent Community Bankers of America, on the state association's Legislative Committee and the national association's Regulation Review Committee; he was named CBAI's "Outstanding Member" in 1995. He also has previously served on the Illinois State Treasurer's Community Bank Advisory Council and as an appointed delegate to the White House Conference on Small Business. Mr. Ashworth earned a Bachelor of Science degree from the University of Miami, and is a graduate of the Graduate School of Banking in Madison, Wisconsin, as well as its post-graduate program. Mr. Ashworth has also served on numerous local Boards, including the community hospital, chamber of commerce, Economic Development Corporation, and Community Foundation.

Mr. Ashworth serves on the following Board committees of the Bank: Affordable Housing (Chairman), Executive & Governance, and Risk Management.

Owen E. Beacom has served as Chief Lending Officer of First Bank & Trust since 2004. Mr. Beacom has also served as a director on the Board of First Bank & Trust and its holding company, First Evanston Bancorp, since 2004. Mr. Beacom's banking experience dates back to 1982 and includes American National Bank of Chicago, Lake Shore National Bank and Bank One. Mr. Beacom's career experience has centered on commercial banking, including community development lending and affordable housing.

Mr. Beacom serves on the following Board committees of the Bank: Human Resources & Compensation and Operations & Technology.

Edward P. Brady has served as president/owner of Brady Homes and Brady Group in Bloomington, Illinois, since 1988. He serves on the Executive Committee and Board of Directors for the National Association of Home Builders and the Home Builders Association of Illinois. Mr. Brady is a former director of Freestar Bank, served as Chairman of the Brady for Illinois 2010 campaign, and has previously served on the Board of Habitat for Humanity for Illinois, the Illinois Chamber of Commerce, the Board of Economic Development Council for McLean County, and other community organizations. Mr. Brady was the immediate past chairman of the National Association of Home Builders. The Board nominated Mr. Brady to serve as an independent director based on his knowledge of and experience in organizational management and project development, as indicated by his background.

Mr. Brady serves on the following Board committees of the Bank: Affordable Housing, Executive & Governance (Alternate) and Public Policy (Chairman).

Mary J. Cahillane was Chief Financial Officer and Chief Investment Officer of the Spencer Foundation since 2003. She retired in May 2015. She previously worked for Bank of America from 1994 to 2003, Continental Bank from 1981 to 1985 and again from 1989 to 1994 and Texas Commerce Bank from 1985 to 1989, holding a variety of senior roles in asset liability management, risk management, and finance. Ms. Cahillane also currently serves on the boards of IES Abroad, St. John Berchmans School, Children's First Fund, and PEAK (Partnership to Educate and Advance Kids). Until the sale of the company in October 2017, she served on the board of Forsythe Technology, Inc. and previously served on the boards of ShoreBank Corporation and ShoreBank. The Board nominated Ms. Cahillane to serve as an independent director based on her knowledge of and experience in financial management and risk management practices, as indicated by her background.

Ms. Cahillane serves on the following Board committees of the Bank: Audit, Executive & Governance and Risk Management (Chairman).

Mark J. Eppli is Robert B. Bell, Sr. Chair in Real Estate at Marquette University in Milwaukee, Wisconsin. Dr. Eppli was appointed Bell Chair in 2002, has served as the Director of the Center for Real Estate since 2009, and served as Interim Keyes Dean of Business at Marquette University from 2012 to 2015. Dr. Eppli was also Professor of Finance and Real Estate in the School of Business and Public Management at The George Washington University in 2002, Associate Professor of Finance and Real Estate at The George Washington University from 1997 to 2002 and Assistant Professor of Finance and Real Estate at The George Washington University from 1991 to 1997. He was an active instructor and author for the Urban Land Institute from 1992 to 2012. Dr. Eppli was also a Lecturer and Teaching Assistant at the University of Wisconsin-Madison from 1987 to 1991. Prior to obtaining his doctorate, Dr. Eppli pursued a career in commercial real estate, serving as Manager of Research and Investment Analysis with PM Realty Advisors from 1985 to 1986 and a Specialist in Real Estate Acquisitions at GE Capital Corporation from 1984 to 1985. Dr. Eppli is past recipient of the Greater Washington Urban League's "Volunteer of the Year" and Urban Land Institute's "Star Performer" awards for his efforts to attract minorities to the commercial real estate industry. He is the immediate past President of the Real Estate Research Institute and Distinguished Fellow at NAIOP, the Commercial Real Estate Development Association. The Board nominated Dr. Eppli to serve as an independent director based on his knowledge of and experience in financial management and risk management practices, as indicated by his background.

Dr. Eppli serves on the following Board committees of the Bank: Affordable Housing and Risk Management (Vice Chairman).

Joseph Fazio III is Co-founder, Board Chairman and CEO of Commerce State Bank, a De Novo bank, which opened in 2005. Mr. Fazio is the only CEO Commerce State Bank has had, having held the positions of Chairman and CEO from 2005 to present. Mr. Fazio also serves as a director of the bank's holding company, Commerce Financial Holdings, Inc. Prior to founding Commerce State Bank, Mr. Fazio led a privately-held marketing company from 2002-2004, was Director of Corporate Marketing for Metavante (now FIS) from 1998 to 2002, led Personal Trust Administration for M&I Trust Company (now BMO) from 1995 to 1998, and held several management positions with IBM from 1983 to 1995. Mr. Fazio is a 1983 graduate of St. Norbert College, and in 1988 earned his master's degree from Edgewood College. He served as a member of the board of directors of the Wisconsin Bankers Association from 2013 to 2016. An active member of his community, he has served as an elected official for the City of Cedarburg and has held several city board appointments. He is President of the Greater Cedarburg Community Foundation, and has served on the board of non-profits such as St. Francis Borgia School, Walker's Point Youth and Family Center, and the Cedarburg Athletic Booster Club. Mr. Fazio is the author of the book, "This Might be a Dumb Question, but How Does Money Work?"

Mr. Fazio serves on the following Board committees of the Bank: Audit and Operations & Technology.

Michelle L. Gross has served as Executive Vice President/Chief Operating Officer, Information Systems Officer, and Director of the State Bank of Bement in Bement, Illinois since 2012 in addition to being Community Bank President of the State Bank of Bement-Monticello facility. She has worked at the State Bank of Bement since 1996 in roles with increasing responsibilities, including as Vice President and Information Systems Officer from 2008 to 2012. Ms. Gross currently serves as a director at the State Bank of Cerro Gordo in Cerro Gordo, Illinois and Bement Bancshares, Inc. in Bement, Illinois. She is a former director at The First National Bank of Ivesdale in Ivesdale, Illinois. Ms. Gross is active in a variety of community service organizations and with the Illinois Bankers Association. Through the Illinois Bankers Association, Ms. Gross has served on a number of committees and is currently a member of its Executive Committee, Board of Directors and Chairman of the Illinois Bankpac Board of Directors. She also serves on the Board of Directors of the Kirby Medical Center and is Chairman of the Kirby Foundation, benefiting Kirby Medical Center, and is also Chairman of the Bement Foundation. Ms. Gross is a graduate of the Graduate School of Banking in Madison, Wisconsin, and earned a Bachelor of Science from Western Illinois University.

Ms. Gross serves on the following Board committees of the Bank: Executive & Governance (Alternate), Human Resources & Compensation (Vice Chairman), and Risk Management.

James H. Hegenbarth has served as President/CEO of The Park Bank in Madison, Wisconsin since 1999 and a member of its Board of Directors since 1997. He has been in the banking industry since 1985 and served in roles with increasing responsibilities, including consumer loan officer, credit analyst, credit manager, Associate Vice President of Business Banking, Vice President of Business Banking, and Senior Vice President of Lending. Mr. Hegenbarth previously worked at First Bank, N.A. (now U.S. Bank). He is a former Wisconsin Bankers Association (WBA) Board member and a current member of the WBA Gold Triangle Club. Mr. Hegenbarth is a graduate of the Graduate School of Banking, University of Wisconsin-Madison, and earned his undergraduate degree in Economics from the University of Wisconsin-Madison.

Mr. Hegenbarth serves on the following Board committees of the Bank: Audit and Public Policy.

Phyllis Lockett has served since 2014 as the founding CEO of LEAP Innovations, a non-profit education technology hub connecting educators and technology companies from across the nation to research, pilot and scale instructional technology solutions that advance teaching from early childhood through college. Prior to her role at LEAP, Ms. Lockett served as President and CEO of New Schools for Chicago (formerly The Renaissance Schools Fund), a venture philanthropy organization that invests in the start-up of new public schools, since 2005. Ms. Lockett served from 1999 to 2005 as Executive Director of the Civic Consulting Alliance, a pro bono consulting firm sponsored by the Civic Committee of the Commercial Club of Chicago that leads strategic planning initiatives, process improvement and program development projects for government agencies. She has played an instrumental role in some of the largest initiatives for the City of Chicago, Chicago Public Schools, and Chicago Housing Authority, including the reorganization of the management structure, resident relocation, capital construction, asset management, and economic development strategies to support the Chicago Housing Authority's $1.5 billion Plan for Transformation. Ms. Lockett earned a Master of Management from the Kellogg School of Management at Northwestern University and a Bachelor of Science in Industrial Engineering from Purdue University. The Board nominated Ms. Lockett to serve as an independent director based on her knowledge of and experience in organizational management, financial management and project development, as indicated by her background.

Ms. Lockett serves on the following Board committees of the Bank: Executive & Governance (Alternate), Human Resources & Compensation, and Operations & Technology (Vice Chairman).

David R. Pirsein has served as President & CEO of First National Bank in Pinckneyville, First Perry Bancorp Inc. and its subsidiary, First National Insurance Services, Inc. since 2005. He has been an active Community Banker for over 35 years. Mr. Pirsein is a board member and executive committee member of the Shazam Inc. board, an EFT network and payments processor. He is the Southern Illinois Regional Vice-Chairman and board member of the Community Bankers Association of Illinois and a board member of its subsidiary, the Community BancService Corp. He currently serves as Assistant Secretary and Finance chairman of the Pinckneyville Community Hospital Board. He also serves on the board of governors of the Southern Illinois Real Estate Title Company, LLC. He is an active participant on the Pinckneyville strategic planning committee and is a Chamber member. Mr. Pirsein previously served two terms on the St. Louis Federal Reserve Board where he held the position of Audit committee chairman for several years. He graduated from Southern Illinois University Carbondale with a degree in Finance and Banking and has attended many banking schools, including the Graduate School of Banking in Madison, Wisconsin.

Mr. Pirsein serves on the following Board committees of the Bank: Executive & Governance (Alternate), Operations & Technology (Chairman) and Public Policy.

John K. Reinke has been with The Stephenson National Bank & Trust since 1974 and served as President there from 2000 to 2013. Mr. Reinke currently serves as Chair of the board of directors of The Stephenson National Bank & Trust subsequent to his retirement from the President & CEO position in April 2013. Mr. Reinke previously served on the Government Relations Administrative Council for the American Bankers Association. In addition, he served on the Board of the Wisconsin Bankers Association from 2002 through 2008 and as Chairman from 2006 to 2007. Mr. Reinke also has previously served as a Bay Area Medical Center board member and Treasurer, President of the University of Wisconsin - Marinette Foundation, Inc., President of the Menominee Area Chamber of Commerce, Chairman of the M&M Area Community Foundation, M&M Area Great Lakes Sport Fishermen President, M&M YMCA President, and Marinette County Revolving Loan Committee President.

Mr. Reinke serves as the Bank's Vice Chairman of the Board and Vice Chairman of the Executive & Governance Committee. Mr. Reinke also serves on the following Board committees of the Bank: Audit (Vice Chairman) and Human Resources & Compensation (Chairman).

Leo J. Ries was the Executive Director of Local Initiatives Support Corporation (LISC) in Milwaukee, Wisconsin from 2000 until he retired in 2015. He currently works as a private consultant for profit and nonprofit corporations, as he also did from 1999 to 2000. He currently serves on the Board of Directors for Near West Side Partners, Inc., Lead2Change, Inc., as well as the Wisconsin Advisory Council for CommonBond Communities, Inc. and the Advisory Council for First-Ring Industrial Redevelopment Enterprise, Inc. Prior to his tenure at LISC, he was Deputy Commissioner for the City of Milwaukee in the Department of Neighborhood Services in 1999 and Director of the Housing and Neighborhood Development Division of the Department of City Development from 1992 to 1998. He served as the Director of the Community Block Grant Administration in the Department of Administration from 1990 to 1992. He served on the Board of Directors of the Neighborhood Improvement Development Corporation from 1992 to 1999, Select Milwaukee, Inc., from 1996 to 2000, Walker's Point Development Corporation from 1999 to 2000 and Canticle Court/Juniper Court from 1999 to 2000. The Board nominated Mr. Ries to serve as an independent director based on his experience representing community interests in housing, as indicated by his background.

Mr. Ries serves on the following Board committees of the Bank: Affordable Housing (Vice Chairman) and Operations & Technology.

Lois Alison Scott has been with Epoch Advisors since 2015, and has served as President since 2015. From 2011 to 2015, Ms. Scott served as the Chief Financial Officer for the City of Chicago, the first woman to ever serve in that capacity. In 2011, Ms. Scott co-founded and chaired the Municipal CFO Forum with the Harris School of the University of Chicago where she now chairs the Advisory Board for the Center on Municipal Finance. From 2002 to 2011, Ms. Scott was Chief Executive Officer of a financial advisory firm that served large corporate and governmental clients. Prior to that, she served as President and Vice Chair of a technology company that provided a family of services to schools. Ms. Scott started her career at First Chicago (now JPMorgan), where she was responsible for governmental, healthcare and higher education clients in an eight-state region. From 2015 to August 2017, Ms. Scott served as a director on the board of the MBIA. She currently serves on the board of the Chicago Stock Exchange, the Kroll Bond Rating Agency, and the advisory board of other privately held financial services companies. The Board nominated Ms. Scott to serve as an independent director based on her knowledge of and experience in accounting and financial management practices, as indicated by her background.

Ms. Scott serves on the following Board committees of the Bank: Executive & Governance, Audit (Chairman) and Risk Management.

William W. Sennholz joined Forward Financial Bank (formerly Marshfield Savings Bank) in Marshfield, Wisconsin, in 2005 as President and CEO. Prior to his service with Forward Financial Bank, he served as President, CEO, and Chairman of the Board of Clarke County State Bank in Osceola, Iowa, from 2002 to 2005. From 1997 to 2002, Mr. Sennholz was the Vice President, Senior Lending Officer at Peoples State Bank in Wausau, Wisconsin. He held various positions of increasing responsibility at M&I First American Bank from 1989 to 1997. In addition to his duties as a director of the Bank, Mr. Sennholz is also the Chairman of the Marshfield Area YMCA, Chairman of the Marshfield Economic Development Board, and a council member of Hope Lodge (a lodging facility for cancer patients and their families).

Mr. Sennholz serves on the following Board committees of the Bank: Executive & Governance, Public Policy, and Risk Management.

Michael G. Steelman has been with the Farmers and Merchants State Bank of Bushnell and its holding company, Prairieland Bancorp., Inc., since 1984. He has served as Chief Executive Officer of Farmers and Merchants State Bank of Bushnell since 1996, and was appointed Chairman in 2001. In addition, Mr. Steelman has served as President and Chairman of the holding company since 2001. Mr. Steelman served as Chairman of the Illinois Bankers Association in 2008-2009, and was actively involved in the legislative and regulatory process at federal and state levels. An attorney practicing in banking law, Mr. Steelman is a member of the Illinois State Bar Association, and a graduate of the University of Wisconsin Graduate School of Banking. Mr. Steelman also serves as Secretary and Director of the Bushnell Economic Development Corporation.

Mr. Steelman serves as the Bank's Chairman of the Board and Chairman of the Executive & Governance Committee. He also serves as an ex officio member of the following Board committees of the Bank: Affordable Housing, Audit, Human Resources & Compensation, Operations & Technology, Public Policy, and Risk Management.

Daniel G. Watts is a Director and the President of Forest Park National Bank, which he joined in January 2010. Mr. Watts has been an executive banking professional for over 25 years. He began his career at The American National Bank and Trust Company of Chicago, after which he became an Executive Officer and Director at Cosmopolitan Bank and Trust, Pullman Bank and Trust and Park National Bank (all subsidiaries of the former FBOP Corporation). Mr. Watts currently serves as a board member of Community Investment Corporation (CIC) and Chicago Neighborhood Initiatives (CNI). Previously, he served as a director of Neighborhood Housing Services (NHS). Mr. Watts is Board Chairman of the Illinois Bankers Association and the Fenwick High School Foundation. Mr. Watts earned an undergraduate degree in Economics from Northwestern University, a law degree from Loyola University of Chicago School of Law, and an MBA from the University of Chicago Booth School of Business.

Mr. Watts serves on the following Board committees of the Bank: Affordable Housing & Audit.

Gregory A. White has been the President and Chief Executive Officer for LEARN Charter Schools located in Chicago, Illinois, from 2008 to present. Mr. White is leading an entrepreneurial effort to grow this nationally recognized network of high performing elementary schools from ten serving 4,200 students to sixteen schools serving 8,000 students. Prior to LEARN, Mr. White worked for The Chicago Community Trust (Vice President of Strategy & Operations), Chicago Venture Partners, L.P. (Co-founder & Partner), Salomon Brothers (Bond Salesman), Continental Bank (Real Estate Lender), The Rouse Company (Research Analyst) and the Enterprise Foundation (Assistant Field Officer). Mr. White also served on the board of directors of Learn Charter School Network, Lakefront Supportive Housing Christ the King High School, and the Chicago Transit Authority Citizens Advisory Board. Mr. White earned a Masters of Business Administration from Harvard Business School and graduated with honors from Brown University. The Board nominated Mr. White to serve as an independent director based on his experience representing consumer and community interests in credit needs and housing, as indicated by his background.

Mr. White serves on the following Board committees of the Bank: Human Resources & Compensation and Public Policy (Vice Chairman).

Charles D. Young has been with Invitation Homes (formerly Starwood Waypoint Homes), a public real estate investment trust, since 2012. He has served as Chief Operating Officer since March 2015 and as Senior Division Vice President and Regional Director prior to that. Invitation Homes acquires, renovates, leases, and manages residential assets in the United States, focused primarily on acquiring single-family rental homes and non-performing residential mortgage loans. Prior to his employment with Invitation Homes, Mr. Young served as Executive Vice President at Mesa Development, a private real estate development firm, from 2003 to 2012, and as a senior analyst at Goldman Sachs from 1999 to 2000. Mr. Young started his career in the National Football League before co-founding and serving from 1994 to 2000 as managing director of the Kaleidoscope Group, a firm that provides management consulting, human resource, and strategic diversity initiative services to Fortune 500 clients. Mr. Young earned a Masters of Business Administration from the Stanford Graduate School of Business, and a Bachelor of Arts in Economics from Stanford University. The Board nominated Mr. Young to serve as an independent director based on his knowledge of and experience in organizational management, financial management and project development, as indicated by his background.

Mr. Young serves on the following Board committees of the Bank: Affordable Housing and Human Resources & Compensation.

There are no family relationships among the above directors or our executive officers.

Audit Committee

Our Audit Committee is comprised of non-executive directors. The Audit Committee Charter is available in full on our website at https://www.fhlbc.com/docs/default-source/about-us-pdfs/ac-charter.pdf.

Audit Committee Report

March 9, 2018

The Audit Committee is composed of seven non-executive directors, two of whom are non-member directors, and operates under a written charter adopted by the Board of Directors that was last amended on April 25, 2017. Our Board of Directors determined that all Audit Committee members (Directors Scott, Reinke, Cahillane, Fazio, Watts, Hegenbarth, and Steelman) are an "Audit Committee financial expert" for purposes of SEC requirements. Our Board of Directors elected to use the New York Stock Exchange definition of "independence" and, in doing so, concluded that each of the Directors on the Audit Committee, during 2017 and currently, is not independent, with the exception of Directors Scott and Cahillane, who do not serve as officers or directors of a Bank member. Under Federal Housing Finance Agency (FHFA) regulations applicable to members of the Audit Committee, each of the Audit Committee members is independent. For further discussion about the Board's analysis of director independence under the New York Stock Exchange rules, see **Director Independence** on page 117.

In accordance with its written charter adopted by the Board of Directors, the Audit Committee, assists the Board of Directors in fulfilling its responsibility for oversight of the Bank's accounting, reporting and financial practices, including the integrity of its financial statements, among other areas.

The Audit Committee is directly responsible for the appointment and oversight of our independent auditors, PricewaterhouseCoopers LLP (PwC), including review of their qualifications, independence and performance. Among other duties, the Audit Committee also oversees:

- the integrity of the Bank's financial statements, the Bank's accounting and financial reporting processes and systems;
- internal control over the Bank's financial reporting and safeguarding the Bank's assets;
- the programs, policies and compliance systems of the Bank designed to ensure compliance with applicable laws, regulations, other legal and regulatory requirements and policies;
- practices with respect to risk assessment and risk management;
- independent auditor's qualifications and independence;
- performance of the internal audit function; and
- performance of the independent auditor.

The Bank is one of 11 district Federal Home Loan Banks (FHLBs), that together with the Office of Finance (OF), comprise the Federal Home Loan Bank System (System). Each FHLB operates as a separate entity with its own management, employees, and board of directors and each is regulated by the FHFA. The OF has responsibility for the issuance of consolidated obligations on behalf of the FHLBs, and for publishing combined financial reports (CFRs) of the FHLBs. Accordingly, the System has determined that it is optimal to have the same independent audit firm to coordinate and perform the separate audits of the OF and each FHLB. The FHLBs and OF cooperate in selecting and evaluating the performance of the independent auditor, but the responsibility for the appointment and oversight of the independent auditor remains solely with the audit committees of each FHLB and the OF.

PwC has been the independent auditor for the System and the Bank since 1990. The Audit Committee engages in rigorous evaluations each year when appointing an independent auditor. In connection with the appointment of the Bank's independent auditor, the Audit Committee's evaluation included consultation with the Audit Committees of the other FHLBs and the OF. Specific considerations included:

- an analysis of the risks and benefits of retaining the same firm as independent auditor versus engaging a different firm, including consideration of:
  - PwC engagement audit partner, engagement quality review partner and audit team rotation;
  - PwC's tenure as the Bank's and the Systems' independent auditor;
  - benefits associated with engaging a different firm as independent auditor; and
  - potential disruption and risks associated with changing the independent auditor.
- PwC's depth and breadth of understanding of our business, operations, and accounting policies and practices;

- PwC's historical and recent performance on the Bank's audit, including the results of an internal survey of PwC service and quality;
- an analysis of PwC's known legal risks and significant proceedings;
- external data relating to audit quality and performance, including recent Public Company Accounting Oversight Board (PCAOB) audit quality inspection reports on PwC and its peer firms;
- the appropriateness of PwC's fees, on both an absolute basis and as compared to its peer firms; and
- the diversity of PwC's ownership and staff assigned to the engagement.

Audit Fees represent fees for professional services provided in connection with the audit of the Bank's annual financial statements and internal control over financial reporting and reviews of the Bank's quarterly financial statements, regulatory filings, consents and other SEC matters.

The Audit Committee has reviewed and approved the fees paid to the independent auditor for audit, audit related and other services, and the Audit Committee has determined that PwC does not provide any non-audit services that would impair its independence. To the Audit Committee's knowledge, there are no other matters which cause the Audit Committee to believe PwC is not independent.

In accordance with SEC rules, audit partners are subject to rotation requirements to limit the number of consecutive years an individual partner may provide service to the Bank. For engagement audit and quality review partners, the maximum number of consecutive years of service in that capacity is five years. The process for selection of the Bank's engagement audit partner pursuant to this rotation policy involves a meeting between the Chair of the Audit Committee and the candidate for the role, as well as discussion by the full Audit Committee and management.

Based on its reviews discussed above, the Audit Committee recommended to the Board of Directors the appointment of PwC as the Bank's independent registered public accounting firm for 2018.

The Audit Committee annually reviews its written charter and practices, and has determined that its charter and practices are consistent with the applicable FHFA regulations and the provisions of the Sarbanes-Oxley Act of 2002.

Among other matters, the Audit Committee also:

- reviewed the scope of and overall plans for the external and internal audit program;
- discussed with management and PwC the Bank's processes for risk assessment and risk management;
- reviewed and approved the Bank's policy with regard to the hiring of former employees of the independent auditor;
- reviewed and approved the Bank's policy for the pre-approval of audit and permitted non-audit services by the independent auditor;
- received reports pursuant to the Bank's policy for the submission and confidential treatment of communications from employees and others about accounting, internal controls and auditing matters;
- reviewed with management the scope and effectiveness of the Bank's disclosure controls and procedures, including for purposes of evaluating the accuracy and fair presentation of the Bank's financial statements in connection with certifications made by the Bank's President and Chief Financial Officer; and
- reviewed significant legal developments and the Bank's processes for monitoring compliance with law and Bank policies.

The Audit Committee has established procedures for the receipt, retention and treatment, on a confidential basis, of any complaints we receive. The Bank encourages employees and third-party individuals and organizations to report concerns about the Bank's accounting controls, auditing matters or anything else that appears to involve financial or other wrongdoing.

Management has the primary responsibility for the preparation and integrity of the Bank's financial statements, accounting and financial reporting principles, and internal controls and procedures designed to assure compliance with accounting standards and applicable laws and regulations. The Bank's independent auditor, PwC, is responsible for performing an independent audit of the Bank's financial statements and of the effectiveness of internal control over financial reporting in accordance with the standards of the PCAOB (United States) and, with respect to the financial statements, the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. The internal auditors are responsible for preparing an annual audit plan and conducting internal audits under the control of the General Auditor, who reports to the Audit Committee. The Audit Committee's responsibility is to monitor and oversee these processes. The Audit Committee met 10 times during 2017, and has regular executive sessions with both internal and independent auditors.

In this context, prior to their issuance, the Audit Committee reviewed and discussed the quarterly and annual earnings releases, financial statements (including the presentation of non-GAAP financial information) and disclosures under "Management's Discussion and Analysis of Financial Condition and Results of Operations" (including significant accounting policies and judgments) with management, the Bank’s internal auditors and PwC. The Audit Committee also reviewed the Bank’s policies and practices with respect to financial risk assessment, as well as its processes and practices with respect to enterprise risk assessment and management. The Audit Committee discussed with PwC matters required to be discussed by Auditing Standard No. 1301 Communications with Audit Committee, as amended, and Rule 2-07 (Communication with Audit Committees) of Regulation S-X. The Audit Committee has also received the written disclosures and the letter from PwC required by the applicable requirements of the PCAOB regarding PwC’s communications with the Audit Committee concerning independence, and has discussed with PwC its independence [Item 407(d)(3) of Reg. S-X]. The Audit Committee met with PwC and with the Bank’s internal auditors, in each case, with and without other members of management present, to discuss the results of their respective examinations, the evaluations of the Bank’s internal controls and the overall quality and integrity of the Bank’s financial reporting. Management represented to the Audit Committee that the Bank's financial statements were prepared in accordance with accounting principles generally accepted in the United States of America.

Based on the reviews and discussions with management, the internal auditors, and PwC, as well as the review of the representations of management and PwC's report, the Audit Committee recommended to the Board of Directors, and the Board of Directors has approved, to include the audited financial statements in the Bank's Annual Report on Form 10-K for the year ended December 31, 2017, for filing with the Securities and Exchange Commission.

As of the date of filing for this Annual Report on Form 10-K, the members of the Audit Committee are:

Lois Alison Scott, Chairman
John K. Reinke, Vice Chairman
Mary J. Cahillane
Joseph Fazio III
Daniel G. Watts
James H. Hegenbarth
Michael G. Steelman (ex officio)

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Executive Officers of the Registrant

The following table provides certain information regarding our executive officers as of February 28, 2018:

Executive Officer	Age	Capacity in Which Served	Employee of the Bank Since
Matthew R. Feldman	64	President and Chief Executive Officer	2003
Michael A. Ericson	46	Executive Vice President, Group Head, Members and Markets	2005
Thomas H.W. Harper*	52	Executive Vice President, General Auditor	2005
Michelle Jonson	44	Executive Vice President and Chief Risk Officer	2000
Roger D. Lundstrom	57	Executive Vice President and Chief Financial Officer	1984
Samuel J. Nicita	57	Executive Vice President and Chief Information Officer	2008
John Stocchetti	61	Executive Vice President, Group Head, Mortgage Partnership Finance Program	2006
Laura M. Turnquest	53	Executive Vice President, General Counsel and Corporate Secretary	2004
Kim Cullotta	48	Senior Vice President, Group Head, Human Resources	2011
Virxhini Gjonzeneli	36	Senior Vice President, Group Head, Strategic Initiatives	2003

* Although Mr. Harper is a non-voting member of the Bank's Executive Team, he is not considered an "executive officer" as defined in Rule 3b-7 of the Securities Exchange Act of 1934 because he is not in charge of a principal business unit, division or function, nor does he perform a similar policy making function.

Matthew R. Feldman became President and Chief Executive Officer in May 2008, after serving as Acting President from April 2008 until then. Mr. Feldman was Executive Vice President, Operations and Administration of the Bank from 2006 to 2008, Senior Vice President, Risk Management of the Bank from 2004 to 2006 and Senior Vice President, Manager of Operations Analysis of the Bank from 2003 to 2004. Prior to his employment with the Bank, Mr. Feldman was Co-founder and Chief Executive Officer of Learning Insights, Inc. from 1995 to 2003. Mr. Feldman conceived, established, financed, and directed the operations of this privately held e-learning company. Mr. Feldman was President of Continental Trust Company, a wholly-owned subsidiary of Continental Bank from 1992 to 1995 and Managing Director-Global Trading and Distribution of Continental Bank from 1988 to 1992. Mr. Feldman currently serves on the Board of Directors of the FHLBs' Office of Finance, and as Chairman of the Board of the Pentegra Defined Benefit Plan for Financial Institutions.

Michael A. Ericson became Executive Vice President and Group Head, Members and Markets in July 2014. Prior to that, he became Senior Vice President and Chief Risk Officer of the Bank in July 2008 and Executive Vice President in December 2008. Previously, Mr. Ericson was Senior Vice President of Accounting Policy and SEC Reporting since joining the Bank in January 2005. Prior to joining the Bank, Mr. Ericson was Vice President, Accounting Policy at Bank One before the merger with JPMorgan Chase and became Global Treasury Controller at JPMorgan Chase subsequent to the merger from 2003 to 2004. Mr. Ericson was Senior Manager with PricewaterhouseCoopers LLP in the Financial Services group from 1994 to 2003.

Thomas H. W. Harper became General Auditor of the Bank in 2006 and Executive Vice President in January 2011. Prior to that, Mr. Harper was Senior Vice President, Audit Director from 2005 to 2006. Prior to joining the Bank, Mr. Harper was First Vice President, Senior Audit Manager with JPMorgan Chase and Co., from 2004 to 2005. From May 1997 until the merger of Bank One, NA with JPMorgan Chase in June 2004, Mr. Harper was responsible for the internal audit of the Commercial and Investment Bank, Treasury Services and Corporate areas of Bank One, NA. Mr. Harper was Vice President, Audit Manager with the First National Bank of Chicago, NA (which became Bank One, NA) in London, U.K. from 1993 to 1997 and an auditor in Banking and Financial Services with KPMG Peat Marwick in London, U.K., from 1987 to 1992. Mr. Harper is a Chartered Accountant (England and Wales), a Certified Financial Services Auditor, and a Certified Internal Auditor.

Michelle Jonson became Executive Vice President, Chief Risk Officer of the Bank in July 2014. Prior to that, she was Senior Vice President and Co-Head of the Members and Markets Group since May 2014. Previously, Ms. Jonson served as Managing Director of the sales, member support, and member marketing relations functions since 2011. In 2000, Ms. Jonson joined the Bank and has managed responsibilities around pricing, funding, and hedging of Advances and MPF, and developing operational risk strategies for the Members and Markets Group. Prior to joining the Bank, Ms. Jonson worked as an Investment Analyst for Aon Advisors. She received her CFA charter designation in 2008.

Roger D. Lundstrom has been Chief Financial Officer since October 2008 and Executive Vice President and Group Head, Financial Information (now Member, Community and Financial Services) of the Bank since 2003. Mr. Lundstrom was Senior

Vice President, Financial Information of the Bank from 1997 to 2003 and Senior Vice President, Financial Reporting and Analysis of the Bank from 1992 to 1997. Mr. Lundstrom held various positions with the Bank in analysis and reporting functions with increasing levels of responsibility from 1984 to 1992.

Samuel J. Nicita became Executive Vice President and Chief Information Officer of the Bank in January 2016. Prior to that, he was Executive Vice President and Group Head, Community Investment and Member Products Support of the Bank from 2014 to 2015, Senior Vice President and Group Head, Community Investment of the Bank from 2012 to 2014, Community Investment Officer of the Bank from 2011 to 2012, Senior Vice President, Manager Premier Group/Middle Office of the Bank from 2010 to 2011 and Vice President, Manager Premier Group/Middle Office of the Bank from 2008 to 2010. Prior to joining the Bank, Mr. Nicita was Chief Operating Officer of Highview Capital Management from 2006 to 2008, Director of Operations of Ritchie Capital Management from 2001 to 2006 and held various positions with Chicago Research and Trade (which was acquired by Nations Bank, and later merged with Bank of America) from 1990 to 2001.

John Stocchetti has been with the Bank since 2006 and is currently Executive Vice President and Group Head, Mortgage Partnership Finance Program (MPF), a responsibility he assumed in January 2014. From May 2008 to January 2014, Mr. Stocchetti was Executive Vice President and Group Head, Products and Operations (formerly Products, Operations, and Technology), where he led a number of initiatives to upgrade, re-organize, and re-engineer the Bank's operations and technology. Mr. Stocchetti served as Senior Vice President, Project Premier Director of the Bank from 2006 to 2008, where he led the effort to implement an enterprise-wide systems platform that is now the Bank's main operating platform. Prior to joining the Bank, Mr. Stocchetti served in several positions from 2004 to 2006, including Chief Financial Officer, at Ritchie Capital Management, LLC, a multi-strategy hedge fund. Previously, Mr. Stocchetti served in various capacities from 1997 to 2004, including CEO, with Learning Insights, Inc., an e-learning internet company. From 1995 to 1997, Mr. Stocchetti was a Senior Vice President with NationsBank where he was the head of interest rate derivatives operations on a global basis and the Chief Operating Officer of NationsBank Financial Products, a AAA-rated derivatives company. From 1978 to 1995, Mr. Stocchetti was with Continental Bank in Chicago, IL where he held various positions, the latest of which was as a Managing Director of Derivative Products. Mr. Stocchetti holds a Masters of Business Administration from the University of Chicago and earned a Bachelors of Science in economics from the University of Illinois at Chicago. Mr. Stocchetti served as an adjunct professor at the Illinois Institute of Technology where he taught classes for six years in the graduate level Financial Markets and Trading program.

Laura M. Turnquest became Executive Vice President, General Counsel and Corporate Secretary of the Bank in August 2016. Prior to that, Ms. Turnquest was: Senior Vice President, Deputy General Counsel from 2007 to August 2016; Vice President, Deputy General Counsel from 2006 to 2007; and Assistant Vice President, Assistant General Counsel from 2004 to 2006. Prior to joining the Bank, Ms. Turnquest was an associate in the Banking and Finance practice at Mayer Brown LLP from 1997 to 2004.

Kim Cullotta joined the Bank's Executive Team in November 2017, and became Senior Vice President and Group Head, Human Resources in January 2018. Ms. Cullotta started with the Bank in 2011, and has served as Senior Vice President, Member Product Support and Senior Vice President, Information Technology. Ms. Cullotta has over 20 years of management experience in diverse financial services institutions, including: Director, Finance at Infinium Capital Management, LLC from 2010 to 2011, Financial Controller/Compliance Officer at Fox River Securities, LLC from 2007-2010 (which was acquired by Infinium), Financial Management & Reporting Director at Ritchie Capital Management, LLC from 2002-2007, and Vice President, Finance-Global Markets Group Planning & Reporting at Bank of America from 1996-2002.

Virxhini Gjonzeneli became Senior Vice President and Group Head, Strategic Initiatives of the Bank in November 2017. Prior to that, she was Senior Vice President, Director of Enterprise Risk Management since 2015. Ms. Gjonzeneli joined the Bank in 2003, and from 2007 to 2015 held positions of increasing levels of responsibilities within the Bank's Credit group, including Assistant Vice President, Senior Markets Credit Analyst and Vice President, Manager of Markets Credit Analysis. Ms. Gjonzeneli received her MBA from the University of Chicago Booth School of Business and her undergraduate degree from Northwestern University.

There are no family relationships among the above executive officers or our directors.

We have adopted a code of ethics for all of our employees and directors, including our President and CEO, principal financial officer, and those individuals who perform similar functions. A copy of the code of ethics is published on our internet website and may be accessed at: https://www.fhlbc.com/docs/default-source/about-us-pdfs/code-of-ethics-1-1-18.pdf.

We intend to disclose on our website any amendments to, or waivers of, the Code of Ethics covering our President, CEO, principal financial officer, and those individuals who perform similar functions. The information contained in or connected to our website is not incorporated by reference into this annual report on Form 10-K and should not be considered part of this or any report filed with the SEC.

Item 11. Executive Compensation.

This section provides information regarding our compensation program for our 2017 named executive officers (NEOs): Matthew R. Feldman, President and CEO; Roger D. Lundstrom, Executive Vice President & Chief Financial Officer; Michael A. Ericson, Executive Vice President & Group Head, Members and Markets; John Stocchetti, Executive Vice President & Group Head, Mortgage Partnership Finance Program; and Laura M. Turnquest, Executive Vice President, General Counsel & Corporate Secretary.

Compensation Discussion & Analysis

Compensation Program Objectives and Philosophy

Our Human Resources & Compensation Committee (the HR&C Committee) is responsible for, among other things, reviewing and making recommendations to the full Board of Directors regarding compensation and incentive plan awards for the Bank's President and CEO and to assist the Board in matters pertaining to the employment and compensation of other executive officers, our employment and benefits programs in general, and overseeing a risk assessment of our compensation policies and practices for all employees. The HR&C Committee may rely on the assistance, advice, and recommendations of the Bank's management and other advisors and may refer specific matters to other committees of the Board.

The goal of our compensation program is to set compensation at a level which allows us to attract, motivate, and retain talented executives who can enhance our business performance and help us fulfill our mission. Our compensation program is designed to reward:

- Individual performance and attainment of Bank-wide requirements and goals and business strategies on both a short-term and long-term basis;
- Fulfillment of our mission;
- Effective and appropriate management of risks, including financial, operational, market, credit, legal, regulatory, and other risks; and
- The growth and enhancement of executive leadership.

Our current compensation program is comprised of a combination of base salary, short-term incentive compensation, long-term incentive compensation, retirement, severance, and other benefits which reflect total compensation that is consistent with individual performance, business results, job responsibility levels, and the competitive market. Because we are a cooperative and our capital stock generally may be held only by members, we are unable to provide compensation to executives in the form of stock or stock options which is typical in the financial services industry.

Regulatory Oversight of Executive Compensation

The FHFA provides certain oversight of FHLB executive officer compensation. Under the Federal Housing Enterprises Financial Safety and Soundness Act of 1992, as amended, the FHFA Director must prohibit an FHLB from paying compensation to its executive officers that is not reasonable and comparable to that paid for employment in similar businesses involving similar duties and responsibilities. In connection with this responsibility, the FHFA has directed the FHLBs to submit all compensation actions involving named executive officers to the FHFA for prior review.

The FHFA has issued a rule setting forth requirements and processes with respect to compensation provided to executive officers by FHLBs. The rule addresses the authority of the FHFA Director to: 1) approve executive officer agreements that provide for compensation in connection with termination of employment and 2) review the compensation arrangements of executive officers of the FHLBs and to prohibit an FHLB from providing compensation to any executive officer that the Director determines is not reasonable and comparable with compensation for employment in other similar businesses involving similar duties and responsibilities.

The FHFA has also issued an advisory bulletin establishing certain principles for executive compensation at the FHLBs and the Office of Finance. These principles include that: (1) such compensation must be reasonable and comparable to that offered to executives in similar positions at comparable financial institutions; (2) such compensation should be consistent with sound risk management and preservation of the par value of FHLB stock; (3) a significant percentage of an executive's incentive-based compensation should be tied to longer-term performance and outcome-indicators and be deferred and made contingent upon performance over several years; and (4) the Board of Directors should promote accountability and transparency in the process of setting compensation. Under the Housing and Economic Recovery Act of 2008, the FHFA Director has the right to prohibit or limit golden parachute payments under certain conditions as described in **Severance Arrangements** on page 104.

In 2016, the FHFA, jointly with five other federal regulators, published a proposed rule that would prohibit certain financial institutions, including the Bank, from establishing or maintaining incentive-based compensation arrangements that encourage inappropriate risks by certain covered persons that could lead to a material financial loss at the institution. The proposed rule would impact the design and operation of our compensation policies and practices, including our incentive compensation policies and practices, if adopted as proposed.

The HR&C Committee has established a risk review framework in connection with its review and approval of incentive compensation plan requirements and goals, risks, and payouts. Under the framework, our Chief Risk Officer delivered a risk analysis report to our Operations and Technology Committee and the Risk Management Committee of the Board of Directors evaluating certain risk principles against the requirements and goals, risks, and payouts associated with our short-term, deferred and long-term incentive compensation plans, and evaluating whether our compensation policies and practices create risks that are reasonably likely to have a material adverse effect on the Bank. The HR&C Committee reviewed the report, along with base salary information and consultant studies (as further described below), and determined that the compensation payable to our executive officers for 2017 and 2018 was and is reasonable and comparable to that paid within the FHLB System and complies with the FHFA guidance.

Use of Compensation Consultants and Surveys

It is the intent of the HR&C Committee to set overall compensation packages at competitive market levels. In order to evaluate and maintain our desired market compensation position, the HR&C Committee reviews comparable market compensation information. We participated in the 2016 Federal Home Loan Bank System Key Position Compensation Survey. This survey, conducted by Kathy Riemer Compensation Consulting, outlines executive and non-executive compensation information for various positions across all 11 FHLBs.

We also engaged McLagan Partners, a compensation consulting firm, to conduct a broad-based compensation survey for 2016 that includes market statistics on salary, annual incentives, total cash, long-term/deferred awards, and total compensation. The survey compared our 2016 named executive officer compensation against three peer groups: (1) commercial banks (excluding global investment banks), (2) other FHLBs, and (3) named executive officers from publicly traded financial institutions with $10 billion to $20 billion in assets. McLagan reviewed the data collection and results with our Human Resources senior management so that we may understand the appropriateness of the survey comparisons adjusting for scale and scope of the survey position versus the other survey participants. Our Human Resources senior management reviews the surveys with our HR&C Committee.

The information obtained from the 2016 Federal Home Loan Bank System Key Position Survey and the 2016 McLagan Executive Compensation Benchmarking Survey (together, Compensation Surveys) was considered by the Board of Directors, the HR&C Committee, and our President and CEO, as appropriate, when making compensation decisions for 2017.

Elements of Our Compensation Program

On an annual basis, the HR&C Committee reviews the components of our NEO compensation: salary, short- and long-term incentive compensation, matching bank contributions, severance benefits, and projected payments under our retirement plans.

Base salary is included in our NEO compensation package because the HR&C Committee believes it is appropriate that a portion of the compensation be in a form that is fixed and liquid. We use the base salary element to provide the foundation of a fair and competitive compensation opportunity for each of our executive officers. We generally do not provide perquisites to our executives as part of our compensation program, and during 2017 none of our executives have received perquisites in excess of $10,000 in annual value.

Performance-based compensation is split between our short-term, long-term, and deferred cash incentive award opportunities, providing incentive for our NEOs to pursue particular business objectives consistent with the overall business strategies and risk management criteria set by our Board of Directors. The plans for our NEOs, although designed to reward both overall Bank performance and individual performance, are heavily weighted toward overall Bank performance.

In determining executive compensation, we do not have to consider federal income tax effects on the Bank because we are exempt from federal income taxation.

Employment Agreements

All of our NEOs (other than the President and CEO) are at-will employees of the Bank.

The Bank entered into a new employment agreement with Mr. Feldman effective January 1, 2015, which replaced his prior agreement that was effective January 1, 2011. The new agreement provides for a four-year employment term ending December 31, 2018, unless terminated earlier as provided for in the agreement. The agreement provides for automatic one-year extensions until such date as the Board of Directors or Mr. Feldman elects not to renew the agreement.

The Board of Directors set Mr. Feldman's 2017 base salary at $940,420 effective January 1, 2017, after considering his performance and accomplishments during 2016 and the overall competitive market data from the Compensation Surveys, which maintains Mr. Feldman's base salary above the 90th percentile of the base salaries paid to other FHLB presidents. The Board of Directors determined that this was appropriate based upon his tenure and experience, the complex nature and operations of the Bank relative to the other FHLBs, and the importance of his retention. The HR&C Committee reviews Mr. Feldman's performance annually and in its discretion may recommend an increase in salary to the Board of Directors for approval.

Mr. Feldman’s employment agreement allows Mr. Feldman to participate in the Bank’s President and Executive Team Incentive Compensation Plan (as amended to date, the Incentive Plan). In 2016, the long-term incentive plan component of Mr. Feldman’s compensation under the Key Employee Long Term Incentive Compensation Plan was replaced by the Deferred Award under the Incentive Plan discussed below. In addition, Mr. Feldman is also entitled to participate in our health insurance, life insurance, retirement, and other benefit plans that are generally applicable to our other senior executives. Under the employment agreement, the Bank has agreed to indemnify Mr. Feldman with respect to any tax liabilities and penalties and interest under Section 409A of the Internal Revenue Code of 1986.

For a description of Mr. Feldman's post-termination compensation payable under his employment agreement, see **Severance Arrangements** on page 104.

Base Salary

Base salary is a key component of our compensation program. In making base salary determinations, the HR&C Committee and, with respect to making compensation recommendations for the other executive officers, the President and CEO, review competitive market data from the Compensation Surveys and consider factors such as prior related work experience, individual job performance, and the position's scope of duties and responsibilities within our organizational structure and hierarchy.

The Board of Directors determines base salary for the President and CEO after it has received a recommendation from the HR&C Committee; it set Mr. Feldman’s base salary at $940,420 for 2017 as described above.

On an annual basis, the President and CEO reviews the performance of the other NEOs and makes salary recommendations to the HR&C Committee. In setting base salaries, Mr. Feldman and the HR&C Committee will generally consider competitive market data from the Compensation Surveys and individual performance, including the attainment of personal goals. The HR&C Committee and Mr. Feldman have determined that the compensation guideline for base salaries for NEOs (other than the President and CEO) should generally target the 75th percentile of the base salaries paid to senior executives serving in similar positions at the other FHLBs. Due to the complex nature and operations of the Bank relative to the other FHLBs and the importance of retaining key members of the executive management team, salaries for certain NEOs may be targeted above the 75th percentile.

Mr. Stocchetti received a 4.87% increase in base salary for 2017 from $553,050 to $580,000, which maintains his base salary above the 90th percentile of base salaries paid to senior executives serving in similar positions at the other FHLBs and reflects the increased complexities of his job compared to those serving in similar positions at the other FHLBs and his individual performance. Mr. Ericson received a 8.24% increase in base salary for 2017 from $425,000 to $460,000, which brings his base salary above the 90th percentile of base salaries paid to senior executives serving in similar positions at the other FHLBs and reflects the increased complexities of his position as compared to those serving in similar positions at the other FHLBs. Mr. Lundstrom received a 2.82% increase in base salary for 2017 from $425,000 to $437,000, which brings his new base salary to the 65th percentile of base salaries paid to senior executives serving in similar positions at the other FHLBs. Ms. Turnquest received a 6.99% increase in base salary for 2017 from $357,500 to $382,500, which brings her base salary slightly above the 90th percentile of base salaries paid to senior executives serving in similar positions at the other FHLBs and reflects her individual performance, tenure, and experience. The new base salaries for these NEOs became effective February 1, 2017.

President and Executive Team Incentive Compensation Plan

Since 2013 our NEOs have participated in the Incentive Plan, which is a cash-based annual incentive plan with a deferral component that establishes individual incentive award opportunities related to achievement of performance objectives by the Bank and by participants during performance periods. Effective January 1, 2017, the Incentive Plan was amended and restated principally to provide for certain awards upon termination of employment (which provisions apply retroactively). The Incentive Plan provides the Bank's Executive Team, including our NEOs, the opportunity to earn incentive compensation awards based on the Bank's achievement of certain financial and performance requirements established by the Board (the Performance Requirements).

The Incentive Plan establishes two performance periods. Incentive Plan participants may earn an annual award following a one-year performance period (an Annual Award) and may receive a deferred award following a three-year deferral period (a Deferred Award). For each performance period the Board will present an opportunity to Incentive Plan participants to earn a total award (an Incentive Award), which is composed of the Annual Award and the Deferred Award, equal to a percentage of each Incentive Plan participant's annual base salary at the end of the performance period for the Annual Award. After the end of a performance period the Board will determine the total Incentive Award of each Incentive Plan participant based on the achievement of the Performance Requirements at a minimum, target, or maximum level. As approved by the Board for the 2017 - 2020 performance period, the Incentive Award may range for NEOs other than the President & CEO from 40% to 80% of base salary and from 60% to 100% of base salary for the President & CEO. The HR&C Committee has the discretion to award amounts that fall between these ranges based on an interpolation of the performance results. The Annual Award will be equal to 50% of the Incentive Award and the Deferred Award will be equal to 50% of the Incentive Award (subject to adjustment based upon achievement of certain Performance Requirements) and will be deferred during the three-year deferral period. The HR&C Committee may in its discretion increase the Incentive Award of an individual Incentive Plan participant to account for such participant's performance that is not captured in the Performance Requirements applicable to such individual.

In determining the Performance Requirements under the Incentive Plan, the HR&C Committee strives to:

(1) balance risk and financial results in a manner that does not encourage participants to expose the Bank to imprudent risks;

(2) make such determination in a manner designed to ensure that participants' overall compensation is balanced and not excessive in amount and that the awards are consistent with the Bank's policies and procedures regarding such compensation arrangements; and

(3) monitor the success of the Performance Requirements and weighting established in prior years, alone and in combination with other incentive compensation awarded to the same participants, and make appropriate adjustments in future calendar years as needed so that payments appropriately incentivize participants and reflect risk.

Performance Requirements for Annual Awards

The Incentive Award opportunity for each performance period will be based on Performance Requirements established annually by the Board. The Incentive Plan provides that the HR&C Committee and the Board will establish separate Performance Requirements for Annual Awards and Deferral Awards. Performance Requirements for Deferred Awards will apply during the deferral period and assessment of the achievement of Performance Requirements will be determined at the end of each deferral period.

The Performance Requirements for the 2017 Annual Awards and applicable weighting for each requirement are as follows:

	Performance Requirements	Weighting for NEOs
A	The Core Mission Asset Ratio at 12/31/17, calculated using annual average par values of outstanding advances plus the unpaid principal balances of mortgage assets acquired from members and held on the Bank's balance sheet, as a proportion of the par value of consolidated obligations issued for the Bank.	17.00%
B	The change in the par amount of advances outstanding (average daily levels for the fourth quarter of 2017) plus the change in the year-end balances of supplemental mission assets and activities from 12/31/16 to 12/31/17.	12.50%
C	Increase in the level of total retained earnings from 12/31/16 to 12/31/17.	18.00%
D	Member use of Community Investment products measured as the sum of the number of: members participating in 2017 with Community First Fund borrowers; CICA advance borrowers in 2017; AHP member applications in 2017; members participating in the Downpayment Plus program in 2017;and participants in voluntary programs.	7.50%
E	Net revenue generated by the Bank on MPF products.	7.50%
F	Implementation of MPF Program enhancement projects, and identification of additional projects for consideration.	5.00%
G	The net income of the MPF Provider vs. the 2017 MPF Provider forecasted net income.	7.50%
H	Remediation of 2016 FHFA findings.	15.00%
I	Implementation of Diversity and Inclusion initiatives.	10.00%

The minimum, target and maximum achievement levels for each Performance Requirement for the 2017 Annual Awards (which awards are reflected in the Summary Compensation Table) along with 2017 results and the actual weighted achievement (as a percentage of base salary) are set forth in the following table:

					Actual Weighted Incentive Award as % of Salary for	
Requirement	Minimum	Target	Maximum	2017 Results	President [a]	All Other NEOs [b]
A	65.0%	66.0%	67.0%	67.22%	17.00%	13.60%
B	$500 million	$1 billion	$3 billion	$19.878 billion	12.50%	10.00%
C	$125 million	$150 million	$175 million	$248.1 million	18.00%	14.40%
D	387 participants	412 participants	439 participants	456 participants	7.50%	6.00%
E	$21.4 million	$23.6 million	$25.8 million	$25.8 million	7.50%	6.00%
F	3 enhancements	4 enhancements	5 enhancements	4 enhancements	4.00%	3.00%
G	($1.0) million	$0.0 million	$0.8 million	$1.3 million	7.50%	6.00%
H	Complete action plans as assessed by the HR&C Committee with a report from Internal Audit within 90 days of the timeframe agreed upon for each (80% credit)	Complete action plans as assessed by the HR&C Committee with a report from Internal Audit within 30 days of the timeframe agreed upon for each (100% credit)	Complete action plans as assessed by the HR&C Committee with a report from Internal Audit by the timeframe agreed upon for each (130% credit)	112.00%	13.20%	10.20%
I	80% achievement	100% achievement	120% achievement	100.00%	8.00%	6.00%
			Total Actual Incentive Award as a % of Salary [c]		95.20%	75.20% [d]

[a] The percentages shown above represent the actual achievement which equates to an opportunity percentage ranging from 60% to 100% of base salary for the President (which includes interpolated amounts where performance fell between the achievement levels), multiplied by the applicable weighting for each requirement.

[b] The percentages shown above represent the actual achievement which equates to an opportunity percentage ranging from 40% to 80% of base salary for NEOs other than the President (which includes interpolated amounts where performance fell between the achievement levels), multiplied by the applicable weighting for each requirement.

[c] 50% of the Incentive Award achieved is the Annual Award, which is payable at the end of 2017, and 50% of the Incentive Award is the Deferred Award, which is payable at the end of the 2018-2020 deferral period.

[d] The HR&C Committee began with an award opportunity of 75.20% for Mr. Ericson and Ms. Turnquest. After considering the Bank's overall performance and each of Mr. Ericson's and Ms. Turnquest's individual performances, the HR&C Committee increased the Incentive Award for Mr. Ericson to 86.48% of his base salary and for Ms. Turnquest to 86.48% of her base salary.

Performance Requirements for Deferred Awards

2015-2017 Deferred Award (Earned for 2017)

The performance results and weighted achievement for the 2015-2017 Deferred Award (as a percentage of the initial deferred portion of the Incentive Award achieved for the 2014-2017 performance period) are set forth in the following table. This Deferred Award was earned in 2017 and is reflected in the Summary Compensation Table.

2015 - 2017 Performance Requirement Results	Actual Weighted Deferred Award as % of Deferred Award [a]
Ratio of the market value to par value of the Bank's capital stock as of 12/31/17 is 315%.	31.25%
Maintained the three minimum regulatory capital ratios at each month end through 12/31/17.	31.25%
Maintained positive annual net income for 2015, 2016, and 2017.	31.25%
Improved the Bank's examination rating.	31.25%
Deferred Award as a % of the Initial Deferred Portion of the Incentive Award Achieved for the 2014-2017 Performance Period [b]	125%

[a] The percentages shown above represent the actual achievement which equates to an opportunity percentage ranging from 75% to125% of the initial deferred portion of the Incentive Award achieved for the 2014-2017 performance period (which includes interpolated amounts where performance fell between the achievement levels), multiplied by the applicable weighting for each requirement. All conditions for payment of the 2015-2017 Deferred Award were satisfied and the maximum levels were achieved for each Performance Requirement.

[b] The 2015-2017 Deferred Award is part of the Incentive Award achieved for the 2014-2017 performance period. 50% of the Incentive Award achieved is the Annual Award, which was earned in 2014, 50% of the Incentive Award achieved is the Deferred Award, which is payable following the end of 2017, and reflected in the Summary Compensation Table.

2018-2020 Deferred Award (Awarded in 2017)

The minimum, target and maximum achievement levels for each Performance Requirement for the Deferred Award for the 2018 - 2020 deferral period along with the applicable weightings for each requirement are set forth in the following table.

	Performance Requirements	Weighting for all NEOs [a]	Minimum	Target	Maximum
A	Ratio of the market value to par value of the Bank's capital stock as of 12/31/20	33.34%	>100%	>105%	>150%
B	Maintain the three minimum regulatory capital ratios at each month end through 12/31/20	33.33%	At least 104 capital requirements	At least 106 capital requirements	In all 36 months (108 capital requirements)
C	Maintain positive annual net income during 2018, 2019 and 2020	33.33%	In 10 of 12 quarters	In 11 of 12 quarters	In all 12 quarters

[a] If the composite exam rating remains the same as the level at 12/31/16 or improves during 2018, 2019, or 2020, the Deferred Award paid will be at 100% of applicable weighting for each Performance Requirement above. If the composite exam rating declines during any of 2018, 2019, or 2020 from the level at 12/31/16 then the calculation based on actual achievement of the Performance Requirements for the Deferred Awards will reflect a reduction of 33% in the weightings of each Performance Requirement above.

The HR&C Committee may, in its discretion, reduce or eliminate an Annual Award or a Deferred Award for any applicable performance period under any of the following circumstances: (1) the Bank receives the lowest or second-lowest cumulative rating in its FHFA examination in any calendar year in a particular performance period; (2) the Board determines that a material safety and soundness problem has occurred, or a material risk management deficiency exists at the Bank, or if (a) operational errors or omissions result in material revisions to the Bank's financial results, information submitted to the FHFA, or to data used to determine Incentive Awards, (b) submission of material information to the Securities and Exchange Commission, the Office of Finance, or the FHFA is materially beyond any deadline or applicable grace period, or (c) the Bank fails to make sufficient progress, as determined by the Board, in the timely remediation of significant examination, monitoring, or other supervisory findings; (3) a Deferred Award may be reduced for each year during the deferral period in which the Bank has negative net income; or (4) with respect to an individual Incentive Plan participant only, (a) such Incentive Plan participant's job performance is rated less than "Meets Expectations," either during a performance period or at the scheduled time of an Incentive Award payout, (b) such Incentive Plan participant becomes subject to any disciplinary action at the scheduled time of an Incentive

Award payout, or (c) such Incentive Plan participant fails to comply with regulatory requirements or standards, internal control standards, the standards of his or her profession, any internal Bank standard, or fails to perform responsibilities assigned to such Incentive Plan participant under the Bank's strategic business plan.

The amount of the Deferred Award may increase or decrease based on the level of achievement of the Performance Requirements during the deferral period. For the 2017 - 2020 performance period, the amount of the Deferred Award as approved by the Board for each participant can range from 75% to 125% of the initial deferred portion of the Incentive Award as determined at the end of the initial performance period. The HR&C Committee has the discretion to award amounts that fall between these ranges based on an interpolation of the performance results.

Incentive Plan participants are paid their respective Incentive Awards, if any, in cash following the initial and deferred performance periods, provided that they are actively employed by the Bank at the end of the performance period. However, effective January 1, 2017 and retroactively applied to prior performance periods, if a participant dies, becomes disabled, retires, terminates employment for good reason or a change of control occurs, the participant shall be eligible to receive, unless he participates in any activity constituting cause, (a) a pro-rated incentive award for the current performance period based on how long he was employed with the Bank during the year (excluding any period of disability in excess of three months), and (b) all Deferred Awards previously granted. If a participant terminates employment other than as set forth in the immediately preceding sentence, he shall receive all Deferred Awards previously granted, as long as the participant has not been terminated for cause, subject to the terms of the plan. Incentive Plan participants may elect to defer some or all of an Incentive Award under our Benefit Equalization Plan. For a description of the terms of the Benefit Equalization Plan see **Benefit Equalization Plan** on page 106.

See **President and Executive Team Incentive Compensation Plan** on page 109 for the awards made to the NEOs under this plan.

Key Employee Long Term Incentive Compensation Plan

Effective as of the 2014-2016 performance period, our Executive Team stopped participating in the Key Employee Long Term Incentive Compensation Plan (which was replaced with the Deferred Award under the Incentive Plan).

However, since Ms. Turnquest was promoted to the Executive Team in August 2016, she continued to participate in the Key Employee Long Term Incentive Compensation Plan (which remained in effect for eligible employees) for the 2015-2017 performance period on a pro-rated basis, and was not eligible for a Deferred Award under the Incentive Plan for the 2015-2017 performance period. Award percentages under the Key Employee Long Term Incentive Compensation Plan vary based upon a participant's level of responsibility and are higher for those individuals serving as members of the Executive Team. Ms. Turnquest's award payment for the 2015-2017 performance period was prorated to reflect her promotion to the Executive Team in August 2016.

The HR&C Committee believes that long-term incentives for our officers align the interests of our shareholder members and our officers. Certain employees participate in our Key Employee Long Term Incentive Compensation Plan under which the HR&C Committee establishes performance periods, performance goals consistent with our long-term business strategies, related performance criteria, performance targets and target values (collectively, goals) for approval by the Board of Directors. The HR&C Committee designates those employees who are eligible to participate in the plan for the performance period. The HR&C Committee may make adjustments in the performance goals at any time to reflect major unforeseen transactions, events, or circumstances.

Participants are vested in their respective awards, if any, at the end of the performance period provided that the participant is actively employed by the Bank at that time. If a participant retires, dies, incurs a separation from service on or after attaining normal retirement age of sixty-five on a date that is not more than 12 months before the end of a performance period, the participant becomes vested at the end of the performance period pro rata based upon the number of full months that the participant was employed during the performance period and the length of the performance period. In the event of (1) a change-of-control (as defined in the plan) or (2) a termination of the participant's employment by the participant for good reason (as defined in the plan), the participant will be fully vested in any performance period award to the extent an award is applicable at the end of the corresponding performance period; provided, however that if either of these events occurred the HR&C Committee may exercise its discretion under the plan to adjust awards, including a pro-rata adjustment based upon the period of time the senior executive was employed during the performance period. In addition, the Bank has the right to recover awards paid to an Executive Team member based on the purported achievement of financial or operational plan goals that are subsequently deemed to be materially inaccurate, misstated, or misleading. The Bank's right to recover such "undue compensation" extends for three years from the date of dissemination of the inaccurate, misstated, or misleading information.

In determining the goals under the Key Employee Long Term Incentive Compensation Plan, the HR&C Committee considers several factors, including:

(1) the long-term strategic priorities of the Bank;

(2) the desire to ensure, as described above, that a significant portion of total compensation is performance-based;

(3) the relative importance, in any given year, of the long-term performance goals established under our strategic business plan;

(4) market comparisons as to long-term incentive compensation practices at other financial institutions within our peer group; and

(5) the target awards set, and actual awards paid, in recent years.

Performance criteria for the Key Employee Long Term Incentive Compensation Plan are developed through an iterative process between the HR&C Committee and our senior management. The performance criteria are set so that the target goals are reasonably obtainable, but only with significant effort from senior management.

At the end of the performance period, the HR&C Committee determines the extent to which the goals for that period were achieved. Attainment of each performance criterion is measured on a percentage basis (not to exceed 150%) and multiplied by the target value, with results for the individual criteria then aggregated to determine a performance percentage. However, the HR&C Committee has the sole discretion to change or deny the grant of awards even if it has determined that the goals for the period were achieved.

Award payments for the Executive Team under the Key Employee Long Term Incentive Plan can range, on the basis of performance, from 0% to 40% of annual salary with the target amount being 20% of annual salary as further described in the following table.

Executive Team Potential Awards	
Performance Percentage	Maximum Award Percentage
80% or lower	No payment
Every 1% increase between 80% and 100%	An additional 1.00% of annual salary
100% (target amount)	20% of annual salary
Every 1% increase between 100% and 130%	An additional 2/3rds of 1% of annual salary (to a maximum of 40% of annual salary)

In connection with determining the award payments for the 2015 to 2017 plan period, the HR&C Committee evaluated the achievement of the performance period goals outlined below.

Target Value	2015 - 2017 Performance Criteria	Percentage Attained
40%	$44.4 billion increase in the amount of advances outstanding (average daily levels for the fourth quarter) plus the change in the year-end balances of certain mission assets and activities from 12/31/14 to 12/31/15.	150%
20%	$30.0 billion of new volume in the unpaid principal balance of new member mortgage loans from 1/1/15 to 12/31/17.	120%
30%	$891.0 million increase in GAAP retained earnings from 12/31/14 to 12/31/17.	137.08%
10%	Improvement in the Bank's examination rating.	120%

Attainment of each performance criterion is measured on a percentage basis (not to exceed 150%) and multiplied by the target value, with results for the individual criteria then aggregated to determine a performance percentage, which was 137.12% for 2015-2017. This resulted in a potential award amount of 34.72% of base salary for Ms. Turnquest, which as discussed above was prorated to reflect her promotion to the Executive Team in August 2016. The HR&C Committee decided to make awards under the plan at this level based upon the accomplishment of the plan criteria and determined that no award adjustments were warranted.

See **Key Employee Long Term Incentive Compensation Plan** on page 109 for the awards made to Ms. Turnquest under this plan.

Post-Termination Compensation

Severance Arrangements

Our NEOs (other than the President and CEO) are eligible to receive severance benefits under our Employee Severance Plan. Under the plan, if an NEO covered by the plan were to be terminated other than for cause or voluntarily terminated their employment because of a constructive discharge, that NEO would be entitled to receive the greater of: (1) four weeks' base salary for each full year of calendar service, but not to exceed 104 weeks; or (2) one year's base salary, subject to certain limits. In addition, we will make COBRA payments required to continue health insurance benefits for a time period generally equal to the number of weeks of pay such employee is entitled to receive (not to exceed the statutory COBRA continuation period). Payments under the Employee Severance Plan shall be made during the payment period (as defined in such plan) with the regular payroll schedule of the Bank. An NEO’s receipt of benefits under the Employee Severance Plan is conditioned on an executed general release waiving all claims against the Bank.

Under Mr. Feldman's employment agreement, in the event his employment with the Bank was terminated either by him with good reason (as defined in the agreement), by the Bank other than for cause (as defined in the agreement), by non-renewal by the Bank of the agreement, or as a result of the death or disability of Mr. Feldman, Mr. Feldman is entitled to receive the following payments:

(1) all accrued and unpaid salary for time worked as of the date of termination;

(2) all accrued but unutilized vacation time as of the date of termination;

(3) salary continuation (at the base salary in effect at the time of termination) for a one-year period beginning on the date of termination, and pursuant to the Bank's normal payroll schedule;

(4) payment in a lump sum of an amount equal to the minimum total incentive compensation that Mr. Feldman would otherwise have been entitled to for

   i. the total Incentive Award (both Annual Award and Deferred Award) under the Incentive Plan for the year in which termination occurs, calculated as if all performance targets for the annual and deferral award period had been met at the target award level and prorated based on the number of months Mr. Feldman was employed during the year of termination, and

   ii. any previously deferred award (50% of the total Incentive Award) under the Incentive Plan not subject to proration or further adjustments based on performance target achievement during the deferral period;

(5) continued participation in the Bank's employee health care benefit plans in accordance with the terms of the Bank's then-current severance plan that would be applicable to him if his employment had been terminated pursuant to such plan, provided that the Bank will continue paying the employer's portion of medical and/or dental insurance premiums for one year from the date of termination, and

(6) an additional amount under the Bank’s Post-December 31, 2004 Benefit Equalization Plan equal to the additional annual benefit as if such benefit had been calculated as though (i) Mr. Feldman were 3 years older than his actual age and (ii) Mr. Feldman had 3 additional years of service at the same rate of annual compensation in effect for the 12-month period ending on the December 31 immediately preceding the termination of Mr. Feldman's employment, to be distributed at the same time and in the same manner as Mr. Feldman has elected pursuant to the Benefit Equalization Plan.

If Mr. Feldman's employment with the Bank is terminated by the Bank for cause or by Mr. Feldman other than for good reason, Mr. Feldman would be entitled only to the amounts in items (1) and (2) above. The employment agreement specifies that the HR&C Committee may in its discretion reduce or eliminate any incentive compensation amounts in item (4) above for certain circumstances related to the performance of the Bank or Mr. Feldman, as more fully set forth in the Incentive Plan as described in **Performance Requirements for Deferred Awards** on page 101.

The employment agreement provides that Mr. Feldman would not be entitled to any other compensation, bonus, or severance pay from the Bank other than as specified above and any vested rights which he has under any pension, thrift, or other benefit plan, excluding the severance plan.

The right to receive termination payments as outlined above is contingent upon, among other things, Mr. Feldman signing a general release of all claims against the Bank in such form as the Bank requires.

Under the Housing and Economic Recovery Act of 2008, the FHFA Director has the authority to prohibit or limit any golden parachute or indemnification payment by an FHLB if a payment is made in contemplation of insolvency, the FHLB is insolvent or the payment may result in the preference of one creditor over another. Golden parachute payment means any compensation payment (or any agreement to make any payment) that is (i) contingent on, or by its terms is payable on or after, the termination of the person's employment or affiliation, and (ii) is received on or after insolvency, conservatorship, or receivership of the FHLB or the Director's determination that the FHLB is in a troubled condition (subject to a cease-and-desist order, written agreement, or proceeding, or determined to be in such a condition by the Director).

In 2014, the FHFA issued a final rule setting forth the standards that the FHFA will take into consideration when determining whether to limit or prohibit golden parachute payments. The primary impact of this final rule is to better conform existing FHFA regulations on golden parachutes with FDIC golden parachute regulations and to further limit golden parachute payments made by an FHLB that is assigned a less than satisfactory composite FHFA examination rating.

For a further description of potential payments to our NEOs upon termination of employment, see **Potential Payments Upon Termination Table** on page 112.

Pension Plan Benefits

The HR&C Committee believes that retirement plan benefits and retiree health and life insurance are an important part of our NEO compensation program which provides a competitive benefits package. The Pentegra Defined Benefit Plan for Financial Institutions (Pension Plan) and related Benefit Equalization Plan benefits serve a critically important role in the retention of our senior executives (including our NEOs), as benefits under these plans increase for each year that these executives remain employed by us and thus encourage our most senior executives to remain employed by us. We provide additional retirement and savings benefits under the Benefit Equalization Plan because we believe that it is inequitable to limit retirement benefits and the matching portion of the retirement savings plan on the basis of a limit that is established by the IRS for purposes of federal tax policy.

We participate in the Pentegra Financial Institutions Retirement Fund, a multiemployer, funded, tax-qualified, noncontributory defined-benefit pension plan that covers most employees, including the NEOs. Benefits under this Pension Plan are based upon the employee's years of service and the employee's consecutive five-year average highest earnings, and are payable after retirement in the form of an annuity or a lump sum. Earnings, for purposes of the calculation of benefits under the Pension Plan, are defined to include salary and bonuses under the applicable short-term incentive plan. The amount of annual earnings that may be considered in calculating benefits under the Pension Plan is limited by law. For 2017, the limitation on annual earnings was $270,000. In addition, benefits provided under tax-qualified plans may not exceed an annual benefit limit of $215,000 in 2017.

The formula for determining the normal retirement annual benefit for employees hired prior to January 1, 2010 is 2.25%, multiplied by the number of years of the employee's credited service, multiplied by the employee's consecutive five-year average highest earnings. An employee's retirement benefit vests 20% per year beginning after an employee has completed two years of employment, but is completely vested at age 65 regardless of completed years of employment. Normal retirement age is 65, but a reduced benefit may be elected in connection with early retirement beginning at age 45. All of the NEOs are currently eligible for the early retirement benefit. We also provide health care and life insurance benefits for retired employees of which they pay 50% of the total Bank premium for each benefit.

Savings Plan Benefits

We participate in the Pentegra Defined Contribution Plan for Financial Institutions (Savings Plan), a tax-qualified, defined-contribution savings plan. Under the Savings Plan, employees, including our NEOs, may contribute up to 50% of regular earnings on a before-tax basis to a 401(k) account or on an after-tax basis to a Roth Elective Deferral Account or a regular account. In addition, under the Savings Plan and for employees who have completed one year of service, the Bank matches a portion of the employee's contribution (50% for employees with three years of service or less, 75% for employees with more than three years of service but less than five years of service, and 100% for employees with five or more years of service).

For 2017, our matching contribution was limited to $16,200 for each employee. For employees hired prior to January 1, 2011, both employee and employer Savings Plan contributions are immediately 100% vested. Pursuant to IRS rules, effective for 2017, the Savings Plan limits the annual additions that can be made to a participating employee's account to $54,000 per year. Annual additions include our matching contributions and employee contributions. Of those annual additions, the current maximum before-tax contribution by an employee to a 401(k) account is $18,000 per year. In addition, no more than $270,000 of annual compensation may be taken into account in computing benefits under the Savings Plan. Participants age 50 and over are eligible to make catch-up contributions of up to $6,000 per year. Generally, Savings Plan distributions can only be made at termination of employment. However, an employee may take a withdrawal of employee and employer plan contributions while employed, but an excise tax of 10% is generally imposed on the taxable portion of withdrawals occurring prior to an employee reaching age 59 1/2. Employees may also take one loan each year from the vested portion of the Regular, Roth Elective Deferral and 401(k) Savings Plan accounts. Loan amounts may be between $1,000 and $50,000. No more than 50% of the available balance can be borrowed at any time.

Benefit Equalization Plan

We also provide supplemental retirement and savings plan benefits under our Benefit Equalization Plan, a nonqualified unfunded plan that preserves the level of benefits which were intended to be provided under our Pension Plan and Savings Plan in light of legislation limiting benefits under these tax qualified plans. The Benefit Equalization Plan was established in 1994. On December 19, 2008, our Board of Directors approved a new plan, the Federal Home Loan Bank of Chicago Post December 31, 2004 Benefit Equalization Plan, that replaces the former plan. The new plan includes updated provisions related to compliance with Section 409A of the Internal Revenue Code of 1986, but the basic benefits under the plan remain unchanged.

Our Benefit Equalization Plan provides that if an executive officer dies, retires, or terminates employment due to disability when any short-term incentive compensation that was previously earned but deferred in accordance with the deferral provisions of any of the Bank’s incentive compensation plans, we will recalculate the officer’s pension benefits in order to adjust for the fact that such short-term incentive compensation would not otherwise be included in the officer’s base compensation for purposes of calculating pension benefits at the time the executive officer dies, retires or terminates employment due to disability. We will recalculate the employee’s pension benefit as if such deferred amounts had been included in the executive officer’s base compensation and the difference between that calculation and the amount to which the retired, deceased or disabled employee is entitled to under the Benefit Equalization Plan as a result of such calculation will be paid in a lump sum.

The Pension Plan benefit under the Benefit Equalization Plan is an amount equal to the difference between the Pension Plan formula without considering legislative limitations, and the benefits which may be provided under the Pension Plan considering such limitations. Generally, participants may elect when Pension Plan benefits under the Benefit Equalization Plan are paid, but not earlier than termination of employment or later than age 70 1/2. Generally, participants may elect to receive a benefit in the form of a single lump sum, a 50% joint and survivor annuity, a 100% joint and survivor annuity with a ten year certain benefit or a life annuity with a ten year certain benefit.

The Benefit Equalization Plan also allows employees to make additional salary reduction contributions up to the maximum percentages allowed under the Savings Plan and to receive matching contributions up to the maximum percentages under the Savings Plan, in each case without giving effect to laws limiting annual additions. Salary reduction contributions and earnings under the Benefit Equalization Plan are treated as deferred income. Effective January 1, 2014, Savings Plan related contributions and earnings in the Benefit Equalization Plan earn interest at the 20 quarter (five year) moving average of the five year Federal Home Loan Bank consolidated obligation bond rate. Generally, a participant's Savings Plan benefit under the Benefit Equalization Plan are payable in lump sum as soon as reasonably practicable after his termination of employment with the Bank. While employed at the Bank, a participant may, in the event of an unforeseeable emergency, request withdrawal from his or her Savings Plan account, and such request shall be made in a time and manner determined by the HR&C Committee.

Compensation Committee Report

Our Board of Directors has established the HR&C Committee to assist it in matters pertaining to the employment and compensation of the President and CEO and executive officers and our employment and benefits programs in general.

The HR&C Committee is responsible for making recommendations to the Board of Directors regarding the compensation of the President and CEO and approves compensation of the other executive officers, including base salary, merit increases, incentive compensation and other compensation and benefits. Its responsibilities include reviewing our compensation strategy and its relationship to our goals and objectives as well as compensation at the other FHLBs and other similar financial institutions that involve similar duties and responsibilities.

The HR&C Committee has reviewed and discussed with our management the Compensation Discussion & Analysis included in this Item 11 - Executive Compensation. In reliance on such review and discussions, the HR&C Committee recommended to the Board of Directors that such Compensation Discussion and Analysis be included in our Annual Report on Form 10-K for the year ended December 31, 2017.

The HR&C Committee:

John K. Reinke, Chairman
Michelle L. Gross, Vice Chairman
Owen E. Beacom
Phyllis Lockett
Gregory A. White
Charles D. Young
Michael G. Steelman, ex officio

Compensation Tables

Summary Compensation Table

The following table sets forth summary compensation information for our NEOs for 2017.

Summary Compensation Table

	Year	Salary	Non-Equity Incentive Plan Compensation: Annual Award	Non-Equity Incentive Plan Compensation: Deferred/ Long Term Award [a]	Change in Pension Value [b]	All Other Compensation [c]	Total
Matthew R. Feldman	**2017**	**$ 940,420**	**$ 447,640**	**$ 429,008**	**$ 1,746,000**	**$ 16,200**	**$ 3,579,268**
President and Chief Executive Officer	2016	904,250	413,468	440,156	1,006,000	15,900	2,779,774
	2015	869,450	406,555	434,725	624,000	15,900	2,350,630
Roger D. Lundstrom	**2017**	**436,000**	**164,312**	**146,160**	**1,332,000**	**16,200**	**2,094,672**
Executive Vice President and Chief Financial Officer	2016	422,083	158,206	158,156	665,000	15,900	1,419,345
	2015	387,542	143,364	156,000	265,000	15,900	967,806
Michael A. Ericson	**2017**	**457,083**	**198,904**	**144,729**	**464,000**	**16,200**	**1,280,916**
Executive Vice President and Group Head, Members and Markets	2016	422,583	181,937	136,343	201,000	15,900	957,763
	2015	393,000	145,570	158,400	80,000	15,900	792,870
John Stocchetti	**2017**	**577,754**	**218,080**	**226,745**	**761,000**	**16,200**	**1,799,779**
Executive Vice President and Group Head, Mortgage Partnership Finance Program	2016	549,633	205,873	218,750	401,000	15,900	1,391,156
	2015	508,217	226,634	204,820	242,000	13,250	1,194,921
Laura M. Turnquest [d]	**2017**	**380,417**	**165,393**	**132,813**	**353,000**	**16,200**	**1,047,823**
Executive Vice President, General Counsel & Corporate Secretary							

[a] For 2015, amounts earned are under the Key Employee Long Term Incentive Plan. For 2016 and 2017, amounts earned for all NEOs except Ms. Turnquest reflect the Deferred Award under the Incentive Plan. As further detailed on page 109, for 2017, amounts earned for Ms. Turnquest are under the Key Employee Long Term Incentive Plan, on a prorated basis.

[b] The amount reported in this column represents the aggregate change in the actuarial present value of the NEO's accumulated benefit under the Pension Plan and BEP from December 31, 2016 to December 31, 2017. The change in value resulted primarily from adding another year of credited service as well as 2017 annual salary increases. The decrease in the discount rates used to calculate the present value of accrued benefits, as further described in **Retirement and Other Post-Employment Compensation Table and Narrative** on page 110, also contributed to the change in projected benefit amount.

[c] Amounts reported for all other compensation consists of Bank contributions to employee 401(k) and BEP plans.

[d] Ms. Turnquest was not a NEO for 2015 and 2016.

Narrative to Summary Compensation Table

Compensation under the heading Annual Award in the Summary Compensation Table is comprised of the Annual Awards under the Incentive Plan. Compensation under the heading Deferred/Long Term Award in the Summary Compensation table is comprised of Deferred Awards under the Incentive Plan and awards under our Key Employee Long Term Compensation Plan. In 2016 and 2017, none of our NEOs except Ms. Turnquest received awards under the Key Employee Long Term Compensation Plan.

President and Executive Team Incentive Compensation Plan

Annual Awards for 2017 to the NEOs under the Incentive Plan are set forth below. For a description of how these awards were calculated see **President and Executive Team Incentive Compensation Plan** page 98.

Name	Base Salary	Actual Annual Award as a % of Salary [a]	Actual Annual Award
Matthew R. Feldman	$ 940,420	48%	$ 447,640
Roger D. Lundstrom	437,000	38%	164,312
Michael A. Ericson	460,000	43%	198,904
John Stocchetti	580,000	38%	218,080
Laura M. Turnquest	382,500	43%	165,393

[a] 50% of the Incentive Award achieved as a percentage of base salary is the Annual Award for 2017.

Deferred Awards for the 2015-2017 performance period to the NEOs under the Incentive Plan are set forth below. For a description of how these awards were calculated see **President and Executive Team Incentive Compensation Plan** page 98.

Name	Deferred Award [a]	Actual Award Percentage [b]	Actual Deferred Award
Matthew R. Feldman	$ 343,206	125%	$ 429,008
Roger D. Lundstrom	116,928	125%	146,160
Michael A. Ericson	115,783	125%	144,729
John Stocchetti	181,396	125%	226,745

[a] Represents the initial deferred portion of the Incentive Award achieved for the 2014-2017 performance period.
[b] Represents the earned percentage of the initial deferred portion of the Incentive Award achieved for the 2014-2017 performance period.

Key Employee Long Term Incentive Compensation Plan

The following table sets forth the award under our Key Employee Long Term Incentive Compensation Plan for Ms. Turnquest.

Name	Base Salary	Actual Award as % of Salary	Actual Award
Laura M. Turnquest [a]	$ 382,500	35%	$ 132,813

[a] Award percentages under the Key Employee Long Term Incentive Compensation Plan vary based on a participant's level of responsibility and are higher for those individuals serving as members of the Bank's Executive Team. See **Executive Team Potential Awards Table** on page 103. Ms. Turnquest's award under the 2015-2017 plan was prorated to reflect her promotion to the Executive Team in August 2016.

Grants of Plan-Based Awards

The following table describes the potential NEO awards under the Incentive Plan for the plan period covering January 1, 2017, through December 31, 2020. See **President and Executive Team Incentive Compensation Plan** starting on page 98 for a description of the performance criteria under this plan.

		Estimated Future Payouts under Non-Equity Incentive Plan Awards		
Name	Incentive Plan [a]	Minimum	Target	Maximum
Matthew R. Feldman	Annual	$ 282,126	$ 376,168	$ 470,210
	Deferred	335,730	447,640	559,550
Roger D. Lundstrom	Annual	87,400	131,100	174,800
	Deferred	123,234	164,312	205,390
Michael A. Ericson	Annual	92,000	138,000	184,000
	Deferred	149,178	198,904	248,630
John Stocchetti	Annual	116,000	174,000	232,000
	Deferred	163,560	218,080	272,600
Laura M. Turnquest	Annual	76,500	114,750	153,000
	Deferred	124,045	165,393	206,741

[a] Annual: Annual Award under the Incentive Plan. The amounts shown are based on the potential awards for each NEO for 2017. Annual awards granted in 2017 were earned in the same year; for such amounts actually earned, please see the Summary Compensation Table. Deferred: Deferred Award under the Incentive Plan. The amounts shown reflect the actual Deferred Awards granted for 2018-2020 based on actual performance for 2017. The Deferred Awards remain subject to adjustment based upon achievement of certain Performance Requirements during the 2018-2020 deferral period and may be reduced to zero if actual achievement is below the minimum achievement level for those Performance Requirements.

Retirement and Other Post-Employment Compensation Table and Narrative

Name	Plan Name	Years Credited Service	Present Value of Accumulated Benefit	Payments During Last Fiscal Year
Matthew R. Feldman [a]	Pension	13.75	$ 1,224,000	$ —
	BEP	13.75	5,296,000	—
Roger D. Lundstrom	Pension	33.33	2,197,000	—
	BEP	33.33	3,177,000	—
Michael A. Ericson	Pension	12.42	583,000	—
	BEP	12.42	708,000	—
John Stocchetti	Pension	10.75	837,000	—
	BEP	10.75	1,717,000	—
Laura M. Turnquest	Pension	12.75	787,000	—
	BEP	12.75	472,000	—

[a] At December 31, 2017 the additional present value of accrued benefits due Mr. Feldman under section (7)(b)(vi) of his employment agreement is $1,601,000.

Our NEOs are entitled to receive retirement benefits through the Pension Plan and the Benefit Equalization Plan. See **Post-Termination Compensation** on page 104. The present value of the current accumulated benefit, with respect to each NEO under both the Pension Plan and the Benefit Equalization Plan, described in the table above is based on certain assumptions described below.

The participant's accumulated benefit is calculated as of December 31, 2017 and 2016. Under the Pension Plan, which is a qualified pension plan, the participant's accumulated benefit amount as of these calculation dates is based on the plan formula, ignoring future service periods and future salary increases during the pre-retirement period. The present value is calculated using the accumulated benefit at each date multiplied by a present value factor based on an assumed age 65 retirement date. As of December 31, 2016, 55% the Pension Plan benefit is valued using the RP-2014 mortality table for white collar worker annuitants (with mortality improvement scale MP-2016) and 45% of the Pension Plan benefit is valued using the RP-2000 static mortality table for lump sums projected to 2016. As of December 31, 2017, 55% of the Pension Plan benefit is valued using the RP-2014 mortality table for white collar worker annuitants (with mortality improvement scale MP-2017) and 45% of the Pension Plan benefit is valued using the RP-2000 static mortality table for lump sums projected to 2017. The interest rates used are 4.14% as of December 31, 2016 and 3.60% as of December 31, 2017.

The present value amount discounted back to the reporting period does not factor in the mortality table. The difference between the present value of the December 31, 2017 accumulated benefit and the present value of the December 31, 2016 accumulated benefit is the change in pension value for the qualified plan presented in the Summary Compensation Table.

Benefits provided under the qualified plan are limited under the Employee Retirement Income Security Act (ERISA). As a result, the Benefit Equalization Plan, which is a nonqualified plan, is designed to provide benefits above the amount allowed under ERISA. The benefits provided under the Benefit Equalization Plan are initially calculated on a gross basis to include benefits provided by the qualified plan. The benefits under the qualified plan are then deducted from the initially calculated gross amount to arrive at the amount of benefits provided by the Benefit Equalization Plan. The participant's accumulated benefit amounts as of these calculation dates are based on plan formula, ignoring future service periods and future salary increases. The present value is calculated by multiplying the benefits accumulated at each date by a present value factor based on an assumed age 65 retirement date. As of December 31, 2016, the Benefit Equalization Plan benefit is valued using the RP-2014 mortality table for white collar worker annuitants (with mortality improvement scale MP-2016). As of December 31, 2017, the Benefit Equalization Plan benefit is valued using the RP-2014 mortality table for white collar worker annuitants (with mortality improvement scale MP-2017). The interest rates used are 4.03% as of December 31, 2016 and 3.29% as of December 31, 2017 (participants who elected a lump sum as their form of benefit from the Benefit Equalization Plan have their lump sum amounts at age 65 valued at 3.60%, then discounted back to current age at 3.29%).

The difference between the present value of the December 31, 2017 accumulated benefit and the present value of the December 31, 2016 accumulated benefit is the change in pension value for the nonqualified plan presented in the Summary Compensation Table.

The difference in the interest rates used for the assumptions under the Pension Plan and the Benefit Equalization Plan is due to the Pension Plan being a multi-employer plan and the experience/assumptions under that plan versus our Benefit Equalization Plan being a single employer plan.

Nonqualified Deferred Compensation Table

Name	Plan Name [a]	Executive Contributions in Last FY [b]	Registrant Contributions in Last FY [c]	Aggregate Earnings in Last FY [d]	Aggregate Withdrawals/ Distributions	Aggregate Balance of All Plans at Last FYE [e]
Matthew R. Feldman	BEP	$ 60,638	$ —	$ 7,647	$ —	$ 518,222
Roger D. Lundstrom	BEP	106,800	7,520	11,951	—	813,356
Michael A. Ericson	BEP	13,996	663	1,005	—	73,982
John Stocchetti	BEP	145,709	2,963	16,744	—	1,088,290
Laura M. Turnquest	BEP	—	—	94	—	5,883

a The table above includes salary reduction contributions by our NEOs, and matching contributions by the Bank under the Benefit Equalization Plan (BEP). For a description of the BEP, see **Benefit Equalization Plan** on page 106.

b Represents the amounts of the contributions made by each NEO. These amounts are reflected in the "Salary" column of the Summary Compensation Table.

c Represents the amounts of the contributions made by the Bank for each NEO under the BEP. These amounts are reflected in the “All Other Compensation” column of the Summary Compensation Table.

d Not included in 2017 compensation as rate paid was not above a market rate.

e The aggregate balance at December 31, 2017, as reported above, includes amounts that are either currently reported or were previously reported as compensation in the Summary Compensation Table for 2017 and prior years, except for the aggregate earnings on deferred compensation to the extent such compensation was not above market rate.

Potential Payments Upon Termination Table

Name	Severance	President and Executive Team Incentive Plan	Key Employee Long-Term Incentive Plan	Health Care	Total
Matthew R. Feldman	$ 940,420	$ 2,144,311	$ —	$ 11,141	$ 3,095,872
Roger D. Lundstrom	874,000	776,354	—	25,155	1,675,509
Michael A. Ericson	460,000	870,044	—	17,489	1,347,533
John Stocchetti	580,000	1,095,412	—	17,489	1,692,901
Laura M. Turnquest	382,500	464,495	132,813	17,489	997,297

The table above outlines payments that our NEOs would be entitled to receive in connection with their termination of employment as of December 31, 2017. The Incentive Plan was amended and restated effective January 1, 2017 and applied retroactively. Due to the number of factors that affect the nature and amounts of compensation and benefits provided upon the potential termination events discussed, the actual amounts paid or distributed may be different.

For Mr. Feldman, the table above outlines termination under the following conditions in accordance with his employment agreement: by the Bank without cause (as defined in his employment agreement), by Mr. Feldman for good reason (as defined in his employment agreement), as a result of the Bank's non-renewal of Mr. Feldman's employment agreement, or upon the death or disability (as defined in his employment agreement) of Mr. Feldman. For purposes of calculating the benefits outlined in the table above, we have also assumed that Mr. Feldman would continue to receive Bank-subsidized health care coverage. For Mr. Feldman, the amounts reflected in the "President and Executive Team Incentive Plan" column in the table above include the following awards under the Incentive Plan: the earned 2017 Annual Award, and Deferred Awards for the following performance periods: 2015-2017 (as earned); 2016-2018(assuming target performance); 2017-2019 (assuming target performance); and 2018-2020 (assuming target performance). In addition to the amounts outlined above, pursuant to his employment agreement, Mr. Feldman would be entitled to an additional amount under the BEP, as detailed on page 110.

For the other NEOs, the table above outlines termination under the following conditions in accordance with the Employee Severance Plan: without cause (as defined in the Employee Severance Plan) or as a result of constructive discharge (as defined in the Employee Severance Plan). In addition, we assumed termination was not for cause as defined in the Incentive Plan, that their severance payments do not exceed the limits set forth in the Employee Severance Plan, and that they continue to receive Bank-subsidized health care coverage if the NEO was enrolled in the Bank's health care benefit plan during 2017. For the other NEOs, except Ms. Turnquest, the amounts reflected in the "President and Executive Team Incentive Plan" column in the table above include the following awards under the Incentive Plan: the 2017 Annual Award (as earned) and the Deferred Awards for the following performance periods: 2015-2017 (as earned); 2016-2018 (assuming target performance); 2017-2019 (assuming target performance); and 2018-2020 (assuming target performance). For Ms. Turnquest, the amounts reflected in the "President and Executive Team Incentive Plan" column in the table above include the following awards under the Incentive Plan: the 2017 Annual Award (as earned) and the Deferred Awards for the following performance periods: 2017-2019 (assuming target performance) and 2018-2020 (assuming target performance).

Additionally, under the Incentive Plan, assuming termination at December 31, 2017 and provided termination is not for cause (as defined in the Incentive Plan), the same awards as set forth under the "President and Executive Team Incentive Plan" column in the table above would be available to the NEOs (except for Mr. Feldman) in the event they terminate employment for any reason, including as set forth in the immediately following sentence. Under the Incentive Plan, the 2017 Annual Award and the 2015-2017, 2016-2018, 2017-2019, and 2018-2020 Deferred Awards as reflected in the table above will also be available to these NEOs in the event they die, become disabled, retire, terminate employment for good reason, or a change of control occurs (as such terms are defined in the Incentive Plan) at December 31, 2017, assuming they did not participate in any activity constituting cause (as defined in the Incentive Plan).

For Ms. Turnquest, the amount reflected in the "Key Employee Long Term Incentive Plan" column includes Ms. Turnquest's 2015-2017 award under the Key Employee Long Term Incentive Compensation Plan, assuming termination of employment on December 31, 2017, which will vest on that date regardless of how employment is terminated.

For further details on payments due upon these circumstances to the NEOs, see **Severance Arrangements** on page 104.

In other termination scenarios, including the death or disability or retirement of the NEOs other than Mr. Feldman and the retirement of Mr. Feldman, or termination of Mr. Feldman for cause (as defined in his termination agreement) or for other than good reason (as defined in his termination agreement), our NEOs would be entitled to receive benefits generally available to other employees, except as described above. The narrative disclosure and tables above describe and quantify the compensation and benefits that are paid in addition to compensation and benefits generally available to other employees. Examples of compensation and benefits generally available to other employees, and thus not included above, are distributions under the Savings Plan, disability and life insurance benefits to the extent such employee has paid for such benefits, health and life insurance benefits, and amounts for accrued and unpaid salary and vacation.

For more information on the Pension Plan and the BEP, see **Retirement and Other Post-Employment Compensation Table and Narrative** on page 110 and the **Nonqualified Deferred Compensation Table** on page 111 , as well as **Pension Plan Benefits** on page 105 and **Benefit Equalization Plan** on page 106.

Pay Ratio

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, and Item 402(u) of Regulation S-K, we are providing the following information about the relationship of the median of the annual total compensation of our employees and the annual total compensation of Mr. Feldman, our President and CEO:

For 2017, the median of the annual total compensation of all employees of the Bank (other than Mr. Feldman) (the Median Employee) was $133,743 and the annual total compensation of Mr. Feldman was $3,579,268. Annual total compensation for the Median Employee and Mr. Feldman is calculated in the same manner as the "Total" column in the **Summary Compensation Table** on page 108. Based on this information, for 2017, the ratio of the annual total compensation of Mr. Feldman to the Median Employee was 26.76 to 1.

We identified the Median Employee by comparing the amount of base salary (including overtime), incentive awards, and Savings Plan and BEP plans contributions made by the Bank, for each of the employees who were employed by the Bank on December 31, 2017, and ranking the total compensation for all such employees from lowest to highest, excluding Mr. Feldman. We identified the Median Employee using this compensation measure, which was applied consistently to all our employees included in the calculation. We included all full-time and part-time employees in the identification of the Median Employee and annualized the compensation for all permanent employees who were not employed by us for all of 2017.

Director Compensation

The goal of our policy governing compensation and travel reimbursement for our Board of Directors is to compensate members of the Board of Directors for work performed on our behalf and to make them whole for out-of-pocket travel expenses incurred while working for the Bank. The fees compensate Directors for time spent reviewing Bank materials, preparing for meetings, participating in other Bank activities and actual time spent attending the meetings of the Board of Directors and its committees. Directors are also reimbursed for reasonable Bank-related travel expenses. Director compensation levels are established at the discretion of each FHLB's Board of Directors, provided that the fees are reasonable. In connection with setting director compensation, we participated in an FHLB System review of director compensation in May 2015 which includes a director compensation study prepared by McLagan Partners. The McLagan study includes separate analysis of director compensation broken into six subgroups: small banks ($5 billion to $20 billion asset size); small banks subject to increased regulation ($10 billion to $20 billion); Fannie Mae; Freddie Mac; other FHLBs, and the Office of Finance.

Our Board of Directors set compensation levels for 2017 as follows:

Position	Maximum Total Quarterly Retainers	Maximum Total Meetings Fees	Maximum Total Annual Compensation
Chairman of the Board	$65,000	$65,000	$130,000
Vice-chairman of the Board	57,500	57,500	115,000
Chairman of the Audit Committee	57,500	57,500	115,000
Other Committee Chairman	52,500	52,500	105,000
All other Directors	47,500	47,500	95,000

If a director does not fulfill his or her responsibility by meeting certain performance and attendance criteria set forth in the policy, the director's compensation will be reduced below the maximum amounts shown above. No additional meeting fees will be paid to any director for their participation in any other special meetings or events on behalf of the Board or the Bank, unless such participation results in a director being absent for a Board or Board committee meeting, in which case a meeting fee will be paid. All directors are also entitled to participate in a non-qualified, unfunded, deferred compensation plan, under which each Bank director has the opportunity to defer all or a portion of the compensation paid under this policy. The Bank reimburses directors for necessary and reasonable travel and related expenses associated with meeting attendance in accordance with the Bank's employee reimbursement policy.

The HR&C Committee reviewed Director performance, as required by the revised policy, and determined that all directors serving during 2017 (except Mr. Young) met the criteria necessary to receive their quarterly retainer fees. Per meeting fees reflect actual attendance by the Directors. The following table sets forth Director Compensation for 2017.

Name	2017 Total Fees Earned	2017 Fees Paid in Cash	2017 Fees Deferred [a]
William W. Sennholz [b] - Chair	**130,000**	130,000	—
Michael G. Steelman [b] - Vice Chair	**115,000**	115,000	—
James T. Ashworth	**105,000**	95,812	9,188
Owen E. Beacom	**95,000**	95,000	—
Edward P. Brady	**105,000**	105,000	—
Mary J. Cahillane	**105,000**	59,062	45,938
Mark J. Eppli	**95,000**	95,000	—
Joseph Fazio	**95,000**	95,000	—
Michelle L. Gross	**95,000**	95,000	—
E. David Locke	**105,000**	105,000	—
Phyllis Lockett	**95,000**	53,437	41,563
David R. Pirsein	**95,000**	78,375	16,625
John K. Reinke [b]	**105,000**	105,000	—
Leo J. Ries	**95,000**	95,000	—
Steven F. Rosenbaum	**95,000**	65,906	29,094
Lois Scott	**95,000**	95,000	—
Gregory A. White	**95,000**	95,000	—
Charles Young [c]	**76,339**	76,339	—
Total	**$ 1,796,339**	$ 1,653,931	$ 142,408

[a] Directors could elect to defer fees to a director's non-qualified, unfunded, deferred compensation plan. Earnings on this deferred compensation are not included above as the rate paid was not above a market rate.

[b] During 2016 and 2017, Mr. Sennholz served as Chairman of the Board and Mr. Steelman served as Vice Chairman of the Board. On December 14, 2017, the Board elected Mr. Steelman to serve as Chairman and Mr. Reinke to serve as Vice Chairman of the Board for 2018-2019.

[c] In 2017, Mr. Young did not meet the criteria necessary to receive his fourth quarter retainer fee.

The Board compensation policy for 2018 was reported in a Form 8-K filed on November 14, 2017 and is attached as Exhibit 10.16 to this Form 10-K.

We are a cooperative and our capital stock may only be held by current and former member institutions, so we do not provide compensation to our directors in the form of stock or stock options. In addition, our directors do not participate in any of our incentive or pension plans.

FHLB Director compensation is subject to FHFA regulations that permit an FHLB to pay its directors reasonable compensation and expenses, subject to the authority of the FHFA Director to object to, and to prohibit prospectively, compensation and other expenses that the Director determines are not reasonable.

Compensation Committee Interlocks and Insider Participation

During 2017, the following directors served on our HR&C Committee: John K. Reinke (Chairman), James T. Ashworth (Vice Chairman), Owen E. Beacom, Michelle L. Gross, William W. Sennholz (ex-officio), Gregory A. White, and Charles D. Young. No member of our HR&C Committee has at any time been an officer or employee of the Bank. None of our executive officers has served or is serving on the Board of Directors or the compensation committee of any entity whose executive officers served on our HR&C Committee or Board of Directors.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

We are cooperatively owned. Our members (and, in limited circumstances, former members) own our outstanding capital stock, and a majority of our directors are elected from our membership. No individuals, including our directors, officers and employees, may own our capital stock. The exclusive voting rights of members in 2017 are for the election of our directors, as more fully discussed in **2017 Director Election** on page 85.

We do not offer any compensation plan under which our capital stock is authorized for issuance.

The following table sets forth information about beneficial owners of more than 5% of our outstanding regulatory capital stock:

As of January 31, 2018	Regulatory Capital Stock	% of Total
BMO Harris Bank N.A. 111 West Monroe Street Chicago, IL 60690	$ 269	13.49%
One Mortgage Partners Corp. [a] 10 South Dearborn St., Suite 413 Chicago, IL 60603	245	12.29%
The Northern Trust Company 50 South LaSalle Street Chicago, IL 60603	238	11.91%
Associated Bank, National Association 433 Main Street Green Bay, WI 54301	139	6.96%

[a] One Mortgage Partners Corp. is a subsidiary of JPMorgan Chase Bank NA.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The following table sets forth information about those members with an officer or director serving as a director of the Bank. Independent directors do not control any capital stock of the Bank.

As of January 31, 2018	Director Name	Regulatory Capital Stock [a]	% of Total
The Park Bank 1815 Greenway Cross Madison, WI 53713	James H. Hegenbarth	$ 2.7	0.13%
Forward Financial Bank 207 West 6th Street Marshfield, WI 54449	William W. Sennholz	2.7	0.13%
Commerce State Bank 1700 South Silverbrook Drive West Bend, WI 53095	Joseph Fazio III	1.4	0.07%
CNB Bank & Trust, N.A. 450 West Side Square Carlinville, IL 62626	James T. Ashworth	0.7	0.04%
First Bank & Trust 820 Church Street Evanston, IL 60201	Owen E. Beacom	0.6	0.03%
The Stephenson National Bank & Trust 1820 Hall Avenue Marinette, WI 54143	John K. Reinke	0.5	0.03%
Forest Park National Bank and Trust Company 7348 W. Madison St. Forest Park, IL 60130	Daniel G. Watts	0.3	0.01%
First National Bank in Pinckneyville 210 South Main Street Pinckneyville, IL 62274	David R. Pirsein	0.3	0.01%
State Bank of Bement 180 East Bodman Street Bement, IL 61813	Michelle Gross	0.2	0.01%
Farmers & Merchants State Bank of Bushnell 484 East Main Street Bushnell, IL 61422	Michael G. Steelman	0.04	0.002%
Total Directors as a group		$ 9.4	0.46%

[a] The regulatory capital stock that a member institution owns is pledged to us as additional collateral on advances and all other outstanding obligations for that member.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Related Persons and Related Transactions

We are a cooperative and capital stock ownership is a prerequisite to transacting any member business with us. Our members (and, in limited circumstances, former members) own all of our capital stock.

Our Board of Directors consists of two types of directors: “member directors” and “independent directors”. Member directors are required to be directors or officers of our members, whereas independent directors cannot be directors or officers of a Bank member. For further discussion of the eligibility criteria for our directors, see **Nomination of Member Directors** and **Nomination of Independent Directors** on page 84. We have eight independent directors and ten member directors currently serving on our Board.

We conduct our advances business and the MPF Program almost exclusively with members. Therefore, in the normal course of business, we extend credit to members whose officers and directors may serve as our directors. We extend credit to them on market terms that are no more favorable than the terms of comparable transactions with other members who are not considered related parties (as defined below). In addition, we may purchase short-term investments, sell Federal Funds to, and purchase MBS from members (or affiliates of members) whose officers or directors serve as our directors. All such investments are market term transactions and all such MBS are purchased through securities brokers or dealers. As an additional service to our members, including those whose officers or directors serve as our directors, we may enter into interest rate derivatives with members and offset these derivatives with non-member counterparties. These transactions are executed on market terms.

We define a “related person” as any director or executive officer of the Bank, any member of their immediate families, or any holder of 5% or more of our capital stock.

During 2017, we did not have a separate written policy to have the Board of Directors review, approve, or ratify transactions with related persons that are outside the ordinary course of business because such transactions rarely occur. However, it has been our practice to report to the Board all transactions between us and our members that are outside the ordinary course of business, and on a case-by-case basis, seek approval or ratification from the Board. In addition, each director is required to disclose to the Board any personal financial interests he or she has and any financial interests of immediate family members or of a director's business associates where such person or entity does or proposes to do business with us. Under our Code of Ethics, executive officers are prohibited from engaging in conduct that would cause an actual or apparent conflict of interest. An executive officer other than the CEO and President may seek a waiver of this provision from the CEO and President, and the CEO and President may seek a waiver from the Board.

Director Independence

General

Our Board of Directors is required to evaluate and report on the independence of our directors under two distinct director independence standards. First, FHFA regulations establish independence criteria for directors who serve as members of our Audit Committee. Second, SEC rules require that our Board of Directors apply the independence criteria of a national securities exchange or automated quotation system in assessing the independence of its directors and members of its board committees, to the extent the exchange or quotation system selected by the Bank has adopted separate independence rules for such committee members.

See **Information Regarding Current Directors of the Bank** on page 85 for more information on our current directors. None of our directors is an “inside” director. That is, none of our directors is a Bank employee or officer. Further, our directors are prohibited from personally owning stock in the Bank. Each of the member directors, however, is a senior officer or director of an institution that is one of our members, and our members are able, and are encouraged, to engage in transactions with us on a regular basis.

FHFA Regulations Regarding Independence

The FHFA director independence standards prohibit an individual from serving as a member of our Audit Committee if he or she has one or more disqualifying relationships with us or our management that would interfere with the exercise of that individual's independent judgment. Relationships considered disqualifying by the FHFA include: employment with the Bank at any time during the last five years; acceptance of compensation from the Bank other than for service as a director; being a consultant, advisor, promoter, underwriter or legal counsel for the Bank at any time within the last five years; and being an immediate family member of an individual who is or who has been within the past five years, a Bank executive officer. Our Board of Directors assesses the independence of each director under the FHFA's independence standards, regardless of whether he or she serves on the Audit Committee. Our Board of Directors determined that all of our directors are independent under these criteria.

SEC Rules Regarding Independence

SEC rules require our Board to adopt a standard of independence to evaluate our directors. Pursuant thereto, the Board adopted the independence standards of the New York Stock Exchange (the NYSE) to determine which of our directors are independent, which members of our Audit Committee and HR&C Committee are not independent, and whether our Audit Committee's financial experts are independent.

Under the NYSE rules, no director qualifies as independent unless the full Board affirmatively determines that he or she has no material relationship with the company (either directly or as a partner, shareholder or officer of an organization that has a relationship with the company). In addition, the NYSE rules set out a number of specific disqualifications from independence, including certain employment relationships between the director or his or her family members and the company, the company's internal or external auditor, another company where any of the company's executive officers is a compensation committee member or another company that conducted business with the company above a specified threshold; and receipt by the director or his or her family members of compensation from the company above a specified threshold (with certain exceptions).

Applying the NYSE independence standards for boards of directors to our current member directors and those who served during 2017, our Board determined that only member directors Beacom, Gross, Sennholz, Steelman, and Watts did not trigger any of the objective NYSE independence disqualifications. However, based upon the fact that each member director is a senior officer or director of an institution that is a member of the Bank (and thus is an equity holder in the Bank), that each such institution routinely engages in transactions with us, and that such transactions occur frequently and are encouraged, the Board determined that at the present time it would conclude that none of these member directors, consisting of Ashworth, Beacom, Fazio, Gross, Hegenbarth, Locke (former director whose term ended in 2017), Pirsein, Reinke, Rosenbaum (former director whose term ended in 2017), Sennholz, Steelman, and Watts meets the independence criteria under the NYSE independence standards. None of the independent directors are employees or officers of institutions that are members of the Bank, and therefore do not have, ongoing business transactions with us. The Board determined that each of these independent directors, consisting of Brady, Cahillane, Eppli, Lockett, Ries, Scott, White and Young, is independent under the NYSE independence standards. Similarly, the Board determined that the following current member directors serving on the Audit Committee, and member directors who served on the Audit Committee during 2017, are not independent under the NYSE independence standards for audit committees: Fazio, Hegenbarth, Rosenbaum (former director whose term ended in 2017), Reinke, Sennholz, Steelman, and Watts. The Board determined that the following current member directors serving on the HR&C Committee, and member directors who served on the HR&C Committee in 2017, are not independent under the NYSE independence standards for compensation committees: Ashworth, Beacom, Gross, Reinke, Sennholz, and Steelman.

Item 14. Principal Accountant Fees and Services.

The following table sets forth the aggregate fees we have been charged (or accrued) by our external accounting firm:

	(in thousands)	
For the Years Ended December 31,	**2017**	2016
Audit fees	**$ 961**	$ 900
Audit related fees	**201**	208
All other fees	**—**	6
Total fees	**$ 1,162**	$ 1,114

Audit fees were for professional services rendered for the audits of our financial statements. Audit related fees were for other assurance and related services. No tax related fees were paid. No fees were paid for financial information system design, implementation, or software license fees. All other fees consist of our allocated share for systemwide human resources consulting in 2016.

Our Audit Committee has adopted the Pre-Approval of Audit and Non-Audit Services Policy (the Policy). In accordance with the Policy and applicable law, the Audit Committee pre-approves audit services, audit-related services, tax services, and non-audit services to be provided by its independent auditor. The term of any pre-approval is 12 months from the date of pre-approval unless the Audit Committee specifically provides otherwise. On an annual basis, the Audit Committee reviews the list of specific services and projected fees for services to be provided for the next 12 months.

FHLB Chicago | Federal Home Loan Bank of Chicago

PART IV
Item 15. Exhibits, Financial Statements Schedules.

(a) See "2017 Annual Financial Statements and Notes"

(b) The below exhibits were filed with the Form 10-K Annual Report to the SEC on March 9, 2018, or as noted below, were filed with the Bank's previously filed Annual, Quarterly, or Current Reports or registration statements, copies of which may be obtained by going to the SEC's website at www.sec.gov. Each exhibit that is considered a management contract or compensatory plan or arrangement required to be filed is identified with a "*".

Exhibit No.	Description
3.1	Federal Home Loan Bank of Chicago Charter [a]
3.2	Federal Home Loan Bank of Chicago Bylaws [b]
4.1	Capital Plan of the Federal Home Loan Bank of Chicago, as amended and restated effective October 1, 2015 [c]
10.1.1	Sublease Agreement between the Federal Home Loan Bank of Chicago and the Aon Corporation dated December 31, 2008 [d]
10.1.2	First Amendment to Sublease Agreement, dated January 26, 2010 [e]
10.2	Office Lease between the Federal Home Loan Bank of Chicago and Wells REIT-Chicago Center Owner, LLC, dated January 9, 2009 [f]
10.3	Advances, Collateral Pledge, and Security Agreement [g]
10.4	Mortgage Partnership Finance Participating Financial Institution Agreement [Origination or Purchase] [h]
10.5	Mortgage Partnership Finance Participating Financial Institution Agreement [Purchase Only] [i]
10.6	Mortgage Partnership Finance Program Consolidated Interbank Agreement, dated July 22, 2016 [j]
10.7	Federal Home Loan Banks P&I Funding and Contingency Plan Agreement, as amended and restated effective as of January 1, 2017, by and among the Office of Finance and each of the Federal Home Loan Banks [k]
10.8	Employment Agreement between the Federal Home Loan Bank of Chicago and Matthew R. Feldman, effective January 1, 2015 [*l]
10.9	Federal Home Loan Bank of Chicago Key Employee Long Term Incentive Compensation Plan, dated December 19, 2008 [*m]
10.10	Federal Home Loan Bank of Chicago President and Executive Team Incentive Compensation Plan, as amended and restated effective January 1, 2017 [*n]
10.11	Federal Home Loan Bank of Chicago Benefit Equalization Plan, dated December 16, 2003 [*o]
10.12	Federal Home Loan Bank of Chicago Post December 31, 2004 Benefit Equalization Plan, as amended and restated effective January 1, 2013 [*p]
10.13	Federal Home Loan Bank of Chicago Employee Severance Plan, dated April 24, 2007 [*q]
10.14	Federal Home Loan Bank of Chicago 2016 Board of Directors Compensation Policy [*r]
10.15	Federal Home Loan Bank of Chicago 2017 Board of Directors Compensation Policy [*s]
10.16	Federal Home Loan Bank of Chicago 2018 Board of Directors Compensation Policy [*v]
10.17	Federal Home Loan Bank of Chicago Board of Directors Deferred Compensation Plan, effective September 1, 2013 [*t]
10.18	Joint Capital Enhancement Agreement, as amended August 5, 2011 [u]
24	Power of Attorney (included on the signature page)
31.1	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 by the Principal Executive Officer [v]
31.2	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 by the Principal Financial Officer [v]
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 by the Principal Executive Officer [v]
32.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 by the Principal Financial Officer [v]
101.INS	XBRL Instance Document - The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema Document [v]
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document [v]
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document [v]
101.LAB	XBRL Taxonomy Extension Label Linkbase Document [v]
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document [v]

[a] Filed as Exhibit 3.1 with our Form 10 on December 14, 2005, SEC File No.: 000-51401
[b] Filed as Exhibit 3.1 with our 8-K Current Report on February 1, 2016, SEC File No.: 000-51401
[c] Filed as Exhibit 4.1 with our 8-K Current Report on August 31, 2015, SEC File No.: 000-51401
[d] Filed as Exhibit 10.1 with our 8-K Current Report on January 15, 2009, SEC File No.: 000-51401

[e] Filed as Exhibit 10.1 with our 8-K Current Report on February 1, 2010, SEC File No.: 000-51401
[f] Filed as Exhibit 10.2 with our 8-K Current Report on January 15, 2009, SEC File No.: 000-51401
[g] Filed as Exhibit 10.3 with our Form 10-K on March 17, 2011, SEC File No.: 000-51401
[h] Filed as Exhibit 10.4 with our Form 10 on December 14, 2005, SEC File No.: 000-51401
[i] Filed as Exhibit 10.4.1 with our Form 10 on December 14, 2005, SEC File No.: 000-51401
[j] Filed as Exhibit 10.1 with our Form 10-Q on November 3, 2016, SEC File No.: 000-51401
[k] Filed as Exhibit 10.7 with our Form 10-K on March 9, 2017, SEC File No.: 000-51401
[l] Filed as Exhibit 10.1 with our 8-K Current Report on January 30, 2015, SEC File No.: 000-51401
[m] Filed as Exhibit 10.22 with our Form 10-K on March 20, 2009, SEC File No.: 000-51401
[n] Filed as Exhibit 10.2 on our Form 10-Q on May 8, 2017, SEC File No.: 000-51401
[o] Filed as Exhibit 10.8.4 with our Form 10 on December 14, 2005, SEC File No.: 000-51401
[p] Filed as Exhibit 10.2 with our Form 10-Q on November 6, 2013, SEC File No.: 000-51401
[q] Filed as Exhibit 10.1 with our Form 10-Q on May 11, 2007, SEC File No.: 000-51401
[r] Filed as Exhibit 10.16 with our Form 10-K on March 9, 2016, SEC File No.: 000-51401
[s] Filed as Exhibit 10.16 with our Form 10-K on March 9, 2017, SEC File No.: 000-51401
[t] Filed as Exhibit 10.4 with our Form 10-Q on November 6, 2013, SEC File No.: 000-51401
[u] Filed as Exhibit 99.1 with our 8-K Current Report on August 5, 2011, SEC File No.: 000-51401
[v] Filed herewith.

Item 16. Form 10-K Summary.

Not applicable.

Glossary of Terms

Advances: Secured loans to members.

ABS: Asset-backed-securities.

AFS: Available-for-sale securities.

Agency MBS: Mortgage-backed securities issued by, or comprised of mortgage loans guaranteed by, Fannie Mae or Freddie Mac.

AHP: Affordable Housing Program.

ALM Policy: Our Asset/Liability Management Policy.

AMA: Acquired Member Assets. Assets that an FHLB may acquire from or through FHLB System members or housing associates by means of either a purchase or a funding transaction.

AMA investment grade: A determination made by the Bank with respect to an asset or pool, based on documented analysis, including consideration of applicable insurance, credit enhancements, and other sources for repayment on the asset or pool, that the Bank has a high degree of confidence that it will be paid principal and interest in all material respects, even under reasonably likely adverse changes to expected economic conditions.

AVM: Automated Valuation Methodology. A service that provides real estate property valuations using mathematical modeling combined with a database.

AOCI: Accumulated Other Comprehensive Income (Loss).

BEP: Benefit Equalization Plan.

Capital Plan: The Second Amended and Restated Capital Plan of the Federal Home Loan Bank of Chicago, effective as of October 1, 2015.

CBSA: Core Based Statistical Areas (CBSAs), which are based upon an assessment of the individual housing markets. CBSA refers collectively to metropolitan and micropolitan statistical areas as defined by the United States Office of Management and Budget; as currently defined, a CBSA must contain at least one urban area with a population of 10,000 or more people.

CDFI: Community Development Financial Institution.

CE Amount: A PFI's assumption of credit risk on conventional MPF Loan products held in an MPF Bank's portfolio that are funded by, or sold to, an MPF Bank by providing credit enhancement either through a direct liability to pay credit losses up to a specified amount or through a contractual obligation to provide SMI. Does not apply to the MPF Government, MPF Xtra, MPF Direct or MPF Government MBS product.

CE Fee: Credit enhancement fee. PFIs are paid a credit enhancement fee for managing credit risk and in some instances, all or a portion of the CE Fee may be performance based.

CFI: Community Financial Institution - FDIC-insured institutions with an average of total assets over the prior three years which is less than the level prescribed by the FHFA and adjusted annually for inflation. Effective in January 2018, the limit is $1.173 billion (for 2017, the limit was $1.148 billion).

CO Curve: Consolidated Obligation curve. The Office of Finance constructs a market-observable curve referred to as the CO Curve. This curve is constructed using the U.S. Treasury Curve as a base curve which is then adjusted by adding indicative spreads obtained largely from market observable sources. These market indications are generally derived from pricing indications from dealers, historical pricing relationships, market activity such as recent GSE trades, and other secondary market activity.

Consolidated Obligations (CO): FHLB debt instruments (bonds and discount notes) which are the joint and several liability of all FHLBs; issued by the Office of Finance.

Consolidated obligation bonds: Consolidated obligations that make periodic interest payments with a term generally over one year, although we have issued for terms of less than one year.

COSO: The Committee of Sponsoring Organizations of the Treadway Commission. A joint initiative of the private sector dedicated to providing frameworks and guidance on enterprise risk management, internal control and fraud deterrence.

DC: Delivery commitment. Commitments to purchase MPF Loans carried at fair value as a derivative asset or derivative liability, with changes in fair value immediately recognized as noninterest income on derivatives and hedging activities in our statements of income.

DCO: Derivatives Clearing Organization. A clearinghouse, clearing association, clearing corporation, or similar entity that enables each party to an agreement, contract, or transaction to substitute, through novation or otherwise, the credit of the DCO for the credit of the parties; arranges or provides, on a multilateral basis, for the settlement or netting of obligations; or otherwise provides clearing services or arrangements that mutualize or transfer credit risk among participants.

Discount notes: Consolidated obligations with a term of one year or less, which sell at less than their face amount and are redeemed at par value when they mature.

Dodd-Frank Act: Dodd-Frank Wall Street Reform and Consumer Protection Act, enacted July 21, 2010.

ERISA: Employee Retirement Income Security Act.

Excess capital stock: Capital stock held by members in excess of their minimum investment requirement.

Fannie Mae: Federal National Mortgage Association.

FASB: Financial Accounting Standards Board.

FCM: Futures Commission Merchant.

FDIC: Federal Deposit Insurance Corporation.

Federal Reserve: Federal Reserve Bank of New York.

FFELP: Federal Family Education Loan Program.

FHA: Federal Housing Administration.

FHFA: Federal Housing Finance Agency - The Housing and Economic Recovery Act of 2008 enacted on July 30, 2008 created the Federal Housing Finance Agency which became the regulator of the FHLBs.

FHFA Purchase Only House Price Index (HPI): The HPI is a broad measure of the movement of single-family house prices. The HPI is a weighted, repeat-sales index, meaning that it measures average price changes in repeat sales or refinancings on the same properties. This information is obtained by reviewing repeat mortgage transactions on single-family properties whose mortgages have been purchased or securitized by Fannie Mae or Freddie Mac since January 1975.

FHLB Act: The Federal Home Loan Bank Act of 1932, as amended.

FHLBs: The 11 Federal Home Loan Banks or subset thereof.

FHLBC: The Federal Home Loan Bank of Chicago.

Finance Board: The Federal Housing Finance Board. We were supervised and regulated by the Finance Board, prior to creation of the Federal Housing Finance Agency as regulator of the FHLBs by the Housing Act, effective July 30, 2008.

Fitch: Fitch Ratings, Inc.

FLA: First loss account is a memo account used to track the MPF Bank's exposure to losses until the CE Amount is available to cover losses.

Freddie Mac: Federal Home Loan Mortgage Corporation.

GAAP: Generally Accepted Accounting Principles in the United States of America.

Ginnie Mae: Government National Mortgage Association.

Ginnie Mae MBS: Mortgage-backed securities guaranteed by Ginnie Mae.

GLB Act: Gramm-Leach-Bliley Act of 1999.

Government Loans: Mortgage loans insured or guaranteed by the Federal Housing Administration (FHA), the Department of Housing and Urban Development (HUD), the Department of Veteran Affairs (VA) or Department of Agriculture Rural Housing Service (RHS).

GSE: Government sponsored enterprise.

HFS: Held for sale.

Housing Act: Housing and Economic Recovery Act of 2008, enacted July 30, 2008.

HR&C Committee: Human Resources and Compensation Committee.

HUD: Department of Housing and Urban Development.

HTM: Held-to-maturity securities.

JCE Agreement: Joint Capital Enhancement Agreement entered into by all FHLBs, effective February 28, 2011 and amended August 5, 2011, which is intended to enhance the capital position of each FHLB. The intent of the agreement is to allocate that portion of each FHLB's earnings to a separate retained earnings account at that FHLB.

Lead Bank: MPF Bank selling interests in MPF Loans.

LIBOR: London Interbank Offered Rate.

LTV: Loan-to-value ratio.

Master Commitment (MC): Pool of MPF Loans purchased or funded by an MPF Bank.

MBS: Mortgage-backed securities.

MI: Mortgage Insurance.

Moody's: Moody's Investors Service.

MPF®: Mortgage Partnership Finance.

MPF Banks: FHLBs that participate in the MPF program.

MPF Direct product: The MPF Program product under which we acquire non-conforming MPF Loans from PFIs and concurrently resell them to a third party investor.

MPF Government MBS product: The MPF Program product under which we aggregate Government Loans acquired from PFIs in order to issue securities guaranteed by the Ginnie Mae that are backed by such Government Loans.

MPF Guides: MPF Program Guide, MPF Selling Guide, and MPF Servicing Guide including the Selling and Servicing Guides and manuals for specific MPF Loan products.

MPF Loans: Conventional and government mortgage loans secured by one-to-four family residential properties with maturities from five to 30 years or participations in such mortgage loans that are acquired under the MPF Program.

MPF Program: A secondary mortgage market structure that provides liquidity to FHLB members that are PFIs through the purchase or funding by an FHLB of MPF Loans.

MPF Provider: The Federal Home Loan Bank of Chicago, in its role of providing programmatic and operational support to the

MPF Banks and their PFIs.

MPF Xtra® product: The MPF Program product under which we acquire MPF Loans from PFIs without any CE Amount and concurrently resell them to Fannie Mae.

MRCS: Mandatorily Redeemable Capital Stock.

NEO: Named executive officer.

Nonaccrual MPF Loans: Nonperforming mortgage loans in which the collection of principal and interest is determined to be doubtful or when interest or principal is past due for 90 days or more, except when the MPF Loan is well secured and in the process of collection.

NRSRO: Nationally Recognized Statistical Rating Organization.

NYSE: New York Stock Exchange.

OCI: Other Comprehensive Income.

Office of Finance: A joint office of the FHLBs established by the Finance Board to facilitate issuing and servicing of consolidated obligations.

OIS: Fed Funds Effective Swap Rate (or Overnight Index Swap Rate).

OTTI: Other-than-temporary impairment.

OTTI Committee: An FHLB System OTTI Committee formed by the FHLBs to achieve consistency among the FHLBs in their analyses of the OTTI of private-label MBS.

PCAOB: Public Company Accounting Oversight Board.

Pension Plan: Pentegra Defined Benefit Plan for Financial Institutions.

PFI: Participating Financial Institution. A PFI is a member (or eligible housing associate) of an MPF Bank that has applied to and been accepted to do business with its MPF Bank under the MPF Program.

PFI Agreement: MPF Program Participating Financial Institution Agreement.

PMI: Primary Mortgage Insurance.

PwC: PricewaterhouseCoopers LLP.

RCAP: Reduced Capitalization Advance Program.

Recorded Investment: Recorded investment in a loan is its amortized cost basis plus related accrued interest receivable, if any. Recorded investment is not net of an allowance for credit losses but is net of any direct charge-off on a loan. Amortized cost basis is defined as either the amount funded or the cost to purchase MPF Loans. Specifically, the amortized cost basis includes the initial fair value amount of the delivery commitment as of the purchase or settlement date, agent fees (i.e., market risk premiums or discounts paid to or received from PFIs), if any, subsequently adjusted, if applicable, for accretion, amortization, collection of cash, charge-offs, and cumulative basis adjustments related to fair value hedges.

Recoverable CE Fee: Under the MPF Program, the PFI may receive a contingent performance based credit enhancement fee whereby such fees are reduced up to the amount of the FLA by losses arising under the Master Commitment.

Regulatory capital: Regulatory capital stock plus retained earnings.

Regulatory capital stock: The sum of the paid-in value of capital stock and mandatorily redeemable capital stock.

REO: Real estate owned.

RHS: Department of Agriculture Rural Housing Service.

S&P: Standard and Poor's Rating Service.

Savings Plan: Pentegra Defined Contribution Plan for Financial Institutions.

SBA: Small Business Administration.

SEC: Securities and Exchange Commission.

Secretary: Secretary of the U.S. Treasury.

SMI: Supplemental mortgage insurance.

System or FHLB System: The Federal Home Loan Bank System consisting of the 11 Federal Home Loan Banks and the Office of Finance.

TBA: A forward contract on a mortgage-backed security (MBS), typically issued by a U.S. government sponsored entity, whereby a seller agrees to deliver an MBS for an agreed upon price on an agreed upon date.

TDR: Troubled Debt Restructuring

UPB: Unpaid Principal Balance.

U.S.: United States

VA: Department of Veteran's Affairs.

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2017 Annual Financial Statements and Notes

TABLE OF CONTENTS

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of the
Federal Home Loan Bank of Chicago

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying statements of condition of the Federal Home Loan Bank of Chicago (the "Bank") as of December 31, 2017 and 2016, and the related statements of income, comprehensive income, capital and cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the "financial statements"). We also have audited the Bank's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

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

Basis for Opinions

The Bank's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Bank's financial statements and on the Bank's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Bank in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

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

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Definition and Limitations of Internal Control over Financial Reporting

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

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

PricewaterhouseCoopers LLP

Chicago, Illinois
March 9, 2018

We have served as the Bank's auditor since 1990.

FHLB Chicago | Federal Home Loan Bank of Chicago

Statements of Condition (Dollars in millions, except capital stock par value)

	December 31, 2017	December 31, 2016
Assets		
Cash and due from banks	**$ 42**	$ 351
Interest bearing deposits	**775**	650
Federal Funds sold	**7,561**	4,075
Securities purchased under agreements to resell	**5,000**	2,300
Investment securities -		
Trading, **67** and 97 pledged	**233**	1,045
Available-for-sale	**12,957**	14,918
Held-to-maturity, **4,538** and 5,516 fair value	**4,157**	5,072
Investment securities	**17,347**	21,035
Advances, **776** and 672 carried at fair value	**48,085**	45,067
MPF Loans held in portfolio, net of **(2)** and (3) allowance for credit losses	**5,193**	4,967
Derivative assets	**3**	6
Other assets, **118** and 44 carried at fair value	**349**	241
Assets	**$ 84,355**	$ 78,692
Liabilities		
Deposits -		
Noninterest bearing	**$ 51**	$ 53
Interest bearing, **32** and 16 from other FHLBs	**473**	443
Deposits	**524**	496
Consolidated obligations, net -		
Discount notes, **749** and 6,368 carried at fair value	**41,191**	35,949
Bonds, **5,260** and 5,443 carried at fair value	**37,121**	36,903
Consolidated obligations, net	**78,312**	72,852
Derivative liabilities	**20**	43
Affordable Housing Program assessment payable	**88**	86
Mandatorily redeemable capital stock	**311**	301
Other liabilities	**248**	219
Liabilities	**79,503**	73,997
Commitments and contingencies - see notes to the financial statements		
Capital		
Class B1 activity stock, **12** and 12 million shares issued and outstanding	**1,241**	1,160
Class B2 membership stock, **2** and 6 million shares issued and outstanding	**202**	551
Capital stock - putable, $100 and $100 **par value**	**1,443**	1,711
Retained earnings - unrestricted	**2,845**	2,631
Retained earnings - restricted	**452**	389
Retained earnings	**3,297**	3,020
Accumulated other comprehensive income (loss) (AOCI)	**112**	(36)
Capital	**4,852**	4,695
Liabilities and capital	**$ 84,355**	$ 78,692

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

FHLB Chicago | Federal Home Loan Bank of Chicago

Statements of Income (Dollars in millions)

For the years ended December 31,	2017	2016	2015
Interest income	$ 1,558	$ 1,259	$ 1,252
Interest expense	1,075	803	744
Net interest income	483	456	508
Provision for (reversal of) credit losses	—	1	5
Net interest income after provision for (reversal of) credit losses	483	455	503
Noninterest income -			
Derivatives and hedging activities	8	1	(16)
Instruments held under fair value option	(2)	5	8
Litigation settlement awards	2	38	13
MPF fees, **20** , 17 and 11 from other FHLBs	28	27	17
Other, net	8	5	1
Noninterest income	44	76	23
Noninterest expense -			
Compensation and benefits	100	94	81
Operating expenses	62	60	51
Other	12	13	6
Noninterest expense	174	167	138
Income before assessments	353	364	388
Affordable Housing Program assessment	36	37	39
Net income	$ 317	$ 327	$ 349

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

Statements of Comprehensive Income (Dollars in millions)

For the years ended December 31,	**2017**	2016	2015
Net income	**$ 317**	$ 327	$ 349
Other comprehensive income (loss) -			
Net unrealized gain (loss) available-for-sale securities	**(52)**	(199)	(402)
Noncredit OTTI held-to-maturity securities	**34**	40	47
Net unrealized gain (loss) cash flow hedges	**165**	151	117
Postretirement plans	**1**	—	(7)
Other comprehensive income (loss)	**148**	(8)	(245)
Comprehensive income	**$ 465**	$ 319	$ 104

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

Statements of Capital (Dollars and shares in millions)

	Capital Stock - Putable - B1 Activity		Capital Stock - Putable - B2 Membership		Capital Stock		Retained Earnings				
	Shares	Value	Shares	Value	Shares	Value	Unrestricted	Restricted	Total	**AOCI**	**Total**
December 31, 2016	**12**	**$1,160**	**6**	**$ 551**	**18**	**$1,711**	**$ 2,631**	**$ 389**	**$3,020**	**$ (36)**	**$4,695**
Comprehensive income							**254**	**63**	**317**	**148**	**465**
Issuance of capital stock	**27**	**2,813**	**—**	**17**	**27**	**2,830**					**2,830**
Repurchase of capital stock	**—**	**(35)**	**(31)**	**(3,058)**	**(31)**	**(3,093)**					**(3,093)**
Capital stock reclassified to mandatorily redeemable capital stock (liabilities)	**—**	**(2)**	**—**	**(3)**	**—**	**(5)**					**(5)**
Transfers between classes of capital stock	**(27)**	**(2,695)**	**27**	**2,695**							
Cash dividends - class B1							**(37)**		**(37)**		**(37)**
Class B1 annualized rate											**3.19%**
Cash dividends - class B2							**(3)**		**(3)**		**(3)**
Class B2 annualized rate											**1.10%**
Total change in period	**—**	**81**	**(4)**	**(349)**	**(4)**	**(268)**	**214**	**63**	**277**	**148**	**157**
December 31, 2017	**12**	**1,241**	**2**	**202**	**14**	**1,443**	**2,845**	**452**	**3,297**	**112**	**4,852**
December 31, 2015	13	1,313	6	637	19	1,950	2,407	323	2,730	(28)	4,652
Comprehensive income							261	66	327	(8)	319
Issuance of capital stock	14	1,293	1	16	15	1,309					1,309
Repurchase of capital stock	(7)	(672)	(6)	(576)	(13)	(1,248)					(1,248)
Capital stock reclassified to mandatorily redeemable capital stock (liabilities)	(3)	(295)	—	(5)	(3)	(300)					(300)
Transfers between classes of capital stock	(5)	(479)	5	479							
Cash dividends - class B1							(33)		(33)		(33)
Class B1 annualized rate											2.75%
Cash dividends - class B2							(4)		(4)		(4)
Class B2 annualized rate											0.60%
Total change in period	(1)	(153)	—	(86)	(1)	(239)	224	66	290	(8)	43
December 31, 2016	12	1,160	6	551	18	1,711	2,631	389	3,020	(36)	4,695
December 31, 2014	8	827	11	1,075	19	1,902	2,152	254	2,406	217	4,525
Comprehensive income							280	69	349	(245)	104
Issuance of capital stock	4	357	—	17	4	374					374
Repurchase of capital stock	(1)	(95)	(3)	(229)	(4)	(324)					(324)
Capital stock reclassified to mandatorily redeemable capital stock (liabilities)	—	—	—	(2)	—	(2)					(2)
Transfers between classes of capital stock	2	224	(2)	(224)							
Cash dividends - class B1							(20)		(20)		(20)
Class B1 annualized rate											2.31%
Cash dividends - class B2							(5)		(5)		(5)
Class B2 annualized rate											0.50%
Total change in period	5	486	(5)	(438)	—	48	255	69	324	(245)	127
December 31, 2015	13	$1,313	6	$ 637	19	$1,950	$ 2,407	$ 323	$2,730	$ (28)	$4,652

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

FHLB Chicago | Federal Home Loan Bank of Chicago

Statements of Cash Flows (Dollars in millions)

	For the years ended December 31,	**2017**	2016	2015
Operating	Net income	**$ 317**	$ 327	$ 349
	Adjustments to reconcile net income for noncash operating activities -			
	Amortization and accretion	**41**	19	2
	Change in net fair value on derivatives and hedging activities	**311**	192	326
	Other	**(2)**	(10)	11
	Changes in operating assets or liabilities -			
	Purchases of mortgage loans to be securitized	**(687)**	(446)	(151)
	Proceeds from sales of securitized mortgage loans	**613**	457	97
	Other operating assets	**(64)**	(40)	(59)
	Other operating liabilities	**11**	(17)	(5)
	Net cash provided by (used in) operating activities	**540**	482	570
Investing	Net change interest bearing deposits	**(125)**	—	(90)
	Net change Federal Funds sold	**(3,486)**	(2,373)	(177)
	Net change securities purchased under agreements to resell	**(2,700)**	(925)	2,025
	Trading securities -			
	Sales	**801**	2,158	300
	Proceeds from maturities and paydowns	**208**	111	812
	Purchases	**(200)**	(2,156)	(2,106)
	Available-for-sale securities -			
	Proceeds from maturities and paydowns	**1,798**	2,243	2,027
	Purchases	**(5)**	(2)	(14)
	Held-to-maturity securities -			
	Short-term held-to-maturity securities, net	**(10)** [a]	37 [a]	112 [a]
	Proceeds from maturities and paydowns	**1,043**	979	1,154
	Purchases	**(31)**	(41)	(24)
	Advances -			
	Principal collected	**747,813**	704,656	342,573
	Issued	**(750,868)**	(713,017)	(346,874)
	MPF Loans held in portfolio -			
	Principal collected	**1,003**	1,164	1,424
	Purchases	**(1,236)**	(1,306)	(204)
	Other investing activities	**21**	33	31
	Net cash provided by (used in) investing activities	**$ (5,974)**	$ (8,439)	$ 969

	For the years ended December 31,	**2017**	2016	2015
Financing	Net change deposits	**$ 28**	$ (43)	$ (125)
	Discount notes -			
	Net proceeds from issuance	**1,408,075**	682,913	277,115
	Payments for maturing and retiring	**(1,402,859)**	(688,540)	(266,620)
	Consolidated obligation bonds -			
	Net proceeds from issuance	**19,567**	36,752	10,283
	Payments for maturing and retiring	**(19,358)**	(22,297)	(21,962)
	Net proceeds (payments) on bond transfers with other FHLBs	**—**	—	(35)
	Payments for retiring of subordinated debt	**—**	(944)	—
	Capital stock -			
	Proceeds from issuance	**2,830**	1,309	374
	Repurchases	**(3,093)**	(1,248)	(324)
	Cash dividends paid	**(40)**	(37)	(25)
	Other financing activities	**(25)**	(56)	(63)
	Net cash provided by (used in) financing activities	**5,125**	7,809	(1,382)
	Net increase (decrease) in cash and due from banks	**(309)**	(148)	157
	Cash and due from banks at beginning of period	**351**	499	342
	Cash and due from banks at end of period	**$ 42**	$ 351	$ 499
Supplemental	Interest paid	**$ 897**	$ 644	$ 740
	Affordable Housing Program assessments paid	**34**	40	40
	Capital stock reclassified to mandatorily redeemable capital stock	**5**	300	2
	Transfer of MPF Loans held for sale (in other assets) to securitized mortgage loans (in trading securities)	**526**	422	83
	Transfer of MPF Loans held in portfolio to other assets	**16**	23	30

[a] Short-term held-to-maturity securities, net, consists of investment securities with a maturity of less than 90 days when purchased.

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

Note 1 – Background and Basis of Presentation

The Federal Home Loan Bank of Chicago is a federally chartered corporation and one of 11 Federal Home Loan Banks (the FHLBs) that, with the Office of Finance, comprise the Federal Home Loan Bank System (the System). The FHLBs are government-sponsored enterprises (GSE) of the United States of America and were organized under the Federal Home Loan Bank Act of 1932, as amended (FHLB Act), in order to improve the availability of funds to support home ownership. We are supervised and regulated by the Federal Housing Finance Agency (FHFA), an independent federal agency in the executive branch of the United States (U.S.) government.

Each FHLB is a member-owned cooperative with members from a specifically defined geographic district. Our defined geographic district is Illinois and Wisconsin. All federally-insured depository institutions, insurance companies engaged in residential housing finance, credit unions and community development financial institutions located in our district are eligible to apply for membership with us. All our members are required to purchase our capital stock as a condition of membership. Our capital stock is not publicly traded and subject to certain statutory and regulatory limits, and is issued, repurchased or redeemed at a par value of $100 per share. As a cooperative, we do business with our members, and former members (under limited circumstances). Specifically, we provide credit principally in the form of secured loans called advances. We also provide liquidity for home mortgage loans to members approved as Participating Financial Institutions (PFIs) through the Mortgage Partnership Finance® (MPF®) Program.

Our accounting and financial reporting policies conform to generally accepted accounting principles in the United States of America (GAAP). Amounts in prior periods may be reclassified to conform to the current presentation and if material are disclosed in the following notes.

Unless otherwise specified, references to we, us, our, and the Bank are to the Federal Home Loan Bank of Chicago.

“Mortgage Partnership Finance”, “MPF”, “MPF Xtra”, and "Community First" are registered trademarks of the Federal Home Loan Bank of Chicago.

Refer to the **Glossary of Terms** starting on page 122 for the definitions of certain terms used herein.

Use of Estimates and Assumptions

We are required to make estimates and assumptions when preparing our financial statements in accordance with GAAP. The most significant of these estimates and assumptions applies to fair value measurements and allowance for credit losses. Our actual results may differ from the results reported in our financial statements due to such estimates and assumptions. This includes the reported amounts of assets and liabilities, the reported amounts of income and expense, and the disclosure of contingent assets and liabilities.

Basis of Presentation

Gross versus Net Presentation - We present derivative assets and liabilities on a net basis in our statements of condition when our right to net amounts due to our counterparties and/or clearing agents is enforceable at law. We include accrued net interest settlements and cash collateral, including initial and variation margin, in the carrying amount of a derivative. Over-the-counter derivatives are netted by contract (e.g., master netting agreement), to discharge all or a portion of the amounts that would be owed to our counterparty by applying them against the amounts that our counterparty owes to us. Additionally, we clear certain derivatives transactions with clearinghouses classified as a Derivatives Clearing Organization (DCO), through Futures Commission Merchants (FCM), a clearing member of the DCO. If these netted amounts are positive, they are classified as a derivative asset and if negative, they are classified as a derivative liability. Effective in January of 2017, there was a change in our basis of presentation for our cleared derivative transactions. Prior to 2017, our accounting presented derivative assets and liabilities of our cleared derivative transactions on a net basis, inclusive of initial and variation margin, and accrued interest receivable/payable and cash collateral. Due to rule changes adopted by our DCOs, as of January of 2017, we characterize the treatment of variation margin payments as settlements rather than as collateral for our cleared derivatives. As result, we account for variation margin payments as settlements to our derivative assets and derivative liabilities. The amendments to the DCOs' rules had no effect on how we present initial margin, which we include in the carrying amount of our derivative assets or derivative liabilities. See **Note 2 - Summary of Significant Accounting Policies** for further details.

The net exposure for these financial instruments can change on a daily basis; therefore, there may be a delay between the time this exposure change is identified and additional collateral is requested, and the time when this collateral is received or pledged. Likewise, there may be a delay for excess collateral to be returned. For derivative instruments that meet the netting requirements, any excess cash collateral received or pledged is recognized as a derivative liability or asset. Derivatives that do not have the legal right of offset are presented on a gross basis in our statements of condition.

Refer to **Note 9 - Derivatives and Hedging Activities** for further details.

Our policy is to report securities purchased under agreements to resell and securities sold under agreements to repurchase, if any, and securities borrowing transactions, if any, on a gross basis.

Consolidation of Variable Interest Entities - We are not the primary beneficiary of any variable interest entity. Specifically, we do not have the power to direct the activities of any variable interest entity that would most significantly impact its economic performance and we do not have the obligation to absorb losses or the right to receive benefits from any variable interest entity that could potentially be significant to a variable interest entity. As a result, we do not consolidate any of our investments in variable interest entities. Instead, we classify variable interest entities as investment securities in our statements of condition. Such investment securities include, but are not limited to, senior interests in private-label mortgage backed securities (MBS) and Federal Family Education Loan Program asset backed securities (FFELP ABS). Our maximum loss exposure for these investment securities is limited to their carrying amounts. We have no liabilities related to these investments in variable interest entities. We have not provided financial or other support (explicitly or implicitly) to these investment securities that we were not previously contractually required to provide, nor do we intend to provide such support in the future.

Note 2 – Summary of Significant Accounting Policies

Fair Value

Fair value represents the exit price that we would receive to sell an asset or pay to transfer a liability in an orderly transaction with a market participant at the measurement date.

Valuation Techniques and Significant Inputs

We utilize the fair value hierarchy when selecting valuation techniques and significant inputs to measure the fair value of our assets and liabilities. Our valuation techniques may utilize market, cost, and/or income models to estimate fair values. Under the fair value hierarchy, valuation techniques and significant inputs are prioritized from the most objective, such as quoted market prices in external active markets, to the least objective, such as valuation approaches that utilize unobservable inputs. The fair value hierarchy requires us to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Outlined below is an overview of Level 1, Level 2, and Level 3 of the fair value hierarchy. Refer to **Note 16 - Fair Value** for further details on our valuation techniques and significant inputs.

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that we can access at the measurement date.

Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability.

Level 3 inputs are unobservable inputs used to measure fair value of an asset or liability to the extent that relevant observable inputs are not available; for example, situations in which there is little, if any, market activity for the asset or liability at the measurement date.

For instruments carried at fair value, we review the fair value hierarchy classifications on a quarterly basis. Changes in the observability of the valuation attributes may result in a reclassification of certain financial assets or liabilities from one level to another. Such reclassifications are reported as transfers in/out at fair value as of the beginning of the quarter in which the changes occur.

Fair Value Option

We may elect the fair value option for financial instruments, such as advances, MPF Loans held for sale, consolidated obligation discount notes and bonds in cases where hedge accounting treatment may not be achieved due to the inability to meet the hedge effectiveness testing criterion. We carry these financial instruments at fair value in our statements of condition. Changes in their fair value are immediately recognized into our statements of income as noninterest income on instruments held under fair value option. We economically hedge these financial instruments with derivatives, which are carried at fair value in our statements of condition. Changes in their fair value also are immediately recognized into our statements of income; however, such changes in fair value are classified as noninterest income on derivatives and hedging activities. Interest income or expense recognized in our statements of income on these financial instruments is based solely on the contractual amount of interest due or unpaid, except for our discount notes, which have a zero coupon rate. For discount notes, we accrete the initial discount into interest expense over the life of the discount note into our statements of income. Any transaction fees or costs, such as concession fees on consolidated obligation bonds and discount notes, are immediately recognized into noninterest expense - other. See **Note 16 - Fair Value** to the financial statements for further details.

Cash and Cash Equivalents

We consider only cash and due from banks as cash and cash equivalents. We do not have any restricted cash.

Interest Bearing Deposits, Federal Funds Sold and Securities Purchased Under Agreements to Resell

We utilize these investments for short-term liquidity purposes and carry them on an amortized cost basis in our statements of condition.

Collateral on Securities Purchased Under Agreements to Resell (resale agreements)

- Collateral accepted from our counterparties is held in our name for safekeeping by third party custodians.

- We do not sell or repledge any collateral we receive due to the short-term nature of our resale agreements.

- The collateral's fair value less haircuts approximates the resale agreement's carrying amount in our statements of condition.

- Our counterparty is required to make up any shortfall, which exists if the collateral's fair value decreases below the contractually required amount, by providing additional securities as collateral equal to the amount of the shortfall. If our counterparty does not provide such additional collateral, the resale agreement's carrying amount is reduced by the collateral shortfall amount.

Investment Securities

We record purchases and sales of investment securities (securities) on a trade date basis. We classify securities as either trading, held-to-maturity (HTM), or available-for-sale (AFS) based on the criteria outlined below. Classification is made at the time a security is acquired and then reassessed each subsequent reporting period.

- Securities held solely for liquidity purposes are classified as trading. We are prohibited from holding trading securities for speculative purposes pursuant to FHFA regulations.

- Securities held to provide additional earnings are classified as HTM. Classification as HTM requires that we have both the intent and ability to hold the security to maturity.

- Securities not classified as either trading or HTM are classified as AFS; for example, securities held for asset-liability management purposes.

Our accounting policies for trading, HTM and AFS securities are outlined below.

- Trading securities are carried at fair value. Fair value changes related to trading securities are recognized in noninterest income on trading securities. Interest income on trading securities is based solely on the contractual amount of interest due, except for securities, if any, that have a zero coupon rate. For trading securities with a zero coupon rate, we accrete the initial discount into interest income over their life into our statements of income. Cash flows from trading securities, excluding cash flows from our securitized MPF Government MBS product, are presented on a gross basis and classified as investing activities in our statements of cash flows. Cash flows from our securitized MPF Government MBS product are classified as operating activities in our statements of cash flows.

- HTM securities are carried on an amortized cost basis adjusted for any noncredit other-than-temporary impairment (OTTI) recognized in AOCI. Amortized cost basis represents the original cost of a security adjusted for accretion, amortization, collection of cash, previous other-than-temporary impairment (OTTI) recognized into earnings (less any cumulative effect adjustments), and any fair value hedge accounting adjustments.

- AFS securities are carried at fair value. Changes in fair value on AFS securities are recognized into AOCI in our statements of condition except for AFS securities that are in a fair value hedge relationship. Changes in fair value on AFS securities and the derivative hedging AFS securities in a fair value hedging relationship are immediately recognized into noninterest income on derivatives and hedging activities.

- We use the interest method to amortize/accrete premiums/discounts on HTM and AFS securities into interest income in our statements of income. HTM and AFS securities having a prepayment feature amortize/accrete premiums/discounts over their estimated lives based on anticipated prepayments. We recalculate their effective yield on an ongoing basis to reflect actual payments to date and anticipated future payments. HTM and AFS securities that do not have a prepayment feature amortize/accrete premiums/discounts over their contractual life.

- Gains and losses on sales of securities are determined using the specific identification method and are included in noninterest income in our statements of income.

Investment Securities - Other-than-Temporary Impairment (OTTI)

We assess an HTM or AFS security for OTTI whenever its fair value is less than its amortized cost basis as of the reporting date. We write down an OTTI security to fair value if we decide to sell it or if we believe it is more likely than not that we will be required to sell it before recovery of its amortized cost basis. The entire amount of the fair value write-down is recognized as an OTTI credit loss in our statements of income. If a fair value write-down on an OTTI security is not required but a recovery of its entire amortized cost basis is not expected, then the OTTI security is written down to its fair value in our statements of condition.

The offset to such a fair value write-down is allocated between an OTTI credit loss that is recognized in our statements of income and a noncredit related loss that is recognized in AOCI.

Subsequent Accretion and Amortization

We prospectively accrete the noncredit OTTI recognized in AOCI for HTM securities to the security's carrying amount over its remaining life. The accretion is based on the amount and timing of the security's future estimated cash flows. This accretion increases the security's carrying amount until we derecognize the security (e.g., at maturity) or until we recognize additional OTTI on that security into earnings. See **Statements of Comprehensive Income** on page F-6.

We evaluate the yield of each impaired HTM or AFS security on a quarterly basis. We adjust the impaired security's yield for subsequent increases or decreases in its estimated cash flows, if any. The adjusted yield is then used to calculate the amount to be recognized into interest income over the remaining life of the impaired security.

Advances

We offer a wide range of fixed-and variable-rate advance products with different maturities, interest rates, payment characteristics and optionality. An advance is carried at its amortized cost basis, except when we elect the fair value option and carry it at fair value. Amortized cost basis represents the original amount funded to our member adjusted for any accretion, amortization, collection of cash, and fair value hedge accounting adjustments, if any. Fair value hedge adjustments include ongoing (open) and/or discontinued (closed) fair value hedges. Cash flow hedging adjustments related to ongoing (open) and/or discontinued (closed) cash flow hedges are classified in AOCI. We utilize the interest method to amortize/accrete any premiums/ discounts and closed fair value and/or cash flow hedging adjustments.

Prepayments

We recognize prepayment fees, if any, and any related fair value and/or cash flow hedging adjustments into interest income in our statements of income when an advance is prepaid.

Modifications versus Extinguishments

We assess whether a modification or an extinguishment of an existing advance has occurred in cases where a new advance is issued concurrently or shortly after the prepayment of that existing advance (within 5 business days) by a member. An advance is considered extinguished if either of the conditions shown below are met:

- The present value of the cash flow on the new advance is at least 10% different from the present value of the remaining cash flows on the original advance; or

- A significant modification has occurred based on the specific facts and circumstances (and other relevant considerations) surrounding the modification.

Any prepayment fees and any unamortized cumulative basis adjustment resulting from a fair value hedge of an extinguished advance would be immediately recognized into interest income in our statements of income. Amounts deferred in AOCI related to a cash flow hedge on the extinguished advance are immediately recognized into noninterest income on derivatives and hedging activities.

If both of the above conditions are not met, a modification of the existing advance has occurred. Any prepayment fees and any unamortized cumulative basis adjustment resulting from a fair value hedge of the modified advance would continue to be amortized over its contractual life.

MPF Loans

See **Note 7 - MPF Loans Held in Portfolio** for further details pertaining to the MPF Program and MPF Loans.

MPF Loans Held in Portfolio

MPF Loans for which we have the intent and ability to hold until maturity are classified as MPF Loans held in portfolio. Such loans are carried on an amortized cost basis on our statements of condition. Amortized cost basis represents the initial fair value amount of the MPF delivery commitment as of the purchase or settlement date, agent fees (i.e., market risk premiums or discounts paid to or received from PFIs), if any, subsequently adjusted, if applicable, for accretion, amortization, collection of cash, charge-offs, and cumulative basis adjustments related to fair value hedges. We use the interest method to amortize yield adjustments into interest income in our statements of income over the contractual life of an MPF Loan held in portfolio. Yield adjustments may include agent fees, the fair value amount of the delivery commitment as of its settlement date, any origination fees or costs representing yield adjustments, closed fair value hedging adjustments, and credit enhancement fees.

MPF Loans Held for Sale

MPF Loans acquired by the Bank under the MPF Xtra, MPF Direct, and MPF Government MBS products are classified as MPF Loans held for sale (HFS). MPF Loans under the MPF Government MBS product are reclassified from Mortgage Loans HFS to trading securities upon their securitization qualifying for sales accounting treatment. If the securitization does not meet the conditions of sales accounting treatment, then we continue to classify these mortgage loans as MPF Loans HFS. We classify MPF Loans HFS in Other Assets rather than as a separate line item in our statements of condition on the basis of materiality. Cash flows from MPF Loans HFS are classified as operating activities in our statements of cash flows. We have elected the fair value option for MPF Loans HFS, and accordingly, carry these mortgage loans at fair value. The initial fair value of the MPF Loans HFS includes the fair value amount of the MPF Delivery Commitment as of the purchase or settlement date. The difference between the price paid to a PFI for a MPF Loan HFS and the price we receive from a third party for such loan is intended to include compensation for future operating expenses incurred to administer the loans. These amounts and other related transaction fees are recognized into Noninterest income - MPF fees in our statements of income as follows:

- Amounts used to pay for third party transaction costs attributable to the sale and securitization of MPF Loans HFS are recognized immediately.
- For MPF Loans HFS sold where servicing is retained by the PFI, the amounts are recognized on a straight-line basis over the life of the loan.
- For MPF Loans HFS sold where servicing is released, the amounts are recognized immediately.

MPF Fees from other FHLBs

Other FHLBs pay us a membership fee to participate in the MPF Program and a fee for us to provide services related to their on balance sheet MPF Loans, which offsets a portion of expenses we incur to administer the program. We present these fees on a gross basis and classify them parenthetically in Noninterest income as MPF fees from other FHLBs.

Allowance for Credit Losses

Refer to **Note 8 - Allowance for Credit Losses** for further details.

On-Balance Sheet Financial Instruments

We determine an allowance for credit losses, if any, for each of our portfolio segments. A portfolio segment represents the level of disaggregation we utilize to develop and document a systematic method for determining an allowance for credit losses attributable to our financing receivables. An allowance for credit losses is a contra valuation account attributable to an on-balance sheet portfolio segment. We recognize a credit loss when it is probable a credit loss has been incurred and when the credit loss amount is reasonably estimable. Our assessment is based on all available information, which includes, but is not limited to, past events and current economic conditions existing at the reporting date. We recognize the change in our allowance for credit losses during the reporting period as a provision for (reversal of) credit losses in our statements of income.

Off-Balance Sheet Financial Instruments

We establish a separate liability for credit losses, if any, attributable to off-balance sheet financial instruments, such as standby letters of credit (also referred to herein as letters of credit), using the same approach described above for on-balance sheet financial instruments. We recognize the change in credit losses during the reporting period, if any, in other noninterest expense in our statements of income.

Details about the allowance for credit losses methodology for each of our portfolio segments is discussed below.

Member Credit Products (advances, letters of credit and other extensions of credit to borrowers)

We consider our risk-based approach to determining collateral requirements, including risk-based collateral levels and collateral delivery triggers, and our credit extension policies as the primary tools for managing the credit quality on our member credit products. We assess and protect our rights to collateral on a member-by-member basis to determine if we are holding collateral with a value that is at least equal to the credit outstanding to that member. The collateral value required to secure each member's credit products is calculated for securities, by multiplying the applicable percentage margin by the market value of each security and for loans, by multiplying the applicable percentage margin by the unpaid principal balance of pledged loans, along with any applicable percentage applied to adjust for ineligible loans found during a member's collateral review. We also factor in the repayment history of our members when assessing whether a credit risk loss has been incurred with respect to our member credit products.

Conventional MPF Loans Held in Portfolio

MPF Risk Sharing Structure

Our allowance for credit losses methodology factors in the allocation of losses for conventional MPF products held in our portfolio as further described below. The credit risk analysis determines the degree to which layers of the MPF Risk Sharing Structure are available to recover losses on MPF Loans. PFIs deliver MPF Loans into pools designated by product specific Master Commitments (MCs). The credit risk analysis is performed at an individual MC level since credit loss recovery from a PFI is MC-specific - that is, credit losses on a loan may be absorbed by the PFI only by its risk layer of the MC related to that loan. We allocate losses on participation interests in MPF Loans amongst the participating MPF Banks pro-ratably based upon their respective percentage participation interest in the related MC. Credit losses are absorbed in the following order (the MPF Risk Sharing Structure):

- Borrower's equity.
- Primary mortgage insurance (PMI), if any.
- The PFI. We will withhold a PFI's scheduled performance credit enhancement fee in order to reimburse ourselves for any losses allocated to the FLA (as further described below).
- Us, or pro-rata with another MPF Bank in the case of a participation, up to the amount of the First Loss Account (FLA). The FLA functions as a tracking mechanism for our first layer of loss exposure before determining the point in which a PFI's credit enhancement obligation (CE Amount) would cover the next layer of losses. Our FLA exposure varies by MPF Loan product type - that is, MPF Original, MPF 35, MPF 100, MPF 125, and MPF Plus.
- The PFI. The PFI's CE Amount, which may include proceeds from a provider of supplemental mortgage guaranty insurance (SMI).
- Us, or pro-rata with another MPF Bank in the case of a participation. We and the participating MPF Bank, if applicable, will absorb any losses after the CE Amount has been exhausted.

Review Process

Our overall allowance for credit losses is determined by an analysis that includes consideration of various data observations such as past performance, current performance, loan portfolio characteristics, other collateral related characteristics, industry data, and prevailing economic conditions. The measurement of the allowance for credit losses consists of: (1) reviewing the change in the rates (i.e., migration or "roll rates") of delinquencies on residential mortgage loans for the entire portfolio; (2) reviewing the total severity rate and the credit loss severity rate; and (3) estimating credit losses in the remaining portfolio.

Loss Severity

The Total Severity Rate and the Credit Loss Severity Rate calculations, as defined further below, are based on analysis of MPF Loans that have experienced a credit loss in the previous 12 months. The analysis is done on a rolling 12 month basis.

- Total Severity Rate: This severity rate is based on the total losses experienced and expenses incurred on conventional MPF Loans under the MPF Risk Sharing Structure. Specifically, this severity rate includes all credit losses related to contractual principal and interest due on impaired conventional MPF Loans, periodic expenses incurred through the life cycle of a conventional MPF Loan, such as real estate taxes and attorney fees incurred after it is transferred to real estate owned (REO), and REO sale gains or losses.

- Credit Loss Severity Rate: The second severity rate only includes credit losses attributable to the contractual principal amounts due on impaired conventional MPF Loan portfolios that either were not collected or were not received on a timely basis.

The Total Severity Rate includes total losses and expenses to prevent our allowance for credit losses from being understated. This ensures the portion of the MPF Risk Sharing Structure utilized to absorb noncredit losses is not being included when calculating the amount to be utilized to absorb credit losses.

We may adjust these severity rates to reach the final Total Severity Rate and Credit Loss Severity Rate used in the allowance for credit losses methodology. Adjustments may include factors that exist in the current economic environment, such as the FHFA Purchase-Only House Price Index, as of the reporting date.

We have not presented quantitative information pertaining to our total and credit loss severity rates due to the immateriality of our allowance for credit losses.

Consideration of the MPF Risk Sharing Structure

The entire population of conventional MPF Loans is analyzed using the MPF Risk Sharing Structure at the MC level using roll rates and the Total Severity Rate. The total losses resulting after factoring in the MPF Risk Sharing Structure are then calculated. The adjusted total losses are then split into credit losses and noncredit losses. A credit loss only consists of the loss resulting from the timing and amount of unpaid principal on an MPF Loan and does not include periodic expenses incurred during the time period in which an MPF Loan has become REO. Such periodic expenses are noncredit losses, and they are directly expensed through the statements of income as incurred.

Estimating Credit Losses in the Remaining Portfolio

We apply an imprecision factor to our homogeneous pools of conventional MPF Loans when estimating our allowance for credit losses. Our margin of imprecision represents a subjective management judgment based on facts and circumstances that exist as of the reporting date that is unallocated to any specific measurable economic or credit event and is intended to cover other inherent losses that may not be captured by our loan loss methodology.

Government Loans Held in Portfolio

The PFI provides insurance or a guaranty from governmental agencies, which includes ensuring compliance with all of their requirements. Servicers maintain the insurance or guaranty and obtain the benefit of the applicable insurance or guaranty with respect to defaulted Government Loans. Any losses incurred on Government Loans that are not recovered from the government insurer or guarantor are absorbed by the servicer. Accordingly, credit losses of our portfolio segment for Government Loans included in our MPF Loan held in portfolio for the reporting periods presented is based on our assessment of our servicers' ability to absorb losses not covered by the applicable government guarantee or insurance.

Federal Funds Sold and Securities Purchased Under Agreements to Resell

Federal Funds sold are only evaluated for purposes of an allowance for credit losses if payment is not made when due. In this regard, we may establish an allowance for credit losses for Federal Funds sold when repayment has not been made according to contractual terms.

We may establish an allowance for credit losses for securities purchased under agreements to resell or resale agreements in cases where all payments due under the contractual terms have not been received and where we do not hold sufficient underlying collateral. For example, if the credit markets experience disruptions, it may increase the likelihood that one of our counterparties could experience liquidity or financial constraints that may cause them to become insolvent or otherwise default on their obligations to us. If the collateral's fair value amount has decreased below the resale agreement's carrying amount, we may suffer a credit loss that would be recognized as an allowance for credit loss with an offsetting amount recognized as a provision for credit losses in our statements of income.

Charge-off Provisions

We recognize a charge-off on a loan upon the occurrence of a confirming event, which include, but are not limited to, the events shown below. The charge-off amount equals the difference between the loan's amortized cost basis and its fair value, less costs to sell. We use an Automated Valuation Methodology (AVM) to determine the fair value of our impaired conventional MPF Loans held in portfolio, including troubled debt restructurings, and REO.

- When a loan is 180 days or more past due and its fair value, less cost to sell, is less than the loan's amortized cost basis.

- When a borrower is in bankruptcy, loans are written down to the fair value of the collateral, less costs to sell, within 60 days of receipt of the notification of filing from the bankruptcy court or within the delinquency time frames specified in the guidance, whichever is shorter. A loan is not written down if the loan is performing, the borrower continues making payments on the loan, and repayment in full is expected.

- Fraudulent loans, not covered by any existing representations and warranties in the loan purchase agreement, are charged off within 90 days of discovery of the fraud, or within the delinquency time frames specified in the adverse classification guidance, whichever is shorter.

Nonaccrual

Conventional MPF Loans held in portfolio are placed on nonaccrual when they become "adversely classified" - that is, when a loan is classified as "Substandard", "Doubtful", or "Loss". An adverse classification means that such a loan is not considered well secured and is in the process of collection.

Derivatives

Refer to **Note 9 - Derivatives and Hedging Activities** for additional details.

We carry all derivatives at fair value in our statements of condition. We designate derivatives either as fair value hedges, cash flow hedges, or economic hedges. We use fair value hedges to offset changes in the fair value or a benchmark interest rate (e.g., LIBOR) related to (1) a recognized asset or liability or (2) an unrecognized firm commitment. We use cash flow hedges to offset an exposure to variability in expected future cash flows associated with an existing recognized asset or liability or a forecasted transaction. We use economic hedges in cases where hedge accounting treatment is not permitted or achievable; for example, hedges of portfolio interest rate risk or financial instruments carried at fair value under the fair value option.

Accounting for Variation Margin Payments - Effective in January of 2017 we began accounting for variation margin payments made to or received by the DCOs through our FCMs as settlements to our cleared derivative assets and derivative liabilities. See **Note 1 - Background and Basis for Presentation** for further details. This change in accounting did not have any effect on the accounting of our existing hedge relationships. Specifically, the change in accounting would not require us to discontinue existing hedge relationships or preclude us from using the short-cut method of hedge accounting provided no additional changes are made by the DCOs that would preclude the use of the short-cut method of hedge accounting. The International Swaps and Derivatives Association (ISDA) issued a confirmation letter confirming the SEC staff's non-objection to the conclusions reached by ISDA related to the accounting implications of the DCO rule changes regarding the characterization of the variation margin payments as daily settlements and the continued application of existing hedge accounting relationships, including the use of the short-cut method of hedge accounting.

Derivative Hedge Accounting - We apply hedge accounting to qualifying hedge relationships. A qualifying hedge relationship exists when a derivative hedging instrument is expected to effectively offset changes in fair values, cash flows, or underlying risk of the hedged item during the term of the hedge relationship. We prepare formal contemporaneous documentation at inception of the hedge relationship to support that the hedge relationship qualifies for hedge accounting treatment. Such documentation includes the items outlined below:

- The nature of the risk being hedged.
- The risk management objective and strategy.
- The hedging relationship.
- The hedged item or forecasted transaction.
- The derivative hedging instrument.
- The method used to retrospectively and prospectively assess the hedge effectiveness between the hedged item and hedging instrument. We use regression analysis to assess hedge effectiveness. We perform hedge effectiveness testing at hedge inception and on a daily basis thereafter. Subsequent to hedge inception, we use the same regression analysis approach for both prospective considerations and retrospective evaluations of assessing hedge effectiveness.
- The method we will use to measure the amount of hedge ineffectiveness into earnings.
- For cash flow hedges only, we document details that include, but are not limited to, the probability that the forecasted transaction will occur, the date or period when a forecasted transaction is expected to occur, and how we meet the sufficient specificity requirement in the event a hedge relationship is discontinued. For example, we use the first-in first out approach to determine the amounts to be reclassified from AOCI into earning should a hedging relationship related to the Bank's Rolling Discount Note (DN) Hedging Strategy be discontinued.

We immediately recognize changes in fair values for both the derivative hedging instrument and the related hedged item beginning on the derivative hedging instrument's trade date. For fair value hedges, changes in fair value on the hedged item are recognized as a cumulative basis adjustment and are included in the amortized cost basis of the asset or liability being hedged. For cash flow hedges, we recognize changes in fair value on the hedged item in AOCI to the extent that the hedge is effective. A cash flow hedge's ineffective portion is immediately recognized as noninterest income on derivatives and hedging activities in our statements of income. Amounts recorded in AOCI are reclassified either to interest income or interest expense depending on the hedged item during the period in which the hedged transaction affects earnings.

Discontinuance of Derivative Hedge Accounting - We discontinue hedge accounting treatment prospectively for an existing fair value or cash flow hedge if any one of the following occurs:

- Any hedge criterion is no longer met.
- The derivative expires or is sold, terminated, or exercised.
- We remove the designation of the fair value or cash flow hedge.

For discontinued asset and liability fair value hedges, we prospectively amortize the cumulative basis adjustment on the hedged item into interest income or interest expense, whichever is appropriate, over the remaining life of the hedged item using the interest method.

For discontinued cash flow hedges in which the Bank elects to discontinue the hedge strategy (e.g., the swap is terminated, sold or exercised) or the hedge effectiveness test fails, then the amount in net unrealized gain (loss) on cash flow hedges in AOCI is prospectively amortized into interest income or interest expense, whichever is applicable, over the remaining life of the hedged item using the interest method. In cases where all or a portion of the hedge relationship is discontinued as a result of a forecasted transaction that does not occur, then all or a portion of the amount in net unrealized gain (loss) on cash flow hedges in AOCI attributable to the discontinued cash flow hedge relationship(s) is immediately recognized to derivatives and hedging activities in our statements of income.

If hedge accounting is discontinued and the derivative is not redesignated to another qualifying hedge relationship, we account for the derivative as an economic hedge.

Economic Hedges - Derivatives used in economic hedges do not qualify for hedge accounting treatment. Changes in fair value on economic hedges are immediately recognized as noninterest income on derivatives and hedging activities in our statements of income.

Purchased Options - Premiums paid to acquire options are included in the initial basis of the derivative and reported in derivative assets on the statements of condition.

Accrual of Net Interest Settlements - Accrual of net interest settlements on a derivative qualifying as a fair value or cash flow hedge are recognized in the same line item in our statements of income as the interest income or interest expense of the underlying hedged item. Accrual of net interest settlements on economic hedges are recognized as noninterest income on derivatives and hedging activities in our statements of income.

MPF Delivery Commitments - Commitments to purchase MPF Loans are carried at fair value as a derivative asset or derivative liability, with changes in fair value immediately recognized as noninterest income on derivatives and hedging activities in our statements of income.

Advance Commitments - An unhedged advance commitment on an advance we intend to hold for investment purposes upon funding is accounted for as a firm commitment rather than a derivative. Firm commitments are accounted for off-balance sheet rather than carried at fair value. A hedged advance commitment (i.e., in a fair value hedge relationship) is carried at fair value with any changes in fair value immediately recognized in noninterest income on derivatives and hedging activities.

Derivative Contracts with a Financing Element - We present cash flows from derivative contracts where an other-than-insignificant financing element is present at the derivative contract's inception as a financing activity. We define the term “other-than-insignificant” as an amount that is equal to or greater than 10% of the present value of an at-the-market derivative’s fully prepaid amount.

Novation - A change in counterparty (through novation) to a derivative instrument that has been designated as the hedging instrument in an existing hedging relationship would not, in and of itself, be considered a termination of the derivative instrument or be considered a change in the critical term of the hedging relationship.

Consolidated Obligations

Consolidated obligations consist of discount notes and consolidated obligation bonds. Consolidated obligations are the joint and several liability of the FHLBs. See **Note 10 - Consolidated Obligations** to the financial statements for further details.

We carry consolidated obligations on an amortized cost basis, except when we elect the fair value option and carry the consolidated obligation at fair value. Amortized cost basis represents the amount funded to us adjusted for any premiums and discounts, concession fees, and cumulative basis adjustments, if any, related to ongoing (open) and/or discontinued (closed) fair value hedges (fair value hedging adjustments). Cumulative basis adjustments related to ongoing (open) and/or discontinued (closed) cash flow hedges (cash flow hedging adjustments) are classified in AOCI. We use the interest method to amortize/accrete premiums/discounts, concession fees, and hedging adjustments on consolidated obligations into interest expense in our statements of income. The amortization/accretion period for a callable consolidated obligation is over its estimated life. The amortization/accretion period for a consolidated obligation that is noncallable or that has a zero-coupon rate is over its contractual life. We immediately recognize any remaining premiums/discounts, concession fees, and any fair value hedging adjustments attributable to a consolidated obligation that is called into interest expense in our statements of income. Any remaining cash flow hedging adjustment in AOCI attributable to the consolidated obligation that was called is immediately recognized into noninterest income on derivatives and hedging activities in our statements of income.

We derecognize a consolidated obligation only if it has been extinguished in the open market or transferred to another FHLB. We record a transfer of our consolidated obligations to another FHLB as an extinguishment of debt because we have been legally released from being the primary obligor. An extinguishment gain or loss is recognized in noninterest income on early extinguishment of debt, if any. The amount recognized equals the difference between the debt's reacquisition price and its net carrying amount, which includes the remaining premiums/discounts, concession fees, and cumulative fair value hedging adjustments, if any, attributable to the extinguished consolidated obligation. Any cash flow hedging adjustment remaining in AOCI attributable to the extinguished consolidated obligation is immediately recognized into noninterest income on derivatives and hedging activities in our statements of income.

Capital and Mandatorily Redeemable Capital Stock (MRCS)

Capital stock is issued and recorded at par. We record the repurchase of our capital stock from our members at par. The capital stock repurchased is retired. We recognize dividends on our capital stock on the date they are declared by our Board of Directors. Specifically, upon being declared, we recognize a reduction to our retained earnings with an offsetting entry to other liabilities (i.e., accrued dividends payable) in our statements of condition based on the number of shares outstanding of our Class B1 activity stock and its dividend rate and the number of shares outstanding of our Class B2 membership stock and its dividend rate.

We reclassify capital stock from equity to mandatorily redeemable capital stock (MRCS), a liability on our statements of condition, once we become unconditionally obligated to redeem capital stock by transferring cash at a specified or determinable date (or dates) or upon an event certain to occur. Capital stock is reclassified to MRCS at fair value. The fair value of capital stock subject to mandatory redemption is its par value (as indicated by contemporaneous member purchases and sales at par value) plus any dividends related to the capital stock which are also reclassified as a liability, accrued at the expected dividend rate, and reported as a component of interest expense. Our stock can only be acquired and redeemed or repurchased at par value. It is not publicly traded and no market mechanism exists for the exchange of stock outside our cooperative structure.

Refer to **Note 13 - Capital and Mandatorily Redeemable Capital Stock (MRCS)** for further details.

Joint and Several Liability

We consider our joint and several liability for consolidated obligations as a related party guarantee. GAAP guidance pertaining to the initial recognition and measurement of guarantees does not apply to related party guarantees. As a result, we did not recognize an initial liability for our joint and several liability at fair value. We would accrue a liability if subsequently we expect to pay any additional amounts on behalf of other FHLBs under the joint and several liability.

Litigation Settlement Awards and related Litigation Settlement Legal Expense

We recognize litigation settlement awards into other noninterest income on litigation settlement awards when realized. A litigation settlement award is considered realized when we receive cash or assets that are readily convertible to known amounts of cash or claims to cash. Prior to being recognized, we consider the potential litigation settlement awards to be gain contingencies.

Legal expenses related to litigation settlement awards are contingent based fees for the attorneys representing the Bank. We incur and recognize these contingent based legal fees only if we receive a litigation settlement award. We classify litigation related legal fees in noninterest expense - other in our statements of income.

Refer to **Ongoing Litigation** on page F-31 for further details.

Pentegra Defined Benefit (DB) Plan for Financial Institutions (the Pension Plan)

We participate in the Pentegra Defined Benefit (DB) Plan for Financial Institutions (the Pension Plan), a tax-qualified defined-benefit pension plan. We account for the Pension Plan as a multiemployer plan since contributions made by us may be used to provide benefits to participants of other participating employers. We include administrative fees in the amount of pension cost recognized into our statements of income. A prepaid pension asset is recognized when our contributions are in excess of 100% of our minimum required contribution while a liability is recognized for contributions due and unpaid at the end of the reporting period. Certain multiemployer plan disclosures, such as the certified zone status, are not applicable to the Pension Plan. Refer to **Note 15 - Employee Retirement Plans** for further details.

Segment Reporting

We manage our business activities as a single operating segment. Specifically, management defines our business, assesses our financial performance, and allocates our resources on an entity-wide basis. As a result, we disclose information on an entity-wide basis.

Note 3 – Recently Issued but Not Yet Adopted Accounting Standards

Targeted Improvements to Accounting for Hedging Activities

In August of 2017, the FASB issued targeted improvements to existing derivatives and hedging guidance to facilitate financial reporting that more closely reflects an entity's risk management activities. Adoption is required as of January 1, 2019; however, the targeted improvements may be adopted immediately in any interim period prior to that date. Outlined below are the significant changes to existing GAAP guidance that are relevant to us.

Cash Flow Hedges:

- Permits the hedging of the variability in cash flows in a financial instrument that has a contractually specified interest rate.
- The entire change in fair value of the hedging instrument is recorded in accumulated other comprehensive income. As a result, hedge ineffectiveness will no longer be immediately recognized into earnings. Reclassification from AOCI into earnings will depend on whether a recognition event has occurred; for example, the hedge relationship is discontinued.
- Enables application of the critical terms match method for a group of forecasted transactions in cases where both the derivative maturity and the forecasted transactions occur within the same 31-day period or fiscal month.

Fair Value Hedges:

- Changes in fair value of the hedged item may be based on the contractual coupon's benchmark rate component determined at hedge inception. Existing GAAP only permits the change in fair value to be based on the full contractual coupon cash flows.
- Provides flexibility to enter into partial-term fair value hedges. Specifically, permits assuming that the hedged item has a term that reflects only the designated cash flows being hedged. Existing GAAP does not permit this approach.
- Permits us to hedge a closed portfolio of prepayable financial assets or one or more beneficial interests secured by a portfolio of prepayable financial instruments if we can designate as the hedged item a stated amount of the asset or assets that are not expected to be affected by prepayments, defaults, and other factors affecting the timing and amount of cash flows, provided the designation is made in conjunction with the partial-term hedging election. This designation is referred to as the last-of-layer-method. Under this designation, prepayment risk is not incorporated into the measurement of the hedged item.

Cash Flow Hedges and Fair Value Hedges:

- Requires both the effective and ineffective portion of a hedging relationship to be presented in either interest income or interest expense, whichever is appropriate. As a result, ineffectiveness related to hedging relationships would no longer be presented in derivatives and hedging activities.
- Enables the initial prospective quantitative hedge effectiveness assessment to be performed after hedge designation but no later than the end of the reporting period in which the hedge designation was made. Hedge effectiveness testing should use data applicable as of the hedge inception date.
- Enables applying the long-haul method of assessing hedge effectiveness in cases where the shortcut method was initially applied but subsequently becomes no longer appropriate. This is provided only if we documented at hedge inception which long-haul methodology we will use in the event the shortcut method is discontinued.
- A change in the original risk being hedged that is beyond our control (e.g., discontinuance of LIBOR) does not necessarily require de-designating the hedge relationship. Specifically, as long as the hedge effectiveness test is still met based on the new risk being hedged (e.g., OIS index), then the hedge relationship and hedge accounting treatment may continue.

Transition:

- Upon adoption, a cumulative-effect adjustment relating to eliminating the separate measurement of ineffectiveness to AOCI with a corresponding adjustment to the opening balance of retained earnings as of the beginning of the fiscal year that we adopt these amendments to hedge accounting ineffectiveness into earnings.

- Permits us to modify our measurement methodology for a hedged item without de-designation of the hedging relationship. The cumulative basis adjustment carried forward is adjusted to an amount that reflects what the cumulative basis adjustment would have been at the date of adoption had the modified measurement method been used in past reporting periods. The adjustment requires defining the benchmark rate component of the contractual coupon rate cash flows to be determined as of the hedge relationship's original inception date. We also may elect to de-designate a portion of the hedged item and reclassify the basis adjustment attributable to the portion of the hedged item de-designated to the opening balance of retained earnings as of the initial application.

- We are permitted to reclassify a debt security from held-to-maturity to available-for-sale if the debt security is eligible to be hedged under the last-of-the layer method. Any unrealized gain or loss at the date of the transfer should be recorded in accumulated other comprehensive income. As discussed above, the last-of-the-layer-method represents a hedge by us of a closed portfolio amount of prepayable financial assets for which the timing and amount of cash flows are not expected to be affected by prepayments, defaults, and other events.

The amended accounting guidance is required only prospectively. We are in the process of determining the expected effect of this guidance on our financial condition, results of operations, and cash flows.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March of 2017, the FASB amended existing GAAP to require the service cost component of our net periodic pension and postretirement benefit costs to be classified as compensation costs. The other components of our net periodic pension and postretirement benefit costs are required to be classified as Noninterest expense - Other operating expenses. We adopted the new guidance on January 1, 2018 on a prospective rather than the required retrospective basis due to the immaterial effect the new guidance had on our 2016 and 2017 statements of income. Our prior practice was to classify our total net periodic pension and postretirement costs as compensation costs.

Classification of Certain Cash Receipts and Cash Payments in the Statement of Cash Flows

In August of 2016, the FASB issued statement of cash flows classification guidance governing certain cash receipts and cash payments. The new guidance became effective on January 1, 2018. The new guidance did not have any effect on our financial condition, results of operations, and cash flows at the time of adoption. Transition provisions were not applicable to us since our existing practice was consistent with the new guidance applicable to us. In particular:

- We classify cash payments related to prepaying or extinguishing our consolidated obligations as financing activities in our statements of cash flows.

- We classify the cash payments attributable to interest expense paid at the maturity of our discount notes, which have a zero coupon rate, as operating activities in our statements of cash flows and in our supplemental disclosure of interest expense paid.

Measurement of Credit Losses on Financial Instruments

In June of 2016, the FASB amended existing GAAP guidance applicable to measuring credit losses on financial instruments. Specifically, the amendment replaces the "incurred loss" impairment methodology applied under current GAAP with an "expected credit losses" methodology. The expected credit losses methodology requires us to estimate all credit losses on financial instruments carried on an amortized cost basis and off-balance-sheet credit exposures over their contractual term. On balance sheet financial instruments include, but are not limited to, advances, MPF Loans held in portfolio, and Held-to-maturity (HTM) securities. Off-balance-sheet credit exposure refers to unfunded credit exposures, such as standby letters of credit. The measurement of expected credit losses is based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the financial instrument's reported amount. Accordingly, the amendment is expected to result in recognizing credit losses in the financial statements on a timelier basis by utilizing forward looking information.

In addition, the accounting for securities is amended as follows:

- Aligns the income statement recognition of credit losses for securities with the reporting period in which changes in collectability occur by recording credit losses (and subsequent reversals) through an allowance rather than a write-down as currently required under GAAP.

- Requires recognition of a credit loss on available-for-sale (AFS) securities into the income statement if the present value of cash flows expected to be collected on the security is less than its amortized cost basis. Additionally, the allowance on AFS debt securities will be limited to the amount by which fair value is less than the amortized cost basis.

- Expands upon the current credit quality disclosures by requiring further disaggregation of financial instruments by their year of origination. This disclosure is expected to help financial statement users better understand credit quality trends of asset portfolios.

The new guidance takes effect January 1, 2020. Upon adoption, any difference in the credit loss amount attributable to both our on balance sheet and off-balance sheet financial instruments resulting from applying the expected credit loss methodology compared to our existing incurred loss methodology will be recognized as a cumulative-effect adjustment to our January 1, 2020 opening retained earnings balance. A prospective transition approach is required for debt securities. Accordingly, any OTTI write-downs on securities recognized prior to January 1, 2020 may not be reversed at the time of our adoption. Improvements in expected cash flows for these securities will continue to be accounted for as yield adjustments over their remaining life. Additionally, recoveries for these securities will be recorded in earnings only when received. We are in the process of reviewing the expected effect of this guidance on our financial condition, results of operations, and cash flows.

Leases

In February of 2016, the FASB issued new guidance pertaining to lease accounting that becomes effective January 1, 2019. The new guidance requires us to recognize operating leases and right-to-use assets with terms exceeding 12 months, if any, in our statements of condition. Our existing practice is to recognize operating leases off-balance sheet. The expense related to our lease payments and the interest expense on our lease obligations will continue to be included in a single line item in our statements of income. A modified retrospective transition approach is required to be applied to leases existing at, or entered into after, January 1, 2018. We do not expect the new guidance to have a significant effect on our financial condition, results of operations, and cash flows since our existing off-balance sheet operating leases are not material.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January of 2016, the FASB issued new guidance governing the recognition and measurement of financial assets and financial liabilities. We adopted the new guidance on January 1, 2018. Under the new guidance, we will separately present financial assets and financial liabilities by measurement category, such as amortized cost, and by form, such as securities or loans, in the accompanying notes to the financial statements. The new guidance did not have a significant effect on our financial condition, results of operations, and cash flows for the reasons outlined below.

- The fair value option will continue to be permitted under this guidance.

- We measure the portion of instrument-specific credit risk attributable to the total change in fair value of our consolidated obligations carried at fair value under the fair value option based on our nonperformance risk, which includes our own credit risk and the credit risk associated with the joint and several liability of other FHLBs. As a result, we did not recognize any instrument-specific credit risk attributable to the total change in fair value of our consolidated obligations in other comprehensive income at the time of adoption. In the event that the instrument-specific credit risk attributable to the total change in fair value of our consolidated obligations were to become significant, that amount would be recognized in other comprehensive income.

Revenue from Contracts with Customers

In May of 2014, the FASB issued new guidance governing revenue recognition from contracts with customers. Subsequently the FASB issued several other related pronouncements that provide additional revenue recognition guidance and clarifications to the original guidance issued in 2014. We adopted the FASB's new revenue recognition guidance on January 1, 2018. The majority of our revenue generating activity is scoped out of the new revenue guidance because it is governed by other GAAP. Further, we did not change our existing accounting practice for revenue generating activity that is governed by the new revenue guidance. As a result, the revenue guidance did not have a material effect on our financial condition, results of operations, or cash flows.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 4 – Interest Income and Interest Expense

The following table presents interest income and interest expense for the periods indicated:

For the years ended December 31,	2017	2016	2015
Interest income -			
Trading	$ 4	$ 10	$ 4
Available-for-sale interest income	428	440	471
Available-for-sale prepayment fees	27	45	60
Available-for-sale	455	485	531
Held-to-maturity interest income	195	222	255
Held-to-maturity prepayment fees	2	2	15
Held-to-maturity	197	224	270
Investment securities	656	719	805
Advances	560	290	181
MPF Loans held in portfolio	213	218	256
Federal Funds sold and securities purchased under agreements to resell	115	25	8
Other interest bearing assets	14	7	2
Interest income	1,558	1,259	1,252
Interest expense -			
Consolidated obligations -			
Discount notes	527	359	294
Bonds	533	411	396
Subordinated notes	—	24	54
Other interest bearing liabilities	15	9	—
Interest expense	1,075	803	744
Net interest income	483	456	508
Provision for (reversal of) credit losses	—	1	5
Net interest income after provision for (reversal of) credit losses	$ 483	$ 455	$ 503

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 5 – Investment Securities

We classify securities as either trading, held-to-maturity (HTM), or available-for-sale (AFS). Our security disclosures within these classifications are disaggregated by major security types as shown below. Our major security types are based on the nature and risks of the security.

- U.S. Government & other government related may consist of the sovereign debt of the United States; debt issued by government sponsored enterprises (GSE); and non-mortgage-backed securities of the Small Business Administration and Tennessee Valley Authority.
- Federal Family Education Loan Program - asset backed securities (FFELP ABS).
- GSE residential mortgage-backed securities (MBS) issued by Fannie Mae and Freddie Mac.
- Government-guaranteed MBS.
- Private-label residential MBS.
- State or local housing agency obligations.

Pledged Collateral

We disclose the amount of investment securities pledged as collateral pertaining to our derivatives activity on our statements of condition. See **Note 9 - Derivatives and Hedging Activities** for further details.

Trading Securities

The following table presents the fair value of our trading securities. Our unrealized gains or losses on trading securities still held on our statement of condition as of the end of the reporting period were not material.

As of	**December 31, 2017**	December 31, 2016
U.S. Government & other government related	**$ 202**	$ 1,005
Residential MBS		
GSE	**30**	39
Government-guaranteed	**1**	1
Trading securities	**$ 233**	$ 1,045

Notes to Financial Statements
(Dollars in tables in millions except per share amounts unless otherwise indicated)

Amortized Cost Basis and Fair Value – Available-for-Sale Securities (AFS)

	Amortized Cost Basis	Gross Unrealized Gains in AOCI	Gross Unrealized (Losses) in AOCI	Carrying Amount and Fair Value
As of December 31, 2017				
U.S. Government & other government related	**$ 256**	**$ 15**	**$ —**	**$ 271**
State or local housing agency	**21**	**—**	**—**	**21**
FFELP ABS	**3,987**	**234**	**(7)**	**4,214**
Residential MBS:				
GSE	**7,275**	**132**	**(1)**	**7,406**
Government-guaranteed	**971**	**24**	**—**	**995**
Private-label	**40**	**10**	**—**	**50**
Available-for-sale securities	**$ 12,550**	**$ 415**	**$ (8)**	**$ 12,957**
As of December 31, 2016				
U.S. Government & other government related	$ 322	$ 15	$ (1)	$ 336
State or local housing agency	19	—	—	19
FFELP ABS	4,431	165	(24)	4,572
Residential MBS:				
GSE	8,291	266	(2)	8,555
Government-guaranteed	1,346	34	—	1,380
Private-label	50	6	—	56
Available-for-sale securities	$ 14,459	$ 486	$ (27)	$ 14,918

We had no sales of AFS securities for the periods presented.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Amortized Cost Basis, Carrying Amount, and Fair Value - Held-to-Maturity Securities (HTM)

	Amortized Cost Basis	Noncredit OTTI Recognized in AOCI	Carrying Amount	Gross Unrecognized Holding Gains	Gross Unrecognized Holding (Losses)	Fair Value
As of December 31, 2017						
U.S. Government & other government related	**$ 1,531**	**$ —**	**$ 1,531**	**$ 29**	**$ (1)**	**$ 1,559**
State or local housing agency	**9**	**—**	**9**	**—**	**—**	**9**
Residential MBS:						
GSE	**1,513**	**—**	**1,513**	**62**	**—**	**1,575**
Government-guaranteed	**585**	**—**	**585**	**6**	**—**	**591**
Private-label	**662**	**(143)**	**519**	**285**	**—**	**804**
Held-to-maturity securities	**$ 4,300**	**$ (143)**	**$ 4,157**	**$ 382**	**$ (1)**	**$ 4,538**
As of December 31, 2016						
U.S. Government & other government related	$ 1,733	$ —	$ 1,733	$ 42	$ (1)	$ 1,774
State or local housing agency	13	—	13	—	—	13
Residential MBS:						
GSE	1,856	—	1,856	100	—	1,956
Government-guaranteed	791	—	791	10	—	801
Private-label	856	(177)	679	294	(1)	972
Held-to-maturity securities	$ 5,249	$ (177)	$ 5,072	$ 446	$ (2)	$ 5,516

We had no sales of HTM securities for the periods presented.

Interest Rate Payment Terms

The following table presents the interest rate payment terms of AFS and HTM securities at amortized cost basis for the reporting periods indicated.

	Available-for-Sale		Held-to-Maturity	
As of December 31,	**2017**	2016	**2017**	2016
Non-MBS:				
Fixed-rate	**$ 275**	$ 336	**$ 1,531**	$ 1,732
Variable-rate	**3,989**	4,436	**9**	14
Non-MBS	**4,264**	4,772	**1,540**	1,746
Residential MBS:				
Fixed-rate	**7,653**	8,955	**1,614**	2,034
Variable-rate	**633**	732	**1,146**	1,469
Residential MBS	**8,286**	9,687	**2,760**	3,503
Total	**$ 12,550**	$ 14,459	**$ 4,300**	$ 5,249

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Contractual Maturity

The following table presents the aging of our investments for the current year, as well as the carrying amounts for the previous two years. It also discloses the yields by aging categories for the current year.

	2017					2016	2015
As of December 31,	**Due in one year or less**	**Due one through five years**	**Due five through ten years**	**Due after ten years**	**Carrying Amount**	Carrying Amount	Carrying Amount
Trading securities-							
U.S. Government & other governmental related	**$ 202**	**$ —**	**$ —**	**$ —**	**$ 202**	$ 1,005	$ 1,108
Residential MBS:							
GSE	**—**	**—**	**—**	**30**	**30**	39	50
Government guaranteed	**—**	**—**	**1**	**—**	**1**	1	2
Trading securities	**202**	**—**	**1**	**30**	**233**	1,045	1,160
Yield on trading securities	**1.37%**	**—%**	**2.37%**	**4.40%**	**1.76%**	1.13%	0.93%
AFS securities-							
U.S. Government & other governmental related	**—**	**26**	**50**	**195**	**271**	336	422
State or local housing agency	**2**	**4**	**9**	**6**	**21**	19	18
FFELP ABS	**—**	**—**	**—**	**4,214**	**4,214**	4,572	5,299
Residential MBS:							
GSE	**—**	**7,328**	**5**	**73**	**7,406**	8,555	9,798
Government-guaranteed	**—**	**—**	**—**	**995**	**995**	1,380	1,868
Private-label	**—**	**—**	**—**	**50**	**50**	56	65
AFS securities	**2**	**7,358**	**64**	**5,533**	**12,957**	14,918	17,470
Yield on AFS securities	**1.71%**	**4.46%**	**4.85%**	**3.40%**	**4.01%**	4.04%	4.14%
HTM securities-							
U.S. Government & other governmental related	**678**	**172**	**115**	**566**	**1,531**	1,733	1,932
State or local housing agency	**—**	**6**	**3**	**—**	**9**	13	16
Residential MBS:							
GSE	**1**	**908**	**67**	**537**	**1,513**	1,856	2,163
Government-guaranteed	**—**	**85**	**4**	**496**	**585**	791	969
Private-label	**—**	**—**	**—**	**519**	**519**	679	887
HTM securities	**679**	**1,171**	**189**	**2,118**	**4,157**	5,072	5,967
Yield on HTM securities	**1.80%**	**3.34%**	**4.01%**	**3.47%**	**3.19%**	3.18%	3.12%
Investment securities	**883**	**8,529**	**254**	**7,681**	**17,347**	21,035	24,597
Interest bearing deposits	**775**				**775**	650	650
Federal Funds sold	**7,561**				**7,561**	4,075	1,702
Securities purchased under agreements to resell	**5,000**				**5,000**	2,300	1,375
Investments	**$ 14,219**	**$ 8,529**	**$ 254**	**$ 7,681**	**$ 30,683**	$ 28,060	$ 28,324

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Aging of Unrealized Temporary Losses

The following table presents unrealized temporary losses on our AFS and HTM portfolio for periods less than 12 months and for 12 months or more. We recognized no OTTI charges on these unrealized loss positions. Refer to the Other-Than-Temporary Impairment Analysis section below for further discussion. In the tables below, in cases where the gross unrealized losses for an investment category are less than $1 million, the losses are not reported.

	Less than 12 Months		12 Months or More		Total	
	Fair Value	Gross Unrealized (Losses)	Fair Value	Gross Unrealized (Losses)	Fair Value	Gross Unrealized (Losses)
Available-for-Sale Securities						
As of December 31, 2017						
U.S. Government & other government related	$ 3	$ —	$ —	$ —	$ 3	$ —
State or local housing agency	4	—	—	—	4	—
FFELP ABS	—	—	644	(7)	644	(7)
Residential MBS:						
GSE	51	—	801	(1)	852	(1)
Private-label	—	—	7	—	7	—
Available-for-sale securities	$ 58	$ —	$ 1,452	$ (8)	$ 1,510	$ (8)
As of December 31, 2016						
U.S. Government & other government related	$ —	$ —	$ 47	$ (1)	$ 47	$ (1)
State or local housing agency	7	—	—	—	7	—
FFELP ABS	—	—	753	(24)	753	(24)
Residential MBS:						
GSE	—	—	991	(2)	991	(2)
Government-guaranteed	—	—	23	—	23	—
Private-label	—	—	8	—	8	—
Available-for-sale securities	$ 7	$ —	$ 1,822	$ (27)	$ 1,829	$ (27)
Held-to-Maturity Securities						
As of December 31, 2017						
U.S. Government & other government related	$ 594	$ —	$ 24	$ (1)	$ 618	$ (1)
State or local housing agency	2	—	—	—	2	—
Residential MBS:						
GSE	—	—	2	—	2	—
Private-label	—	—	769	(143)	769	(143)
Held-to-maturity securities	$ 596	$ —	$ 795	$ (144)	$ 1,391	$ (144)
As of December 31, 2016						
U.S. Government & other government related	$ 26	$ —	$ 17	$ (1)	$ 43	$ (1)
State or local housing agency	—	—	1	—	1	—
Residential MBS:						
GSE	—	—	4	—	4	—
Government-guaranteed	117	—	—	—	117	—
Private-label	—	—	934	(178)	934	(178)
Held-to-maturity securities	$ 143	$ —	$ 956	$ (179)	$ 1,099	$ (179)

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Other-Than-Temporary Impairment

We recognized no OTTI charges on HTM or AFS securities for the year ending December 31, 2017. This is because we do not intend to sell these securities and we believe it is more likely than not that we will not be required to sell them prior to recovering their amortized cost basis. We also recognized no OTTI charges for the years ending December 31, 2016 or December 31, 2015.

We assess a security for OTTI whenever its fair value is less than its amortized cost basis as of the reporting date. Our assessment entails generating cash flow projections to determine OTTI, if any, on our private-label MBS. Our initial cash flow projections are based on key modeling assumptions, significant inputs, and methodologies provided by an FHLB System OTTI Committee, which was formed by the FHLBs to achieve consistency among the FHLBs in their OTTI analyses for private-label MBS. We then determine the final cash flow projections after assessing the reasonableness of, and if necessary, modifying those assumptions, significant inputs, and methodologies used. We also perform present value calculations using appropriate historical cost bases and yields to crosscheck the reasonableness of the final cash flow projections. OTTI exists when a security's cash flow projection is not expected to result in the recovery of its entire amortized cost basis.

As of December 31, 2017, we had a short-term housing price forecast with projected changes ranging from -5.0% to +12.0% over the twelve month period beginning October 1, 2017 over all markets. For the vast majority of markets, the short-term forecast has changes ranging from +2.0% to +6.0%. Based on these inputs and assumptions, we had no OTTI charge for the year ended December 31, 2017.

Unpaid Principal Balance, Amortized Cost, Carrying Amount, and Fair Value - OTTI Private-Label MBS

The following table presents private-label MBS that have incurred OTTI at some point in time since we acquired the security. Each private-label MBS presented below is classified as prime, subprime, or Alt-A. Such classification depends upon the nature of the majority of underlying mortgages collateralizing each private-label MBS based on the issuer's classification, or as published by a nationally recognized statistical rating organization (NRSRO), at the time of issuance of the MBS.

As of December 31, 2017	Unpaid Principal Balance	Amortized Cost Basis	Noncredit OTTI in AOCI	Gross Unrealized Gains	Carrying Amount	Fair Value
Private-label residential MBS:						
OTTI AFS Securities-						
Alt-A	$ 61	$ 40	$ —	$ 9	$ 49	$ 49
OTTI HTM Securities-						
Prime	$ 535	$ 430	$ (107)	$ —	$ 323	$ 479
Subprime	368	194	(36)	—	158	285
OTTI HTM securities	$ 903	$ 624	$ (143)	$ —	$ 481	$ 764

The following table presents the changes in the cumulative amount of OTTI credit losses previously recognized into earnings on investment securities for the reporting periods indicated.

For the years ended December 31,	2017	2016	2015
Beginning Balance	**$ 520**	$ 568	$ 620
Reductions:			
Securities sold, matured, or fully prepaid over the period	**(1)**	—	—
Increases in expected future cash flows recorded as credit-related accretion into interest income	**(42)**	(48)	(52)
Ending Balance	**$ 477**	$ 520	$ 568

Ongoing Litigation

On October 15, 2010, we instituted litigation relating to 64 private label MBS bonds we purchased. While we continue to pursue this litigation, we have recognized litigation settlement awards with respect to these matters as noted in our statements of income for the periods presented. As of December 31, 2017, the remaining litigation covers three private-label MBS bonds in the aggregate principal amount of $38 million.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 6 – Advances

We offer a wide range of fixed- and variable-rate advance products with different maturities, interest rates, payment characteristics and optionality.

The following table presents our advances by terms of contractual maturity. Actual maturities may differ from contractual maturities because some borrowers have the right to call or prepay advances with or without penalties.

As of December 31, 2017	Amount	Weighted Average Interest Rate
Due in one year or less	$ 22,177	1.42%
One to two years	2,314	1.65%
Two to three years	1,698	1.91%
Three to four years	1,994	1.65%
Four to five years	3,168	1.78%
More than five years	16,669	1.54% [a]
Par value	$ 48,020	1.52%

[a] The weighted average interest rate is relatively lower when compared to other categories due to a majority of advances in this category consisting of variable rate advances which reset periodically at current interest rates.

See **Note 2 - Summary of Significant Accounting Policies** for information related to our accounting for advances.
See **Note 8 - Allowance for Credit Losses** for information related to our credit risk on advances and allowance methodology for credit losses.

The following table presents our advances by payment terms as of the dates indicated.

As of	December 31, 2017	December 31, 2016
Fixed-rate due in one year or less	$ 9,544	$ 9,473
Fixed-rate due after one year	7,732	5,704
Total fixed-rate	17,276	15,177
Variable-rate due in one year or less	12,633	10,960
Variable-rate due after one year	18,111	18,828
Total variable-rate	30,744	29,788
Par value	48,020	44,965
Fair value hedging adjustments	69	98
Other adjustments	(4)	4
Advances	$ 48,085	$ 45,067

The following advance borrowers exceeded 10% of our advances outstanding:

As of December 31, 2017	Par Value	% of Total Outstanding
One Mortgage Partners Corp.	$ 11,000 [a]	22.9%
The Northern Trust Company	6,000	12.5%
BMO Harris Bank, NA	5,975	12.4%

[a] One Mortgage Partners Corp. is a subsidiary of JPMorgan Chase Bank NA.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 7 – MPF Loans Held in Portfolio

We acquire MPF Loans from PFIs to hold in our portfolio and historically purchased participations in pools of eligible mortgage loans from other FHLBs (MPF Banks). MPF Loans that are held in portfolio are fixed-rate conventional and Government Loans secured by one-to-four family residential properties with maturities ranging from 5 years to 30 years or participations in pools of similar eligible mortgage loans from other MPF Banks.

The following table presents information on MPF Loans held in portfolio by contractual maturity at the time of purchase.

As of	**December 31, 2017**	December 31, 2016
Medium term (15 years or less)	**$ 285**	$ 417
Long term (greater than 15 years)	**4,835**	4,489
Unpaid principal balance	**5,120**	4,906
Net premiums, credit enhancement and deferred loan fees	**55**	38
Fair value hedging adjustments	**20**	26
MPF Loans held in portfolio, before allowance for credit losses	**5,195**	4,970
Allowance for credit losses on MPF Loans	**(2)**	(3)
MPF Loans held in portfolio, net	**$ 5,193**	$ 4,967
Conventional mortgage loans	**$ 4,133**	$ 3,818
Government Loans	**987**	1,088
Unpaid principal balance	**$ 5,120**	$ 4,906

The above table excludes MPF Loans acquired under the MPF Xtra, MPF Direct, and MPF Government MBS products. See **Note 2 - Summary of Significant Accounting Policies** for information related to the accounting treatment of these off balance sheet MPF Loan products.

See **Note 8 - Allowance for Credit Losses** for information related to our credit losses on MPF Loans held in portfolio.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 8 – Allowance for Credit Losses

See **Note 2 - Summary of Significant Accounting Policies** for further details regarding our allowance for credit losses methodology for each of our portfolio segments discussed below.

- Member credit products (advances, letters of credit and other extensions of credit to borrowers);
- Conventional MPF Loans held in portfolio;
- Government Loans held in portfolio; and
- Federal Funds sold and securities purchased under agreements to resell.

Member Credit Products

We have not recorded any allowance for credit losses for our member credit products portfolio segment based upon our credit analysis and the repayment history on member credit products. We had no member credit products that were past due, on nonaccrual status, involved in a troubled debt restructuring or otherwise considered impaired. We have not recorded a separate liability to reflect credit losses on our member credit products with off-balance sheet credit exposure.

Conventional MPF Loans Held in Portfolio

The following table presents the changes in the allowance for credit losses attributable to our portfolio segment for conventional MPF Loans held in portfolio. FHFA regulatory guidance that became effective January 1, 2015, resulted in the increased amount of losses charged to the allowance during 2015.

For the years ended December 31,	**2017**	2016	2015
Balance, beginning of period	**$ 3**	$ 3	$ 15
Losses charged to the allowance	**(1)**	(1)	(17)
Provision for (reversal of) credit losses	**—**	1	5
Balance, end of period	**$ 2**	$ 3	$ 3

The following table presents the recorded investment and the allowance for credit losses in conventional MPF Loans by impairment methodology. The recorded investment in a conventional MPF Loan includes its amortized cost basis and related accrued interest receivable, if any. The recorded investment in a conventional MPF Loan excludes our allowance for credit losses.

As of	**December 31, 2017**	December 31, 2016
Recorded investment in conventional MPF Loans -		
Individually evaluated for impairment	**$ 49**	$ 74
Collectively evaluated for impairment	**4,167**	3,812
Recorded investment	**$ 4,216**	$ 3,886
Allowance for credit losses on conventional MPF Loans -		
Collectively evaluated for impairment	**$ 2**	$ 3

Government Loans Held in Portfolio

Servicers are responsible for absorbing any losses incurred on Government Loans held in portfolio that are not recovered from the government insurer or guarantor. We did not establish an allowance for credit losses on our Government Loans held in portfolio for the reporting periods presented based on our assessment that our servicers have the ability to absorb such losses. Further, Government Loans were not placed on nonaccrual status or disclosed as troubled debt restructurings for the same reason.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Credit Quality Indicators - MPF Loans Held in Portfolio

The following table summarizes our recorded investment in MPF Loans by our key credit quality indicators, which include:

- "Serious delinquency rate" consists of MPF Loans that are 90 days or more past due or in the process of foreclosure, as a percentage of the total recorded investment. MPF Loans that are both 90 days or more past due and in the process of foreclosure are only included once in our serious delinquency rate calculation.

- "Past due 90 days or more still accruing interest" consists of MPF Loans that are either insured or guaranteed by the government or conventional mortgage loans that are well secured (by collateral that have a realizable value sufficient to discharge the debt or by the guarantee or insurance, such as primary mortgage insurance, of a financially responsible party) and in the process of collection.

	December 31, 2017			December 31, 2016		
As of	**Conventional**	**Government**	**Total**	Conventional	Government	Total
Past due 30-59 days	**$ 74**	**$ 48**	**$ 122**	$ 83	$ 57	$ 140
Past due 60-89 days	**21**	**16**	**37**	26	17	43
Past due 90 days or more	**48**	**21**	**69**	69	23	92
Past due	**143**	**85**	**228**	178	97	275
Current	**4,073**	**921**	**4,994**	3,708	1,013	4,721
Recorded investment	**$ 4,216**	**$ 1,006**	**$ 5,222**	$ 3,886	$ 1,110	$ 4,996
In process of foreclosure	**$ 21**	**$ 7**	**$ 28**	$ 35	$ 7	$ 42
Serious delinquency rate	**1.16%**	**2.11%**	**1.34%**	1.82%	2.07%	1.88%
Past due 90 days or more and still accruing interest	**$ 8**	**$ 21**	**$ 29**	$ 8	$ 23	$ 31
On nonaccrual status	**$ 49**	**$ —**	**$ 49**	$ 74	$ —	$ 74

Individually Evaluated Impaired Conventional MPF Loans

The following table summarizes the recorded investment and unpaid principal balance of individually evaluated impaired conventional MPF Loans. Conventional MPF Loans are individually evaluated for impairment when they are adversely classified. There is no allowance for credit losses attributable to conventional MPF Loans that are individually evaluated for impairment, since the related allowance for credit losses have been charged off.

As of	**December 31, 2017**	December 31, 2016
Recorded investment without an allowance for credit losses	**$ 49**	$ 74
Unpaid principal balance without an allowance for credit losses	**53**	80

We do not recognize interest income on impaired conventional MPF Loans.

Term Federal Funds Sold and Term Securities Purchased Under Agreements to Resell

We only held overnight Federal Funds sold and Securities Purchased Under Agreements to Resell as of December 31, 2017, and December 31, 2016. We did not have any longer term Federal Funds sold and Securities Purchased Under Agreements to Resell arrangements. We did not establish an allowance for credit losses for our overnight Federal Funds sold since all Federal Funds sold were repaid according to their contractual terms. We also did not establish an allowance for credit losses for overnight securities purchased under agreements to resell since all payments due under the contractual terms have been received and we hold sufficient underlying collateral.

Note 9 – Derivatives and Hedging Activities

Refer to **Note 2 - Summary of Significant Accounting Policies** for our accounting policies for derivatives.

We transact most of our derivatives with large banks and major broker-dealers. Some of these banks and broker-dealers or their affiliates buy, sell, and distribute consolidated obligations. We are not a derivatives dealer and do not trade derivatives for speculative purposes. We enter into derivative transactions through either of the following:

- A bilateral agreement with an individual counterparty for over-the-counter derivative transactions.
- Clearinghouses classified as DCOs through FCMs, which are clearing members of the DCOs, for cleared derivative transactions.

Managing Interest Rate Risk

We use fair value hedges to offset changes in the fair value or a benchmark interest rate (e.g., LIBOR) related to (1) a recognized asset or liability or (2) an unrecognized firm commitment. We use cash flow hedges to offset an exposure to variability in expected future cash flows associated with an existing recognized asset or liability or a forecasted transaction. We use economic hedges in cases where hedge accounting treatment is not permitted or achievable; for example, hedges of portfolio interest rate risk or financial instruments carried at fair value under the fair value option.

Managing Credit Risk on Derivative Agreements

Over-the-counter (bilateral) Derivative Transactions: We are subject to credit risk due to the risk of nonperformance by counterparties to our derivative agreements. For bilateral derivative agreements, the degree of counterparty risk depends on the extent to which master netting arrangements, collateral requirements and other credit enhancements are included in such contracts to mitigate the risk. We manage counterparty credit risk through credit analysis, collateral requirements and adherence to the requirements set forth in our policies and FHFA regulations. We require collateral agreements on all over-the-counter derivatives. Additionally, collateral related to over-the-counter derivatives with member institutions includes collateral assigned to us, as evidenced by a written security agreement, and which may be held by the member institution for our benefit. Based on credit analyses and collateral requirements, we do not anticipate any credit losses on our over-the-counter derivative agreements. See **Note 16 - Fair Value** for discussion regarding our fair value methodology for over-the-counter derivative assets and liabilities, including an evaluation of the potential for the fair value of these instruments to be affected by counterparty credit risk.

For nearly all of our bilateral derivative transactions executed prior to March 1, 2017, and for all transactions entered into after March 1, 2017, our bilateral derivative agreements are fully collateralized with a zero unsecured threshold in accordance with variation margin requirements issued by the U.S. federal bank regulatory agencies and the CFTC. For certain transactions executed prior to March 1, 2017, we may be required to post net additional collateral with our counterparties if there is deterioration in our credit rating. If our credit rating had been lowered from its current rating to the next lower rating by a major credit rating agency, such as Standard and Poor's, or Moody's, the amount of collateral we would have been required to deliver would not have been material at December 31, 2017.

Cleared Derivative Transactions: Cleared derivative transactions are subject to variation and initial margin requirements established by the DCO and its clearing members. As a result of rule changes adopted by our DCOs, variation margin payments are characterized as settlement of a derivative's mark-to-market exposure and not as collateral against the derivative's mark-to-market exposure. See **Note 1 - Background and Basis of Presentation** and **Note 2 - Summary of Significant Accounting Policies** for further discussion. We post our initial margin collateral payments and make variation margin settlement payments through our FCMs, on behalf of the DCO, which could expose us to institutional credit risk in the event that the FCMs or the DCO fail to meet their obligations. Clearing derivatives through a DCO mitigates counterparty credit risk exposure because the DCO is substituted for individual counterparties and variation margin settlement payments are made daily through the FCMs for changes in the value of cleared derivatives. The DCO determines initial margin requirements for cleared derivatives. In this regard, we pledged $67 million of investment securities at December 31, 2017 that can be sold or repledged, as part of our initial margin related to cleared derivative transactions. Additionally, an FCM may require additional initial margin to be posted based on credit considerations, including, but not limited to, if our credit rating is downgraded. We had no requirement to post additional initial margin by our FCMs at December 31, 2017.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The following table presents details on the notional amounts, and derivative assets and liabilities on our statements of condition. Effective in January of 2017, we began treating daily variation margin on our cleared derivatives as cash settlements instead of as cash collateral.

	December 31, 2017			December 31, 2016		
As of	**Notional Amount**	**Derivative Assets**	**Derivative Liabilities**	Notional Amount	Derivative Assets	Derivative Liabilities
Derivatives in hedge accounting relationships-						
Interest rate contracts	**$ 26,655**	**$ 57**	**$ 589**	$ 25,999	$ 40	$ 898
Derivatives not in hedge accounting relationships-						
Interest rate contracts	**20,506**	**270**	**157**	29,313	432	260
Other	**810**	**1**	**1**	892	2	3
Derivatives not in hedge accounting relationships	**21,316**	**271**	**158**	30,205	434	263
Variation margin daily settlements on cleared derivatives		**(16)**	**(168)**			
Gross derivative amount before netting adjustments and cash collateral	**$ 47,971**	**312**	**579**	$ 56,204	474	1,161
Netting adjustments and cash collateral		**(309)** [a]	**(559)** [a]		(468) [a]	(1,118) [a]
Derivatives on statements of condition		**$ 3**	**$ 20**		$ 6	$ 43

[a] Cash collateral received was $35 million and $40 million, and cash collateral posted was $284 million and $689 million at December 31, 2017, and December 31, 2016.

The following table presents the noninterest income on derivatives and hedging activities as presented in the statements of income. The amounts attributable to fair value and cash flow hedges represent hedge ineffectiveness.

For the years ending December 31,	**2017**	2016	2015
Fair value hedges - interest rate contracts	**$ (4)**	$ 7	$ (35)
Cash flow hedges - interest rate contracts	**3**	5	3
Economic hedges -			
Interest rate contracts	**4**	(15)	15
Other	**3**	4	1
Economic hedges	**7**	(11)	16
Variation margin on daily settled cleared derivatives	**2**	—	—
Noninterest income on derivatives and hedging activities	**$ 8**	$ 1	$ (16)

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The following table presents details regarding the offsetting of our derivative assets and liabilities on our statements of condition. Effective in January of 2017, we began treating daily variation margin on our cleared derivatives as cash settlements instead of as cash collateral.

	Derivative Assets			Derivative Liabilities		
	Bilateral	Cleared	Total	Bilateral	Cleared	Total
As of December 31, 2017						
Derivatives with legal right of offset -						
Gross recognized amount	**$ 216**	**$ 95**	**$ 311**	**$ 476**	**$ 102**	**$ 578**
Netting adjustments and cash collateral	**(214)**	**(95)**	**(309)**	**(463)**	**(96)**	**(559)**
Derivatives with legal right of offset - net	**2**	**—**	**2**	**13**	**6**	**19**
Derivatives without legal right of offset	**1**	**—**	**1**	**1**	**—**	**1**
Derivatives on statements of condition	**3**	**—**	**3**	**14**	**6**	**20**
Less:						
Noncash collateral received and cannot be sold or repledged	**—**		**—**	**—**	**6**	**6**
Noncash collateral pledged and cannot be sold or repledged		**(1)**	**(1)**			
Net amount	**$ 3**	**$ 1**	**$ 4**	**$ 14**	**$ —**	**$ 14**
As of December 31, 2016						
Derivatives with legal right of offset -						
Gross recognized amount	$ 339	$ 133	$ 472	$ 820	$ 339	$ 1,159
Netting adjustments and cash collateral	(335)	(133)	(468)	(788)	(330)	(1,118)
Derivatives with legal right of offset - net	4	—	4	32	9	41
Derivatives without legal right of offset	2	—	2	2	—	2
Derivatives on statements of condition	6	—	6	34	9	43
Less:						
Noncash collateral received and cannot be sold or repledged	—		—	—	9	9
Cash collateral for initial margin		(1)	(1)			
Noncash collateral pledged and cannot be sold or repledged		(2)	(2)			
Net amount	$ 6	$ 3	$ 9	$ 34	$ —	$ 34

At December 31, 2017, we had $60 million of additional credit exposure on cleared derivatives due to pledging of noncash collateral to our DCOs, for initial margin, which exceeded our derivative liability position. We had $86 million of comparable exposure at December 31, 2016.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Fair Value Hedges

The following table presents our fair value hedging results by the type of hedged item. We had no gain (loss) for hedges that no longer qualified as a fair value hedge. Additionally, the table indicates where fair value hedging results are classified in our statements of income. In this regard, the **Amount Recorded in Net Interest Income** column includes the following:

- The amortization of closed fair value hedging adjustments, which are included in the interest income/expense line item of the respective hedged item type.
- The effect of net interest settlements attributable to open derivative hedging instruments, which are recorded directly to the interest income/expense line item of the respective hedged item type.

For the years ending December 31,	Gain (Loss) on Hedging Instrument	Gain (Loss) on Hedged Item	Total Ineffectiveness Recognized in Derivatives and Hedging Activities	Amount Recorded in Net Interest Income
2017				
Available-for-sale securities	**$ 91**	**$ (100)**	**$ (9)**	**$ (90)**
Advances	**31**	**(29)**	**2**	**(32)**
MPF Loans held in portfolio	**—**	**—**	**—**	**(6)**
Consolidated obligation bonds	**5**	**(2)**	**3**	**31**
Total	**$ 127**	**$ (131)**	**$ (4)**	**$ (97)**
2016				
Available-for-sale securities	$ 86	$ (85)	$ 1	$ (122)
Advances	66	(59)	7	(70)
MPF Loans held in portfolio	—	—	—	(9)
Consolidated obligation bonds	(140)	139	(1)	62
Total	$ 12	$ (5)	$ 7	$ (139)
2015				
Available-for-sale securities	$ 43	$ (56)	$ (13)	$ (146)
Advances	6	(5)	1	(84)
MPF Loans held in portfolio	—	—	—	(13)
Consolidated obligation bonds	46	(69)	(23)	205
Total	$ 95	$ (130)	$ (35)	$ (38)

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Cash Flow Hedges

We reclassify amounts in AOCI into our statements of income in the same periods during which the hedged forecasted transaction affects our earnings. We had no discontinued hedges for the periods presented. The deferred net gains (losses) on derivative instruments in AOCI that are expected to be reclassified to earnings during the next twelve months were not material as of December 31, 2017. The maximum length of time over which we are hedging our exposure to the variability in future cash flows for forecasted transactions is 3 years.

The following table presents our cash flow hedging results by type of hedged item. Additionally, the table indicates where cash flow hedging results are classified in our statements of income. In this regard, the **Amount Recorded in Net Interest Income** column includes the following:

- The amortization of closed cash flow hedging adjustments, which are reclassified from AOCI into the interest income/ expense line item of the respective hedged item type.

- The effect of net interest settlements attributable to open derivative hedging instruments, which are recorded directly to the interest income/expense line item of the respective hedged item type.

For the years ending December 31,	Ineffectiveness Recorded in Derivatives and Hedging Activities	Effective Portion Recorded in AOCI	Amount Recorded in Net Interest Income
2017			
Advances	**$ —**	**$ —**	**$ 10**
Discount notes	**3**	**173**	**(168)**
Bonds	**—**	**—**	**(3)**
Total	**$ 3**	**$ 173**	**$ (161)**
2016			
Advances	$ —	$ —	$ 10
Discount notes	5	161	(195)
Bonds	—	—	(3)
Total	$ 5	$ 161	$ (188)
2015			
Advances	$ —	$ —	$ 10
Discount notes	3	125	(242)
Bonds	—	—	(3)
Total	$ 3	$ 125	$ (235)

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 10 – Consolidated Obligations

The FHLBs issue consolidated obligations through the Office of Finance as their agent. Consolidated obligations consist of discount notes and consolidated obligation bonds. Consolidated discount notes are issued to raise short-term funds, are issued at less than their face amount and redeemed at par value when they mature. The maturity of consolidated obligation bonds may range from less than one year to over 20 years, but they are not subject to any statutory or regulatory limits on maturity.

The following table presents our consolidated obligation discount notes for which we are the primary obligor. All are due in one year or less.

As of	**December 31, 2017**	December 31, 2016
Carrying Amount	**$ 41,191**	$ 35,949
Weighted Average Interest Rate	**1.23%**	0.46%

The following table presents our consolidated obligation bonds, for which we are the primary obligor, including callable bonds that are redeemable in whole, or in part, at our discretion on predetermined call dates.

As of December 31, 2017	**Contractual Maturity**	**Weighted Average Interest Rate**	**By Maturity or Next Call Date**
Due in one year or less	**$ 16,616**	**1.25%**	**$ 27,347**
One to two years	**7,919**	**1.32%**	**6,749**
Two to three years	**2,734**	**1.38%**	**1,959**
Three to four years	**3,739**	**1.97%**	**374**
Four to five years	**2,823**	**2.46%**	**575**
Thereafter	**3,516**	**2.70%**	**343**
Total par value	**$ 37,347**	**1.58%**	**$ 37,347**

The following table presents consolidated obligation bonds outstanding by call feature:

As of	**December 31, 2017**	December 31, 2016
Noncallable	**$ 23,644**	$ 22,356
Callable	**13,703**	14,778
Par value	**37,347**	37,134
Fair value hedging adjustments	**(214)**	(229)
Other adjustments	**(12)**	(2)
Consolidated obligation bonds	**$ 37,121**	$ 36,903

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Consolidated obligations are issued with either fixed- or floating-rate payment terms that may use a variety of indices for interest rate resets including the London Interbank Offered Rate (LIBOR). Additionally, both fixed-rate bonds and floating-rate bonds may contain an embedded derivative, such as a call feature or complex coupon payment terms, if requested by investors. When such consolidated obligations are issued, we may concurrently enter into an interest rate swap containing offsetting features that effectively convert the terms of the bond to a variable-rate bond tied to an index or a fixed-rate bond.

Consolidated obligation bonds, beyond having fixed-rate or floating-rate payment terms, may also have the following broad terms regarding either principal repayment or coupon payment terms:

Step-Up Bonds and Step-Down Bonds - Bonds that pay interest at increasing or decreasing fixed rates for specified intervals over their life. These bonds are callable at our option on the step-up or step-down dates.

The following table presents interest rate payment terms for consolidated obligation bonds for which we are primary obligor at the dates indicated:

As of	**December 31, 2017**	December 31, 2016
Fixed-rate	**$ 21,357**	$ 22,389
Variable-rate	**12,884**	11,615
Step-up	**2,730**	2,650
Step-down	**366**	480
Other	**10**	—
Par value	**$ 37,347**	$ 37,134

The following table summarizes the consolidated obligations of the FHLBs and those for which we are the primary obligor. We did not accrue a liability for our joint and several liability related to the other FHLBs' share of the consolidated obligations as of December 31, 2017 and December 31, 2016. Refer to **Note 17 - Commitments and Contingencies** for further details.

	December 31, 2017			December 31, 2016		
Par values as of	**Bonds**	**Discount Notes**	**Total**	Bonds	Discount Notes	Total
FHLB System total consolidated obligations	**$642,211**	**$ 392,049**	**$1,034,260**	$ 579,189	$ 410,122	$ 989,311
FHLB Chicago as primary obligor	**37,347**	**41,235**	**78,582**	37,134	35,969	73,103
As a percent of the FHLB System	**6%**	**11%**	**8%**	6%	9%	7%

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 11 - Affordable Housing Program

The Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA) contains provisions for the establishment of an Affordable Housing Program (AHP) by each FHLB. We provide subsidies in the form of direct grants for members that use the funds for qualifying affordable housing projects. Annually, the FHLB System must set aside for their AHPs, in the aggregate, the greater of $100 million or 10% of the current year's income before assessments excluding any interest expense related to mandatorily redeemable capital stock (MRCS). The exclusion of interest expense related to MRCS is a regulatory calculation that was established by the FHFA. Interest expense related to MRCS for 2017, 2016, and 2015, was $10 million, $6 million, and $0 million. We accrue AHP expense monthly based on our regulatory income and recognize an AHP liability. As subsidies are provided, the AHP liability is reduced.

The following table summarizes the changes in the AHP payable for the periods indicated:

For the years ended December 31,	**2017**	2016	2015
AHP balance at beginning of year	**$ 86**	$ 89	$ 90
AHP expense accrual	**36**	37	39
Cash disbursements for AHP	**(34)**	(40)	(40)
AHP balance at end of year	**$ 88**	$ 86	$ 89

Note 12 – Subordinated Notes

Subordinated Notes Payoff

As approved by the Finance Board (predecessor to the FHFA), we issued $1 billion of 10-year subordinated notes in 2006, and during 2013, we purchased $56 million of these notes in the open market. On June 13, 2016, our remaining $944 million subordinated notes matured and we paid the holders of our subordinated notes in full in accordance with the terms of their notes.

Note 13 – Capital and Mandatorily Redeemable Capital Stock (MRCS)

Under our Capital Plan our stock consists of two sub-classes of stock, Class B1 activity stock and Class B2 membership stock (together, Class B stock), both with a par value of $100 and redeemable on five years' written notice, subject to certain conditions. Under the Capital Plan, each member is required to own capital stock in an amount equal to the greater of a membership stock requirement or an activity stock requirement. Class B1 activity stock is available to support a member's activity stock requirement. Class B2 membership stock is available to support a member's membership stock requirement and any activity stock requirement.

Members that withdraw from membership must wait at least five years after their membership was terminated and all of their capital stock was redeemed or repurchased before being readmitted to membership in any FHLB.

Under our Capital Plan, any dividend declared on Class B1 shares must be greater than or equal to the dividend declared on Class B2 shares for the same period. We have paid an enhanced dividend on Class B1 activity stock since the fourth quarter of 2013. Future dividend determination remains at our Board's sole discretion and subject to future operating results, our Retained Earnings and Dividend Policy and any other factors the Board determines to be relevant.

Minimum Capital Requirements

We are subject by regulation to the following three capital requirements:

- Total regulatory capital ratio;
- Leverage capital ratio; and
- Risk-based capital.

For purposes of calculating our compliance with these minimum capital requirements:

- “Permanent capital” includes our retained earnings plus the amount paid in for our Class B stock, including Class B stock classified as mandatorily redeemable.
- “Total capital” means the sum of (1) our permanent capital plus (2) any general allowance for losses.
- “Total assets” are the total assets determined in accordance with GAAP.

Permanent capital and total capital do not include accumulated other comprehensive income (loss).

Total Regulatory Capital Ratio. We must maintain a minimum ratio of total capital to total assets of 4.00%. For safety and soundness reasons, this ratio may be increased by the FHFA with respect to an individual FHLB.

Leverage Capital Ratio. We must also maintain a leverage ratio of total capital to total assets of at least 5.00%. For purposes of determining this leverage ratio, total capital is modified by multiplying our permanent capital by 1.5 and adding to this product all other components of total capital. This ratio also may be increased by the FHFA with respect to an individual FHLB.

Risk-Based Capital. Under the risk-based capital requirement, we must maintain permanent capital in an amount at least equal to the sum of our: (i) credit risk capital requirement, (ii) market risk capital requirement, and (iii) operations risk capital requirement; all of which are calculated in accordance with the rules and regulations of the FHFA.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

The following table details our minimum capital requirements:

	December 31, 2017		December 31, 2016	
As of	Requirement	Actual	Requirement	Actual
Risk-based capital	$ 1,075	$ 5,051	$ 1,088	$ 5,032
Total regulatory capital	$ 3,374	$ 5,051	$ 3,148	$ 5,032
Total regulatory capital ratio	4.00%	5.99%	4.00%	6.40%
Leverage capital	$ 4,218	$ 7,577	$ 3,935	$ 7,549
Leverage capital ratio	5.00%	8.98%	5.00%	9.59%

Total regulatory capital and leverage capital includes mandatorily redeemable capital stock (MRCS) but does not include AOCI. Under the FHFA regulation on capital classifications and critical capital levels for the FHLBs, we are adequately capitalized.

Capital Concentration

The following members had regulatory capital stock exceeding 10% of our total regulatory capital stock outstanding (which includes MRCS).

As of December 31, 2017	Regulatory Capital Stock Outstanding	% of Total Outstanding	Amount of Which is Classified as a Liability (MRCS)
BMO Harris Bank, N.A.	$ 269	15.3%	$ —
One Mortgage Partners Corp.	245 [a]	14.0%	245

[a] One Mortgage Partners Corp. is a subsidiary of JPMorgan Chase Bank NA.

Repurchase of Excess Capital Stock

Beginning in 2017, we began repurchasing all excess Class B2 stock on a weekly basis at par value, i.e., at $100 per share. Members may continue to request repurchase of excess stock on any business day in addition to the weekly repurchase. All repurchases of excess stock, including automatic weekly repurchases, will continue until otherwise announced, but remain subject to our regulatory requirements, certain financial and capital thresholds, and prudent business practices.

As of December 31, 2017, our regulatory capital stock outstanding was $1.754 billion, a net decrease of $258 million from December 31, 2016, due in part to the automatic weekly repurchases.

Joint Capital Enhancement Agreement

All of the FHLBs, including us, entered into a Joint Capital Enhancement Agreement, as later amended (JCE Agreement) and implemented in the FHLBs' capital plans. The intent of the JCE Agreement is to enhance the capital position of each FHLB by allocating that portion of each FHLB's earnings to a separate restricted retained earnings account at that FHLB.

The JCE Agreement provides that each FHLB is required to contribute 20% of its net income each quarter to a restricted retained earnings account until the balance of that account equals at least 1% of that FHLB's average balance of outstanding consolidated obligations for the previous quarter. These restricted retained earnings will not be available to pay dividends.

Mandatorily Redeemable Capital Stock (MRCS)

In 2016, we transferred our captive insurance company members' capital stock from equity to MRCS in liabilities on our statement of condition. The transfer was triggered by the issuance of the FHFA rule on FHLB membership making captive insurance companies ineligible for FHLB membership, which rule became effective February, 2016. Under this rule, our three captive insurance company members will have their memberships terminated by February 2021. The transfer from equity to MRCS in liabilities was required because the rule creates an unconditional obligation requiring us to redeem our capital stock from our captive insurance company members after their membership terminates. In addition to our captive insurers, we have other members or former members who hold MRCS.

The following table shows our MRCS redemption terms by year payable.

As of December 31, 2017	Amount
Due in one year or less	$ 1
One to two years	2
Two to three years	1
Three to four years	5
Four to five years	4
After five years	298
MRCS	**$ 311**

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 14 - Accumulated Other Comprehensive Income (Loss)

The following table summarizes the gains (losses) in AOCI for the reporting periods indicated.

For the years ended December 31,	Net Unrealized - Available-for-sale Securities	Noncredit OTTI - Held-to-maturity Securities	Net Unrealized - Cash Flow Hedges	Post-retirement Plans	AOCI
2017					
Beginning balance	**$ 459**	**$ (177)**	**$ (312)**	**$ (6)**	**$ (36)**
Change in the period recorded to the statements of condition, before reclassifications to statements of income	**(52)**	**34**	**173**	**1**	**156**
Amounts reclassified in period to statements of income:					
Net interest income	**—**	**—**	**(5)**	**—**	**(5)**
Noninterest income on derivatives and hedging activities	**—**	**—**	**(3)**	**—**	**(3)**
Ending balance	**$ 407**	**$ (143)**	**$ (147)**	**$ (5)**	**$ 112**
2016					
Beginning balance	$ 658	$ (217)	$ (463)	$ (6)	$ (28)
Change in the period recorded to the statements of condition, before reclassifications to statements of income	(199)	40	161	—	2
Amounts reclassified in period to statements of income:					
Net interest income	—	—	(5)	—	(5)
Noninterest income on derivatives and hedging activities	—	—	(5)	—	(5)
Ending balance	$ 459	$ (177)	$ (312)	$ (6)	$ (36)
2015					
Beginning balance	$ 1,060	$ (264)	$ (580)	$ 1	$ 217
Change in the period recorded to the statements of condition, before reclassifications to statements of income	(402)	47	125	(7)	(237)
Amounts reclassified in period to statements of income:					
Net interest income	—	—	(5)	—	(5)
Noninterest income on derivatives and hedging activities	—	—	(3)	—	(3)
Ending balance	$ 658	$ (217)	$ (463)	$ (6)	$ (28)

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 15 - Employee Retirement Plans

We participate in the Pentegra Defined Benefit (DB) Plan for Financial Institutions (the Pension Plan), a tax-qualified defined-benefit pension plan. The Pension Plan year runs from July 1 to June 30. Substantially all of our officers and employees participate in the Pension Plan. Our risks in participating in the Pension Plan are as follows:

- The Pension Plan is a single plan under Internal Revenue Code Section 413(c) and, as a result, all of the assets stand behind all of the liabilities. Accordingly, contributions made by us may be used to provide benefits to participants of other participating employers.

- If a participating employer withdraws from the Pension Plan, the unfunded obligations of the Pension Plan may be borne by the remaining participating employers, which would include us.

- If we choose to withdraw from the Pension Plan, we may be required to pay the Pension Plan an amount based on the underfunded status of the Pension Plan, referred to as a withdrawal liability.

Relevant information concerning the Pension Plan is outlined below:

- The Pension Plan's Employer Identification Number is 135645888 and the Plan Number is 333.
- A single Form 5500 is filed on behalf of all employers who participate in the Pension Plan. A Form 5500 was not available for the Pension Plan year ended June 30, 2017, as of the date of this Form 10-K filing.
- Our contributions for the years presented were not more than 5% of the total contributions to the Pension Plan.
- The Pension Plan is not a collective bargaining agreement.
- We did not pay any surcharges to the Pension Plan.
- There was no funding improvement plan or rehabilitation plan implemented, nor is any such plan pending.

Contributions to the Pension Plan include both mandatory amounts required under federal law and discretionary contributions to improve the Plan's funded status. The Moving Ahead for Progress in the 21st Century Act (“MAP-21”), enacted in 2012, provided temporary relief for employers like the Bank who participate in plans for which funding contributions are determined under the Employee Retirement Income Security Act of 1974. Specifically, MAP-21 allows the Bank to use a 25-year average discount rate within an upper and lower range rather than the current discount rate when determining its minimum funding obligation. In effect, the discount rate under MAP-21 is higher than the current discount rate, which reduces the Bank’s minimum funding obligation and expense recognized into earnings. This is due to the inverse relationship between the discount rate and the pension liability and expense - that is, the higher the discount rate, the lower the liability and expense amount. This discount rate relief was extended in 2014 when the Highway and Transportation Funding Act (“HATFA”) was signed into law. The discount rate relief was extended again through the year 2020 (with graduated increases each year thereafter until expiring in 2023) when the Bipartisan Budget Act of 2015 (“BBA 2015”) was enacted in 2015.

The following table provides details on our multiemployer Pension Plan. The funded status is calculated as the market value of plan assets divided by the funding target and reflects contributions received through the plan year ended June 30.

Pension Plan	**2017**	2016	2015
Net pension cost (minimum required contribution) including administrative fees, charged to compensation and benefits expense for the years ended December 31,	**$ 7**	$ 7	$ 3
Actual cash paid including administrative fees for calendar year ended December 31,	**9**	9	5
Prepaid pension contributions, in other assets, as of December 31,	**19**	17	15
Plan funded status as of the plan years ended June 30,	**111%**	104%	107%
Our portion of plan funded status as of the plan years ended June 30,	**120%**	112%	121%

In addition to the multiemployer Pension Plan we have a tax-qualified defined contribution 401(k) plan, an unfunded non-qualified deferred compensation plan, and a postretirement health and life insurance benefit plan. The financial amounts related to these plans were not material.

Note 16 - Fair Value

Fair value represents the exit price that we would receive to sell an asset or pay to transfer a liability in an orderly transaction with a market participant at the measurement date. Refer to **Note 2 - Summary of Significant Accounting Policies** for our fair value measurement policies.

Valuation Techniques and Significant Inputs

We believe our estimated fair value amounts are reasonable; however, as outlined below, there are inherent limitations in any valuation technique.

- Our estimated fair value amounts are highly subjective in nature. We select assumptions and inputs from a market participant's perspective to use with any of our valuation techniques. Such assumptions and inputs include, but are not limited to, the amount and timing of future cash flows, prepayment speed, expected interest rate volatility, possible distributions of future interest rates used to value options, and the selection of discount rates that appropriately reflect market and credit risks. Significant judgment is required when selecting such assumptions and inputs. Using different assumptions and inputs could have a material effect on our estimated fair value amounts. Further, the estimated fair value amounts presented in our statements of condition and disclosed in our notes to financial statements are not necessarily indicative of the amounts that would be realized in current market transactions.

- Our estimated fair value amounts are made as of the statement of condition date; and accordingly, such estimated fair value amounts are susceptible to material changes thereafter.

Outlined below is a description of our valuation techniques and significant assumptions.

Assets for which fair value approximates carrying amount. Due to the short-term nature and negligible credit risk, we use the carrying amount to estimate fair value of cash and due from banks, interest bearing deposits, Federal Funds sold, securities purchased under agreements to resell, and accrued interest receivable.

Investment securities—non-MBS and MBS. We use one of the valuation approaches outlined below to determine fair value.

- Prices received from third party pricing vendors provided we believe their pricing models are consistent with what other market participants would use; or

- An income approach based on a market-observable interest rate curve adjusted for a spread.

The significant inputs and assumptions utilized by third party pricing vendors in their proprietary pricing models are derived as outlined below for these securities.

- Market observable sources (Level 1), which include, but are not limited to, benchmark yields, reported trades, broker/dealer quotes, issuer spreads, benchmark securities, bids, offers, and other market related data, for securities that are actively traded.

- Available market observable inputs (Level 2) rather than quoted market prices when valuing securities primarily comprised of our portfolio of government, mortgage and asset-backed securities.

- Available market information (Level 2), such as benchmark curves, benchmarking of like securities, sector groupings, and matrix pricing, for fixed income securities that do not trade on a daily basis.

- Significant unobservable inputs (Level 3) for securities, such as private-label MBS.

We annually review the multiple third party pricing vendors we utilize to measure the fair value of our agency and private-label MBS. Our annual review includes, but is not limited to, the following:

- Confirming and further augmenting our understanding of the vendors' pricing processes, methodologies and control procedures.

- Reviewing, if available, the vendors' independent auditors' reports to assess the vendors' internal controls over their valuation processes.

- Assessing our third party vendors' proprietary pricing models for reasonableness, including the underlying inputs and assumptions utilized. This is achieved by sampling securities across different asset classes and utilizing deep dive analyses since we do not have direct access to their propriety pricing models.

- Using our third party vendor's pricing challenge process, which is in place for all security valuations. The pricing challenge process facilitates identification and resolution of potentially erroneous prices.

Private-label MBS and agency MBS. We determine our fair value measurement for private-label MBS and for agency MBS using the inputs received from our third party pricing vendors using a pricing process that is completed on at least a quarterly basis. Outlined below are the steps we follow to measure fair value for these securities.

- We establish a median price for each security from the prices we receive from our third party pricing vendors. All prices that are within a specified tolerance threshold of the median price are included in the “cluster” of prices that are averaged to compute a “default” price. We determine the final price of the security based on the cluster average and an evaluation of any outlier prices as outlined below.

- If all prices fall within the tolerance threshold level of the median price, the final price is simply the cluster average.

- If all prices received for a security are outside the tolerance threshold level of the median price, then there is no default price, and the final price is determined by an evaluation of all outlier prices as described above. A revised price may be assigned to an MBS in situations where strong contrary evidence supports a price different than the price derived from the "default" price or the outlier price. In either case, justification of the price selected is documented and presented to our Risk Management Group for their review and approval.

- If some prices fall within the tolerance threshold level and some prices are outside the tolerance threshold level of the median price, additional analysis is required. The price or prices falling outside of the tolerance threshold level of the median price would be evaluated by us and a determination made to exclude that price or prices in the final price. If the price or prices that fall outside the tolerance threshold level of the median price are evaluated to be a better estimate of the fair value, then the selected outlier price will be the final price instead of the average of prices that fit within the tolerance level threshold of the median price. Possible factors that may be used to determine the quality of the outlier price or prices include:

    - Comparison to bonds with similar characteristics, such as collateral type, credit quality, deal structure, or expected weighted-average life or maturity;

    - Comparing option-adjusted spread or projected yield to similar bonds;

    - Consideration of expected weighted-average life or maturity;

    - Consideration of expected default, loss, and credit support;

    - Consideration of the remaining principal versus the original principal of a security;

    - Recent data on transactions with the security or similar securities; and

    - Implied yields calculated with our OTTI projected cash flows at quarter ends compared to industry benchmarks. Specifically, we calculated an implied yield for our private-label MBS using the estimated fair value derived from the process described above and the security's projected cash flows from our OTTI process and compared such yield to the market yield data for comparable securities according to dealers and other third party sources to the extent comparable market yield data was available. Significant variances were evaluated in conjunction with all of the other available pricing information to determine whether an adjustment to the fair value estimate was appropriate.

As of December 31, 2017, multiple vendor prices were received for substantially all of our MBS holdings. We computed the final prices by taking the median of the prices, excluding any outlier price deemed as unreasonable. We believe our final prices are representative of the exit price that we would receive to sell these securities in an orderly transaction with a market participant at the measurement date.

Non-MBS securities - SBA, agency bonds and housing development bonds. We use one third party pricing vendor to measure the fair value of these securities. If available, we compare the prices received from that service to two other third party pricing vendors to determine if the price is reasonable. If no other third party prices are available we validate against internal models.

FFELP ABS. We use the fair value provided by a third party pricing vendor or average of pricing services or our internal model price in cases where a fair value is not provided by any third party pricing vendor to measure the fair value of our FFELP ABS. We assess these fair value measurements for reasonableness as outlined below.

- *Our internal pricing model*. We compare prices for comparable FFELP securities provided by third party pricing vendors. The internal model price also is compared to other third party pricing vendors to test for reasonableness. If only one pricing vendor is providing prices, our internal pricing model will be averaged with the vendor price.

Private-label residential MBS. The significant unobservable inputs used by third party pricing vendors in the fair value measurement of our private-label residential MBS are prepayment rates, probability of default, and loss severity in the event of default. Significant increases (decreases) in any of those inputs in isolation may result in a significantly lower (higher) fair value measurement. A change in the assumption used for the probability of default is accompanied by a directionally similar change in the assumption used for the loss severity and a directionally opposite change in the assumption used for prepayment rates.

The following table shows the range of values for our investment securities that are carried at fair value on our statements of condition using Level 3 significant inputs provided to us by multiple third party pricing vendors.

			Range of Values	
As of December 31, 2017		**Fair Value**	**Minimum**	**Maximum**
Available-for-sale securities	Private-label residential MBS	$ 50	$ 48	$ 51

Advances. We determine the fair value of advances by calculating the present value of expected future cash flows. Accrued interest receivable is included in the expected future cash flows for advances carried at fair value under the fair value option, and accordingly, accrued interest receivable is classified in Advances in our statements of condition. In determining fair value we do not factor in prepayment risk in cases where an advance carries a prepayment fee since we are financially indifferent whether or not the borrower prepays. Accrued interest receivable is not included in the expected future cash flows on advances carried on an amortized cost basis, and accordingly, accrued interest receivable is classified in Other Assets in our statements of condition.

The significant inputs used to determine fair value for advances carried under the fair value option in our statements of condition are shown below.

- Consolidated Obligation Curve (CO Curve). The Office of Finance constructs this market-observable curve using the U.S. Treasury Curve as a base which is then adjusted by adding indicative spreads obtained largely from market observable sources. These market indications are derived from pricing indications from dealers, historical pricing relationships, market activity such as recent GSE trades, and other secondary market activity. The CO Curve best represents our cost of funds and is an integral factor with respect to pricing our advance products, and accordingly, we utilize it to measure an advance's fair value.

- Volatility assumption. Market-based expectations of future interest rate volatility implied from current market prices for similar options.

- Target spread assumption. The target spread relative to our cost of funds that we expect to earn for a given advance.

MPF Loans held in portfolio. We measure the fair value of our entire mortgage loan portfolio based on to-be-announced (TBA) securities, which represent quoted market prices for new mortgage-backed securities issued by U.S. government-sponsored enterprises, and adjust that fair value amount for impaired MPF Loans held in portfolio. We use a third party Automated Valuation Methodology (AVM) model based on market inputs to determine the fair value of our impaired conventional MPF Loans held in portfolio, including troubled debt restructurings. The prices of the referenced mortgage-backed securities and the MPF Loans are highly dependent upon the underlying prepayment assumptions priced in the secondary market. Prices are then adjusted for differences in coupon, average loan rate, seasoning, settlements, purchase market spread, loan balance, and cash flow remittance between our MPF Loans and the referenced mortgage-backed securities.

MPF Loans held for sale (included in Other Assets). We measure the fair value of our MPF Loans HFS portfolio based on TBA securities, which represent quoted market prices for new mortgage-backed securities issued by U.S. government-sponsored enterprises.

Derivative assets/liabilities. Derivative instruments are primarily transacted in the institutional dealer market and priced with observable market assumptions at a mid-market valuation point. We estimate the fair value of a derivative that is not transacted in such an active market using standard valuation techniques, such as discounted cash-flow analysis and comparisons to similar instruments. We are subject to nonperformance risk in derivative transactions due to the potential default by our derivative counterparties or a DCO. To mitigate this risk, we have entered into master netting agreements and credit support agreements with our derivative counterparties for our bilaterally executed derivative contracts that provide for the delivery of collateral at specified levels at least weekly. We apply the “portfolio exception” for purposes of determining the nonperformance risk adjustment, if any, to the fair value of our derivative instruments. As a result, we measure the nonperformance risk adjustment on our derivative instruments by taking into consideration the effects of legally enforceable master netting agreements that allow us to settle positive and negative positions and offset cash collateral with the same counterparty on a net basis. For derivative transactions executed as a cleared derivative, the transactions are fully collateralized in cash and exchanged daily with the DCO. We also have established the enforceability of offsetting rights incorporated in the agreements for the cleared derivative transactions. Our net counterparty position equals the amount attributable to a particular credit exposure that we would receive to sell a net long position or that we would pay to transfer a net short position. Based on our risk management practices described above and our assessment of any change in our own credit spread, we concluded that the effect of the credit differential between us and our derivative counterparties and DCO was sufficiently mitigated to an immaterial level that no nonperformance risk adjustments were deemed necessary to the recorded fair value of our derivative assets/liabilities in our statements of condition. See **Note 9 - Derivatives and Hedging Activities** for further discussion of our credit risk management practices.

In estimating a derivative's fair value, we use the carrying amount of a derivative's accrued net interest settlements and the carrying amount of any cash collateral remitted to or received from counterparties. We use the carrying amount as a proxy for fair value due to the short-term nature of the interest receivable/payable and cash collateral.

A discounted cash flow analysis utilizes market-observable inputs (inputs that are actively quoted and can be validated to external sources). Inputs by class of derivative are shown below.

Interest-rate related:

- We use the OIS curve to determine the fair value of our derivative contracts.
- Volatility assumption market-based expectations of future interest rate volatility implied from current market prices for similar options.
- Prepayment assumption, if applicable.

Mortgage delivery commitments and TBA mortgage-backed securities:

- TBA price. Market-based prices of TBAs are determined by coupon class and expected term until settlement.

Deposits. We determine the fair values of deposits by calculating the present value of expected future cash flows from the deposits and reducing this amount for accrued interest payable. The discount rates used in these calculations are the costs of deposits with similar terms.

Consolidated obligations. We estimate fair values based on the cost of raising comparable term debt using internal valuation models. Our internal valuation models use standard valuation techniques and estimate fair values based on the following significant inputs for those consolidated obligations carried at fair value:

- CO Curve for fixed-rate, noncallable (bullet) consolidated obligations and a spread to the LIBOR swap curve for callable consolidated obligations based on price indications for callable consolidated obligations from the Office of Finance.
- Volatility assumption. Market-based expectations of future interest rate volatility implied from current market prices for similar options.
- Spread assumption. A spread adjustment to the LIBOR Curve used to value callable consolidated obligations carried at fair value.

Fair Value Estimates

The following tables are a summary of the fair value estimates and related levels in the fair value hierarchy. The carrying amounts are as recorded in the statements of condition. These tables do not represent an estimate of our overall market value as a going concern; as they do not take into account future business opportunities and future net profitability of assets and liabilities. We had no transfers between levels in the fair value hierarchy for the periods shown.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

	Carrying Amount	Fair Value	Level 1	Level 2	Level 3	Netting
As of December 31, 2017						
Carried at amortized cost-						
Cash and due from banks	$ 42	$ 42	$ 42	$ —	$ —	
Interest bearing deposits	775	775	775	—	—	
Federal Funds sold and securities purchased under agreements to resell	12,561	12,561	—	12,561	—	
Held-to-maturity securities	4,157	4,538	—	3,734	804	
Advances	47,309	47,336	—	47,336	—	
MPF Loans held in portfolio, net	5,186	5,306	—	5,295	11	
Other assets	228	228	—	228	—	
Carried at fair value on a recurring basis-						
U.S. Government & other government related non-MBS	202	202	—	202	—	
GSE residential MBS	30	30	—	30	—	
U.S. Governmental-guaranteed residential MBS	1	1	—	1	—	
Trading securities	233	233	—	233	—	
U.S. Government & other government related non-MBS	271	271	—	271	—	
State or local housing agency non-MBS	21	21	—	21	—	
FFELP ABS	4,214	4,214	—	4,214	—	
GSE residential MBS	7,406	7,406	—	7,406	—	
U.S. Government-guaranteed residential MBS	995	995	—	995	—	
Private-label residential MBS	50	50	—	—	50	
Available-for-sale securities	12,957	12,957	—	12,907	50	
Advances	776	776	—	776	—	
Derivative assets	3	3	—	312	—	$ (309) [a]
Other assets	118	118	—	118	—	
Carried at fair value on a nonrecurring basis-						
MPF Loans held in portfolio, net	7	7	—	—	7	
Other assets	3	3	—	—	3	
Total assets	84,355	84,883	817	83,500	875	(309)
Carried at amortized cost-						
Deposits	(524)	(524)	—	(524)	—	
Consolidated obligation discount notes	(40,442)	(40,437)	—	(40,437)	—	
Consolidated obligation bonds	(31,861)	(32,011)	—	(32,011)	—	
Mandatorily redeemable capital stock	(311)	(311)	(311)	—	—	
Other liabilities	(336)	(336)	—	(336)	—	
Carried at fair value on a recurring basis-						
Consolidated obligation discount notes	(749)	(749)	—	(749)	—	
Consolidated obligation bonds	(5,260)	(5,260)	—	(5,260)	—	
Derivative liabilities	(20)	(20)	—	(579)	—	559 [a]
Total liabilities	$ (79,503)	$ (79,648)	$ (311)	$ (79,896)	$ —	$ 559

Notes to Financial Statements
(Dollars in tables in millions except per share amounts unless otherwise indicated)

As of December 31, 2016	Carrying Amount	Fair Value	Level 1	Level 2	Level 3	Netting
Carried at amortized cost-						
Cash and due from banks	$ 351	$ 351	$ 351	$ —	$ —	
Interest bearing deposits	650	650	650	—	—	
Federal Funds sold and securities purchased under agreements to resell	6,375	6,375	—	6,375	—	
Held-to-maturity securities	5,072	5,516	—	4,544	972	
Advances	44,395	44,393	—	44,393	—	
MPF Loans held in portfolio, net	4,941	5,136	—	5,136	—	
Other assets	188	188	—	188	—	
Carried at fair value on a recurring basis-						
U.S. Government & other government related non-MBS	1,005	1,005	—	1,005	—	
GSE residential MBS	39	39	—	39	—	
U.S. Governmental-guaranteed residential MBS	1	1	—	1	—	
Trading securities	1,045	1,045	—	1,045	—	
U.S. Government & other government related non-MBS	336	336	—	336	—	
State or local housing agency non-MBS	19	19	—	19	—	
FFELP ABS	4,572	4,572	—	4,572	—	
GSE residential MBS	8,555	8,555	—	8,555	—	
U.S. Government-guaranteed residential MBS	1,380	1,380	—	1,380	—	
Private-label residential MBS	56	56	—	—	56	
Available-for-sale securities	14,918	14,918	—	14,862	56	
Advances	672	672	—	672	—	
Derivative assets	6	6	—	474	—	$ (468) [a]
Other assets	44	44	—	44	—	
Carried at fair value on a nonrecurring basis-						
MPF Loans held in portfolio, net	26	26	—	—	26	
Other assets	9	9	—	—	9	
Total assets	78,692	79,329	1,001	77,733	1,063	(468)
Carried at amortized cost-						
Deposits	(496)	(496)	—	(496)	—	
Consolidated obligation discount notes	(29,581)	(29,581)	—	(29,581)	—	
Consolidated obligation bonds	(31,460)	(31,706)	—	(31,706)	—	
Mandatorily redeemable capital stock	(301)	(301)	(301)	—	—	
Other liabilities	(305)	(305)	—	(305)	—	
Carried at fair value on a recurring basis-						
Consolidated obligation discount notes	(6,368)	(6,368)	—	(6,368)	—	
Consolidated obligation bonds	(5,443)	(5,443)	—	(5,443)	—	
Derivative liabilities	(43)	(43)	—	(1,161)	—	1,118 [a]
Total liabilities	$ (73,997)	$ (74,243)	$ (301)	$ (75,060)	$ —	$ 1,118

[a] The netting adjustment amount includes cash collateral (either received or paid by us) and related accrued interest in cases where we have a legal right of setoff, by contract (e.g., master netting agreement) or otherwise, to discharge all or a portion of the debt owed to our counterparty by applying against the debt an amount that our counterparty owes to us. See **Note 9 - Derivatives and Hedging Activities**.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Level 3 Rollforward

The following table presents a rollforward of assets and liabilities that are measured at fair value on the statements of condition using significant unobservable inputs (Level 3).

	Available-For-Sale Private-Label MBS			Derivative Assets Interest-Rate Related			Consolidated Obligation Bonds		
For the years ended December 31,	**2017**	2016	2015	**2017**	2016	2015	**2017**	2016	2015
Balance at beginning of period	**$ 56**	$ 65	$ 71	**$ —**	$ 5	$ 13	**$ —**	$ (55)	$ (63)
Gain (loss) included in earnings -									
Interest income	**4**	5	4						
Derivatives and hedging activities				**—**	(5)	(8)	**—**	55	8
Gain (loss) included in OCI -									
Net unrealized on AFS securities	**3**	2	(1)						
Paydowns and settlements	**(13)**	(16)	(9)	**—**	—	—	**—**	—	—
Balance at end of period	**$ 50**	$ 56	$ 65	**$ —**	$ —	$ 5	**$ —**	$ —	$ (55)
Unrealized gains (losses) recorded in earnings and attributable to instruments still held at period end	**$ 3**	$ 4	$ 4	**$ —**	$ —	$ —	**$ —**	$ —	$ 8

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Fair Value Option

We may elect the fair value option for financial instruments, such as advances, MPF Loans held for sale, consolidated obligation discount notes and bonds, in cases where hedge accounting treatment may not be achieved due to the inability to meet the hedge effectiveness testing criterion. Refer to **Note 2 - Summary of Significant Accounting Policies** for further details.

The following table presents the changes in fair value of financial assets and liabilities carried at fair value under the fair value option that were recognized in noninterest income - instruments held under the fair value option in our statements of income.

For the years ended December 31,	**2017**	2016	2015
Advances	**$ (5)**	$ (7)	$ (2)
Mortgage loans held for sale (in other assets)	**(4)**	(4)	(1)
Discount notes	**—**	(2)	2
Bonds	**7**	18	9
Noninterest income - Instruments held under fair value option	**$ (2)**	$ 5	$ 8

The following table reflects the difference between the aggregate unpaid principal balance (UPB) outstanding and the aggregate fair value for our long term financial instruments for which the fair value option has been elected. None of the advances were 90 days or more past due and none were on nonaccrual status.

	December 31, 2017		December 31, 2016	
As of	**Advances**	**Consolidated Obligation Bonds**	Advances	Consolidated Obligation Bonds
Unpaid principal balance	**$ 786**	**$ 5,270**	$ 677	$ 5,447
Fair value over (under) UPB	**(10)**	**(10)**	(5)	(4)
Fair value	**776**	**5,260**	672	5,443

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 17 – Commitments and Contingencies

The following table shows our commitments outstanding, which represent off-balance sheet obligations.

	December 31, 2017			December 31, 2016		
As of	Expire within one year	Expire after one year	Total	Expire within one year	Expire after one year	Total
Unsettled consolidated obligation bonds	$ —	$ —	$ —	$ 10	$ —	$ 10
Member standby letters of credit	15,703	3,869 [a]	19,572	8,459	2,369 [a]	10,828
Housing authority standby bond purchase agreements	—	337	337	25	281	306
Advance commitments	151	—	151	15	1	16
MPF delivery commitments	371	—	371	417	—	417
Other	14	—	14	24	—	24
Commitments	$ 16,239	$ 4,206	$ 20,445	$ 8,950	$ 2,651	$ 11,601

[a] Contains $750 million and $486 million of member standby letters of credit at December 31, 2017 and December 31, 2016, which were renewable annually.

Commitments

Member standby letters of credit. A member standby letter of credit is a financing arrangement between us and our member. We execute a letter of credit with a member for a fee and require that member to fully collateralize the letter of credit at the time of issuance. If we are required to make payment for a beneficiary's draw, the payment amount is converted into a collateralized advance to the member if not reimbursed by the member. We monitor the creditworthiness of our members that have letters of credit. See **Note 8 - Allowance for Credit Losses** for information related to our credit risk for member standby letters of credit.

Housing authority standby bond purchase agreements. We enter into agreements with state housing authorities within our district to provide them liquidity for a fee. Specifically, if required under the terms of the agreement, we purchase and hold a state housing authority's bonds until their designated marketing agent can find a suitable investor or the state housing authority repurchases the bond. These standby bond purchase commitments have original expiration periods of up to 5 years, expiring no later than December 31, 2022, although some may be renewable at our option. We purchased no bonds under these agreements during the periods presented above.

Advance commitments. We enter into forward-starting advances, which lock in a predetermined interest rate for an advance that will be funded at a future date subject to certain conditions.

MPF delivery commitments. Includes delivery commitments to purchase on- and off-balance sheet mortgage loans.

Contingencies

Joint and Several Liability on Behalf of Another FHLB. We have a contingent obligation for the payment of principal and interest on consolidated obligations of all the FHLBs resulting from our joint and several liability. We did not expect to pay any additional amounts under our joint and several liability as of December 31, 2017 and December 31, 2016.

Legal Proceedings. We may be subject to various legal proceedings arising in the normal course of business. After consultation with legal counsel, management is not aware of any such proceedings that might result in our ultimate liability in an amount that would have a material effect on our financial condition or results of operations.

(Dollars in tables in millions except per share amounts unless otherwise indicated)

Note 18 – Transactions with Related Parties and Other FHLBs

We define related parties as either members whose officers or directors serve on our Board of Directors, or members that control more than 10% of our total voting interests. We did not have any members that controlled more than 10% of our total voting interests for the periods presented in these financial statements.

In the normal course of business, we may extend credit to or enter into other transactions with a related party. All transactions are done at market terms that are no more favorable than the terms of comparable transactions with other members who are not considered related parties.

Members

The following table summarizes material balances we had with our members who are related parties as defined above (including their affiliates) as of the periods presented.

As of	December 31, 2017	December 31, 2016
Assets - Advances	$ 165	$ 107
Liabilities - Deposits	13	8
Equity - Capital Stock	10	18

Other FHLBs

From time to time, we may loan to, or borrow from, other FHLBs. All transactions are done at market terms that are no more favorable than the terms of comparable transactions with other counterparties. These transactions are overnight, maturing the following business day. These transactions with other FHLBs, if any, are identified on the face of our **Financial Statements**.

FHLB Chicago | Federal Home Loan Bank of Chicago

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

FEDERAL HOME LOAN BANK OF CHICAGO

	/s/ Matthew R. Feldman
	By: Matthew R. Feldman
	Title: President and Chief Executive Officer
Date: March 9, 2018	(Principal Executive Officer)
	/s/ Roger D. Lundstrom
	By: Roger D. Lundstrom
	Title: Executive Vice President and Chief Financial Officer
Date: March 9, 2018	(Principal Financial Officer and Principal Accounting Officer)

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Laura M. Turnquest, Executive Vice President, and Roger D. Lundstrom, Executive Vice President and Chief Financial Officer, or either of them, his or her attorneys-in-fact, for such person in any and all capacities, to execute, deliver and file with the Securities and Exchange Commission in his and her name and on his and her behalf, and in each of the undersigned director's capacity as shown below, an Annual Report on Form 10-K for the year ended December 31, 2017, and all exhibits thereto and all documents in support thereof or supplemental thereto, and any and all amendments or supplements to the foregoing, hereby ratifying and confirming all that either of said attorneys-in-fact, or substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

FHLB Chicago | Federal Home Loan Bank of Chicago

Signature	Title	Date
/s/ Matthew R. Feldman Matthew R. Feldman	President and Chief Executive Officer (Principal Executive Officer)	March 9, 2018
/s/ Roger D. Lundstrom Roger D. Lundstrom	Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 9, 2018
**/s/ Michael G. Steelman* Michael G. Steelman	Chairman of the Board of Directors	March 9, 2018
**/s/ John K. Reinke* John K. Reinke	Vice Chairman of the Board of Directors	March 9, 2018
**/s/ James T. Ashworth* James T. Ashworth	Director	March 9, 2018
**/s/ Owen E. Beacom* Owen E. Beacom	Director	March 9, 2018
**/s/ Edward P. Brady* Edward P. Brady	Director	March 9, 2018
**/s/ Mary J. Cahillane* Mary J. Cahillane	Director	March 9, 2018
**/s/ Mark J. Eppli* Mark J. Eppli	Director	March 9, 2018
**/s/ Joseph Fazio III* Joseph Fazio III	Director	March 9, 2018
**/s/ Michelle L. Gross* Michelle L. Gross	Director	March 9, 2018
**/s/ James H. Hegenbarth* James H. Hegenbarth	Director	March 9, 2018
**/s/ Phyllis Lockett* Phyllis Lockett	Director	March 9, 2018
**/s/ David R. Pirsein* David R. Pirsein	Director	March 9, 2018

Signature	Title	Date
*/s/ *Leo J. Ries* Leo J. Ries	Director	March 9, 2018
*/s/ *Lois A. Scott* Lois A. Scott	Director	March 9, 2018
*/s/ *William W. Sennholz* William W. Sennholz	Director	March 9, 2018
*/s/ *Daniel G. Watts* Daniel G. Watts	Director	March 9, 2018
*/s/ *Gregory A. White* Gregory A. White	Director	March 9, 2018
*/s/ *Charles D. Young* Charles D. Young	Director	March 9, 2018
* By: /s/ *Laura M. Turnquest* Laura M. Turnquest, Attorney-in-fact		March 9, 2018