UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018

Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number 000-51404

FEDERAL HOME LOAN BANK OF INDIANAPOLIS
(Exact name of registrant as specified in its charter)

Federally Chartered Corporation	**35-6001443**
(State or other jurisdiction of incorporation)	**(IRS employer identification number)**
8250 Woodfield Crossing Blvd. Indianapolis, IN	**46240**
(Address of principal executive offices)	**(Zip code)**

Registrant's telephone number, including area code:
(317) 465-0200
Securities registered pursuant to Section 12(b) of the Act:
Not Applicable
Securities registered pursuant to Section 12(g) of the Act:
Class B capital stock, par value $100 per share
(Title of class)

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 filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405) 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) is not contained herein, and will not be contained, to the best of 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 (Do not check if a smaller reporting company)	☐ Smaller reporting company
	☐ Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

Registrant's Class B 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 certain regulatory and statutory limits. At June 30, 2018, the aggregate par value of the Class B stock held by members and former members of the registrant was approximately $2.1 billion. At February 28, 2019, 21,265,312 shares of Class B stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE: None.

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GLOSSARY OF TERMS

ABS: Asset-Backed Securities
Advance: Secured loan to members, former members or Housing Associates
AFS: Available-for-Sale
Agency: GSE and Ginnie Mae
AHP: Affordable Housing Program
AMA: Acquired Member Assets
AOCI: Accumulated Other Comprehensive Income (Loss)
Bank Act: Federal Home Loan Bank Act of 1932, as amended
bps: basis points
CDFI: Community Development Financial Institution
CE: Credit Enhancement
CFI: Community Financial Institution, an FDIC-insured depository institution with average total assets below an annually-adjusted limit established by the Director based on the Consumer Price Index
CFPB: Bureau of Consumer Financial Protection
CFTC: United States Commodity Futures Trading Commission
Clearinghouse: A United States Commodity Futures Trading Commission-registered derivatives clearing organization
CME: CME Clearing
CMO: Collateralized Mortgage Obligation
CO bond: Consolidated Obligation bond
DB Plan: Pentegra Defined Benefit Pension Plan for Financial Institutions, as amended
DC Plan: Pentegra Defined Contribution Retirement Savings Plan for Financial Institutions, as amended
DDCP: Directors' Deferred Compensation Plan
Director: Director of the Federal Housing Finance Agency
Dodd-Frank Act: Dodd-Frank Wall Street Reform and Consumer Protection Act, as amended
Exchange Act: Securities Exchange Act of 1934, as amended
Fannie Mae: Federal National Mortgage Association
FASB: Financial Accounting Standards Board
FDIC: Federal Deposit Insurance Corporation
FHA: Federal Housing Administration
FHLBank: A Federal Home Loan Bank
FHLBanks: The 11 Federal Home Loan Banks or a subset thereof
FHLBank System: The 11 Federal Home Loan Banks and the Office of Finance
FICO®: Fair Isaac Corporation, the creators of the FICO credit score
Final Membership Rule: Final Rule on FHLBank Membership issued by the Federal Housing Finance Agency effective February 19, 2016
Finance Agency: Federal Housing Finance Agency, successor to Finance Board
Finance Board: Federal Housing Finance Board, predecessor to Finance Agency
FLA: First Loss Account
FOMC: Federal Open Market Committee
Form 8-K: Current Report on Form 8-K as filed with the SEC under the Exchange Act
Form 10-K: Annual Report on Form 10-K as filed with the SEC under the Exchange Act
Form 10-Q: Quarterly Report on Form 10-Q as filed with the SEC under the Exchange Act
FRB: Federal Reserve Board
Freddie Mac: Federal Home Loan Mortgage Corporation
GAAP: Generally Accepted Accounting Principles in the United States of America
Ginnie Mae: Government National Mortgage Association
GLB Act: Gramm-Leach-Bliley Act of 1999, as amended
GSE: United States Government-Sponsored Enterprise
HERA: Housing and Economic Recovery Act of 2008, as amended
Housing Associate: Approved lender under Title II of the National Housing Act of 1934 that is either a government agency or is chartered under federal or state law with rights and powers similar to those of a corporation
HTM: Held-to-Maturity
HUD: United States Department of Housing and Urban Development
JCE Agreement: Joint Capital Enhancement Agreement, as amended, among the 11 FHLBanks
LCH: LCH.Clearnet LLC
LIBOR: London Interbank Offered Rate
LRA: Lender Risk Account

LTV: Loan-to-Value
MAP-21: Moving Ahead for Progress in the 21st Century Act, enacted on July 6, 2012
MBS: Mortgage-Backed Securities
MCC: Master Commitment Contract
MDC: Mandatory Delivery Commitment
Moody's: Moody's Investor Services
MPF: Mortgage Partnership Finance®
MPP: Mortgage Purchase Program, including Original and Advantage unless indicated otherwise
MRCS: Mandatorily Redeemable Capital Stock
MVE: Market Value of Equity
NRSRO: Nationally Recognized Statistical Rating Organization
OCC: Office of the Comptroller of the Currency
OCI: Other Comprehensive Income (Loss)
OIS: Overnight-Indexed Swap
ORERC: Other Real Estate-Related Collateral
OTTI: Other-Than-Temporary Impairment or -Temporarily Impaired (as the context indicates)
PFI: Participating Financial Institution
PMI: Primary Mortgage Insurance
REMIC: Real Estate Mortgage Investment Conduit
REO: Real Estate Owned
RMBS: Residential Mortgage-Backed Securities
S&P: Standard & Poor's Rating Service
Safety and Soundness Act: Federal Housing Enterprises Financial Safety and Soundness Act of 1992, as amended
SEC: Securities and Exchange Commission
Securities Act: Securities Act of 1933, as amended
SERP: Federal Home Loan Bank of Indianapolis 2005 Supplemental Executive Retirement Plan and/or a similar frozen plan
SETP: Federal Home Loan Bank of Indianapolis 2016 Supplemental Executive Thrift Plan, as amended
SMI: Supplemental Mortgage Insurance
SOFR: Secured Overnight Financing Rate
TBA: To Be Announced, a forward contract for the purchase or sale of MBS at a future agreed-upon date for an established price
TDR: Troubled Debt Restructuring
TVA: Tennessee Valley Authority
UPB: Unpaid Principal Balance
VaR: Value at Risk
VIE: Variable Interest Entity
WAIR: Weighted-Average Interest Rate

Special Note Regarding Forward-Looking Statements

Statements in this Form 10-K, including statements describing our objectives, projections, estimates or predictions, may be considered to be "forward-looking statements." These statements may use forward-looking terminology, such as "anticipates," "believes," "could," "estimates," "may," "should," "expects," "will," or their negatives or other variations on these terms. We caution that, by their nature, forward-looking statements involve risk or uncertainty and that actual results either could differ materially from those expressed or implied in these forward-looking statements or could affect the extent to which a particular objective, projection, estimate, or prediction is realized. These forward-looking statements involve risks and uncertainties including, but not limited to, the following:

- economic and market conditions, including the timing and volume of market activity, inflation or deflation, changes in the value of global currencies, and changes in the financial condition of market participants;
- volatility of market prices, interest rates, and indices or other factors, resulting from the effects of, and changes in, various monetary or fiscal policies and regulations, including those determined by the FRB and the FDIC, or a decline in liquidity in the financial markets, that could affect the value of investments, or collateral we hold as security for the obligations of our members and counterparties;
- changes in demand for our advances and purchases of mortgage loans resulting from:
    - changes in our members' deposit flows and credit demands;
    - federal or state regulatory developments impacting suitability or eligibility of membership classes;
    - membership changes, including, but not limited to, mergers, acquisitions and consolidations of charters;
    - changes in the general level of housing activity in the United States and particularly our district states of Michigan and Indiana, the level of refinancing activity and consumer product preferences; and
    - competitive forces, including, without limitation, other sources of funding available to our members;
- changes in mortgage asset prepayment patterns, delinquency rates and housing values or improper or inadequate mortgage originations and mortgage servicing;
- ability to introduce and successfully manage new products and services, including new types of collateral securing advances;
- political events, including federal government shutdowns, administrative, legislative, regulatory, or other developments, and judicial rulings that affect us, our status as a secured creditor, our members (or certain classes of members), prospective members, counterparties, GSE's generally, one or more of the FHLBanks and/or investors in the consolidated obligations of the FHLBanks;
- ability to access the capital markets and raise capital market funding on acceptable terms;
- changes in our credit ratings or the credit ratings of the other FHLBanks and the FHLBank System;
- changes in the level of government guarantees provided to other United States and international financial institutions;
- dealer commitment to supporting the issuance of our consolidated obligations;
- ability of one or more of the FHLBanks to repay its portion of the consolidated obligations, or otherwise meet its financial obligations;
- ability to attract and retain skilled personnel;
- ability to develop, implement and support technology and information systems sufficient to manage our business effectively;
- nonperformance of counterparties to uncleared and cleared derivative transactions;
- changes in terms of derivative agreements and similar agreements;
- loss arising from natural disasters, acts of war or acts of terrorism;
- changes in or differing interpretations of accounting guidance; and
- other risk factors identified in our filings with the SEC.

Although we undertake no obligation to revise or update any forward-looking statements, whether as a result of new information, future events or otherwise, additional disclosures may be made through reports filed with the SEC in the future, including our Forms 10-K, 10-Q and 8-K. This Form 10-K, including Business, Risk Factors and Management’s Discussion and Analysis of Financial Condition and Results of Operations, should be read in conjunction with our financial statements and notes, which are included in Item 8.

ITEM 1. BUSINESS

As used in this Form 10-K, unless the context otherwise requires, the terms "we," "us," "our," and the "Bank" refer to the Federal Home Loan Bank of Indianapolis or its management. We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*.

Unless otherwise stated, amounts disclosed in this Item are rounded to the nearest million; therefore, dollar amounts of less than one million may not be reflected or, due to rounding, may not appear to agree to the amounts presented in thousands in the *Financial Statements* and related *Notes to Financial Statements*. Amounts used to calculate dollar and percentage changes are based on numbers in the thousands. Accordingly, calculations based upon the disclosed amounts (millions) may not produce the same results.

Background Information

The Federal Home Loan Bank of Indianapolis is a regional wholesale bank that serves its member financial institutions in Michigan and Indiana. We are one of 11 regional FHLBanks across the United States, which, along with the Office of Finance, compose the FHLBank System established in 1932. Each FHLBank is a federal instrumentality of the United States of America that is privately capitalized and funded, receives no Congressional appropriations and operates as an independent entity with its own board of directors, management, and employees.

Our mission is to provide reliable and readily available liquidity to our member institutions in support of housing finance and community investment. Our advance and mortgage purchase programs provide funding to assist members with asset/liability management, interest-rate risk management, mortgage pipelines, and other liquidity needs. In addition to funding, we provide various correspondent services, such as securities safekeeping and wire transfers. We also help to meet the economic and housing needs of communities and families through grants and low-cost advances that help support affordable housing and economic development initiatives.

We are wholly owned by our member institutions. All federally-insured depository institutions (including commercial banks, savings associations and credit unions), CDFIs certified by the CDFI Fund of the United States Treasury, certain non-federally insured credit unions and non-captive insurance companies are eligible to become members of our Bank if they have a principal place of business, or are domiciled, in our district states of Michigan or Indiana. Applicants for membership must meet certain requirements that demonstrate that they are engaged in residential housing finance. All member institutions are required to purchase a minimum amount of our Class B capital stock as a condition of membership. Only members may own our capital stock, except for stock held by former members or their legal successors during their stock redemption period. Our capital stock is not publicly-traded; it is purchased by members from us and redeemed or repurchased by us at the stated par value. With written approval from us, a member may transfer any of its excess capital stock in our Bank to another member at par value.

As a financial cooperative, our members are also our primary customers. We are generally limited to making advances to and purchasing mortgage loans from members; however, by regulation, we are also permitted to make advances to and purchase loans from Housing Associates, but they may not purchase our stock and have no voting rights. We do not lend directly to, or purchase mortgage loans directly from, the general public.

The principal source of our funding is the proceeds from the sale to the public of FHLBank debt instruments, known as consolidated obligations, which consist of CO bonds and discount notes. The Office of Finance was established as a joint office of the FHLBanks to facilitate the issuance and servicing of consolidated obligations. The United States government does not guarantee, directly or indirectly, our consolidated obligations, which are the joint and several obligations of all FHLBanks.

Each FHLBank was organized under the authority of the Bank Act as a GSE, i.e., an entity that combines elements of private capital, public sponsorship, and public policy. The public sponsorship and public policy attributes of the FHLBanks include:

- an exemption from federal, state, and local taxation, except employment and real estate taxes;
- an exemption from registration under the Securities Act (although the FHLBanks are required by federal law to register a class of their equity securities under the Exchange Act);
- the requirement that at least 40% of our directors be non-member "independent" directors; that two of these "independent" directors have more than four years of experience representing consumer or community interests in banking services, credit needs, housing, or consumer financial protections; and that the remaining "independent" directors have demonstrated knowledge or experience in auditing or accounting, derivatives, financial management, organizational management, project development or risk management practices, or other expertise established by Finance Agency regulations;
- the United States Treasury's authority to purchase up to $4.0 billion of FHLBank consolidated obligations; and
- the required allocation of 10% of annual net earnings before interest expense on MRCS to fund the AHP.

As an FHLBank, we seek to maintain a balance between our public policy mission and our goal of providing adequate returns on our members' capital.

The Finance Agency is the federal regulator of the FHLBanks, Fannie Mae and Freddie Mac. The Finance Agency's stated mission is to ensure that the housing GSEs operate in a safe and sound manner so that they serve as a reliable source of liquidity and funding for housing finance and community investment. The Finance Agency's operating expenses with respect to the FHLBanks are funded by assessments on the FHLBanks. No tax dollars are used to support the operations of the Finance Agency relating to the FHLBanks.

Operating Segments

We manage our operations by grouping products and services within two operating segments. The segments identify the principal ways we provide services to our members. These segments reflect our two primary mission asset activities and the manner in which they are managed from the perspective of development, resource allocation, product delivery, pricing, credit risk and operational administration.

These operating segments are (i) traditional, which consists of credit products, investments, and correspondent services and deposits; and (ii) mortgage loans, which consist substantially of mortgage loans purchased from our members through our MPP. The revenues, profit or loss, and total assets for each segment are disclosed in *Notes to Financial Statements - Note 16 - Segment Information*.

Traditional.

Credit Products. We offer our members a wide variety of credit products, including advances, letters of credit, and lines of credit. We approve member credit requests based on our assessment of the member's creditworthiness and financial condition, as well as its collateral position. All credit products must be fully collateralized by a member's pledge of eligible assets.

Our primary credit product is advances. Members utilize advances for a wide variety of purposes including, but not limited to:

- funding for single-family mortgages and multi-family mortgages held in portfolio, including both conforming and non-conforming mortgages (as determined in accordance with secondary market criteria);
- temporary funding during the origination, packaging, and sale of mortgages into the secondary market;
- funding for commercial real estate loans and, especially with respect to CFIs, funding for small business, small farm, and small agri-business portfolio loans;
- acquiring or holding MBS;
- short-term liquidity;
- asset/liability and interest-rate risk management;
- a cost-effective alternative to holding short-term investments to meet contingent liquidity needs;
- a competitively priced alternative source of funds, especially with respect to smaller members with less diverse funding sources; and
- low-cost funding to help support affordable housing and economic development initiatives.

We offer standby letters of credit, typically for up to 10 years in term, which are rated Aaa by Moody's and AA+ by S&P. Letters of credit are performance contracts that guarantee the performance of a member to a third party and are subject to the same collateralization and borrowing limits that are applicable to advances. Letters of credit may be offered to assist members in facilitating residential housing finance, community lending, asset/liability management, or liquidity. We also offer a standby letter of credit product to collateralize public deposits.

We also offer lines of credit which allow members to fund short-term cash needs without submitting a new application for each funding request.

Advances. We offer a wide array of fixed-rate and adjustable-rate advances, on which interest is generally due monthly. The maturities of advances currently offered typically range from 1 day to 10 years, although the maximum maturity may be longer in some instances. Our primary advance products include:

- **Fixed-rate Bullet Advances**, which have fixed rates throughout the term of the advances. These advances are typically referred to as "bullet" advances because no principal payment is due until maturity. Prepayments prior to maturity may be subject to prepayment fees. These advances can include a feature that allows for delayed settlement.
- **Putable Advances**, which are fixed-rate advances that give us an option to terminate the advance prior to maturity. We would normally exercise the option to terminate the advance when interest rates increase. Upon our exercise of the option, the member must repay the putable advance or convert it to a floating-rate instrument under the terms established at the time of the original issuance.
- **Fixed-rate Amortizing Advances**, which are fixed-rate advances that require principal payments either monthly, annually, or based on a specified amortization schedule and may have a balloon payment of remaining principal at maturity.
- **Adjustable-rate Advances**, which are sometimes called "floaters," reprice periodically based on a variety of indices, including LIBOR. LIBOR floaters are the most common type of adjustable-rate advance we extend to our members. Prepayment terms are agreed to before the advance is extended. Most frequently, no prepayment fees are required if a member prepays an adjustable rate advance on a reset date, after a pre-determined lock-out period, with the required notification. No principal payment is due prior to maturity.
- **Variable-rate Advances**, which reprice daily. These advances may be extended on terms from one day to six months and may be prepaid on any given business day during that term without fee or penalty. No principal payment is due until maturity.
- **Callable Advances**, which are fixed-rate advances that give the member an option to prepay the advance before maturity on call dates with no prepayment fee, which members normally would exercise when interest rates decrease.

We also offer customized advances to meet the particular needs of our members. Our entire menu of advance products is generally available to each creditworthy member, regardless of the member's asset size. Finance Agency regulations require us to price our credit products consistently and without discrimination to any member applying for advances. We are also prohibited from pricing our advances below our marginal cost of matching term and maturity funds in the marketplace, including embedded options, and the administrative cost associated with extending such advances to members. Therefore, advances are typically priced at standard spreads above our cost of funds. Our board-approved credit policy allows us to offer lower rates on certain types of advances transactions. Determinations of such rates are based on factors such as volume, maturity, product type, funding availability and costs, and competitive factors in regard to other sources of funds.

Advances Concentration. Credit risk can be magnified if a lender's portfolio is concentrated in a few borrowers. The following tables present the par value of advances outstanding to our largest borrowers ($ amounts in millions).

December 31, 2018	Advances Outstanding	% of Total
The Lincoln National Life Insurance Company	$ 3,930	12%
Flagstar Bank, FSB	3,143	10%
Chemical Bank	2,445	7%
Jackson National Life Insurance Company	2,016	6%
American United Life Insurance Company	1,675	5%
Subtotal - largest borrowers	13,209	40%
Next five largest borrowers	6,854	21%
Others	12,766	39%
Total advances, par value	$ 32,829	100%

December 31, 2017	Advances Outstanding	% of Total
Flagstar Bank, FSB	$ 5,665	17%
The Lincoln National Life Insurance Company	2,900	8%
Jackson National Life Insurance Company	2,621	8%
Chemical Bank	2,337	7%
American United Life Insurance Company	1,671	5%
Subtotal - largest borrowers	15,194	45%
Next five largest borrowers	6,802	19%
Others	12,173	36%
Total advances, par value	$ 34,169	100%

Because of this concentration in advances, we perform frequent credit and collateral reviews on our largest borrowers. In addition, we regularly analyze the implications to our financial management and profitability if we were to lose the business of one or more of these borrowers.

At our discretion, and provided the borrower meets our contractual requirements, advances to borrowers that are no longer members may remain outstanding until maturity, subject to certain regulatory requirements.

For the years ended December 31, 2018, 2017, and 2016, we did not have gross interest income on advances, excluding the effects of interest-rate swaps, from any one borrower that exceeded 10% of our total interest income.

Collateral. All credit products extended to a member must be fully collateralized by the member's pledge of eligible assets. Each borrowing member and its affiliates that hold pledged collateral are required to grant us a security interest in such collateral. All such security interests held by us are afforded a priority by the Competitive Equality Banking Act of 1987 over the claims of any party, including any receiver, conservator, trustee, or similar party having rights as a lien creditor, except for claims held by bona fide purchasers for value or by parties that are secured by prior perfected security interests, provided that such claims would otherwise be entitled to priority under applicable law. Moreover, with respect to federally-insured depository institution members, our claims are given certain preferences pursuant to the receivership provisions of the Federal Deposit Insurance Act.

With respect to insurance company members, however, Congress provided in the McCarran-Ferguson Act of 1945 that state law generally governs the regulation of insurance and shall not be preempted by federal law unless the federal law expressly regulates the business of insurance. Thus, if a court were to determine that the priority status afforded the FHLBanks under Section 10(e) of the Bank Act conflicts with state insurance law applicable to our insurance company members, the court might then determine that the priority of our security interest would be governed by state law, not Section 10(e). Under these circumstances, the "super lien" priority protection afforded to our security interest under Section 10(e) may not fully apply when we lend to insurance company members. However, our security interests in collateral posted by insurance company members have express statutory protections in the jurisdictions where our members are domiciled. In addition, we monitor applicable states' laws, and take all necessary action to obtain and maintain a prior perfected security interest in the collateral, including by taking possession or control of the collateral when appropriate.

Collateral Status Categories. We take collateral under a blanket, specific listings or possession status depending on the credit quality of the borrower, the type of institution, and our lien position on assets owned by the member (i.e., blanket, specific, or partially subordinated). The blanket status is the least restrictive and allows the member to retain possession of the pledged collateral, provided that the member executes a written security agreement and agrees to hold the collateral for our benefit. Under the specific listings status, the member maintains possession of the specific collateral pledged, but the member generally provides listings of loans pledged with detailed loan information such as loan amount, payments, maturity date, interest rate, LTV, collateral type, FICO® scores, etc. Members under possession status are required to place the collateral in possession with our Bank or a third-party custodian in amounts sufficient to secure all outstanding obligations.

Eligible Collateral. Eligible collateral types include certain investment securities, one-to-four family first mortgage loans, multi-family first mortgage loans, deposits in our Bank, certain ORERC assets, such as commercial MBS, municipal securities, commercial real estate loans and home equity loans, and small business loans or farm real estate loans from CFIs. While we only extend credit based on the borrowing capacity for such approved collateral, our contractual arrangements typically allow us to take other assets as collateral to provide additional protection. In addition, under the Bank Act, we have a lien on the borrower's stock in our Bank as security for all of the borrower's indebtedness.

We have an Anti-Predatory Lending Policy and a Subprime and Nontraditional Residential Mortgage Policy that establish guidelines for any subprime or nontraditional loans included in the collateral pledged to us. Loans that are delinquent or violate those policies do not qualify as acceptable collateral and are required to be removed from any collateral value calculation. Consistent with the CFPB home mortgage lending rules, we accept loans that comply with or are exempt from the ability-to-pay requirements as collateral.

In order to help mitigate the market, credit, liquidity, operational and business risk associated with collateral, we apply an over-collateralization requirement to the book value or market value of pledged collateral to establish its lending value. Collateral that we have determined to contain a low level of risk, such as United States government obligations, is over-collateralized at a lower rate than collateral that carries a higher level of risk, such as small business loans. Standard requirements range from 100% for deposits (cash) to 140% - 155% for residential mortgages pledged through blanket status. Over-collateralization requirements for eligible securities range from 103% to 190%; less traditional types of collateral have standard over-collateralization ratios up to 360%.

The over-collateralization requirement applied to asset classes may also vary depending on collateral status, because lower requirements are applied as our levels of information and control over the assets increase. Over-collateralization requirements are applied using market values for collateral in listing and possession status and book value for collateral pledged through blanket status. In no event, however, would market values assigned to whole loan collateral exceed par value. For more information, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Management - Credit Risk Management - Advances and Other Credit Products*.

Collateral Review and Monitoring. We verify collateral balances by performing periodic, on-site collateral audits on our borrowers, which allows us to verify loan pledge eligibility, credit strength and documentation quality, as well as adherence to our Anti-Predatory Lending Policy, our Subprime and Nontraditional Residential Mortgage Policy, and other collateral policies. In addition, on-site collateral audit findings are used to adjust over-collateralization amounts to mitigate credit risk and collateral liquidity concerns.

Investments. We maintain a portfolio of investments, purchased from approved counterparties, members and their affiliates, or other FHLBanks, to provide liquidity, utilize balance sheet capacity and supplement our earnings. Higher earnings bolster our ability to support affordable housing and community investment. Our investment portfolio may only include investments deemed investment quality at the time of purchase.

Our short-term investment portfolio is placed with highly-rated entities, and ensures the availability of funds to meet our members' credit needs. Our short-term investment portfolio typically includes securities purchased under agreements to resell, which are secured by United States Treasuries or Agency MBS passthroughs, unsecured federal funds sold and interest-bearing demand deposit accounts. Each may be purchased with either overnight or term maturities, or in the case of demand deposit accounts, redeemed at any time during business hours. In the aggregate, the FHLBanks may represent a significant percentage of the federal funds sold market at any one time, although each FHLBank manages its investment portfolio separately.

The longer-term investment portfolio typically generates higher returns and consists of (i) securities issued by the United States government, its agencies, and certain GSEs, and (ii) Agency MBS and ABS.

All unsecured investments, including those with our members or their affiliates, are subject to certain selection criteria. Each unsecured counterparty must be approved and has an exposure limit, which is computed in the same manner regardless of the counterparty's status as a member, affiliate of a member or unrelated party. These criteria determine the permissible amount and maximum term of the investment. For more information, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Management - Credit Risk Management - Investments*.

Under Finance Agency regulations, except for certain investments authorized under state trust law for our retirement plans, we are prohibited from investing in the following types of securities:

- instruments, such as common stock, that represent an equity ownership in an entity, other than 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 and instruments that were downgraded after their purchase;
- whole mortgages or other whole loans, except for:
  - those acquired under the MPP or the MPF Program;
  - certain investments targeted to low-income persons or communities; and
  - certain foreign housing loans authorized under Section 12(b) of the Bank Act; and
- non-United States dollar denominated securities.

In addition, we are prohibited by a Finance Agency regulation and Advisory Bulletin, as well as internal policy, from purchasing certain types of investments, such as interest-only or principal-only stripped MBS, CMOs, REMICs or ABS; residual-interest or interest-accrual classes of CMOs, REMICs, ABS and MBS; and CMOs or REMICs with underlying collateral containing pay option/negative amortization mortgage loans, unless those loans or securities are guaranteed by the United States government, Fannie Mae, Freddie Mac or Ginnie Mae.

Finance Agency regulation further provides that the total book value of our investments in MBS and ABS must not exceed 300% of our total regulatory capital, consisting of Class B stock, retained earnings, and MRCS, as of the day we purchase the investments, based on the capital amount most recently reported to the Finance Agency. If the outstanding balances of our investments in MBS and ABS exceed the limitation at any time, but were in compliance at the time we purchased the investments, we would not be considered out of compliance with the regulation, but we would not be permitted to purchase additional investments in MBS or ABS until these outstanding balances were within the capital limitation. Generally, our goal is to maintain these investments near the 300% limit.

Deposit Products. Deposit products provide a small portion of our funding resources, while also giving members a high-quality asset that satisfies their regulatory liquidity requirements. We offer several types of deposit products to our members and other institutions including overnight and demand deposits. We may accept uninsured deposits from:

- our members;
- institutions eligible to become members;
- any institution for which we are providing correspondent services;
- interest-rate swap counterparties;
- other FHLBanks; or
- other federal government instrumentalities.

Mortgage Loans. Mortgage loans consist of residential mortgage loans purchased from our members through our MPP and participating interests purchased in 2012-2014 from the FHLBank of Topeka in residential mortgage loans that were originated by certain of its members under the MPF Program. These programs help fulfill the FHLBank System's housing mission and provide an additional source of liquidity to FHLBank members that choose to sell mortgage loans into the secondary market rather than holding them in their own portfolios. These programs are considered AMA, a core mission activity of the FHLBanks, as defined by Finance Agency regulations.

Mortgage Purchase Program.

Overview. We purchase mortgage loans directly from our members through our MPP. Members that participate in the MPP are known as PFIs. By regulation, we are not permitted to purchase loans directly from any institution that is not a member or Housing Associate of the FHLBank System, and we may not use a trust or other entity to purchase the loans. We purchase conforming, medium- or long-term, fixed-rate, fully amortizing, level payment loans predominantly for primary, owner-occupied, detached residences, including single-family properties, and two-, three-, and four-unit properties. Additionally, to a lesser degree, we purchase loans for primary, owner-occupied, attached residences (including condominiums and planned unit developments), second/vacation homes, and investment properties.

Our mortgage loan purchases are governed by the Finance Agency's AMA regulation. Further, while the regulation does not expressly limit us to purchasing fixed-rate loans, before purchasing adjustable-rate loans we would need to analyze whether such purchases would require Finance Agency approval under its New Business Activity regulation. Such regulation provides that any material change to an FHLBank's business activity that results in new risks or operations needs to be pre-approved by the Finance Agency.

Under Finance Agency regulations, all pools of mortgage loans currently purchased by us, other than government-insured mortgage loans, must have sufficient credit enhancement to be rated by us as at least investment grade, and we operate our credit enhancement model and methodology accordingly to estimate the amount of necessary credit enhancement for those pools.

As a result of the credit enhancements, the PFI shares the credit risk with us on conventional mortgage loans. We manage the interest-rate risk, prepayment option risk, and liquidity risk.

Mortgage Standards. All loans we purchase must meet the guidelines for our MPP or be specifically approved as an exception based on compensating factors. Our guidelines generally meet or exceed the underwriting standards of Fannie Mae and Freddie Mac. For example, the maximum LTV ratio for any conventional mortgage loan at the time of purchase is 95%, and borrowers must meet certain minimum credit scores depending upon the type of property or loan. In addition, we will not knowingly purchase any loan that violates the terms of our Anti-Predatory Lending Policy or our Subprime and Nontraditional Residential Mortgage Policy. Furthermore, we require our members to warrant to us that all of the loans pledged or sold to us are in compliance with all applicable laws, including prohibitions on anti-predatory lending. All loans purchased through our MPP must qualify as "Safe-Harbor Qualified Mortgages" under CFPB rules.

Under our guidelines, a PFI must:

- be an active originator of conventional mortgages and have servicing capabilities, if applicable, or use a servicer that we approve;
- advise us if it has been the subject of any adverse action by either Fannie Mae or Freddie Mac; and
- along with its parent company, if applicable, meet the capital requirements of each state and federal regulatory agency with jurisdiction over the member's or parent company's activities.

Mortgage Loan Concentration. During 2018, our top-selling PFI sold us mortgage loans totaling $730 million, or 33% of the total mortgage loans purchased by the Bank in 2018. Our five top-selling PFIs sold us 61%. Because of this concentration, we regularly analyze the implications to our financial management and profitability if we were to lose the business of one or more of these sellers.

At December 31, 2018, 26% of the par value of MPP loans outstanding had been purchased from one PFI. Based on a limit established by our board of directors, the outstanding balance (as determined at the last reported month end) of MPP loans previously purchased from any one PFI cannot exceed 50% of the total MPP portfolio balance.

For the years ended December 31, 2018, 2017, and 2016, no aggregate mortgage loans outstanding previously purchased from any one PFI contributed interest income that exceeded 10% of our total interest income.

The properties underlying the mortgage loans in our MPP portfolio are dispersed across 50 states, the District of Columbia and the Virgin Islands, with concentrations in Michigan and Indiana, the two states in our district.

The median original size of each mortgage loan outstanding was approximately $166 thousand at December 31, 2018.

Credit Enhancement. FHA mortgage loans are backed by insurance provided by the United States government and, therefore, no additional credit enhancements (such as an LRA or SMI) are required.

For conventional mortgage loans, the credit enhancement required to reach the minimum credit rating is determined by using an NRSRO credit risk model. The model is used to evaluate each MCC or pool of MCCs to ensure the LRA percentage as credit enhancement is sufficient. The model evaluates the characteristics of the loans the PFIs actually delivered for the likelihood of timely payment of principal and interest. The model's results are based on numerous standard borrower and loan attributes, such as the LTV ratio, loan purpose (such as purchase of home, refinance, or cash-out refinance), type of documentation, income and debt expense ratios and credit scores. Based on the credit assessment, we are required to hold risk-based capital to help mitigate the potential credit risk in accordance with the Finance Agency regulations.

Our original MPP, which we ceased offering for conventional loans in November 2010, relied on credit enhancement from LRA and SMI to achieve an implied credit rating of at least AA based on an NRSRO model in compliance with Finance Agency regulations. In November 2010, we began offering Advantage MPP for new conventional MPP loans, which utilizes an enhanced fixed LRA for additional credit enhancement, resulting in an implied credit rating of at least investment grade, consistent with Finance Agency regulations, instead of utilizing coverage from an SMI provider. The only substantive difference between the two programs is the credit enhancement structure. For both the original MPP and Advantage MPP, the funds in the LRA are established in an amount sufficient to cover expected losses in excess of the borrower's equity and PMI, if any, and used to pay losses on a pool basis.

Credit losses on defaulted mortgage loans in a pool are paid from these sources, until they are exhausted, in the following order:

- borrower's equity;
- PMI, if applicable;
- LRA;
- SMI, if applicable; and
- our Bank.

LRA. We use either a "spread LRA" or a "fixed LRA" for credit enhancement. The spread LRA is used in combination with SMI for credit enhancement of conventional mortgage loans purchased under our original MPP, and the fixed LRA is used for all acquisitions of conventional mortgage loans under Advantage MPP.

- *Original MPP.* The spread LRA is funded through a reduction to the net yield earned on the loans, and the corresponding purchase price paid to the PFI reflects our reduced net yield. The LRA for each pool of loans is funded monthly at an annual rate ranging from 6 to 20 bps, depending on the terms of the MCC, and is used to pay loan loss claims or is held until the LRA accumulates to a required "release point." The release point is 20 to 85 bps of the then outstanding principal balances of the loans in that pool, depending on the terms of the original contract. If the LRA exceeds the required release point, the excess amount is eligible for return to the PFI(s) that sold us the loans in that pool, generally subject to a minimum five-year lock-out period after the pool is closed to acquisitions.

- *Advantage MPP.* The LRA for Advantage MPP differs from our original MPP in that the funding of the fixed LRA occurs at the time we acquire the loan and is based on the principal amount purchased. Depending on the terms of the MCC, the LRA funding amount varies between 110 bps and 120 bps of the principal amount. LRA funds not used to pay loan losses may be returned to the PFI subject to a release schedule detailed in each MCC based on the original LRA amount. No LRA funds are returned to the PFI for the first five years after the pool is closed to acquisitions. We absorb any losses in excess of available LRA funds.

SMI. For pools of loans acquired under our original MPP, we have credit protection from loss on each loan, where eligible, through SMI, which provides insurance to cover credit losses to approximately 50% of the property's original value, depending on the SMI contract terms, and subject, in certain cases, to an aggregate stop-loss provision in the SMI policy. Some MCCs that equal or exceed $35 million of total initial principal to be sold on a "best-efforts" basis include an aggregate loss/ benefit limit or "stop-loss" that is equal to the total initial principal balance of loans under the MCC multiplied by the stop-loss percentage (ranges from 200 - 400 bps), as is then in effect, and represents the maximum aggregate amount payable by the SMI provider under the SMI policy for that pool. Even with the stop-loss provision, the aggregate of the LRA and the amount payable by the SMI provider under an SMI stop-loss contract will be equal to or greater than the amount of credit enhancement required for the pool to have an implied NRSRO credit rating of at least AA at the time of purchase. Non-credit losses, such as uninsured property damage losses that are not covered by the SMI, can be recovered from the LRA to the extent that there are releasable LRA funds available. We absorb any non-credit losses greater than the available LRA. We do not have SMI coverage on loans purchased under Advantage MPP.

Pool Aggregation. We offer pool aggregation under our MPP. Our pool aggregation program is designed to reduce the credit enhancement costs to small and mid-size PFIs. PFIs are allowed to pool their loans with similar pools of loans originated by other PFIs to create aggregate pools of approximately $100 million original UPB or greater. The combination of small and mid-size PFIs' loans into one pool also assists in the evaluation of the amount of LRA needed for the overall credit enhancement.

Conventional Loan Pricing. We consider the cost of the credit enhancement (LRA and SMI, if applicable) when we formulate conventional loan pricing. Each of these credit enhancement structures is accounted for, not only in our expected return on acquired mortgage loans, but also in the risk review performed during the accumulation/pooling process. The pricing of each structure is dependent on a number of factors and is specific to the PFI or group of PFIs.

We typically receive a 0.25% fee on cash-out refinancing transactions with LTVs between 75% and 80%. Our current guidelines do not allow cash-out refinance loans above 80% LTV. We also adjust the market price we pay for loans depending upon market conditions. We continue to evaluate the scope and rate of such fees as they evolve in the industry. We do not pay a PFI any fees other than the servicing fee when the PFI retains the servicing rights.

Servicing. We do not service the mortgage loans we purchase. PFIs may elect to retain servicing rights for the loans sold to us, or they may elect to sell servicing rights to an MPP-approved servicer.

Those PFIs that retain servicing rights receive a monthly servicing fee and may be required to undergo a review by a third-party quality control contractor that advises the PFIs of any deficiencies in servicing procedures or processes and then notifies us so that we can monitor the PFIs' performance. The PFIs that retain servicing rights can sell those rights at a later date with our approval. Servicing activities, whether retained or released, are subject to review by our master servicer, BNY Mellon. If we deem servicing to be inadequate, we can require that the servicing of those loans be transferred to a servicer that is acceptable to us.

The servicers are responsible for all aspects of servicing, including, among other responsibilities, the administration of any foreclosure and claims processes from the date we purchase the loan until the loan has been fully satisfied. Our MPP was designed to require loan servicers to foreclose and liquidate in the servicer's name rather than in our name. As the servicer progresses through the process from foreclosure to liquidation, we are paid in full for all unpaid principal and accrued interest on the loan through the normal remittance process.

It is the servicer's responsibility to initiate loss claims on the loans. No payments from the LRA (other than excess amounts released to the PFI over a period of time in accordance with each MCC) or SMI are made prior to the claims process. For loans that are credit-enhanced with SMI, if it is determined that a loss is covered, the SMI provider pays the claim in full and seeks reimbursement from the LRA funds. The SMI provider is entitled to reimbursement for credit losses from funds available in the LRA that are equal to the aggregate amounts contributed to the LRA less any amounts paid for previous claims and any amounts that have been released to the PFI from the LRA or paid to us to cover prior claims. If the LRA has been depleted but is still being funded, based on our contractual arrangement, we and/or the SMI provider are entitled to reimbursement from those funds as they are received, up to the full reimbursable amount of the claim. These claim payments would be reflected as additional deductions from the LRA as they were paid. For more information, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Management - Credit Risk Management - Mortgage Loans Held for Portfolio - MPP*.

Housing Goals. The Bank Act requires the Finance Agency to establish low-income housing goals for mortgage purchases. Under its current housing goals regulation, the Finance Agency may establish low-income housing goals for FHLBanks that acquire, in any calendar year, more than $2.5 billion of conventional mortgages through an AMA program. If we exceed this volume threshold and fail to meet any affordable housing goals established by the Finance Agency that were determined by the Director to have been feasible, we may be required to submit a housing plan to the Finance Agency.

For information concerning the Finance Agency's proposed changes to the housing goals regulation, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Recent Accounting and Regulatory Developments - Legislative and Regulatory Developments*.

Funding Sources

The primary source of funds for each of the FHLBanks is the sale of consolidated obligations, which consist of CO bonds and discount notes. The Finance Agency and the United States Secretary of the Treasury oversee the issuance of this debt in the capital markets. Finance Agency regulations govern the issuance of debt on our behalf and authorize us to issue consolidated obligations through the Office of Finance, under Section 11(a) of the Bank Act. No FHLBank is permitted to issue individual debt without the approval of the Finance Agency.

While the primary liability for consolidated obligations issued to provide funds for a particular FHLBank rests with that FHLBank, consolidated obligations are the joint and several obligations of all of the FHLBanks under Section 11(a). Although each FHLBank is a GSE, consolidated obligations are not obligations of, and are not guaranteed by, the United States government. Consolidated obligations are backed only by the financial resources of all of the FHLBanks and are rated Aaa by Moody's and AA+ by S&P.

Consolidated Obligation Bonds. CO bonds satisfy term funding requirements and are issued with a variety of maturities and terms under various programs. The maturities of these securities may range from 4 months to 30 years, but the maturities are not subject to any statutory or regulatory limit. CO bonds can be fixed or adjustable rate and callable or non-callable. Those issued with adjustable-rate payment terms use a variety of indices for interest rate resets, including LIBOR, Federal Funds, United States Treasury Bill, Constant Maturity Swap, Prime Rate, SOFR, and others. CO bonds are issued and distributed through negotiated or competitively bid transactions with approved underwriters or selling group members.

Consolidated Obligation Discount Notes. We also issue discount notes to provide short-term funds. These securities can have maturities that range from one day to one year, and are offered daily through a discount note selling group and other authorized securities dealers. Discount notes are generally sold below their face values and are redeemed at par when they mature.

Office of Finance. The issuance of consolidated obligations is facilitated and executed by the Office of Finance, which also services all outstanding debt, provides information on capital market developments to the FHLBanks, and manages our relationship with the NRSROs with respect to consolidated obligations. The Office of Finance also prepares and publishes the FHLBanks' combined quarterly and annual financial reports.

As the FHLBanks' fiscal agent for debt issuance, the Office of Finance can control the timing and amount of each issuance. Through its oversight of the United States financial markets, the United States Treasury can also affect debt issuance for the FHLBanks. For more information, see *Item 1. Business - Supervision and Regulation - Government Corporations Control Act*.

Affordable Housing Programs, Community Investment and Small Business Grants

Each FHLBank is required to set aside 10% of its annual net earnings before interest expense on MRCS to fund its AHP, subject to an annual FHLBank System-wide minimum of $100 million. Through our AHP, we may provide cash grants or interest subsidies on advances to our members, which are, in turn, provided to awarded projects or qualified individuals to finance the purchase, construction, or rehabilitation of very low- to moderate-income owner-occupied or rental housing. Our AHP includes the following:

- Competitive Program, which is the primary grant program to finance the purchase, construction or rehabilitation of housing for individuals with incomes at or below 80% of the median income for the area, and to finance the purchase, construction, or rehabilitation of rental housing, with at least 20% of the units occupied by, and affordable for, very low-income households. Each year, 65% of our annual available AHP funds are granted through this program. AHP-related advances, of which none were outstanding at December 31, 2018 or 2017, are also part of this program.

- Set-Aside Programs, which include 35% of our annual available AHP funds, are administered through the following:
    - Homeownership Opportunities Program, which provides assistance with down payments and closing costs to first-time homebuyers;
    - Neighborhood Impact Program, which provides rehabilitation assistance to homeowners to help improve neighborhoods;
    - Accessibility Modifications Program, which provides funding for accessibility modifications and minor home rehabilitation for eligible senior homeowners or owner-occupied households with one or more individuals having a permanent disability; and
    - Disaster Relief Program, which may be activated at our discretion in cases of federal or state disaster declarations for rehabilitation or down payment assistance targeted to low- or moderate-income homeowner disaster victims. The disaster relief program was most recently approved by the board of directors and activated to assist victims of the 2018 flooding disaster/emergency declaration in certain Michigan and Indiana counties.

In addition, we offer a variety of specialized advance programs to support housing and community development needs. Through our Community Investment Program, we offer advances to our members involved in community economic development activities benefiting low- or moderate-income families or neighborhoods. These funds can be used for the development of housing, infrastructure improvements, or assistance to small businesses or businesses that are creating or retaining jobs in the member's community for low- and moderate-income families. These advances typically have maturities ranging from overnight to 20 years and are priced at our cost of funds plus reasonable administrative expenses. At December 31, 2018 and 2017, we had $1.1 billion and $908 million, respectively, of outstanding principal on CIP-related advances.

In 2018, the Bank began offering small business grants under its new Elevate program, which are designed to support the growth and development of small businesses in Michigan and Indiana by providing funding for capital expenditures, workforce training, or other business-related needs. The total amount awarded in 2018 was $255,595.

Use of Derivatives

Derivatives are an integral part of our financial management strategies to manage identified risks inherent in our lending, investing and funding activities and to achieve our risk management objectives. Finance Agency regulations and our Enterprise Risk Management Policy establish guidelines for the use of derivatives. Permissible derivatives include interest-rate swaps, swaptions, interest-rate cap and floor agreements, calls, puts, futures, and forward contracts. We are only permitted to execute derivative transactions to manage interest-rate risk exposure inherent in otherwise unhedged asset or liability positions, hedge embedded options in assets and liabilities including mortgage prepayment risk positions, hedge any foreign currency positions, and act as an intermediary between our members and interest-rate swap counterparties. We are prohibited from trading in or the speculative use of these instruments.

Our use of derivatives is the primary way we align the preferences of investors for the types of debt securities they want to purchase and the preferences of member institutions for the types of advances they want to hold and the types of mortgage loans they want to sell. For more information, see *Notes to Financial Statements - Note 9 - Derivatives and Hedging Activities* and *Item 7A. Quantitative and Qualitative Disclosures About Market Risk - Use of Derivative Hedges*.

Supervision and Regulation

The Bank Act. We are supervised and regulated by the Finance Agency, an independent agency in the executive branch of the United States government, established by HERA.

Under the Bank Act, the Finance Agency's responsibility is to ensure that, pursuant to regulations promulgated by the Finance Agency, each FHLBank:

- carries out its housing finance mission;
- remains adequately capitalized and able to raise funds in the capital markets; and
- operates in a safe and sound manner.

The Finance Agency is headed by a Director, who is appointed to a five-year term by the President of the United States, with the advice and consent of the Senate. The Director appoints a Deputy Director for the Division of Enterprise Regulation, a Deputy Director for the Division of FHLBank Regulation, and a Deputy Director for Housing Mission and Goals, who oversees the housing mission and goals of Fannie Mae and Freddie Mac, as well as the housing finance and community and economic development mission of the FHLBanks. HERA also established the Federal Housing Finance Oversight Board, comprised of the Secretaries of the Treasury and HUD, the Chair of the SEC, and the Director. The Federal Housing Finance Oversight Board functions as an advisory body to the Director. The Finance Agency's operating expenses are funded by assessments on the FHLBanks, Fannie Mae and Freddie Mac. As such, no tax dollars or other appropriations support the operations of the Finance Agency or the FHLBanks. In addition to reviewing our submissions of monthly and quarterly information on our financial condition and results of operations, the Finance Agency conducts annual on-site examinations and performs periodic on- and off-site reviews in order to assess our safety and soundness.

The United States Treasury receives a copy of the Finance Agency's annual report to Congress, monthly reports reflecting the FHLBank System's securities transactions, and other reports reflecting the FHLBank System's operations. Our annual financial statements are audited by an independent registered public accounting firm in accordance with standards issued by the Public Company Accounting Oversight Board, as well as the government auditing standards issued by the United States Comptroller General. The Comptroller General has authority under the Bank Act to audit or examine the Finance Agency and the FHLBank System and to decide the extent to which they fairly and effectively fulfill the purposes of the Bank Act. The Finance Agency's Office of Inspector General also has investigation authority over the Finance Agency and the FHLBank System.

GLB Act Amendments to the Bank Act. The GLB Act amended the Bank Act to require that each FHLBank maintain a capital structure comprised of Class A stock, Class B stock, or both. A member can redeem Class A stock upon six months' prior written notice to its FHLBank. A member can redeem Class B stock upon five years' prior written notice to its FHLBank. Class B stock has a higher weighting than Class A stock for purposes of calculating the minimum leverage requirement applicable to each FHLBank.

The Bank Act requires that each FHLBank maintain permanent capital and total capital in sufficient amounts to comply with specified, minimum risk-based capital and leverage capital requirements. From time to time, for reasons of safety and soundness, the Finance Agency may require one or more individual FHLBanks to maintain more permanent capital or total capital than is required by the regulations. Failure to comply with these requirements or the minimum capital requirements could result in the imposition of operating agreements, cease and desist orders, civil money penalties, and other regulatory action, including involuntary merger, liquidation, or reorganization as authorized by the Bank Act.

HERA Amendments to the Bank Act. In addition to establishing the Finance Agency, HERA eliminated regulatory authority to appoint directors to our board. HERA also eliminated regulatory authority to cap director fees (subject to the Finance Agency's review of reasonableness of such compensation), but placed additional controls over executive compensation.

Government Corporations Control Act. We are subject to the Government Corporations Control Act, which provides that, before we can issue and offer consolidated obligations to the public, the Secretary of the United States Treasury must prescribe the form, denomination, maturity, interest rate, and conditions of the obligations; the way and time issued; and the selling price.

Furthermore, this Act provides that the United States Comptroller General may review any audit of the financial statements of an FHLBank conducted by an independent registered public accounting firm. If the Comptroller General undertakes such a review, the results and any recommendations must be reported to Congress, the Office of Management and Budget, and the FHLBank in question. The Comptroller General may also conduct a separate audit of any of our financial statements.

Federal Securities Laws. Our shares of Class B stock are registered with the SEC under the Exchange Act, and we are generally subject to the information, disclosure, insider trading restrictions, and other requirements under the Exchange Act, with certain exceptions. We are not subject to the registration provisions of the Securities Act. We have been, and continue to be, subject to all relevant liability provisions of the Securities Act and the Exchange Act.

Federal and State Banking Laws. We are generally not subject to the state and federal banking laws affecting United States retail depository financial institutions. However, the Bank Act requires the FHLBanks to submit reports to the Finance Agency concerning transactions involving loans and other financial instruments that involve fraud or possible fraud. In addition, we are required to maintain an anti-money laundering program, under which we are required to report suspicious transactions to the Financial Crimes Enforcement Network pursuant to the Bank Secrecy Act and the USA Patriot Act.

We contract with third-party compliance firms to perform certain services on our behalf to assist us with our compliance with these regulations as they are applicable to us. Finance Agency regulations require that we monitor and assess our third-party firms' performance of the services. As we identify deficiencies in our third-party firms' performance, we seek to remediate the deficiencies. Under certain circumstances, we are required to notify the Finance Agency about the deficiencies and our response to assure our compliance with these regulations.

As a wholesale secured lender and a secondary market purchaser of mortgage loans, we are not, in general, directly subject to the various federal and state laws regarding consumer credit protection, such as anti-predatory lending laws. However, as non-compliance with these laws could affect the value of these loans as collateral or acquired assets, we require our members to warrant that all of the loans pledged or sold to us are in compliance with all applicable laws. Federal law requires that, when a mortgage loan (defined to include any consumer credit transaction secured by the principal dwelling of the consumer) is sold or transferred, the new creditor shall, within 30 days of the sale or transfer, notify the borrower of the following: the identity, address and telephone number of the new creditor; the date of transfer; how to contact an agent or party with the authority to act on behalf of the new creditor; the location of the place where the transfer is recorded; and any other relevant information regarding the new creditor. In accordance with this statute, we provide the appropriate notice to borrowers whose mortgage loans we purchase under our MPP and have established procedures to ensure compliance with this notice requirement. In the case of the participating interests in mortgage loans we purchased from the FHLBank of Topeka under the MPF Program, the FHLBank of Chicago (as the MPF Provider) issued the appropriate notice to the affected borrowers and established its own procedures to ensure compliance with the notice requirement.

Regulatory Enforcement Actions. While examination reports are confidential between the Finance Agency and an FHLBank, the Finance Agency may publicly disclose supervisory actions or agreements that the Finance Agency has entered into with an FHLBank. We are not subject to any such Finance Agency actions, and we are not aware of any current Finance Agency actions with respect to other FHLBanks that will have a material adverse effect on our financial results.

Membership

Our membership territory is comprised of the states of Michigan and Indiana. In 2018, we gained 9 new members and lost 12 members, as a result of mergers and consolidations, for a net loss of 3 members.

The following table presents the composition of our members by type of financial institution.

Type of Institution	December 31, 2018	% of Total	December 31, 2017	% of Total
Commercial banks and savings associations	192	51%	201	53%
Credit unions	129	34%	123	32%
Insurance companies	53	14%	55	14%
CDFIs	5	1%	3	1%
Total member institutions	379	100%	382	100%

There was no material impact on our business as a result of the change in membership composition.

Competition

We operate in a highly competitive environment. Member demand for advances is affected by, among other factors, the cost and availability of other sources of funds, including deposits. We compete with other suppliers of wholesale funding, both secured and unsecured. Other suppliers may include the United States government, the Federal Reserve Banks, corporate credit unions, the Central Liquidity Facility, investment banks, commercial banks, and in certain circumstances other FHLBanks. An example of this occurs when a financial holding company has subsidiary banks that are members of different FHLBanks and can, therefore, choose to take advances from the FHLBank with the best terms. Larger institutions may have access to all of these alternatives as well as independent access to the national and global credit markets. The availability of alternative funding sources can be affected by a variety of factors, including market conditions, member creditworthiness, regulatory restrictions, and collateral availability and valuation.

Likewise, our MPP is subject to significant competition. The most direct competition for mortgage purchases comes from other buyers or guarantors of government-guaranteed or conventional, conforming fixed-rate mortgage loans, such as Ginnie Mae, Fannie Mae and Freddie Mac.

We also compete with Fannie Mae, Freddie Mac and other GSEs as well as corporate, sovereign, and supranational entities for funds raised through the issuance of debt instruments. Increases in the supply of competing debt products, in the absence of increases in demand, typically result in higher debt costs to us or lesser amounts of debt issued on our behalf at the same cost than otherwise would be the case.

Employees

As of December 31, 2018, we had 246 full-time employees and 3 part-time employees. Employees are not represented by a collective bargaining unit.

Available Information

Our Annual and Quarterly Reports on Forms 10-K and 10-Q, together with our Current Reports on Form 8-K, are filed with the SEC through the EDGAR filing system. A link to EDGAR is available through our public website at www.fhlbi.com by selecting "News" and then "Investor Relations."

We have a Code of Conduct that is applicable to all directors, officers, and employees and the members of our Affordable Housing Advisory Council. The Code of Conduct is available on our website by scrolling to the bottom of any web page on www.fhlbi.com and then selecting "Corporate Governance" in the navigation menu.

Our 2019 Community Lending Plan describes our plan to address the credit needs and market opportunities in our district states of Michigan and Indiana. It is available on our website at www.fhlbi.com/materials under "Bulletins, Publications and Presentations."

Our Audit Committee operates under a written charter adopted by the board of directors that was most recently amended on March 23, 2018. The Audit Committee charter is available on our website by scrolling to the bottom of any web page on www.fhlbi.com and then selecting "Corporate Governance" in the navigation menu.

We provide our website address and the SEC's website address solely for information. Except where expressly stated, information appearing on our website and the SEC's website is not incorporated into this Annual Report on Form 10-K.

Anyone may also request a copy of any of our public financial reports, our Code of Conduct or our 2019 Community Lending Plan through our Corporate Secretary at FHLBank of Indianapolis, 8250 Woodfield Crossing Boulevard, Indianapolis, IN 46240, (317) 465-0200.

ITEM 1A. RISK FACTORS

We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*.

We have identified the following risk factors that could have a material adverse effect on our Bank.

Economic Conditions and Policy Could Have an Adverse Effect on Our Business, Liquidity, Financial Condition, and Results of Operations

Our business, liquidity, financial condition, and results of operations are sensitive to general domestic and international business and economic conditions, such as changes in the money supply, inflation, volatility in both debt and equity capital markets, and the strength of the local economies in which we conduct business.

Our business and results of operations are significantly affected by the fiscal and monetary policies of the United States government and its agencies, including the FRB through its regulation of the supply of money and credit in the United States. The FRB's policies either directly or indirectly influence the yield on interest-earning assets, volatility of interest rates, prepayment speeds, the cost of interest-bearing liabilities and the demand for our debt. In addition, the FHLBanks currently play a predominant role as lenders in the federal funds market; therefore, any disruption in the federal funds market or any related regulatory or policy change may adversely affect our cash management activities, results of operations, and reputation.

The FOMC continues to maintain its policy of reinvesting principal payments from its holdings of Agency debt and Agency MBS in Agency MBS and of rolling over maturing United States Treasury securities at auction. These policies are intended to help maintain accommodative financial conditions. However, the FRB's continuing substantial participation in both short-term and MBS markets could adversely affect us through lower yields on our investments, higher costs of debt, and disruption of member demand for our products.

Additionally, we are affected by the global economy through member ownership and investments, and through capital markets exposures. Global political, economic, and business uncertainty has led to increased volatility in capital markets and has the potential to drive volatility in the future. Continued economic uncertainties could lead to further global capital market volatility, lower credit availability, and weaker economic growth. As a result, our business could be exposed to unfavorable market conditions, lower demand for mission-related assets, lower earnings, or reduced ability to pay dividends or redeem or repurchase capital stock.

Our business and results of operations are sensitive to the condition of the housing and mortgage markets, as well as general business and economic conditions. Adverse trends in the mortgage lending sector, including declines in home prices or loan performance, could reduce the value of collateral securing our advances and the fair value of our MBS. Such reductions in value would increase the possibility of under-collateralization, thereby increasing the risk of loss in case of a member's failure. Also, deterioration in the residential mortgage markets could negatively affect the value of our MPP portfolio, resulting in an increase in the allowance for credit losses on mortgage loans and possible additional realized losses if we were forced to liquidate our MPP portfolio.

Our district is comprised of the states of Michigan and Indiana. In the last several years, both states have experienced improving economic conditions. However, increases in unemployment and foreclosure rates or decreases in job or income growth rates in either state could result in less demand for mission-related assets and therefore lower earnings. For more information, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Executive Summary - Economic Environment.*

A Cybersecurity Event; Interruption in Our Information Systems; Unavailability of, or an Interruption of Service at, Our Main Office or Our Backup Facilities; or Failure of or an Interruption in Information Systems of Third-Party Vendors or Service Providers Could Adversely Affect Our Business, Risk Management, Financial Condition, Results of Operations, and Reputation

Cybersecurity.

We rely heavily on our information systems and other technology to conduct and manage our business, which inherently involves large financial transactions with our members and other counterparties. Our operations rely on the secure processing, storage and transmission of confidential and other information in our computer systems and networks. These computer systems, software and networks may be vulnerable to breaches, unauthorized access, damage, misuse, computer viruses or other malicious code and other events that could potentially jeopardize the confidentiality of such information or otherwise cause interruptions or malfunctions in our operations. As malicious threat tactics continue to mature, we are required to implement more advanced mitigating controls, which increases our mitigation costs. Moreover, if we experience a significant cybersecurity event, we may be unable to conduct and manage our business functions effectively, we may incur significant expenses in remediating such incidents, and we may suffer reputational harm. Any such occurrence could result in increased regulatory scrutiny of our operations. Although we carry cybersecurity insurance, its coverage may not be adequate to cover losses we may incur if a significant cybersecurity event occurs.

Information Systems; Facilities; Unavailability or Interruption of Service.

In addition, our operations rely on the availability and functioning of our main office, our business resumption center and other facilities. If we experience a significant failure or interruption in our business continuity, disaster recovery or certain information systems, we may be unable to conduct and manage our business functions effectively, we may incur significant expenses in remediating such incidents, and we may suffer reputational harm. Moreover, any of these occurrences could result in increased regulatory scrutiny of our operations.

Office of Finance.

The Office of Finance is a joint office of the FHLBanks established to facilitate the issuance and servicing of consolidated obligations, among other things. A failure or interruption of the Office of Finance's services as a result of breaches, cyber attacks, or technological outages could disrupt each FHLBank's access to these funds and constrain or otherwise negatively affect our business operations. Moreover, any operational failure of the Office of Finance could expose us to the risk of loss of data or confidential information, or other harm, including reputational damage.

Other Third Parties.

Despite our policies, procedures, controls and initiatives, some operational risks are beyond our control, and the failure of other parties to adequately address their performance standards and operational risks could adversely affect us. In addition to internal computer systems, we outsource certain communication and information systems and other services critical to our business and regulatory compliance to third-party vendors and service providers, including derivatives clearing organizations and loan servicers. Compromised security at any third party with whom we conduct business could expose us to cyber attacks or other breaches. If one or more of these key external parties were not able to perform their functions for a period of time, at an acceptable service level, or with increased volumes, our business operations could be constrained, disrupted, or otherwise negatively affected. In addition, any failure, interruption or breach in security of these systems, any disruption of service, or any key external party's failure to perform its contractual obligations could result in failures or interruptions in our ability to conduct and manage our business effectively, including, without limitation, our advances, MPP, funding, hedging activities and regulatory compliance. There is no assurance that such failures or interruptions will not occur or, if they do occur, that they will be timely detected or adequately addressed by us or the third parties on which we rely. Any failure, interruption, or breach could significantly harm our customer relations and business operations, which could negatively affect our financial condition, results of operations, or ability to pay dividends or redeem or repurchase capital stock.

MPF Program - FHLBank of Chicago.

We have purchased participating interests in MPF Program mortgage loans that the FHLBank of Topeka acquired from its PFIs. In its role as MPF Provider, the FHLBank of Chicago provides the infrastructure and operational support for the MPF Program and is responsible for publishing and maintaining the MPF Origination, Underwriting and Servicing Guides, which detail the requirements PFIs must follow in originating or selling and servicing MPF Program mortgage loans. If the FHLBank of Chicago changes or ceases to operate the MPF Program or experiences a failure or interruption in its information systems and other technology in its operation of the MPF Program, our MPF business could be adversely impacted, which could negatively affect our financial condition, profitability and cash flows. In the same way, we could be adversely affected if any of the FHLBank of Chicago's third-party vendors that are engaged in the operation of the MPF Program were to experience operational or technical difficulties.

The Inability to Access Capital Markets on Acceptable Terms Could Adversely Affect Our Liquidity, Operations, Financial Condition and Results of Operations, and the Value of Membership in Our Bank

Our primary source of funds is the sale of consolidated obligations in the capital markets. Our ability to obtain funds through the sale of consolidated obligations depends in part on prevailing conditions in the capital markets, such as investor demand and liquidity, and on dealer commitment to inventory and support our debt. Severe financial and economic disruptions in the past, and the United States government's measures to mitigate their effects, including increased capital requirements on dealers' inventory and other regulatory changes affecting dealers, have changed the traditional bases on which market participants value GSE debt securities and consequently could affect our funding costs and practices, which could make it more difficult and more expensive to issue our debt. Any further disruption in the debt market could have an adverse impact on our interest spreads, opportunities to call and reissue existing debt or roll over maturing debt, or our ability to meet the Finance Agency's mandates on FHLBank liquidity.

A Loss of Significant Borrowers, PFIs, Acceptable Loan Servicers or Other Financial Counterparties Could Adversely Impact Our Profitability, Our Ability to Achieve Business Objectives, Our Ability to Pay Dividends or Redeem or Repurchase Capital Stock, and Our Risk Concentration

The loss of any large borrower or PFI could adversely impact our profitability and our ability to achieve business objectives. The loss of a large borrower or PFI could result from a variety of factors, including acquisition, consolidation of charters within a bank holding company, loss of market share to non-depository institutions, resolution of a financially distressed member, or regulatory changes.

Our top borrower had advances outstanding at December 31, 2018 totaling $3.9 billion, or 12% of the Bank's total advances outstanding, at par. Our top-selling PFI sold us mortgage loans during 2018 totaling $730 million, or 33% of the total mortgage loans purchased by the Bank in 2018.

Our larger PFIs originate mortgages on properties in several states. We also purchase mortgage loans from many smaller PFIs that predominantly originate mortgage loans on properties in Michigan and Indiana. Therefore, our concentration of MPP loans on properties in Michigan and Indiana could continue to increase over time, as we do not currently limit such concentration.

We do not service the mortgage loans we purchase. PFIs may elect to retain servicing rights for the loans sold to us, or they may elect to sell servicing rights to an MPP-approved servicer. Federal banking regulations and Dodd-Frank Act capital requirements are causing mortgage servicing rights to be transitioned to non-depository institutions, which may reduce the availability of buyers of mortgage servicing rights. A scarcity of mortgage servicers could adversely affect our results of operations.

The number of counterparties that meet our internal and regulatory standards for derivative, repurchase, federal funds sold, TBA, and other financial transactions, such as broker-dealers and their affiliates, has decreased over time. In addition, since the Dodd-Frank Act, the requirements for posting margin or other collateral to financial counterparties has tended to increase, both in terms of the amount of collateral to be posted and the types of transactions for which margin is now required. These factors tend to increase the risk exposure that we have to any one counterparty, and as such may tend to increase our reliance upon each of our counterparties. A failure of any one of our major financial counterparties, or continuing market consolidation, could affect our profitability, results of operations, and ability to enter into additional transactions with existing counterparties without exceeding internal or regulatory risk limits.

Downgrades of Our Credit Rating, the Credit Rating of One or More of the Other FHLBanks, or the Credit Rating of the Consolidated Obligations Could Adversely Impact Our Cost of Funds, Our Ability to Access the Capital Markets, and/or Our Ability to Enter Into Derivative Instrument Transactions on Acceptable Terms

The FHLBanks' 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 lower a rating or issue negative reports. Because each FHLBank has joint and several liability for all FHLBank consolidated obligations, negative developments at any FHLBank may affect these credit ratings or result in the issuance of a negative report regardless of an individual FHLBank's financial condition and results of operations. In addition, because of the FHLBanks' GSE status, the credit ratings of the respective FHLBanks are generally influenced by the sovereign credit rating of the United States.

Based on the credit rating agencies' criteria, downgrades to the United States' sovereign credit rating and outlook may occur. As a result, similar downgrades in the credit ratings and outlook on the FHLBanks and the FHLBanks' consolidated obligations may also occur, even though they are not obligations of the United States.

Uncertainty remains regarding possible longer-term effects resulting from rating actions. Any future downgrades in the credit ratings and outlook, especially a downgrade to an S&P AA rating or equivalent, could result in higher funding costs, additional collateral posting requirements for certain derivative instrument transactions, or disruptions in our access to capital markets. To the extent that we cannot access funding when needed on acceptable terms to effectively manage our cost of funds, our financial condition and results of operations and the value of membership in our Bank may be negatively affected.

Our Exposure to Credit Losses Could Adversely Affect Our Financial Condition and Results of Operations

We are exposed to credit losses from member products, investment securities and counterparty obligations.

Member Products.

Advances. If a member fails and the appointed receiver or rehabilitator (or another applicable entity) does not either (i) promptly repay all of the failed institution's obligations to our Bank or (ii) properly assign or assume the outstanding advances, we may be required to liquidate the collateral pledged by the failed institution. The proceeds realized from the liquidation may not be sufficient to fully satisfy the amount of the failed institution's obligations plus the operational cost of liquidation, particularly if market price and interest-rate volatility adversely affect the value of the collateral. Price volatility could also adversely impact our determination of over-collateralization requirements, which could ultimately cause a collateral deficiency in a liquidation scenario. In some cases, we may not be able to liquidate the collateral in a timely manner.

A deterioration of residential or commercial real estate property values could further affect the mortgages pledged as collateral for advances. In order to remain fully collateralized, we may require members to pledge additional collateral when we deem it necessary. If members are unable to fully collateralize their obligations with us, our advances could decrease further, negatively affecting our results of operations or ability to pay dividends or redeem or repurchase capital stock.

Mortgage Loans. If delinquencies in our fixed-rate mortgages increase and residential property values decline, we could experience reduced yields or losses exceeding the protection provided by the LRA and SMI credit enhancement and CE obligations, as applicable, on mortgage loans purchased through our MPP or the participating interests in MPF Program loans acquired from the FHLBank of Topeka or another MPF FHLBank.

We are the beneficiary of third-party PMI and SMI (where applicable) coverage on conventional mortgage loans we acquire through our MPP, upon which we rely in part to reduce the risk of losses on those loans. As a result of actions by their respective state insurance regulators, however, certain of our PMI providers are paying less than 100% of the claim amounts. The remaining amounts are deferred until the funds are available or the PMI provider is liquidated. It is possible that insurance regulators may impose restrictions on the ability of our other PMI/SMI providers to pay claims. If our PMI/SMI providers further reduce the portion of mortgage insurance claims they will pay to us or further delay or condition the payment of mortgage insurance claims, or if additional adverse actions are taken by their state insurance regulators, we could experience higher losses on mortgage loans.

We are also exposed to credit losses from servicers of mortgage loans purchased under our MPP or through participating interests in mortgage loans purchased from other FHLBanks under the MPF Program if they fail to perform their contractual obligations.

Investment Securities. The MBS market continues to face uncertainty over the potential changes in the Federal Reserve's holdings of MBS and the effect of any new or proposed actions. Additionally, future declines in housing prices, as well as other factors, such as increased loan default rates and loss severities and decreased prepayment speeds, may result in unrealized losses, which could adversely affect our financial condition.

We are also exposed to credit losses from third-party providers of credit enhancements on the MBS investments that we hold in our investment portfolios, including mortgage insurers, bond insurers and financial guarantors. Our results of operations could be adversely impacted if one or more of these providers fails to fulfill its contractual obligations to us.

Counterparty Obligations. We assume unsecured credit risk when entering into money market transactions and financial derivatives transactions with domestic and foreign counterparties or through derivatives clearing organizations. A counterparty default could result in losses if our credit exposure to that counterparty is not fully collateralized or if our credit obligations associated with derivative positions are over-collateralized. The insolvency or other inability of a significant counterparty, including a clearing organization, to perform its obligations under such transactions or other agreements could have an adverse effect on our financial condition and results of operations, as well as our ability to engage in routine derivative transactions. If we are unable to transact additional business with those counterparties, our ability to effectively use derivatives could be adversely affected, which could impair our ability to manage some aspects of our interest-rate risk.

Moreover, our ability to engage in routine derivatives, funding and other transactions could be adversely affected by the actions and commercial soundness of financial institutions that transact business with our counterparties. Financial services institutions are interrelated as a result of trading, clearing, counterparty and/or other relationships. Consequently, financial difficulties experienced by one or more financial services institutions could lead to market-wide disruptions that may impair our ability to find suitable counterparties for routine business transactions.

Changes in the Legal and Regulatory Environment for FHLBanks, Other Housing GSEs or Our Members May Adversely Affect Our Business, Demand for Products, the Cost of Debt Issuance, and the Value of FHLBank Membership

We could be materially adversely affected by: the adoption of new or revised laws, policies, regulations or accounting guidance; new or revised interpretations or applications of laws, policies, or regulations by the Finance Agency, the SEC, the CFTC, the CFPB, the Financial Stability Oversight Council, the Comptroller General, the FASB or other federal or state financial regulatory bodies; or judicial decisions that alter the present regulatory environment. Likewise, whenever federal elections result in changes in the executive branch or in the balance of political parties' representation in Congress, there is increased uncertainty as to potential administrative, regulatory and legislative actions that may materially adversely affect our business.

Changes that restrict the growth or alter the risk profile of our current business or prohibit the creation of new products or services could negatively impact our earnings. For example, our earnings could be negatively impacted by regulatory changes that (i) further restrict the types, characteristics or volume of mortgages that we may purchase through our MPP or otherwise reduce the economic value of MPP to our members, or (ii) require us to change the composition of our assets and liabilities. In addition, the regulatory environment in which our members provide financial products and services could be changed in a manner that negatively impacts their ability to take full advantage of our products and services, our ability to rely on their pledged collateral, or their desire to maintain membership in our Bank. Changes to the regulatory environment that affect our debt underwriters, particularly revised capital and liquidity requirements, could also adversely affect our cost of issuing debt in the capital markets. Similarly, regulatory actions or public policy changes, including those that give preference to certain sectors, business models, regulated entities, assets, or activities, could negatively impact us. For example, changes in the status of Fannie Mae and Freddie Mac during the next phases of their conservatorship or as a result of legislative or regulatory changes, may impact funding costs for the FHLBanks, which could negatively affect our business and results of operations. In addition, negative news articles, industry reports, and other announcements pertaining to GSEs, including Fannie Mae, Freddie Mac or the FHLBanks, could cause an increase in interest rates on all GSE debt, as investors may perceive these issuers or their debt instruments as bearing increased risk.

The Finance Agency requires the FHLBanks to maintain sufficient liquidity through short-term investments in an amount at least equal to an FHLBank's cash outflows under hypothetical scenarios for the treatment of maturing advances. This regulatory guidance is designed to assure there is sufficient liquidity in the event of temporary disruptions in the capital markets that affect the FHLBanks' access to funding. To satisfy these scenarios, we maintain balances in shorter-term investments, which may earn lower interest rates than alternate investment options. In certain circumstances we may also need to fund shorter-term advances with short-term discount notes that have maturities beyond those of the related advances, thus increasing our short-term advance pricing or reducing net income through lower net interest spreads. To the extent these increased prices make our advances less competitive, advance levels and net interest income may be negatively affected.

In August 2018, the Finance Agency issued Advisory Bulletin 2018-07 on liquidity ("Liquidity Guidance AB"), which took effect, in part, on December 31, 2018. The Liquidity Guidance AB, among other things, provides guidance related to asset and liability maturity funding gap limits. Specifically, with respect to funding gaps and possible asset and liability mismatches, the Liquidity Guidance AB provides guidance on maintaining appropriate funding gaps for three-month and one-year maturity horizons. Specific initial percentages within prescribed ranges are identified in a Finance Agency supervisory letter. The Liquidity Guidance AB provides for these limits to reduce the liquidity risks associated with a mismatch in asset and liability maturities, including an undue reliance on short-term debt funding, which may increase refinancing risk. As a result of the Liquidity Guidance AB, our cost of funding may increase if we are required to achieve appropriate funding gaps with longer-term funding.

The CFPB rules include standards for mortgage lenders to follow during the loan approval process to determine whether a borrower has the ability to repay the mortgage loan. The Dodd-Frank Act provides defenses to foreclosure and causes of action for damages if the mortgage lender does not meet the standards in the CFPB rules. A mortgage borrower can assert these defenses and causes of action against the original mortgage lender and against purchasers and other assignees of the mortgage loan, which would include us if we were to purchase a loan under our AMA programs or if we were to direct a servicer to foreclose on mortgage loan collateral. In addition, if we were to make advances secured by non-safe harbor qualified mortgages retained by a mortgage lender and were to subsequently liquidate such collateral, we could be subject to these defenses to foreclosure or causes of action for damages. This risk, in turn, could reduce the value of our advances collateral, potentially reducing our likelihood of full repayment on our advances if we were required to sell such collateral.

Regulatory reform since the most recent financial crisis has tended to increase the amount of margin collateral that we must provide to collateralize certain kinds of financial transactions, and has broadened the categories of transactions for which we are required to post margin. For example, the Dodd-Frank Act and related regulatory changes have increased the margin we must provide for cleared and uncleared derivative transactions, and, effective in March 2020, Financial Industry Regulatory Authority ("FINRA") Rule 4210 will require us to exchange margin on certain MBS transactions. Materially greater margin requirements - due to Dodd-Frank Act derivatives regulatory requirements, FINRA Rule 4210, or otherwise - could adversely affect the availability and pricing of our derivative transactions, making such trades more costly and less attractive as risk management tools. New and expanded margin requirements on derivatives and MBS could also change our risk exposure to our counterparties and may require us to enhance further our systems and processes.

Dodd-Frank Act provisions may also indirectly affect us due to its effects on our members. For example, this law establishes a solvency framework to address the failure of a financial institution, which could include one or more of our members or financial counterparties. Because the Dodd-Frank Act requires several regulatory bodies to carry out its provisions, its full effect remains uncertain until after the required reports to Congress are issued and implementing regulations are adopted.

Solvency frameworks comparable to the Dodd-Frank Act have been enacted by several members of the European Union pursuant to the European Bank Recovery and Resolution Directive ("BRRD") developed by the Financial Stability Board. We engage in financial transactions with counterparties which are domiciled in countries that have adopted the BRRD. The failure of any such counterparty could subject our transactions with such party to the BRRD solvency framework, the results of which may not be wholly predictable.

New and amended rules promulgated by our members' primary regulators may create unanticipated risks as well. For example, the largest members of the FHLBank System may have increased their advances levels in order to meet Basel III regulatory requirements. At the same time, changes to SEC guidance pertaining to prime money market funds have resulted in a significant increase in demand for government funds and Agency debt, as well as FHLBank discount notes. These developments could influence regulatory guidance, particularly with respect to liquidity. We cannot predict what effects, if any, these developments will have on the FHLBank System as a whole or upon our Bank, nor can we predict what additional regulatory actions may be taken as a result.

For more information, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Recent Accounting and Regulatory Developments - Legislative and Regulatory Developments*.

Changes in Interest Rates or Changes in the Differences Between Short-Term Rates and Long-Term Rates Could Have an Adverse Effect on Our Earnings

Our ability to prepare for changes in interest rates, or to hedge related exposures such as basis risk, significantly affects the success of our asset and liability management activities and our level of net interest income.

The effect of interest rate changes can be exacerbated by prepayment and extension risks, which are the risks that mortgage-based investments will be refinanced by borrowers in low interest-rate environments or will remain outstanding longer than expected at below-market yields when interest rates increase. Decreases in interest rates typically cause mortgage prepayments to increase, which may result in increased premium amortization expense and a decrease in the yield of our mortgage assets as we experience a return of principal that we must re-invest in a lower rate environment. While these prepayments would reduce the asset balance, our balance of consolidated obligations may remain outstanding. Conversely, increases in interest rates typically cause mortgage prepayments to decrease or mortgage cash flows to slow, possibly resulting in the debt funding the portfolio to mature and the replacement debt to be issued at a higher cost, thus reducing our interest spread.

A flattening yield curve, in which the difference between short-term interest rates and long-term interest rates is lower relative to prior market conditions, will tend to reduce, and has reduced, the net interest margin on new loans added to the MPP portfolio. Until such time as the yield curve becomes steeper, we may continue to earn lower spread income from that portfolio.

Although derivatives are used to mitigate market risk, they also introduce the potential for short-term earnings volatility, principally due to basis risk because we use the OIS curve in place of the LIBOR rate curve as the discount rate to estimate the fair values of collateralized LIBOR-based interest-rate related derivatives while the hedged items currently on the balance sheet are still valued using the LIBOR rate curve. Such volatility may be greater in 2019 as we began purchasing short-term fixed-rate Treasury securities swapped to OIS as a part of our liquidity portfolio.

Changes to or Replacement of the LIBOR Benchmark Interest Rate Could Adversely Affect Our Business, Financial Condition and Results of Operations

Many of our assets and liabilities are indexed to LIBOR. On July 27, 2017, the Financial Conduct Authority ("FCA"), a regulator of financial services firms and financial markets in the United Kingdom, announced that it will plan for a phase-out of regulatory oversight of LIBOR interest rate indices. The FCA indicated that it will cease persuading or compelling banks to submit rates for the calculation of LIBOR after 2021, and that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. The FCA further indicated, however, that it will support the LIBOR indices through 2021 to allow for an orderly transition to an alternative reference rate.

In the United States, efforts to identify a set of alternative U.S. dollar reference interest rates include proposals by the Alternative Reference Rates Committee ("ARRC") of the FRB and the Federal Reserve Bank of New York. The ARRC has proposed the SOFR as its recommended alternative to U.S. dollar LIBOR. SOFR is based on a broad segment of the overnight Treasury repurchase market and is intended to be a measure of the cost of borrowing cash overnight collateralized by Treasury securities. The Federal Reserve Bank of New York began publishing a SOFR in the second quarter of 2018. In January 2019, we participated in the issuance of a SOFR-indexed CO bond, the fourth SOFR issuance for the FHLBank System. The Bank expects to continue to participate in SOFR-indexed CO bonds.

The market transition away from LIBOR to SOFR also is expected to be complicated, including the development of terms and credit adjustments to accommodate differences between LIBOR and SOFR. The introduction of an alternative rate also may introduce additional basis risk for market participants, as an alternative index is utilized along with LIBOR during a transition period. There can be no guarantee that SOFR will become widely used or that alternatives may or may not develop with additional complications. The infrastructure necessary to manage hedging utilizing SOFR still needs to be built, and the transition in the markets and adjustments in our systems could be disruptive, with disruptions potentially beginning before the currently-planned phase-out of FCA support of LIBOR. A mechanism is not yet well-established to convert the credit and tenor features of LIBOR into any proposed replacement rate because markets which could facilitate such conversion are new and currently lack depth or liquidity. Moreover, there is no guarantee that, if the market is fully functioning at the time of the transition, the transition will be successful. Similarly, the transition from one reference rate to another could have accounting effects. For example, such 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 utilize LIBOR as a reference rate. Disruptions in the market for LIBOR and its regulatory framework, therefore, could have unanticipated effects on our risk management activities as well.

Given the large volume of LIBOR-based mortgages and financial instruments, the basis adjustment to the replacement floating rate will receive extraordinary scrutiny, but whether the net impact is positive or negative cannot yet be ascertained. We believe that other market participants, including our member institutions, derivatives clearing organizations, and other financial counterparties are also monitoring the LIBOR transition, but we cannot predict how such institutions will react to the transition, or what effects such reactions will have on us. We are not able to predict at this time whether LIBOR will cease to be available after 2021, whether SOFR or another alternative rate will become the sole market benchmark in place of LIBOR, whether the transitions to new reference rates will be successful, or what the impact of such a transition will be on the Bank's business, financial condition or results of operations.

Competition Could Negatively Impact Advances, the Supply of Mortgage Loans for our MPP, Our Access to Funding and Our Earnings

We operate in a highly competitive environment. Demand for advances is affected by, among other factors, the cost and availability of other sources of liquidity for our members, including deposits. We compete with other suppliers of wholesale funding, both secured and unsecured. Such other suppliers may include the United States government, the Federal Reserve Banks, corporate credit unions, the Central Liquidity Facility, investment banks, commercial banks, and in certain circumstances other FHLBanks. Large institutions may also have independent access to the national and global credit markets. The availability of alternative funding sources to members can significantly influence the demand for advances and can vary as a result of several factors, including market conditions, members' creditworthiness, and availability of collateral. Lower demand for advances could negatively impact our earnings.

Likewise, our MPP is subject to significant competition. The most direct competition for purchases of mortgages comes from other buyers of conventional, conforming, fixed-rate mortgage loans, such as Fannie Mae and Freddie Mac. In addition, PFIs face increased origination competition from originators that are not members of our Bank. Increased competition can result in a smaller share of the mortgages available for purchase through our MPP and, therefore, lower earnings.

We also compete with Fannie Mae, Freddie Mac, and other GSEs as well as corporate, sovereign, and supranational entities for funds raised through the issuance of CO bonds and discount notes. Increases in the supply of competing debt products may, in the absence of increases in demand, result in higher debt costs to us or lesser amounts of debt issued at the same cost than otherwise would be the case. There can be no assurance that our supply of funds through issuance of consolidated obligations will be sufficient to meet our future operational needs.

A Failure of the Business and Financial Models and Related Processes Used to Evaluate Various Financial Risks and Derive Certain Estimates in Our Financial Statements Could Produce Unreliable Projections or Valuations, which Could Adversely Affect Our Business, Financial Condition, Results of Operations and Risk Management

We are exposed to market, business and operational risk, in part due to the significant use of business and financial models when evaluating various financial risks and deriving certain estimates in our financial statements. Our business could be adversely affected if these models fail to produce reliable projections or valuations. These models, which rely on various inputs including, but 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, require management to make critical judgments about the appropriate assumptions that are used in the determinations of such risks and estimates and may overstate or understate the value of certain financial instruments, future performance expectations, or our level of risk exposure. Our models could produce unreliable results for a number of reasons, including, but not limited to, invalid or incorrect assumptions underlying the models, the need for manual adjustments in response to rapid changes in economic conditions, incorrect coding of the models, incorrect data being used by the models or inappropriate application of a model to products or events outside the model's intended use. In particular, models are less dependable when the economic environment is outside of historical experience, as has been the case in recent years.

A Failure to Meet Minimum Regulatory Capital Requirements Could Affect Our Ability to Pay Dividends, Redeem or Repurchase Capital Stock, and Attract New Members

We are required to maintain sufficient capital to meet specific minimum requirements established by the Finance Agency. If we violate any of these requirements or if our board or the Finance Agency determines that we have incurred, or are likely to incur, losses resulting, or expected to result, in a charge against capital, we would not be able to redeem or repurchase any capital stock while such charges are continuing or expected to continue, even if the statutory redemption period had expired for some or all of such stock. Violations of our capital requirements could also restrict our ability to pay dividends, lend, invest, or purchase mortgage loans or participating interests in mortgage loans, or other business activities. Additionally, the Finance Agency could direct us to call upon our members to purchase additional capital stock to meet our minimum regulatory capital requirements. Members may be unable or unwilling to satisfy such calls for additional capital, thereby adversely affecting their ability to continue doing business with us.

The formula for calculating risk-based capital includes factors that depend on interest rates and other market metrics outside our control and could cause our minimum requirement to increase to a point exceeding our capital level. Further, if our retained earnings were to become inadequate, the Finance Agency could initiate restrictions consistent with those associated with a failure of a minimum capital requirement.

The Dodd-Frank Act requires certain financial companies with total consolidated assets of more than $10.0 billion and that are regulated by a primary federal financial regulatory agency to conduct annual stress tests to determine whether the companies have the capital necessary to absorb losses under adverse economic conditions. The Finance Agency has implemented annual stress testing for the FHLBanks. We must report the results of our stress tests to the Finance Agency and the FRB on an annual basis, and we must also publicly disclose a summary of stress test results for the "severely adverse" scenario on an annual basis.

The severity of the hypothetical scenarios devised by the Finance Agency and the FRB and employed in these stress tests is not defined by law or regulation, and is thus subject to the regulators' discretion. Nonetheless, the results of the stress testing process may affect our approach to managing and deploying capital. The stress testing and capital planning processes may, among other things, require us to increase our capital levels, modify our business strategies, or decrease our exposure to various asset classes.

The stability of our capital is also important in maintaining the value of membership in our Bank. Failure to pay dividends or redeem or repurchase stock at par, or a call upon our members to purchase additional stock to restore capital, could make it more difficult for us to attract new members or retain existing members.

Restrictions on the Redemption, Repurchase, or Transfer of the Bank's Capital Stock Could Result in an Illiquid Investment for the Holder

Under the GLB Act, Finance Agency regulations, and our capital plan, our capital stock may be redeemed upon the expiration of a five-year redemption period, subject to certain conditions. Capital stock may become subject to redemption following the redemption period after a member (i) provides a written redemption notice to the Bank; (ii) gives notice of intention to withdraw from membership; (iii) attains nonmember status by merger or acquisition, charter termination, or other involuntary membership termination; or (iv) has its Bank capital stock transferred by a receiver or other liquidating agent for that member to a nonmember entity. In addition, we may elect to repurchase some or all of the excess capital stock of a shareholder at any time at our sole discretion.

There is no guarantee, however, that we will be able to redeem shareholders' capital stock, even at the end of the prescribed redemption period, or to repurchase their excess capital stock. If a redemption or repurchase of capital stock would cause us to fail to meet our minimum regulatory capital requirements, Finance Agency regulations and our capital plan would prohibit the redemption or repurchase. Moreover, only capital stock that is not required to meet a member's membership capital stock requirement or to support a member or nonmember shareholder's outstanding activity with the Bank (excess capital stock) may be redeemed at the end of the redemption period. Restrictions on the redemption or repurchase of our capital stock could result in an illiquid investment for holders of our stock. In addition, because 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 we would allow a member or nonmember shareholder to transfer any excess capital stock to another member or nonmember shareholder at any time.

Providing Financial Support to Other FHLBanks Could Negatively Impact the Bank's Liquidity, Earnings and Capital and Our Members

We are jointly and severally liable with the other FHLBanks for the consolidated obligations issued on behalf of the FHLBanks through the Office of Finance. If another FHLBank were to default on its obligation to pay principal and interest on any consolidated obligations, the Finance Agency may allocate the outstanding liability among one or more of the remaining FHLBanks on a pro rata basis or on any other basis the Finance Agency may determine. In addition to possibly making payments due on consolidated obligations under our joint and several liability, we may voluntarily or involuntarily provide financial assistance to another FHLBank in order to resolve a condition of financial distress. Such assistance could negatively affect our financial condition, our results of operation and the value of membership in our Bank. Moreover, a Finance Agency regulation provides for an FHLBank System-wide annual minimum contribution to AHP of $100 million, and we could be liable for a pro rata share of that amount (based on the FHLBanks' combined net earnings for the previous year), up to 100% of our net earnings for the previous year. Thus, our ability to pay dividends to our members or to redeem or repurchase capital stock could be affected by the financial condition of one or more of the other FHLBanks.

The Inability to Attract and Retain Key Personnel Could Adversely Affect the Bank's Operations

We rely on key personnel for many of our functions and have a relatively small workforce, given the size and complexity of our business. Our ability to attract and retain personnel with the required technical expertise and specialized skills is important for us to manage our business and conduct our operations. Such ability could be challenged as employment in the United States improves, particularly in the Indianapolis area.

ITEM 2. PROPERTIES

We own an office building containing approximately 117,000 square feet of office and storage space at 8250 Woodfield Crossing Boulevard, Indianapolis, IN, of which we use approximately 105,600 square feet. We lease or hold for lease to various tenants the remaining 11,400 square feet. We also maintain two leased off-site backup facilities of approximately 11,900 square feet and 200 square feet, respectively, which are on electrical distribution grids that are separate from each other and from our office building. For more information, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Management - Operational Risk Management*.

In the opinion of management, our physical properties are suitable and adequate. All of our properties are insured to approximately replacement cost. In the event we were to need more space, our lease terms with tenants generally provide the ability to move tenants to comparable space at other locations at our cost for moving and outfitting any replacement space to meet our tenants' needs.

ITEM 3. LEGAL PROCEEDINGS

In the ordinary course of business, we may from time to time become a party to lawsuits involving various business matters. We are unaware of any lawsuits presently pending which, individually or in the aggregate, could have a material effect on our financial condition or results of operations.

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*.

No Trading Market

Our Class B capital stock is not publicly traded, and there is no established market for such stock. Members may be required to purchase additional shares of Class B stock from time to time in order to meet minimum stock purchase requirements under our capital plan. Our Class B stock may be redeemed, at a par value of $100 per share, up to five years after we receive a written redemption request by a member, subject to regulatory limits and the satisfaction of any ongoing stock purchase requirements applicable to the member. We may repurchase shares held by members in excess of their required holdings at our discretion at any time in accordance with our capital plan.

Our Class B common stock is registered under the Exchange Act. Because our shares of capital stock are "exempt securities" under the Securities Act, purchases and sales of stock by our members are not subject to registration under the Securities Act.

Number of Shareholders

As of February 28, 2019, we had 390 shareholders and $2.1 billion par value of regulatory capital stock, which includes Class B common stock and MRCS issued and outstanding.

Dividends

A cooperative enterprise enjoys the benefits of an integrated customer/shareholder base; however, there are certain tensions inherent in our membership structure that are unusual and unique to the FHLBanks. Because only member institutions and certain former members can own shares of our capital stock and, by statute and regulation, stock can be issued and repurchased only at par, there is no open market for our stock and no opportunity for stock price appreciation. As a result, return on equity can be received only in the form of dividends.

Dividends may, but are not required to, be paid on our Class B capital stock. Our board of directors may declare and pay dividends in either cash or capital stock or a combination thereof, subject to Finance Agency regulations. Under these regulations, stock dividends cannot be paid if our excess stock is greater than 1% of our total assets. At December 31, 2018, our excess stock was 0.7% of our total assets.

Our board of directors seeks to reward our members with a competitive, risk-adjusted return on their investment, particularly those who actively utilize our products. Our board of directors' decision to declare dividends is influenced by our financial condition, overall financial performance and retained earnings, as well as actual and anticipated developments in the overall economic and financial environment including the level of interest rates and conditions in the mortgage and credit markets. In addition, our board of directors considers several other factors, including our risk profile, regulatory requirements, our relationship with our members and the stability of our current capital stock position and membership.

Our capital plan provides for two sub-series of Class B capital stock: Class B-1 and Class B-2. Class B-1 is stock held by our members that is not subject to a redemption request, while Class B-2 is required stock that is subject to a redemption request. Class B-1 shareholders receive a higher dividend than Class B-2 shareholders. The Class B-2 dividend is presently equal to 80% of the amount of the Class B-1 dividend and can only be changed by an amendment to our capital plan with approval of the Finance Agency. The amount of the dividend to be paid is based on the average number of shares of each sub-series held by a member during the dividend payment period (applicable quarter). For more information, see *Notes to Financial Statements - Note 13 - Capital* and *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources - Capital Resources*.

We are exempt from federal, state, and local taxation, except for employment and real estate taxes. Despite our tax-exempt status, any cash dividends paid by us to our members are taxable dividends to the members, and our members do not benefit from the exclusion for corporate dividends received. *The preceding statement is for general information only; it is not tax advice. Members should consult their own tax advisors regarding particular federal, state, and local tax consequences of purchasing, holding, and disposing of our Class B stock, including the consequences of any proposed change in applicable law.*

We paid quarterly cash dividends as set forth in the following table ($ amounts in thousands).

	Class B-1				Class B-2			
By Quarter Paid	**Dividend on Capital Stock**	**Interest Expense on MRCS**	**Total**	**Annualized Dividend Rate [1]**	**Dividend on Capital Stock**	**Interest Expense on MRCS**	**Total**	**Annualized Dividend Rate [1]**
2019								
Quarter 1	$ 26,480	$ 2,153	$ 28,633	5.50%	$ 4	$ 150	$ 154	4.40%
2018								
Quarter 4	$ 21,470	$ 1,723	$ 23,193	4.50%	$ 6	$ 125	$ 131	3.60%
Quarter 3	21,115	1,842	22,957	4.50%	4	159	163	3.60%
Quarter 2	19,368	1,927	21,295	4.25%	5	24	29	3.40%
Quarter 1 [2]	11,481	1,014	12,495	2.50%	6	20	26	2.00%
Quarter 1	19,518	1,723	21,241	4.25%	10	34	44	3.40%
2017								
Quarter 4	$ 18,564	$ 1,724	$ 20,288	4.25%	$ 11	$ 44	$ 55	3.40%
Quarter 3	17,373	1,703	19,076	4.25%	14	52	66	3.40%
Quarter 2	15,803	1,701	17,504	4.25%	15	52	67	3.40%
Quarter 1	15,545	1,824	17,369	4.25%	19	54	73	3.40%

(1) Reflects the annualized dividend rate on all of our average capital stock outstanding in Class B-1 and Class B-2, respectively, regardless of its classification for financial reporting purposes as either capital stock or MRCS. The Class B-2 dividend is paid at 80% of the amount of the Class B-1 dividend.

(2) Reflects a supplemental cash dividend.

ITEM 6. SELECTED FINANCIAL DATA

We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*. The following table should be read in conjunction with the financial statements and related notes and the discussion set forth in *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations*. The table presents a summary of selected financial information derived from audited financial statements as of and for the years ended as indicated ($ amounts in millions).

	As of and for the Years Ended December 31,				
	2018	2017	2016	2015	2014
Statement of Condition:					
Advances	$ 32,728	$ 34,055	$ 28,096	$ 26,909	$ 20,789
Mortgage loans held for portfolio, net	11,385	10,356	9,501	8,146	6,820
Cash and short term investments	7,610	4,601	4,128	4,932	3,552
Investment securities	13,378	13,027	11,880	10,415	10,538
Total assets	65,412	62,349	53,907	50,608	41,853
Discount notes	20,895	20,358	16,802	19,251	12,568
CO bonds	40,266	37,896	33,467	27,862	25,503
Total consolidated obligations	61,161	58,254	50,269	47,113	38,071
MRCS	169	164	170	14	16
Capital stock	1,931	1,858	1,493	1,528	1,551
Retained earnings	1,078	976	887	835	777
AOCI	42	112	56	23	47
Total capital	3,051	2,946	2,436	2,386	2,375
Statement of Income:					
Net interest income	$ 288	$ 262	$ 198	$ 196	$ 184
Provision for (reversal of) credit losses	—	—	—	—	(1)
Other income (loss)	21	(6)	6	10	13
Other expenses	92	82	78	72	68
AHP assessments	22	18	13	13	13
Net income	$ 195	$ 156	$ 113	$ 121	$ 117
Selected Financial Ratios:					
Net interest margin [1]	0.45%	0.45%	0.39%	0.44%	0.47%
Return on average equity	6.43%	5.88%	4.92%	5.13%	4.72%
Return on average assets	0.30%	0.26%	0.22%	0.27%	0.30%
Weighted average dividend rate [2]	5.00%	4.25%	4.25%	4.12%	4.18%
Dividend payout ratio [3]	47.87%	43.05%	53.87%	52.48%	58.96%
Total capital ratio [4]	4.66%	4.72%	4.52%	4.71%	5.68%
Total regulatory capital ratio [5]	4.86%	4.81%	4.73%	4.70%	5.60%
Average equity to average assets	4.72%	4.47%	4.46%	5.23%	6.29%

(1) Net interest income expressed as a percentage of average interest-earning assets.
(2) Dividends paid in cash during the year divided by the average amount of Class B capital stock eligible for dividends under our capital plan, excluding MRCS.
(3) Dividends paid in cash during the year divided by net income for the year. The ratios for the years ended December 31, 2018 and 2014 include a supplemental dividend of 2.5% and 2.0% related to 2017 and 2013 results, respectively.
(4) Capital stock plus retained earnings and AOCI expressed as a percentage of total assets.
(5) Capital stock plus retained earnings and MRCS expressed as a percentage of total assets.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Presentation

This discussion and analysis by management of the Bank's financial condition and results of operations should be read in conjunction with the *Financial Statements* and related *Notes to Financial Statements* contained in this Form 10-K.

As used in this Item, unless the context otherwise requires, the terms "we," "us," "our," and the "Bank" refer to the Federal Home Loan Bank of Indianapolis or its management. We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*.

Unless otherwise stated, amounts disclosed in this Item are rounded to the nearest million; therefore, dollar amounts of less than one million may not be reflected or, due to rounding, may not appear to agree to the amounts presented in thousands in the *Financial Statements* and related *Notes to Financial Statements*. Amounts used to calculate dollar and percentage changes are based on numbers in the thousands. Accordingly, calculations based upon the disclosed amounts (millions) may not produce the same results.

Executive Summary

Overview. We are a regional wholesale bank that serves as a financial intermediary between the capital markets and our members. We primarily make secured loans in the form of advances to our members and purchase whole mortgage loans from our members. Additionally, we purchase other investments and provide other financial services to our members. As an FHLBank, we are generally designed to expand and contract in asset size as the needs of our members and their communities change over time.

Our principal source of funding is the proceeds from the sale to the public of FHLBank debt instruments, called consolidated obligations, which are the joint and several obligation of all FHLBanks. We obtain additional funds from deposits, other borrowings, and the issuance of capital stock to our members.

Our primary source of revenue is interest earned on advances, mortgage loans, and long- and short-term investments.

Our net interest income is primarily determined by the spread between the interest rate earned on our assets and the interest rate paid on our share of the consolidated obligations. We use funding and hedging strategies to manage the related interest-rate risk.

Due to our cooperative structure and wholesale nature, we typically earn a narrow net interest spread. Accordingly, our net income is relatively low compared to our total assets and capital.

We group our products and services within two operating segments: traditional and mortgage loans.

Economic Environment. The Bank’s financial performance is influenced by a number of regional and national economic and market factors, including the level and volatility of market interest rates, inflation or deflation, monetary policies, and the strength of housing markets.

The FOMC raised the target range for the federal funds rate by 25 bps at its December 2018 meeting. This marked the 8th rate hike of this tightening cycle, reaching a cumulative full 2 percentage point increase in the federal funds target since the cycle began in December 2015. Subsequent to year-end, the FOMC met and left the target rate unchanged, noting that recent data indicates a continuing strong labor market and strong household spending growth, but business fixed investment and near-term price level increases have moderated from last year's levels. Additionally, inflation indicators remain firmly below long-term averages and just under the FOMC target inflation level of 2% annually, as measured by the Personal Consumption Expenditure deflator. Although it maintained the current federal funds target, the FOMC indicated that it will remain patient in making additional rate changes and that its overall strategy going forward will be data-dependent. The Federal Reserve has continued to unwind the trillions of dollars of quantitative easing ("QE"), also known as quantitative tightening. By early December, the Federal Reserve had reduced its balance sheet holdings by $347 billion, resulting in the lowest level of total remaining QE assets held since January 2014. In the fourth quarter of 2018, yields on U.S. Treasuries increased at the short-end of the yield curve and decreased for Treasuries with maturities of 6-months and greater relative to the prevailing yields at the end of the third quarter. As nominal interest rates remain historically relatively low and interest rates have increased, total returns in many bond market sectors remained low in 2018. Market sectors with negative returns in 2018 include Treasury Inflation-Protection Securities, convertible bonds, high yield bonds, and corporate bonds.

During the fourth quarter 2018, the U.S. Gross Domestic Product ("GDP") for the third quarter was revised downward a second time to an annualized growth rate of 3.4%. This marks the 36th consecutive quarter with positive economic growth, starting with the end of the last recession. The growth rate compares to an increase of 4.2% in the second quarter. According to the Department of Commerce, GDP rose in the third quarter as a result of increases in personal consumption expenditures, private industry investment, non-residential fixed investment, federal government spending, and state and local government spending. According to the Bureau of Economic Analysis ("BEA"), both household debt service ratios and net worth levels remain strong and have been improving along with the labor market. However, the BEA also reported moderating or deteriorating performance in the fourth quarter in the following cyclical economic indicators as a percentage of GDP: residential investment, business fixed investment, motor vehicle and parts consumption, and changes in private inventories.

According to the Bureau of Labor Statistics, labor market activity continues to improve. As of December 2018, the U.S. unemployment rate was 3.9%, compared to the 50-year average of 6.2%. The unemployment rate has dropped steadily since peaking at 10% in October 2009. Wage growth, after steadily declining from 2007 to 2012, has been stagnant, but has recently increased. In December 2018, the annualized wage growth in the U.S. was 3.3%.

Economic activity in the district, represented by Michigan and Indiana, has been similar to national averages. The unemployment rates in Michigan and Indiana in December 2018 were 4.0% and 3.6%, respectively, similar to the national average of 3.9%. Total employment and personal income have continued to grow, though personal income growth has been below national levels in both states. Housing market growth across the U.S. began to slow in late 2018 despite the strength in the overall economy. A shortage of existing home inventory, increased builder costs, and higher mortgage rates are beginning to impact the overall housing market. Consensus projections from the National Association of Realtors, Mortgage Bankers Association and Freddie Mac anticipate continued growth, albeit at a slower pace than recent years, in housing starts and total home sales in 2019, with increases of 4.7% and 2.8% respectively. The housing market in Indiana has remained strong, with home price appreciation setting a record in 2018, and existing home sales have continued a high rate of growth. Both have exceeded the national rates according to the Indiana Association of Realtors. The Indiana Business Research Center at Indiana University states that more construction in low-to-moderately priced homes is needed to satisfy housing demand and maintain housing prices at a level where would-be homeowners can purchase a home. According to Neighborhood-Scout Real Estate data, home prices in Michigan have increased at an average annual rate of 7.7% and 6.7% over the past two and five years, respectively, with both comparing favorably to national averages. According to the Home Builders Association of Michigan ("HBAM"), rising materials costs and regulations, combined with shortages in land and labor, have led to increased expenses in building new homes. This high demand has led to significant increases in existing home prices. According to HBAM, these price increases, combined with slowing construction, has left Michigan in a "near-crisis shortage of affordable homes." Indiana University's Business Research Center projects the average economic growth rate for Indiana to outpace that of the U.S. through 2019, and virtually match the rate of national growth over the next 20 years. Job growth is expected to peak in 2019 and decelerate over the next few years. The University of Michigan Research Seminar in Quantitative Economics has reported continued growth in personal income and real disposable income for Michigan in the past three years and projects continuing improvement over the next three years. Michigan is expected to set a new record for continuous quarters of job growth through the end of 2019, though the pace of job creation slowed in 2018.

Impact on Operating Results. Market interest rates and trends affect yields and margins on earning assets, including advances, purchased mortgage loans, and our investment portfolio, which contribute to our overall profitability. Additionally, market interest rates drive mortgage origination and prepayment activity, which can lead to both favorable and unfavorable net interest margin volatility in our MPP and MBS portfolios. A flat or inverted yield curve, in which the difference between short-term interest rates and long-term interest rates is low, or negative, respectively, can have an unfavorable impact on our net interest margins.

Lending and investing activity by our member institutions is a key driver for our balance sheet and income growth. Such activity is a function of both prevailing interest rates and economic activity, including local economic factors, particularly relating to the housing and mortgage markets. Positive economic trends could drive interest rates higher, which could impair growth of the mortgage market. A less active mortgage market could affect demand for advances and activity levels in our Advantage MPP. However, borrowing patterns between our insurance company and depository members tend to differ during various economic and market conditions, thereby easing the potential magnitude of core business fluctuations during business cycles. Member demand for liquidity during stressed market conditions can lead to advances growth.

Results of Operations and Changes in Financial Condition

Results of Operations for the Years Ended December 31, 2018 and 2017. The following table presents the comparative highlights of our results of operations ($ amounts in millions).

	Years Ended December 31,			
Comparative Highlights	**2018**	**2017**	**$ Change**	**% Change**
Net interest income	$ 288	$ 262	$ 26	10%
Provision for (reversal of) credit losses	—	—	—	
Net interest income after provision for credit losses	288	262	26	10%
Other income (loss)	21	(6)	27	
Other expenses	92	82	10	
Income before assessments	217	174	43	24%
AHP assessments	22	18	4	
Net income	195	156	39	24%
Total other comprehensive income (loss)	(70)	55	(125)	
Total comprehensive income	$ 125	$ 211	$ (86)	(41%)

The increase in net income for the year ended December 31, 2018 compared to 2017 was primarily due to a net realized gain on the sale of all of the Bank's private-label RMBS and higher net interest income, partially offset by higher operating expenses.

The decrease in total other comprehensive income for the year ended December 31, 2018 compared to 2017 was primarily due to net unrealized losses on our AFS securities and the recognition of the gain on the sale of the private-label RMBS in other income.

Results of Operations for the Years Ended December 31, 2017 and 2016. The following table presents the comparative highlights of our results of operations ($ amounts in millions).

	Years Ended December 31,			
Comparative Highlights	**2017**	**2016**	**$ Change**	**% Change**
Net interest income	$ 262	$ 198	$ 64	33%
Provision for (reversal of) credit losses	—	—	—	
Net interest income after provision for credit losses	262	198	64	33%
Other income (loss)	(6)	6	(12)	
Other expenses	82	78	4	
Income before assessments	174	126	48	38%
AHP assessments	18	13	5	
Net income	156	113	43	38%
Total other comprehensive income (loss)	55	33	22	
Total comprehensive income	$ 211	$ 146	$ 65	44%

The increase in net income for the year ended December 31, 2017 compared to 2016 was primarily due to higher net interest income as a result of asset growth and higher spreads, partially offset by net losses on derivatives and hedging activities.

The increase in total other comprehensive income for the year ended December 31, 2017 compared to 2016 was primarily due to larger unrealized gains on non-OTTI AFS securities.

Changes in Financial Condition for the Year Ended December 31, 2018. The following table presents the comparative highlights of our changes in financial condition ($ amounts in millions).

Condensed Statements of Condition	December 31, 2018	December 31, 2017	$ Change	% Change
Advances	$ 32,728	$ 34,055	$ (1,327)	(4%)
Mortgage loans held for portfolio, net	11,385	10,356	1,029	10%
Cash and short-term investments [1]	7,610	4,601	3,009	65%
Other assets [2]	13,689	13,337	352	3%
Total assets	$ 65,412	$ 62,349	$ 3,063	5%
Consolidated obligations	$ 61,161	$ 58,254	$ 2,907	5%
MRCS	169	164	5	3%
Other liabilities	1,031	985	46	5%
Total liabilities	62,361	59,403	2,958	5%
Capital stock	1,931	1,858	73	4%
Retained earnings [3]	1,078	976	102	10%
AOCI	42	112	(70)	(63%)
Total capital	3,051	2,946	105	4%
Total liabilities and capital	$ 65,412	$ 62,349	$ 3,063	5%
Total regulatory capital [4]	$ 3,178	$ 2,998	$ 180	6%

(1) Includes cash, interest-bearing deposits, securities purchased under agreements to resell, and federal funds sold.
(2) Includes AFS and HTM securities.
(3) Includes restricted retained earnings at December 31, 2018 and 2017 of $222 million and $183 million, respectively.
(4) Total capital less AOCI plus MRCS.

The increase in total assets at December 31, 2018 compared to December 31, 2017 was primarily driven by an increase in short-term investments. The Bank enhanced its liquidity position in light of new regulatory guidance from the Finance Agency. For more information, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Recent Accounting and Regulatory Developments*.

The increase in total liabilities was attributable to an increase in consolidated obligations to support the Bank's growth in assets.

The increase in total capital was due to the growth of retained earnings and additional capital stock issued to members. These increases were partially offset by the reduction in AOCI, primarily a result of unrealized losses on AFS securities and the recognition of the gain on the sale of the private-label RMBS in other income.

Outlook. We believe that our financial performance will continue to provide reasonable, risk-adjusted returns for our members across a wide range of business, financial, and economic environments.

We continue to face competition from many sources in both the advances and mortgage purchase businesses. Competing wholesale funding opportunities for our members include brokered deposits, repurchase agreements, capital market debt issuance and other alternative sources. Additionally, the mortgage purchase market offers alternative providers for our members including Fannie Mae, Freddie Mac, and private mortgage aggregators.

During recent years, the advances line of business has experienced solid growth in both depository and insurance sectors. However, alternative sources of wholesale funds available to our members, continued consolidation in the financial services industry, and run-off from captive insurance company advances has continued to pressure overall advances levels. We expect advances to grow at a moderate pace.

Mortgage loans held for portfolio have increased at an average annual rate of nearly 12% since 2015, reflecting increased selling into our Advantage MPP. Factors that impact the volume of mortgage loans purchased include interest rates, competition, the general level of housing activity in the United States, the level of mortgage refinancing activity, consumer product preferences, and the Bank's capital capacity. As interest rates have continued to trend upward, housing market growth has slowed and refinancing activity has declined, which may lead to a decline in our mortgage purchase volume.

Our investment securities portfolio has increased throughout 2018, with particular growth in the short-term investment portfolio, as a result of increased liquidity requirements issued to the Federal Home Loan Banks by the Finance Agency. In 2019, we began purchasing short-term fixed-rate Treasury securities swapped to OIS as part of our liquidity portfolio. Despite selling all remaining private-label RMBS in 2018, the total MBS portfolio continued to grow. We expect to continue to increase our MBS holdings, though long-term Agency debentures are likely to remain flat to slightly lower.

In addition to having embedded prepayment options and basis risk exposure, which increase both our market risk and earnings volatility, the amortization of purchased premiums on mortgage assets could cause volatility in our earnings. Additionally, as market mortgage rates have increased and are likely to flatten or continue increasing, prepayment activity is expected to continue to decline, barring a large decline in market interest rates.

Access to debt markets has been reliable, but the cost of our consolidated obligations has increased. Going forward, the cost will continue to depend on several factors, including the direction and level of market interest rates, competition from other issuers of Agency debt, changes in the investment preferences of potential buyers of Agency debt securities, global demand, pricing in the interest-rate swap market, and other technical market factors. As LIBOR phases out, some of our adjustable-rate funding is expected to move to debt tied to the SOFR index. In January 2019, we participated in the issuance of a SOFR-indexed CO bond, the fourth SOFR issuance for the FHLBank System.

Events in the capital and housing markets in the last several years have created opportunities for us to generate spreads well-above historical levels on certain types of transactions; however, spreads across asset categories on the balance sheet have moderated in the past year. Although debt costs remain low relative to historic norms, a flattening yield curve began to have an adverse effect on the Bank's spreads in 2018. We anticipate spreads to continue to compress further before leveling out.

We will continue to engage in various hedging strategies and use derivatives to assist in mitigating the volatility of earnings and the market value of equity that arises from the maturity structure of our financial assets and liabilities. Although derivatives are used to mitigate market risk, they also introduce the potential for short-term earnings volatility, principally due to basis risk because we use the OIS curve in place of the LIBOR rate curve as the discount rate to estimate the fair values of collateralized LIBOR-based interest-rate related derivatives while the hedged items currently on the balance sheet are still valued using the LIBOR rate curve. Such volatility may be greater in 2019 with the purchases of Treasury securities swapped to OIS.

We strive to keep our operating expense ratios relatively low while maintaining adequate systems, support, and staffing. We expect operating expenses to continue to increase beyond the rate of inflation as we continue to invest in operating and risk management systems and member service capabilities.

As a result of all of the foregoing factors, we expect net income in 2019 to be generally consistent with net income in 2018.

Our board of directors seeks to reward our members with a competitive, risk-adjusted return on their investment, particularly those who actively utilize our products. Our board of directors' decision to declare dividends is influenced by our financial condition, overall financial performance and retained earnings, as well as actual and anticipated developments in the overall economic and financial environment, including the level of interest rates and conditions in the mortgage and credit markets. In addition, our board of directors considers several other factors, including our risk profile, regulatory requirements, our relationship with our members, and the stability of our current capital stock position and membership.

Analysis of Results of Operations for the Years Ended December 31, 2018, 2017 and 2016.

Net Interest Income. Net interest income, which is primarily the interest income on advances, mortgage loans held for portfolio, short-term investments, and investment securities less the interest expense on consolidated obligations and interest-bearing deposits, is our primary source of earnings. The following table presents average daily balances, interest income/expense, and average yields of our major categories of interest-earning assets and their funding sources ($ amounts in millions).

	Years Ended December 31,								
	2018			2017			2016		
	Average Balance	Interest Income/ Expense	Average Yield	Average Balance	Interest Income/ Expense	Average Yield	Average Balance	Interest Income/ Expense	Average Yield
Assets:									
Federal funds sold and securities purchased under agreements to resell	$ 5,938	$ 114	1.91%	$ 4,919	$ 50	1.02%	$ 4,215	$ 17	0.40%
Investment securities [1]	13,038	350	2.69%	12,621	240	1.90%	11,872	182	1.53%
Advances [2]	32,683	726	2.22%	31,209	406	1.30%	25,974	220	0.85%
Mortgage loans held for portfolio [2]	10,902	354	3.25%	9,922	315	3.17%	8,792	274	3.12%
Other assets (interest-earning) [3]	1,151	21	1.83%	364	5	1.47%	313	2	0.63%
Total interest-earning assets	63,712	1,565	2.46%	59,035	1,016	1.72%	51,166	695	1.36%
Other assets [4]	440			444			326		
Total assets	$64,152			$59,479			$51,492		
Liabilities and Capital:									
Interest-bearing deposits	$ 641	11	1.72%	$ 555	5	0.86%	$ 597	1	0.12%
Discount notes	21,265	392	1.84%	20,116	182	0.91%	16,129	64	0.40%
CO bonds [2]	38,518	866	2.25%	35,302	560	1.59%	31,662	425	1.34%
MRCS	168	8	4.99%	167	7	4.22%	152	7	4.35%
Total interest-bearing liabilities	60,592	1,277	2.11%	56,140	754	1.34%	48,540	497	1.02%
Other liabilities	531			679			653		
Total capital	3,029			2,660			2,299		
Total liabilities and capital	$64,152			$59,479			$51,492		
Net interest income		$ 288			$ 262			$ 198	
Net spread on interest-earning assets less interest-bearing liabilities			0.35%			0.38%			0.34%
Net interest margin [5]			0.45%			0.45%			0.39%
Average interest-earning assets to interest-bearing liabilities	1.05			1.05			1.05		

(1) Consists of AFS and HTM securities. The average balances of investment securities are based on amortized cost; therefore, the resulting yields do not reflect changes in the estimated fair value of AFS securities that are a component of OCI, nor do they reflect OTTI-related non-credit losses. Interest income/expense includes the effects of associated derivative transactions.

(2) Interest income/expense and average yield include all other components of interest, including the impact of net interest payments or receipts on derivatives in qualifying hedge relationships, amortization of hedge accounting adjustments, and prepayment fees on advances.

(3) Consists of interest-bearing deposits and loans to other FHLBanks (if applicable). Includes the rights or obligations to cash collateral, except for variation margin payments characterized as daily settled contracts. The 2017 and 2016 amounts also include grantor trust assets that are included in other assets in 2018, as a result of adopting ASU 2016-01.

(4) Includes changes in the estimated fair value of AFS securities, the effect of OTTI-related non-credit losses on AFS and HTM securities, and in 2018 grantor trust assets.

(5) Net interest income expressed as a percentage of the average balance of interest-earning assets.

Changes in both volume and interest rates determine changes in net interest income and net interest margin. Changes in interest income and interest expense that are not identifiable as either volume-related or rate-related, but are attributable to both volume and rate changes, have been allocated to the volume and rate categories based upon the proportion of the volume and rate changes. The following table presents the changes in interest income and interest expense by volume and rate ($ amounts in millions).

	Years Ended December 31,					
	2018 vs. 2017			2017 vs. 2016		
Components	**Volume**	**Rate**	**Total**	**Volume**	**Rate**	**Total**
Increase (decrease) in interest income:						
Federal funds sold and securities purchased under agreements to resell	$ 12	$ 52	$ 64	$ 3	$ 30	$ 33
Investment securities	13	97	110	16	42	58
Advances	20	300	320	51	135	186
Mortgage loans held for portfolio	31	8	39	36	5	41
Other assets (interest earning)	14	2	16	—	3	3
Total	90	459	549	106	215	321
Increase (decrease) in interest expense:						
Interest-bearing deposits	1	5	6	—	4	4
Discount notes	11	199	210	19	99	118
CO bonds	55	251	306	53	82	135
MRCS	—	1	1	—	—	—
Total	67	456	523	72	185	257
Increase (decrease) in net interest income	$ 23	$ 3	$ 26	$ 34	$ 30	$ 64

The increase in net interest income for the year ended December 31, 2018 compared to 2017 and for the year ended December 31, 2017 compared to 2016 was primarily due to an increase in the average balances of interest-earning assets and interest-bearing liabilities.

Yields. The average yield on total interest-earning assets for the year ended December 31, 2018 was 2.46%, an increase of 74 bps compared to 2017, resulting primarily from increases in market interest rates that led to higher yields on advances and investment securities. The cost of total interest-bearing liabilities for the year ended December 31, 2018 was 2.11%, an increase of 77 bps from the prior year due to higher funding costs on consolidated obligations. The net effect was a decrease in the net interest spread to 0.35% for the year ended December 31, 2018 from 0.38% for the year ended December 31, 2017.

The average yield on total interest-earning assets for the year ended December 31, 2017 was 1.72%, an increase of 36 bps compared to 2016, resulting primarily from increases in market interest rates that led to higher yields on advances and investment securities. The cost of total interest-bearing liabilities for the year ended December 31, 2017 was 1.34%, an increase of 32 bps from the prior year due to higher funding costs on consolidated obligations. The net effect was an increase in the net interest spread to 0.38% for the year ended December 31, 2017 from 0.34% for the year ended December 31, 2016.

Average Balances. The average balances of interest-earning assets for the year ended December 31, 2018 increased by 8% compared to 2017. The average balance of short-term investments outstanding for the year ended December 31, 2018 increased by 21% in light of new regulatory guidance from the Finance Agency. The average amount of advances outstanding increased by 5%, generally due to members' higher funding needs. The average amount of mortgage loans held for portfolio outstanding increased by 10% due to higher purchases from members under Advantage MPP than paydowns of original and Advantage MPP. Additionally, the increase in the average balances of investment securities was due primarily to higher purchases of Agency MBS, partially offset by the sale of the private-label RMBS portfolio. The increase in average interest-bearing liabilities for the year ended December 31, 2018, compared to 2017, was due to an increase in consolidated obligations to fund the increases in the average balances of all interest-earning assets.

The average balances of interest-earning assets for the year ended December 31, 2017 increased compared to 2016, largely due to advances and, to a lesser extent, mortgage loans and investment securities. The average amount of advances outstanding increased by 20%, generally due to members' higher funding needs. The average amount of mortgage loans held for portfolio outstanding increased by 13% due to higher purchases from members under Advantage MPP than paydowns of original and Advantage MPP. Additionally, the increase in the average balances of investment securities was due primarily to purchases of Agency MBS. The increase in average interest-bearing liabilities for the year ended December 31, 2017, compared to 2016, was due to an increase in consolidated obligations to fund the increases in the average balances of all interest-earning assets.

Provision for (Reversal of) Credit Losses. The changes in the provision for (reversal of) credit losses for the year ended December 31, 2018 compared to 2017 and the year ended December 31, 2017 compared to 2016 were insignificant.

Other Income. The following table presents a comparison of the components of other income ($ amounts in millions).

	Years Ended December 31,		
Components	**2018**	**2017**	**2016**
Net OTTI credit losses	$ —	$ —	$ —
Net realized gains from sale of available-for-sale securities	32	—	—
Net realized losses from sale of held-to-maturity securities	—	—	—
Net gains (losses) on derivatives and hedging activities	(13)	(9)	2
Other	2	3	4
Total other income (loss)	$ 21	$ (6)	$ 6

The increase in total other income for the year ended December 31, 2018 compared to 2017 was due to the net realized gain on the sale of all of the Bank's private-label RMBS and ABS, partially offset by higher net losses on derivative and hedging activities.

The decrease in total other income for the year ended December 31, 2017 compared to 2016 was primarily due to net losses on derivatives and hedging activities.

OTTI Losses. As described in detail in *Notes to Financial Statements - Note 1 - Summary of Significant Accounting Policies*, OTTI credit losses recorded on private-label RMBS are derived from projections of the future cash flows of the individual securities. These projections are based on a number of assumptions and expectations, which are updated on a quarterly basis. OTTI losses over the past several years have been insignificant due to the continuing economic recovery, particularly in the housing market, and its favorable impact on housing prices.

Net Gains (Losses) on Derivatives and Hedging Activities. Our net gains (losses) on derivatives and hedging activities fluctuate due to volatility in the overall interest-rate environment as we hedge our asset or liability risk exposures. In general, we hold derivatives and associated hedged items to the maturity, call, or put date. Therefore, due to timing, nearly all of the cumulative net gains and losses for these financial instruments will generally reverse over the remaining contractual terms of the hedged item. However, there may be instances when we terminate these instruments prior to the maturity, call or put date. Terminating the financial instrument or hedging relationship may result in a realized gain or loss. For more information, see *Notes to Financial Statements - Note 9 - Derivatives and Hedging Activities*.

The Bank uses interest-rate swaps to hedge the risk of changes in the fair value of certain of its advances, consolidated obligations and AFS securities due to changes in market interest rates. These hedging relationships are designated as fair value hedges. Changes in the estimated fair value of the derivative and, to the extent these relationships qualify for hedge accounting, changes in the fair value of the hedged item that are attributable to the hedged risk are recorded in earnings. The estimated fair values are based on a wide range of factors, including current and projected levels of interest rates, credit spreads and volatility.

For the hedging relationships that qualified for hedge accounting, the differences between the change in the estimated fair value of the hedged items and the change in the estimated fair value of the associated interest-rate swaps, i.e., hedge ineffectiveness, resulted in a net loss of $5 million for the year ended December 31, 2018 compared to a net loss of $7 million for the year ended December 31, 2017 and a net gain of $4 million for the year ended December 31, 2016. The losses for the years ended December 31, 2018 and 2017 were primarily due to marginal mismatches in durations on, and the increase in volume of, swapped GSE MBS, particularly Fannie Mae Delegated Underwriting and Servicing (DUS) MBS. As a result of issuing floating rate notes to fund these MBS purchases instead of swapped fixed-rate notes, the funding and operational costs have been reduced but there is less offsetting hedge ineffectiveness, resulting in higher unrealized hedging gains or losses.

To the extent those hedges did not qualify for hedge accounting, or ceased to qualify because they were determined to be ineffective, only the change in the fair value of the derivative was recorded in earnings with no offsetting change in the fair value of the hedged item.

For derivatives not qualifying for hedge accounting (economic hedges), the net interest settlements and the changes in the estimated fair value of the derivatives are recorded in net gains (losses) on derivatives and hedging activities. For economic hedges, the Bank recorded a net loss of $3 million for the year ended December 31, 2018 and a net loss of $2 million for each of the years ended December 31, 2017 and 2016.

The tables below present the net effect of derivatives on net interest income and other income, within the net gains (losses) on derivatives and hedging activities, by type of hedge and hedged item ($ amounts in millions).

Year Ended December 31, 2018	Advances	Investments	Mortgage Loans	CO Bonds	Discount Notes	Other	Total
Net interest income:							
Amortization/accretion of hedging activities [1]	$ —	$ —	$ —	$ (8)	$ —	$ —	$ (8)
Net interest settlements [2]	49	18	—	(41)	—	—	26
Total net interest income	49	18	—	(49)	—	—	18
Net gains (losses) on derivatives and hedging activities:							
Gains (losses) on fair-value hedges	4	(8)	—	(1)	—	—	(5)
Gains (losses) on derivatives not qualifying for hedge accounting [3]	—	—	(2)	(1)	—	—	(3)
Price alignment amount [4]	—	—	—	—	—	(5)	(5)
Net gains (losses) on derivatives and hedging activities	4	(8)	(2)	(2)	—	(5)	(13)
Total net effect of derivatives and hedging activities	$ 53	$ 10	$ (2)	$ (51)	$ —	$ (5)	$ 5
Year Ended December 31, 2017							
Net interest income:							
Amortization/accretion of hedging activities [1]	$ —	$ 2	$ (1)	$ —	$ —	$ —	$ 1
Net interest settlements [2]	(31)	(48)	—	16	—	—	(63)
Total net interest income	(31)	(46)	(1)	16	—	—	(62)
Net gains (losses) on derivatives and hedging activities:							
Gains (losses) on fair-value hedges	(1)	(4)	—	(2)	—	—	(7)
Gains (losses) on derivatives not qualifying for hedge accounting [3]	—	—	(1)	—	(1)	—	(2)
Price alignment amount [4]	—	—	—	—	—	—	—
Net gains (losses) on derivatives and hedging activities	(1)	(4)	(1)	(2)	(1)	—	(9)
Total net effect of derivatives and hedging activities	$ (32)	$ (50)	$ (2)	$ 14	$ (1)	$ —	$ (71)
Year Ended December 31, 2016							
Net interest income:							
Amortization/accretion of hedging activities [1]	$ —	$ 9	$ (2)	$ —	$ —	$ —	$ 7
Net interest settlements [2]	(91)	(94)	—	17	—	—	(168)
Total net interest income	(91)	(85)	(2)	17	—	—	(161)
Net gains (losses) on derivatives and hedging activities:							
Gains (losses) on fair-value hedges	1	(1)	—	4	—	—	4
Gains (losses) on derivatives not qualifying for hedge accounting [3]	—	—	(2)	—	—	—	(2)
Net gains (losses) on derivatives and hedging activities	1	(1)	(2)	4	—	—	2
Total net effect of derivatives and hedging activities	$ (90)	$ (86)	$ (4)	$ 21	$ —	$ —	$ (159)

(1) Represents the amortization/accretion of fair value hedge accounting adjustments for both current and terminated hedge positions.

(2) Represents interest income/expense on derivatives in qualifying hedge relationships. Excludes the interest income/expense of the respective hedged items, which fully offset the interest income/expense of the derivatives, except to the extent of any hedge ineffectiveness.

(3) Includes net interest settlements on derivatives not qualifying for hedge accounting. For more information, see *Notes to Financial Statements - Note 9 - Derivatives and Hedging Activities*.

(4) Relates to derivatives for which variation margin payments are characterized as daily settled contracts. Effective January 16, 2018, LCH changed the characterization of variation margin payments to be daily settled contracts, consistent with CME.

Other Expenses. The following table presents a comparison of the components of other expenses ($ amounts in millions).

	Years Ended December 31,		
Components	**2018**	**2017**	**2016**
Compensation and benefits	$ 50	$ 46	$ 44
Other operating expenses	29	26	25
Finance Agency and Office of Finance expenses	8	7	6
Other	5	3	3
Total other expenses	$ 92	$ 82	$ 78

The increase in total other expenses for the year ended December 31, 2018 compared to 2017 was primarily due to (i) increases in compensation, primarily driven by continued increases in head count, higher incentive compensation achievement and salary increases, and (ii) increases in other operating expenses, primarily due to various technology, business continuity and risk management initiatives.

The increase in total other expenses for the year ended December 31, 2017 compared to 2016 was due primarily to increases in compensation and benefits, primarily driven by salary increases and higher head count. The increase in head count was primarily due to strengthening our information security, business continuity and risk management capabilities and reducing our reliance on contractual resources.

Office of Finance Expenses. The FHLBanks fund the costs of the Office of Finance as a joint office that facilitates issuing and servicing consolidated obligations, preparation of the FHLBanks' combined quarterly and annual financial reports, and certain other functions. For each of the years ended December 31, 2018, 2017 and 2016, our assessments to fund the Office of Finance totaled $5 million, $4 million, and $3 million, respectively.

Finance Agency Expenses. Each FHLBank is assessed a portion of the operating costs of our regulator, the Finance Agency. We have no direct control over these costs. For each of the years ended December 31, 2018, 2017 and 2016, our Finance Agency assessments totaled $3 million.

AHP Assessments. The FHLBanks are required to set aside annually, in the aggregate, the greater of $100 million or 10% of their net earnings to fund the AHP. For purposes of the AHP calculation, net earnings is defined as income before assessments, plus interest expense related to MRCS, if applicable. For each of the years ended December 31, 2018, 2017 and 2016, our AHP expense was $22 million, $18 million, and $13 million, respectively. Our AHP expense fluctuates in accordance with our net earnings.

If we experienced a net loss during a quarter but still had net earnings for the year to date, our obligation to the AHP would be calculated based on our year-to-date net earnings. If we experienced a net loss for a full year, we would have no obligation to the AHP for the year, since our required annual contribution is limited to annual net earnings.

If the FHLBanks' aggregate 10% contribution were less than $100 million, each FHLBank would be required to contribute an additional pro rata amount. The proration would be based on the net earnings of each FHLBank in relation to the net earnings of all FHLBanks for the previous year, up to the Bank's annual net earnings. There was no shortfall in 2018, 2017 or 2016.

If we determine that our required AHP contributions are adversely affecting our financial stability, we may apply to the Finance Agency for a temporary suspension of our contributions. We did not make such an application in 2018, 2017 or 2016.

Total Other Comprehensive Income (Loss). Total other comprehensive loss for the year ended December 31, 2018 was $70 million and total other comprehensive income for the years ended December 31, 2017 and 2016 was $55 million and $33 million, respectively. Total other comprehensive loss for the year ended December 31, 2018 consisted primarily of unrealized losses on AFS securities and non-credit OTTI losses as a result of the recognition of the gain on the sale of our private-label RMBS in other income and the corresponding reversal of the unrealized gain previously recorded in OCI. Total other comprehensive income for the years ended December 31, 2017 and 2016 consisted substantially of unrealized gains on non-OTTI AFS securities.

Operating Segments

Our products and services are grouped within two operating segments: traditional and mortgage loans.

Traditional. The traditional segment consists of (i) credit products (including advances, letters of credit, and lines of credit), (ii) investments (including federal funds sold, securities purchased under agreements to resell, interest-bearing demand deposit accounts, and investment securities), and (iii) correspondent services and deposits. The following table presents the financial performance of our traditional segment ($ amounts in millions).

	Years Ended December 31,		
Traditional	**2018**	**2017**	**2016**
Net interest income	$ 221	$ 193	$ 144
Provision for (reversal of) credit losses	—	—	—
Other income (loss)	22	(5)	7
Other expenses	78	70	66
Income before assessments	165	118	85
AHP assessments	17	12	9
Net income	$ 148	$ 106	$ 76

The increase in net income for the traditional segment for the year ended December 31, 2018 compared to 2017 was due to the net realized gain on the sale of all of the Bank's private-label RMBS and higher net interest income, primarily as a result of higher average balances of assets and higher yields on advances partially offset by higher funding costs. These increases were partially offset by higher operating expenses and higher net losses on derivatives and hedging activities.

The increase in net income for the traditional segment for the year ended December 31, 2017 compared to 2016 was due to higher net interest income, primarily as a result of higher yields on and higher average balances of advances and investments outstanding partially offset by higher funding costs. This net increase was partially offset by higher expenses and net losses on derivatives and hedging activities.

Mortgage Loans. The mortgage loans segment includes (i) mortgage loans purchased from our members through our MPP and (ii) participating interests purchased in 2012 - 2014 from the FHLBank of Topeka in mortgage loans originated by certain of its PFIs under the MPF Program. The following table presents the financial performance of our mortgage loans segment ($ amounts in millions).

	Years Ended December 31,		
Mortgage Loans	**2018**	**2017**	**2016**
Net interest income	$ 67	$ 69	$ 54
Provision for (reversal of) credit losses	—	—	—
Other income (loss)	(1)	(1)	(1)
Other expenses	14	12	12
Income before assessments	52	56	41
AHP assessments	5	6	4
Net income	$ 47	$ 50	$ 37

The decrease in net income for the mortgage loans segment for the year ended December 31, 2018 compared to 2017 was due to lower net interest income, due to higher funding costs, and higher operating expenses.

The increase in net income for the mortgage loans segment for the year ended December 31, 2017 compared to 2016 was due to higher net interest income resulting from an increase in the average outstanding balance of mortgage loans held for portfolio, a decrease in amortization of concession fees on called consolidated obligations, and a decrease in amortization of purchased premiums resulting from lower prepayments.

Analysis of Financial Condition

Total Assets. The table below presents the comparative highlights of our major asset categories ($ amounts in millions).

Major Asset Categories	December 31, 2018 Carrying Value	December 31, 2018 % of Total	December 31, 2017 Carrying Value	December 31, 2017 % of Total
Advances	$ 32,728	50%	$ 34,055	55%
Mortgage loans held for portfolio, net	11,385	17%	10,356	17%
Cash and short-term investments	7,610	12%	4,601	7%
Investment securities	13,378	21%	13,027	21%
Other assets [1]	311	—%	310	—%
Total assets	$ 65,412	100%	$ 62,349	100%

[1] Includes accrued interest receivable, premises, software and equipment, derivative assets and other miscellaneous assets.

Total assets were $65.4 billion as of December 31, 2018, an increase of 5% compared to December 31, 2017. This increase of $3.1 billion was driven primarily by an increase in short-term investments to enhance the Bank's liquidity position in light of new regulatory guidance from the Finance Agency. Such increase resulted in a change to the mix of our total assets.

Under the Finance Agency's Prudential Management and Operations Standards, if our non-advance assets were to grow by more than 30% over the six calendar quarters preceding a Finance Agency determination that we have failed to meet any of these standards, the Finance Agency would be required to impose one or more sanctions on us, which could include, among others, a limit on asset growth, an increase in the level of retained earnings, and a prohibition on dividends or the redemption or repurchase of capital stock. Through the six-quarter period ended December 31, 2018, our growth in non-advance assets did not exceed 30%.

Advances. In general, advances fluctuate in accordance with our members' funding needs, primarily determined by their deposit levels, mortgage pipelines, loan growth, investment opportunities, available collateral, other balance sheet strategies, and the cost of alternative funding options.

Advances at carrying value totaled $32.7 billion at December 31, 2018, a net decrease of 4% compared to December 31, 2017, due to a decline in short-term advances outstanding.

Advances to depository members, comprising commercial banks, savings institutions and credit unions, decreased by 9%. Advances to insurance company members increased slightly. Advances to depository institutions, as a percent of total advances outstanding, were 53% at December 31, 2018, while advances to insurance companies were 47%.

The table below presents advances outstanding by type of financial institution ($ amounts in millions).

	December 31, 2018		December 31, 2017	
Borrower Type	**Par Value**	**% of Total**	**Par Value**	**% of Total**
Depository institutions:				
Commercial banks and saving institutions	$ 14,019	43%	$ 15,818	46%
Credit unions	3,099	10%	2,901	9%
Total depository institutions	17,118	53%	18,719	55%
Insurance companies:				
Captive insurance companies [1]	2,936	9%	3,020	9%
Other insurance companies	12,491	38%	12,389	36%
Total insurance companies	15,427	47%	15,409	45%
Total members	32,545	100%	34,128	100%
Former members	284	—%	41	—%
Total advances	$ 32,829	100%	$ 34,169	100%

[1] Membership must terminate no later than February 19, 2021. See certain restrictions on and maturities of advances in *Notes to Financial Statements - Note 5 - Advances*.

Our advance portfolio is well-diversified with advances to commercial banks and savings institutions, credit unions, and insurance companies. Borrowing patterns between our insurance company and depository members tend to differ during various economic and market conditions, thereby easing the potential magnitude of core business fluctuations during business cycles.

Our advance portfolio includes fixed- and variable-rate advances, as well as callable or prepayable and putable advances. For prepayable advances, the advance can be prepaid on specified dates without incurring repayment or termination fees. All other advances may only be prepaid by the borrower paying a fee that is sufficient to make us financially indifferent to the prepayment of the advance.

The following table presents the par value of advances outstanding by product type and redemption term, some of which contain call or put options ($ amounts in millions).

	December 31, 2018		December 31, 2017	
Product Type and Redemption Term	**Par Value**	**% of Total**	**Par Value**	**% of Total**
Fixed-rate:				
Fixed-rate [1]				
Due in 1 year or less	$ 14,670	45%	$ 15,950	47%
Due after 1 year	6,927	21%	6,880	20%
Total	21,597	66%	22,830	67%
Callable or prepayable				
Due in 1 year or less	10	—%	—	—%
Due after 1 year	39	—%	28	—%
Total	49	—%	28	—%
Putable				
Due in 1 year or less	—	—%	28	—%
Due after 1 year	3,103	10%	1,825	5%
Total	3,103	10%	1,853	5%
Other [2]				
Due in 1 year or less	133	—%	127	—%
Due after 1 year	140	—%	295	1%
Total	273	—%	422	1%
Total fixed-rate	25,022	76%	25,133	73%
Variable-rate:				
Variable-rate [1]				
Due in 1 year or less	349	1%	27	—%
Due after 1 year	—	—%	79	—%
Total	349	1%	106	—%
Callable or prepayable				
Due in 1 year or less	435	1%	803	2%
Due after 1 year	7,023	22%	8,127	25%
Total	7,458	23%	8,930	27%
Total variable-rate	7,807	24%	9,036	27%
Total advances	$ 32,829	100%	$ 34,169	100%

(1) Includes advances without call or put options.
(2) Includes hybrid, fixed-rate amortizing/mortgage matched advances.

Advances due in one year or less decreased from 50% of the total outstanding, at par, at December 31, 2017 to 48% of the total outstanding, at par, at December 31, 2018, reflecting members' decreased demand for short-term funding. For more information, see *Notes to Financial Statements - Note 5 - Advances.*

Mortgage Loans Held for Portfolio. We purchase mortgage loans from our members to support our housing mission, provide an additional source of liquidity to our members, diversify our assets, and generate additional earnings. In general, our volume of mortgage loans purchased is affected by several factors, including interest rates, competition, the general level of housing and refinancing activity in the United States, consumer product preferences, our balance sheet capacity and risk appetite, and regulatory considerations.

In 2010, we began offering Advantage MPP for new conventional MPP loans, which utilizes an enhanced fixed LRA account for credit enhancement consistent with Finance Agency regulations, instead of utilizing a spread LRA with coverage from SMI providers. The only substantive difference between our original MPP and Advantage MPP for conventional mortgage loans is the credit enhancement structure. Upon implementation of Advantage MPP, the original MPP was phased out and is no longer being used for acquisitions of new conventional loans. For more detailed information about the credit enhancement structures for our original MPP and Advantage MPP, see *Item 1. Business - Operating Segments - Mortgage Loans*.

In 2012 - 2014, we purchased participating interests from the FHLBank of Topeka in mortgage loans originated by certain of its PFIs through their participation in the MPF Program.

A breakdown of mortgage loans held for portfolio by primary product type is presented below ($ amounts in millions).

	December 31, 2018		December 31, 2017	
Product Type	**UPB**	**% of Total**	**UPB**	**% of Total**
MPP:				
Conventional Advantage	$ 9,874	89%	$ 8,608	85%
Conventional Original	688	6%	850	8%
FHA	314	3%	361	4%
Total MPP	10,876	98%	9,819	97%
MPF Program:				
Conventional	208	2%	243	2%
Government	54	—%	62	1%
Total MPF Program	262	2%	305	3%
Total mortgage loans held for portfolio	$ 11,138	100%	$ 10,124	100%

The increase in the UPB of mortgage loans held for portfolio was due to purchases under Advantage MPP exceeding repayments of outstanding MPP and MPF Program loans. Over time, the aggregate outstanding balance of mortgage loans purchased under our original MPP and MPF Program will continue to decrease.

We have established and maintain an allowance for loan losses based on our best estimate of probable losses over the loss emergence period, which we have estimated to be 24 months. Our estimate of MPP losses remaining after borrowers' equity, but before credit enhancements, was $4 million at December 31, 2018 and $5 million at December 31, 2017. After consideration of the portion recoverable under the associated credit enhancements, the resulting allowance for MPP loan losses was less than $1 million at December 31, 2018 and 2017. For more information, see *Notes to Financial Statements - Note 7 - Allowance for Credit Losses, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Policies and Estimates,* and *Risk Management - Credit Risk Management - Mortgage Loans Held for Portfolio - MPP*.

Cash and Investments. We maintain our investment portfolio for liquidity purposes, to use balance sheet capacity and to supplement our earnings. The earnings on our investments bolster our capacity to meet our commitments to affordable housing and community investments and to cover operating expenses. The following table presents a comparison of the components of our cash and investments at carrying value ($ amounts in millions).

	December 31,		
Components of Cash and Investments	**2018**	**2017**	**2016**
Cash and short-term investments:			
Cash and due from banks	$ 101	$ 55	$ 547
Interest-bearing deposits	1,211	660	150
Securities purchased under agreements to resell	3,213	2,606	1,781
Federal funds sold	3,085	1,280	1,650
Total cash and short-term investments	7,610	4,601	4,128
Investment securities:			
AFS securities:			
GSE and TVA debentures	4,277	4,404	4,715
GSE MBS	3,427	2,507	1,076
Private-label RMBS	—	218	269
Total AFS securities	7,704	7,129	6,060
HTM securities:			
Other U.S. obligations - guaranteed MBS	3,469	3,299	2,679
GSE MBS	2,205	2,553	3,082
Private-label RMBS and ABS	—	46	59
Total HTM securities	5,674	5,898	5,820
Total investment securities	13,378	13,027	11,880
Total cash and investments, carrying value	$ 20,988	$ 17,628	$ 16,008

Cash and Short-Term Investments. The total outstanding balance and composition of our short-term investment portfolio is influenced by our liquidity needs, regulatory requirements, member advance activity, market conditions and the availability of short-term investments at attractive interest rates, relative to our cost of funds. For more information, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources*.

Cash and short-term investments totaled $7.6 billion at December 31, 2018, an increase of 65% compared to December 31, 2017, due to the Bank's enhancement of its liquidity position in light of new regulatory guidance from the Finance Agency. Cash and short-term investments as a percent of total assets were 12% at December 31, 2018 compared to 7% at December 31, 2017.

Cash and short-term investments totaled $4.6 billion at December 31, 2017, an increase of 11% compared to December 31, 2016. However, cash and short-term investments as a percent of total assets were 7% at December 31, 2017 compared to 8% at December 31, 2016.

Investment Securities. During the year ended December 31, 2018, for strategic, economic and operational reasons, we sold all of our private-label RMBS and ABS.

AFS securities totaled $7.7 billion at December 31, 2018, a net increase of 8% compared to $7.1 billion at December 31, 2017. The increase resulted from purchases of GSE MBS to maintain a ratio of MBS and ABS to total regulatory capital of up to 300%.

Net unrealized gains on AFS securities totaled $53 million at December 31, 2018, a decrease of $69 million compared to December 31, 2017, primarily due to the income recognition of the gain on the sale of our private-label RMBS as well as changes in interest rates, credit spreads and volatility.

AFS securities totaled $7.1 billion at December 31, 2017, a net increase of 18% compared to $6.1 billion at December 31, 2016. Because regulatory capital increased during 2017, we purchased additional GSE MBS to maintain a ratio of MBS and ABS to total regulatory capital of up to 300%.

HTM securities totaled $5.7 billion at December 31, 2018, a net decrease of 4% compared to $5.9 billion at December 31, 2017. At December 31, 2018, the estimated fair value of our HTM securities totaled $5.7 billion, of which $2.4 billion was in an unrealized loss position, a decrease of 14% from $2.8 billion at December 31, 2017, primarily due to changes in interest rates, credit spreads and volatility. The associated unrealized losses increased from $12 million at December 31, 2017 to $16 million at December 31, 2018.

HTM securities totaled $5.9 billion at December 31, 2017, relatively unchanged from December 31, 2016. At December 31, 2017, the estimated fair value of our HTM securities in an unrealized loss position totaled $2.8 billion, a decrease of 19% from $3.4 billion at December 31, 2016, primarily due to changes in interest rates, credit spreads and volatility. The associated unrealized losses decreased from $23 million at December 31, 2016 to $12 million at December 31, 2017.

Interest-Rate Payment Terms. Our AFS and HTM securities are presented below at amortized cost by interest-rate payment terms ($ amounts in millions).

	December 31, 2018		December 31, 2017	
Interest-Rate Payment Terms	**Amortized Cost**	**% of Total**	**Amortized Cost**	**% of Total**
AFS Securities:				
Total non-MBS fixed rate	$ 4,240	55%	$ 4,357	62%
MBS:				
Fixed-rate	3,411	45%	2,463	35%
Variable-rate	—	—%	187	3%
Total MBS	3,411	45%	2,650	38%
Total AFS securities	$ 7,651	100%	$ 7,007	100%
HTM Securities:				
MBS and ABS:				
Fixed-rate	$ 936	16%	$ 1,141	19%
Variable-rate	4,738	84%	4,757	81%
Total MBS and ABS	5,674	100%	5,898	100%
Total HTM securities	$ 5,674	100%	$ 5,898	100%
Investment Securities:				
Total fixed-rate	$ 8,587	64%	$ 7,961	62%
Total variable-rate	4,738	36%	4,944	38%
Total investment securities	$ 13,325	100%	$ 12,905	100%

The mix of fixed- vs. variable-rate securities at December 31, 2018 was slightly higher compared to December 31, 2017, primarily due to purchases of fixed-rate MBS and the sale of our private-label RMBS and ABS. However, all of the fixed-rate AFS securities are swapped to effectively create variable-rate securities, consistent with our balance sheet strategies to manage interest-rate risk.

Issuer Concentration. As of December 31, 2018, we held securities classified as AFS and HTM from the following issuers with a carrying value greater than 10% of our total capital. The MBS issuers listed below include one or more trusts established as separate legal entities by the issuer. Therefore, the associated carrying and estimated fair values are not necessarily indicative of our exposure to that issuer ($ amounts in millions).

	December 31, 2018	
Name of Issuer	**Carrying Value**	**Estimated Fair Value**
Non-MBS:		
Fannie Mae debentures	$ 1,606	$ 1,606
Federal Farm Credit Bank debentures	1,852	1,852
Freddie Mac debentures	647	647
MBS:		
Freddie Mac	1,149	1,150
Fannie Mae	4,483	4,475
Ginnie Mae	3,469	3,478
Subtotal	13,206	13,208
All other issuers	172	172
Total investment securities	$ 13,378	$ 13,380

Investments by Year of Redemption. The following table provides, by year of redemption, carrying values and yields for AFS and HTM securities as well as carrying values for short-term investments as of December 31, 2018 ($ amounts in millions).

Investments	**Due in one year or less**	**Due after one year through five years**	**Due after five years through ten years**	**Due after ten years**	**Total**
AFS securities:					
GSE and TVA debentures	$ 508	$ 1,947	$ 1,668	$ 154	$ 4,277
GSE MBS [1]	—	46	3,240	141	3,427
Total AFS securities	508	1,993	4,908	295	7,704
HTM securities:					
Other U.S. obligations - guaranteed MBS [1]	—	—	1	3,468	3,469
GSE MBS [1]	74	843	258	1,030	2,205
Total HTM securities	74	843	259	4,498	5,674
Total investment securities	582	2,836	5,167	4,793	13,378
Short-term investments:					
Interest-bearing deposits	1,211	—	—	—	1,211
Securities purchased under agreements to resell	3,213	—	—	—	3,213
Federal funds sold	3,085	—	—	—	3,085
Total short-term investments	7,509	—	—	—	7,509
Total investments, carrying value	$ 8,091	$ 2,836	$ 5,167	$ 4,793	$ 20,887
Yield on AFS securities	1.54%	1.74%	2.74%	3.26%	
Yield on HTM securities	4.27%	3.55%	2.86%	2.37%	
Yield on total investment securities	1.89%	2.29%	2.75%	2.43%	

(1) Year of redemption on our MBS is based on contractual maturity. Their actual maturities will likely differ from contractual maturities as borrowers have the right to prepay their obligations with or without prepayment fees.

Based on contractual maturities at December 31, 2018, of the total investment securities, due in one year or less was 4%, due after one year through five years was 21%, due after 5 years through 10 years was 39%, and due after 10 years was 36%.

For more information about our investments, see *Notes to Financial Statements - Note 4 - Investment Securities*. For more information on the credit quality of our investments, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Management - Credit Risk Management - Investments*.

Total Liabilities. Total liabilities were $62.4 billion at December 31, 2018, an increase of 5% compared to December 31, 2017, substantially due to an increase in consolidated obligations.

Deposits (Liabilities). Total deposits were $500 million at December 31, 2018, a decrease of 11% compared to December 31, 2017. These deposits represent a relatively small portion of our funding. The balances of these accounts can fluctuate from period to period and vary depending upon such factors as the attractiveness of our deposit pricing relative to the rates available on alternative money market instruments, members' preferences with respect to the maturity of their investments, and members' liquidity.

The following table presents the average amount of, and the average rate paid on, each category of deposits that exceeds 10% of average total deposits ($ amounts in millions).

	Years Ended December 31,		
Category of Deposit	**2018**	**2017**	**2016**
Non-interest-bearing deposits:			
Average balance	$ 57	$ 42	$ 30
Interest-bearing deposits - demand and overnight			
Average balance	465	504	591
Average rate paid	1.64%	0.72%	0.11%
Total average rate paid on interest-bearing deposits	1.64%	0.72%	0.11%

We had no individual time deposits in amounts of $100 thousand or more at December 31, 2018 or 2017.

Consolidated Obligations. The overall balance of our consolidated obligations fluctuates in relation to our total assets and the availability of alternative sources of funds. The carrying value of consolidated obligations outstanding at December 31, 2018 totaled $61.2 billion, a net increase of $2.9 billion, or 5%, from December 31, 2017. This increase supported the Bank's growth in assets.

The composition of our consolidated obligations can fluctuate significantly based on comparative changes in their cost levels, supply and demand conditions, demand for advances, and our overall balance sheet management strategy. Discount notes are issued to provide short-term funds, while CO bonds are generally issued to provide a longer-term mix of funding.

The following table presents a breakdown by term of our consolidated obligations outstanding ($ amounts in millions).

	December 31, 2018		December 31, 2017	
By Term	**Par Value**	**% of Total**	**Par Value**	**% of Total**
Consolidated obligations due in 1 year or less:				
Discount notes	$ 20,953	34%	$ 20,394	35%
CO bonds	18,457	30%	14,021	24%
Total due in 1 year or less	39,410	64%	34,415	59%
Long-term CO bonds	21,918	36%	23,962	41%
Total consolidated obligations	$ 61,328	100%	$ 58,377	100%

The table below presents certain information for each category of our short-term borrowings for which the average balance outstanding during each year exceeded 30% of capital at the respective year end ($ amounts in millions).

	Discount Notes			CO Bonds With Original Maturities of One Year or Less		
Short-term Borrowings	**2018**	**2017**	**2016**	**2018**	**2017**	**2016**
Outstanding at year end	$20,896	$20,358	$16,802	$ 8,001	$ 6,795	$ 7,499
Weighted average rate at year end	2.34%	1.22%	0.51%	2.38%	1.26%	0.66%
Daily average outstanding for the year	$21,265	$20,116	$16,129	$ 6,809	$ 6,315	$ 8,656
Weighted average rate for the year	1.84%	0.91%	0.40%	1.88%	0.91%	0.52%
Highest outstanding at any month end	$24,772	$22,413	$19,511	$ 8,001	$ 7,279	$10,247

We seek to maintain a sufficient liquidity and funding balance between our financial assets and financial liabilities. Additionally, the FHLBanks work collectively to manage FHLB System-wide liquidity and funding and jointly monitor System-wide refinancing risk. In managing and monitoring the amounts of assets that require refunding, the FHLBanks may consider contractual maturities of the financial assets, as well as certain assumptions regarding expected cash flows (i.e., estimated prepayments and scheduled amortizations). For more detailed information regarding contractual maturities of certain of our financial assets and liabilities, see *Notes to Financial Statements - Note 4 - Investment Securities*, *Note 5 - Advances*, and *Note 11 - Consolidated Obligations*.

Derivatives. We classify interest-rate swaps as derivative assets or liabilities according to the net estimated fair value of the interest-rate swaps with each counterparty. As of December 31, 2018 and 2017, we had derivative assets, net of collateral held or posted, including accrued interest, with estimated fair values of $117 million and $128 million, respectively, and derivative liabilities, net of collateral held or posted, including accrued interest, with estimated fair values of $21 million and $3 million, respectively. Increases and decreases in the fair value of derivatives are primarily caused by changes in the derivatives' respective underlying interest-rate indices.

The volume of derivative hedges is often expressed in terms of notional amounts, which is the amount upon which interest payments are calculated. The following table presents the notional amounts by type of hedged item whether or not it is in a qualifying hedge relationship ($ amounts in millions).

Hedged Item	**December 31, 2018**	**December 31, 2017**
Advances	$ 13,980	$ 11,296
Investments	8,562	7,238
Mortgage loans	1,038	144
CO bonds	14,239	13,524
Discount notes	—	298
Total notional	$ 37,819	$ 32,500

Total Capital. Total capital at December 31, 2018 was $3.1 billion, a net increase of $105 million, or 4%, compared to December 31, 2017. This increase was due to the growth of retained earnings and additional capital stock issued to members. These increases were partially offset by the reduction in AOCI, primarily a result of unrealized losses on AFS securities and the recognition of the gain on the sale of our private-label RMBS in other income.

The following table presents a percentage breakdown of the components of GAAP capital.

Components	**December 31, 2018**	**December 31, 2017**
Capital stock	63%	63%
Retained earnings	36%	33%
AOCI	1%	4%
Total GAAP capital	100%	100%

The mix of the components of GAAP capital were impacted by the sale of our private-label RMBS.

The following table presents a reconciliation of GAAP capital to regulatory capital ($ amounts in millions).

Reconciliation	December 31, 2018	December 31, 2017
Total GAAP capital	$ 3,051	$ 2,946
Exclude: AOCI	(42)	(112)
Add: MRCS	169	164
Total regulatory capital	$ 3,178	$ 2,998

Liquidity and Capital Resources

Liquidity. We manage our liquidity in order to be able to satisfy our members' needs for short- and long-term funds, repay maturing consolidated obligations, redeem or repurchase excess stock and meet other financial obligations. We are required to maintain liquidity in accordance with the Bank Act, certain Finance Agency regulations and related policies established by our management and board of directors.

Our primary sources of liquidity are holdings of cash and short-term investments and the issuance of consolidated obligations. Our cash and short-term investments portfolio totaled $7.6 billion at December 31, 2018. Our short-term investments generally consist of high-quality financial instruments, many of which mature overnight. We manage our short-term investment portfolio in response to economic conditions and market events and uncertainties. As a result, the overall level of our short-term investment portfolio may fluctuate accordingly.

Historically, our status as a GSE and favorable credit ratings have provided us with excellent access to capital markets. Our consolidated obligations are not obligations of, and they are not guaranteed by, the United States government, although they have historically received the same credit rating as the United States government bond credit rating. The rating has not been affected by rating actions taken with respect to individual FHLBanks. During the year ended December 31, 2018, we maintained sufficient access to funding; our net proceeds from the issuance of consolidated obligations totaled $369.5 billion.

In addition, by statute, the United States Secretary of the Treasury may acquire our consolidated obligations up to an aggregate principal amount outstanding of $4.0 billion. The authority provided by this statute may be exercised only if alternative means cannot be effectively employed to permit us to continue to supply reasonable amounts of funds to the mortgage market, and the ability to supply such funds is substantially impaired because of monetary stringency and a high level of interest rates. Any funds borrowed would be repaid at the earliest practicable date. As of this date, this authority has never been exercised.

To protect us against temporary disruptions in access to the debt markets in response to increased capital market volatility, the Finance Agency currently requires us to: (i) maintain contingent liquidity sufficient to meet liquidity needs that shall, at a minimum, cover five calendar days of inability to access consolidated obligations in the debt markets; (ii) have available at all times an amount greater than or equal to our members' current deposits invested in specific assets; (iii) maintain, in the aggregate, unpledged qualifying assets in an amount at least equal to our participation in total consolidated obligations outstanding; and (iv) maintain, through short-term investments, an amount at least equal to our anticipated cash outflows under hypothetical adverse scenarios. For information concerning the Finance Agency's liquidity guidance, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Recent Accounting and Regulatory Developments - Legislative and Regulatory Developments*.

To support deposits, the Bank Act requires us to have at all times a liquidity deposit reserve in an amount equal to the current deposits received from our members invested in (i) obligations of the United States, (ii) deposits in eligible banks or trust companies, or (iii) advances with a maturity not exceeding five years. The following table presents our excess liquidity deposit reserves ($ amounts in millions).

	December 31, 2018	December 31, 2017
Liquidity deposit reserves	$ 33,109	$ 32,016
Less: total deposits	500	565
Excess liquidity deposit reserves	$ 32,609	$ 31,451

We must maintain assets that are free from any lien or pledge in an amount at least equal to the amount of our consolidated obligations outstanding from among the following types of qualifying assets:

- cash;
- obligations of, or fully guaranteed by, the United States;
- advances;
- mortgages that have any guaranty, insurance, or commitment from the United States or any agency of the United States; and
- investments described in Section 16(a) of the Bank Act, which include, among others, securities that a fiduciary or trustee may purchase under the laws of the state in which the FHLBank is located.

The following table presents the aggregate amount of our qualifying assets to the total amount of our consolidated obligations outstanding ($ amounts in millions).

	December 31, 2018	December 31, 2017
Aggregate qualifying assets	$ 65,158	$ 62,093
Less: total consolidated obligations outstanding	61,161	58,254
Aggregate qualifying assets in excess of consolidated obligations	$ 3,997	$ 3,839
Ratio of aggregate qualifying assets to consolidated obligations	1.07	1.07

We also maintain a contingency liquidity plan designed to enable us to meet our obligations and the liquidity needs of our members in the event of short-term capital market disruptions, or operational disruptions at our Bank and/or the Office of Finance.

New or amended regulatory guidance from the Finance Agency could continue to increase the amount and change the characteristics of liquidity that we are required to maintain. We have not identified any other trends, demands, commitments, or events that are likely to materially increase or decrease our liquidity.

Changes in Cash Flow. The cash flows from our assets and liabilities support our mission to provide our members with competitively priced funding, a reasonable return on their investment in our capital stock, and support for community investment activities. The balances of 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. However, our net cash flows from operations have been relatively stable. Net cash provided by operating activities was $353 million for the year ended December 31, 2018, compared to $264 million for the year ended December 31, 2017. The increase was primarily due to the impact of the change, by the derivatives clearinghouses, in the legal characterization of variation margin payments to be daily settled contracts. Net cash provided by operating activities was $264 million for the year ended December 31, 2017, compared to $239 million for the year ended December 31, 2016.

Capital Resources.

Total Regulatory Capital. The following table provides a breakdown of our outstanding capital stock, categorized by type of member institution, and MRCS ($ amounts in millions).

	December 31, 2018		December 31, 2017	
By Type of Member Institution	**Amount**	**% of Total**	**Amount**	**% of Total**
Depository institutions:				
Commercial banks and savings institutions	$ 985	47%	$ 945	47%
Credit unions	263	12%	240	12%
Total depository institutions	1,248	59%	1,185	59%
Insurance companies	683	33%	673	33%
CDFIs	—	—%	—	—%
Total capital stock, putable at par value	1,931	92%	1,858	92%
MRCS:				
Captive insurance companies	132	6%	152	7%
Former members [1]	37	2%	12	1%
Total MRCS	169	8%	164	8%
Total regulatory capital stock	$ 2,100	100%	$ 2,022	100%

[1] Balances at December 31, 2018 and 2017 include $1 million and $3 million, respectively, of MRCS that had reached the end of the five-year redemption period but will not be redeemed until the associated credit products and other obligations are no longer outstanding.

Our remaining captive insurance company members that do not meet the new definition of "insurance company" or fall within another category of institution that is eligible for FHLBank membership shall have their memberships terminated no later than February 19, 2021. Upon termination, all of their outstanding Class B capital stock will be repurchased or redeemed in accordance with the Final Membership Rule.

Excess Capital Stock. Capital stock that is not required as a condition of membership or to support outstanding obligations of members or former members to us is considered excess capital stock. In general, the level of excess capital stock fluctuates with our members' level of advances.

The following table presents the composition of our excess capital stock ($ amounts in millions).

Components	**December 31, 2018**	**December 31, 2017**
Member capital stock not subject to outstanding redemption requests	$ 450	$ 302
Member capital stock subject to outstanding redemption requests	1	4
MRCS	25	31
Total excess capital stock	$ 476	$ 337
Excess capital stock as a percentage of regulatory capital stock	23%	17%

The increase in excess stock during the year ended December 31, 2018 resulted primarily from advance activity and the reduction in required capital stock.

Finance Agency rules limit the ability of an FHLBank to issue excess stock under certain circumstances, including when its total excess stock exceeds 1% of total assets or if the issuance of excess stock would cause total excess stock to exceed 1% of total assets. Our excess stock at December 31, 2018 was 0.7% of our total assets. Therefore, subject to these regulatory limitations, we are currently permitted to issue new excess stock to members and distribute stock dividends, should we choose to do so.

Under our capital plan, we are not required to redeem excess stock from a member until five years after the earliest of (i) termination of the membership, (ii) our receipt of notice of voluntary withdrawal from membership, or (iii) the member's request for redemption of its excess stock. At our discretion, we may repurchase, and have repurchased from time to time, excess stock without a member request, upon approval of our board of directors and with 15 days' notice to the member in accordance with our capital plan.

Statutory and Regulatory Restrictions on Capital Stock Redemption. In accordance with the Bank Act, each class of FHLBank stock is considered putable by the member. However, there are significant statutory and regulatory restrictions on our obligation to redeem, or right to repurchase, the outstanding stock, including the following:

- We may not redeem or repurchase any capital stock if, following such action, we would fail to satisfy any of our minimum capital requirements. By law, no FHLBank stock may be redeemed or repurchased at any time at which we are undercapitalized.
- We may not redeem or repurchase any capital stock without approval of the Finance Agency if either our board of directors or the Finance Agency determines that we have incurred, or are likely to incur, losses resulting, or expected to result, in a charge against capital while such charges are continuing or expected to continue.

Additionally, we may not redeem or repurchase shares of capital stock from any member if (i) the principal or interest due on any consolidated obligation has not been paid in full when due; (ii) we fail to certify in writing to the Finance Agency 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; (iii) we notify the Finance Agency that we cannot provide the foregoing certification, 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 obligations; (iv) we actually fail to comply with statutory or regulatory liquidity requirements or to timely and fully meet all of our current obligations; or (v) we enter or negotiate to enter into an agreement with one or more FHLBanks to obtain financial assistance to meet our current obligations.

If, during the period between receipt of a stock redemption notification from a member and the actual redemption (which may last indefinitely if any of the restrictions on capital stock redemption discussed above have occurred), the Bank is liquidated, merged involuntarily, or merges upon our board of directors' approval or consent with one or more other FHLBanks, the consideration for the stock or the redemption value of the stock will be established after the settlement of all senior claims. Generally, no claims would be subordinated to the rights of our shareholders.

Our capital plan permits us, at our discretion, to retain the proceeds of redeemed or repurchased stock if we determine that there is an existing or anticipated collateral deficiency related to a member's obligations to us until the member delivers other collateral to us, such obligations have been satisfied or the anticipated collateral deficiency is otherwise resolved to our satisfaction.

If the Bank were to be liquidated, after payment in full to our creditors, our shareholders would be entitled to receive the par value of their capital stock as well as retained earnings, if any, in an amount proportional to the shareholder's allocation of total shares of capital stock at the time of liquidation. In the event of a merger or consolidation, our board of directors must determine the rights and preferences of our shareholders, subject to any terms and conditions imposed by the Finance Agency.

Capital Distributions. We may, but are not required to, pay dividends on our capital stock. Dividends are non-cumulative and may be paid in cash or Class B capital stock out of current net earnings or from unrestricted retained earnings, as authorized by our board of directors and subject to Finance Agency regulations. No dividend may be declared or paid if we are or would be, as a result of such payment, in violation of our minimum capital requirements. Moreover, we may not pay dividends if any principal or interest due on any consolidated obligation issued on behalf of any of the FHLBanks has not been paid in full or, under certain circumstances, if we fail to satisfy liquidity requirements under applicable Finance Agency regulations. For more information, see *Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*.

On February 19, 2019, our board of directors declared a cash dividend of 5.50% (annualized) on our Class B-1 capital stock and 4.40% (annualized) on our Class B-2 capital stock.

Restricted Retained Earnings. We allocate 20% of our net income each quarter to a restricted retained earnings account until the balance of that account equals at least 1% of the average balance of outstanding consolidated obligations for the previous quarter. These restricted retained earnings will not be available from which to pay dividends except to the extent the restricted retained earnings balance exceeds 1.5% of our average balance of outstanding consolidated obligations for the previous quarter. We do not expect either level to be reached for several years.

Adequacy of Capital. In addition to possessing the authority to prohibit stock redemptions, our board of directors has the right to require our members to make additional capital stock purchases as needed to satisfy statutory and regulatory capital requirements.

Our board of directors has a statutory obligation to review and adjust member capital stock requirements in order to comply with our minimum capital requirements, and each member must comply promptly with any such requirement. However, a member could reduce its outstanding business with us as an alternative to purchasing stock.

Our board of directors assesses the adequacy of our capital every quarter, prior to the declaration of our quarterly dividend, by reviewing various measures set forth in our Capital Markets Policy. We developed our Capital Markets Policy based on guidance from the Finance Agency.

We must maintain sufficient permanent capital to meet the combined credit risk, market risk and operations risk components of the risk-based capital requirement.

- **Permanent capital** is defined as the amount of our Class B stock (including MRCS) plus our retained earnings. We are required to maintain permanent capital at all times in an amount equal to our risk-based capital requirement, which includes the following components:
    - **Credit risk**, which represents the sum of our credit risk charges for all assets, off-balance sheet items and derivative contracts, calculated using the methodologies and risk weights assigned to each classification in the regulations;
    - **Market risk**, which represents the sum of 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 the amount by which the market value of total capital is less than 85% of the book value of total capital; and
    - **Operations risk**, which represents 30% of the sum of our credit risk and market risk capital requirements.

As presented in the following table, we were in compliance with the risk-based capital requirement at December 31, 2018 and 2017 ($ amounts in millions).

Risk-Based Capital Components	December 31, 2018	December 31, 2017
Credit risk	$ 307	$ 360
Market risk	298	336
Operations risk	182	208
Total risk-based capital requirement	$ 787	$ 904
Permanent capital	$ 3,178	$ 2,998

The decrease in our total risk-based capital requirement was primarily caused by a decrease in both the credit risk and market risk components. The decrease in credit risk was mainly the result of the sale of our private-label RMBS portfolio while the decrease in market risk was due to changes in portfolio composition and the market environment, including interest rates, spreads and volatility. The operations risk component is calculated as 30% of the credit and market risk capital components. Our permanent capital at December 31, 2018 remained well in excess of our total risk-based capital requirement.

By regulation, the Finance Agency may mandate us to maintain a greater amount of permanent capital than is generally required by the risk-based capital requirements as defined, in order to promote safe and sound operations. In addition, a Finance Agency rule authorizes the Director to issue an order temporarily increasing the minimum capital level for an FHLBank if the Director determines that the current level is insufficient to address such FHLBank's risks. The rule sets forth several factors that the Director may consider in making this determination.

Under the Dodd-Frank Act, as implemented by the Finance Agency, each FHLBank is required to perform an annual stress test to assess the potential impact of various financial and economic conditions on capital adequacy. Our annual stress test was completed and published in November 2018, based on our financial condition as of December 31, 2017, using the methodology prescribed by the Finance Agency. Our stress test results demonstrated our capital adequacy under the severely adverse economic scenario defined by the Finance Agency.

The Finance Agency has established four capital classifications for the FHLBanks - adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized - and implemented the prompt corrective action provisions of HERA that apply to FHLBanks that are not deemed to be adequately capitalized. The Finance Agency determines our capital classification on at least a quarterly basis. If we are determined to be other than adequately capitalized, we would become subject to additional supervisory authority by the Finance Agency. Before implementing a reclassification, the Director would be required to provide us with written notice of the proposed action and an opportunity to respond. The Finance Agency's most recent determination is that we hold sufficient capital to be adequately capitalized and meet both our minimum capital and risk-based capital requirements. For more information, see *Notes to Financial Statements - Note 13 - Capital*.

Off-Balance Sheet Arrangements

The following table summarizes our off-balance-sheet arrangements (notional $ amounts in millions).

Types	December 31, 2018
Letters of credit outstanding	$ 340
Unused lines of credit [1]	989
Commitments to fund additional advances [2]	32
Commitments to fund or purchase mortgage loans, net [3]	44
Unsettled CO bonds, at par	1

(1) Maximum line of credit amount is $50,000.
(2) Generally for periods up to six months.
(3) Generally for periods up to 91 days.

A standby letter of credit is a financing arrangement between us and one of our members for which we charge a fee. If we are required to make payment on a beneficiary's draw, the payment amount is converted into a collateralized advance to the member. The original terms of these standby letters of credit, including related commitments, range from 3 months to 20 years. Lines of credit allow members to fund short-term cash needs (up to one year) without submitting a new application for each request for funds.

Our MPP was designed to require loan servicers to foreclose and liquidate in the servicer's name rather than in our name. As the servicer progresses through the process from foreclosure to liquidation, we are paid in full for all unpaid principal and accrued interest on the loan through the normal remittance process and the servicer files a claim against the various credit enhancements for reimbursement of losses incurred. The claim is then reviewed and paid as appropriate under the various credit enhancement policies or guidelines. Subsequently, the servicer may submit claims to us for any remaining losses. At December 31, 2018, principal previously paid in full by our MPP servicers totaling $2 million remains subject to potential claims by those servicers for any losses resulting from past or future liquidations of the underlying properties. An estimate of the losses is included in the MPP allowance for loan losses. For more information, see *Notes to Financial Statements - Note 1 - Summary of Significant Accounting Policies* and *Note 7 - Allowance for Credit Losses*. For more information on additional commitments and contingencies, see *Notes to Financial Statements - Note 18 - Commitments and Contingencies*.

Contractual Obligations

The following table presents the payments due or expiration terms by specified contractual obligation type ($ amounts in millions).

December 31, 2018	< 1 year	1 to 3 years	3 to 5 years	> 5 years	Total
Contractual obligations:					
Long-term debt [1]	$ 18,457	$ 11,464	$ 4,022	$ 6,432	$ 40,375
Operating leases	—	1	—	1	2
Benefit payments [2]	5	6	11	6	28
MRCS [3]	1	9	27	132	169
Total	$ 18,463	$ 11,480	$ 4,060	$ 6,571	$ 40,574

(1) Includes CO bonds reported at par and based on contractual maturities but excludes discount notes due to their short-term nature. For more information on consolidated obligations, see *Notes to Financial Statements - Note 11 - Consolidated Obligations*.

(2) Amounts represent actuarial estimates of future benefit payments in accordance with the provisions of our SERP. For more information, see *Notes to Financial Statements - Note 15 - Employee and Director Retirement and Deferred Compensation Plans*.

(3) For more information, see *Notes to Financial Statements - Note 13 - Capital*.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with GAAP requires management to make a number of judgments, estimates, and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities (if applicable), and the reported amounts of income and expenses during the reporting period. We review these estimates and assumptions based on historical experience, changes in business conditions and other relevant factors that we believe to be reasonable under the circumstances. Changes in estimates and assumptions have the potential to significantly affect our financial position and results of operations. In any given reporting period, our actual results may differ from the estimates and assumptions used in preparing our financial statements.

We determined that three of our accounting policies and estimates are critical because they require management to make particularly difficult, subjective, and/or complex judgments about matters that are inherently uncertain and because of the likelihood that materially different amounts could be reported under different conditions or using different assumptions. These accounting policies pertain to:

- Derivatives and hedging activities (for more information, see *Notes to Financial Statements - Note 9 - Derivatives and Hedging Activities*);
- Fair value estimates (for more information, see *Notes to Financial Statements - Note 17 - Estimated Fair Values*); and
- Provision for credit losses (for more information, see *Notes to Financial Statements - Note 7 - Allowance for Credit Losses*).

We believe the application of our accounting policies on a consistent basis enables us to provide financial statement users with useful, reliable and timely information about our results of operations, financial position and cash flows.

Accounting for Derivatives and Hedging Activities. All derivatives are recorded in the statement of condition at their estimated fair values. Changes in the estimated fair value of our derivatives are recorded in current period earnings regardless of how changes in the estimated fair value of the assets or liabilities being hedged may be treated. Therefore, even though derivatives are used to mitigate market risk, derivatives introduce the potential for earnings volatility. Specifically, a mismatch can exist between the timing of income and expense recognition from assets or liabilities and the income effects of derivative instruments positioned to mitigate the market risk associated with those assets or liabilities. Therefore, during periods of significant changes in interest rates and other market factors, our earnings may experience greater volatility.

Generally, we strive to use derivatives that effectively hedge specific assets or liabilities and qualify for fair-value hedge accounting. Fair-value hedge accounting allows for offsetting changes in the estimated fair value attributable to the hedged risk in the hedged item to also be recorded in current period earnings.

Although substantially all of our derivatives qualify for fair-value hedge accounting, we treat all derivatives that do not qualify for fair-value hedge accounting as economic hedges for asset/liability management purposes. The changes in the estimated fair value of these economic hedges are recorded in other income as net gains (losses) on derivatives and hedging activities with no offsetting fair value adjustments for the hedged assets, liabilities, or firm commitments.

The use of estimates based on market prices to determine the derivative's estimated fair value can have a significant impact on current period earnings for all hedges, both those in fair-value hedging relationships and those in economic hedging relationships. Although this estimation and valuation process can cause earnings volatility during the periods the derivative instruments are held, the estimation and valuation process for hedges that qualify for fair-value hedge accounting does not have any net long-term economic effect or result in any net cash flows if the derivative and the hedged item are held to maturity. Since these estimated fair values eventually return to zero (or par value) on the maturity date, the effect of such fluctuations throughout the hedge period is usually only a timing issue.

Fair Value Estimates. We report certain assets and liabilities on the statement of condition at estimated fair value, including investments classified as AFS, grantor trust assets, and all derivatives. "Fair value" is defined as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date (i.e., an exit price). We are required to consider factors specific to the asset or liability, the principal or most advantageous market for the asset or liability, and the participants with whom we would transact in that market. In general, the transaction price will equal the exit price and, therefore, represents the fair value of the asset or liability at initial recognition.

Estimated fair values are based on quoted market prices or market-based prices, if such prices are available. If quoted market prices or market-based prices are not available, estimated fair values are determined based on valuation models that use either:

- discounted cash flows, using market estimates of interest rates and volatility; or
- dealer prices on similar instruments.

For external pricing models, we review the vendors' pricing processes, methodologies, and control procedures for reasonableness. For internal pricing models, the underlying assumptions are based on management's best estimates for:

- discount rates;
- prepayments;
- market volatility; and
- other factors.

The assumptions used in both external and internal pricing models could have a significant effect on the reported fair values of assets and liabilities, including the related income and expense. The use of different assumptions, as well as changes in market conditions, could result in materially different values. We continue to refine our valuation methodologies as markets and products develop and the pricing for certain products becomes more or less transparent.

We categorize our financial instruments reported at estimated fair value into a three-level hierarchy. The valuation hierarchy is based upon the transparency (observable or unobservable) of inputs to the valuation of an asset or liability as of the measurement date. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect our market assumptions. Level 1 instruments are those for which inputs to the valuation methodology are observable and are derived from quoted prices (unadjusted) for identical assets or liabilities in active markets that we can access on the measurement date. Level 2 instruments are those for which inputs are observable, either directly or indirectly, and include quoted prices for similar assets and liabilities. Finally, level 3 instruments are those for which inputs are unobservable or are unable to be corroborated by external market data.

Provision for Credit Losses.

Mortgage Loans Acquired under the MPP. Our loan loss allowance policy requires management to determine if it is probable that impairment has occurred in the mortgage loan portfolio as of the statement of condition date and whether the amount of loss can be reasonably estimated. Losses shall not be recognized before it is probable that they have been incurred, even though it may be probable based on past experience that losses will be incurred in the future. Probable impairment occurs when management determines, using current and historical information and events, that it is likely that not all amounts due according to the contractual terms of the loan agreement will be collected by the Bank.

We have developed a systematic approach for reviewing the adequacy of the allowance for loan losses. Using this methodology, we perform a review designed to identify probable impairment as well as determine a reasonable estimate of loss, if any. This review consists of a separate review of (i) performing conventional loans collectively evaluated for impairment, (ii) delinquent conventional loans collectively evaluated for impairment, and (iii) certain other conventional loans individually evaluated for impairment. FHA loans are government-guaranteed and, consequently, we have determined that no allowance for losses is necessary for such loans.

For performing conventional loans current to 179 days past due and collectively evaluated for impairment, our analysis incorporates the use of a recognized third-party credit and prepayment model to estimate potential ranges of credit loss exposure. The loss projection is based upon distinct underlying loan characteristics, including loan vintage (year of origination), geographic location, credit support features and other factors, and a projected migration of loans through the various stages of delinquency.

For delinquent conventional loans past due 180 days or more and collectively evaluated for impairment, we evaluate the pools based on current and historical information and events.

Certain conventional mortgage loans that are impaired, primarily TDRs, are specifically identified for purposes of calculating the allowance for loan losses. The measurement of the allowance for individually evaluated loans considers loan-specific attribute data similar to loans evaluated on a collective basis.

Our allowance for loan losses also includes specifically identified probable claims by servicers for any remaining losses of principal on delinquent loans that were previously paid in full by the servicers, and thus no longer included in the UPB on the statement of condition. We individually evaluate the properties included in this balance and obtain HUD statements, sales listings or other evidence of current expected liquidation amounts.

Our allowance for loan losses also compares, or benchmarks, our estimated losses on conventional mortgage loans, after credit enhancements, to actual losses occurring in the portfolio. Further, the third-party credit and prepayment model serves as a secondary review of the allowance for loan losses determined using the systematic approach. The projected losses from the model have historically been lower than our estimate of loan losses under the systematic approach.

These estimates require significant judgments, especially considering the inability to readily determine the fair value of all underlying properties and the uncertainty in other macroeconomic factors that make estimating defaults and severity imprecise. Because of variability in the data underlying the assumptions made in the process of determining the allowance for loan losses, estimates of the portfolio's inherent risks will change as warranted by changes in the economy. The degree to which any particular change would affect the allowance for loan losses would depend on the severity of the change.

We consider an adverse scenario whereby we use a haircut on our underlying collateral values of 20% for delinquent conventional loans, including individually evaluated loans. We consider such a haircut to represent the most distressed scenario that is reasonably possible to occur over the loss emergence period of 24 months. In this distressed scenario, while holding all other assumptions constant, our estimated incurred losses remaining after borrowers' equity, but before credit enhancements, would increase by approximately $2.2 million. However, such increase would be substantially offset by credit enhancements. Therefore, the allowance for loan losses continues to be based upon our best estimate of the probable losses over the loss emergence period that would not be recovered from the credit enhancements.

Recent Accounting and Regulatory Developments

Accounting Developments. For a description of how recent accounting developments may impact our financial condition, results of operations or cash flows, see *Notes to Financial Statements - Note 2 - Recently Adopted and Issued Accounting Guidance*.

Legislative and Regulatory Developments.

Final Rules.

Finance Agency Final Rule on FHLBank Capital Requirements. On February 20, 2019, the Finance Agency published a final rule, effective January 1, 2020, that adopts, with amendments, Finance Board regulations pertaining to the capital requirements for the FHLBanks. The final rule carries over most of the prior Finance Board regulations without material change, but substantively revises the credit risk component of the risk-based capital requirement, as well as the limitations on extensions of unsecured credit. The main revisions remove requirements that we calculate credit risk capital charges and unsecured credit limits based on ratings issued by an NRSRO, and instead require that we establish and use our own internal rating methodology. The final rule imposes a new credit risk capital charge for cleared derivatives. In addition, the final rule revises the percentages used (in the regulation's tables) to calculate credit risk capital charges for advances and for non-mortgage assets. The final rule also rescinds certain contingency liquidity requirements that were part of the Finance Board regulations, because these requirements are now addressed in Finance Agency Advisory Bulletin 2018-07, "Federal Home Loan Bank Liquidity Guidance," which is discussed below.

We do not expect this rule to materially affect our financial condition or results of operations.

FDIC Final Rule on Reciprocal Deposits. On February 4, 2019, the FDIC published a final rule, which became effective March 6, 2019, that implements Section 202 of the Economic Growth, Regulatory Relief, and Consumer Protection Act, relating to the treatment of "reciprocal deposits." For certain insured depository institutions ("depositories") the final rule exempts certain reciprocal deposits - deposits acquired by a depository from a network of participating depositories that enables depositors to receive FDIC insurance coverage for the entire amount of their deposits - from FDIC restrictions on brokered deposits. Under the rule, well-capitalized and well-rated depositories are not required to treat reciprocal deposits as brokered deposits up to the lesser of twenty percent of their total liabilities or $5 billion. Reciprocal deposits held by depositories that are not well-capitalized and well-rated may also be excluded from brokered deposit treatment in certain circumstances.

We continue to evaluate the potential impact of the final rule, but currently do not expect the rule to materially affect our financial condition or results of operations. The rule could, however, enhance depositories' liquidity by increasing the attractiveness of deposits that exceed FDIC insurance limits. This could affect the demand for certain advance products.

Finance Agency Final Rule on Golden Parachute and Indemnification Payments. On December 20, 2018, the Finance Agency published a final rule, which took effect January 22, 2019, on golden parachute and indemnification payments ("Golden Parachute Rule") to better align the rule with the Finance Agency's supervisory concerns and reduce administrative and compliance burdens. The Golden Parachute Rule sets forth the standards the Finance Agency would take into consideration when limiting or prohibiting golden parachute and indemnification payments by an FHLBank or the Office of Finance to an entity-affiliated party when such entity is in a troubled condition, in conservatorship or receivership, or insolvent. The final rule amendments focus the standards on payments to and agreements with executive officers, broad-based plans covering large numbers of employees (such as severance plans), and payments made to non-executive-officer employees who may have engaged in certain types of wrongdoing.

We do not expect this rule to materially affect our financial condition or results of operations.

Finance Agency Final Rule Amending AHP Regulations. On November 28, 2018, the Finance Agency published a final rule that amends the operating requirements of the FHLBanks' AHP. The final rule retains a scoring criteria method for awarding competitive AHP subsidies, but allows us to create multiple pools of competitive funds in order to target specific affordable housing needs in our district. The final rule amendments also:

- Revise the scoring criteria to establish new scoring priorities;
- Remove the retention agreement requirement on owner-occupied units using the subsidy solely for rehabilitation;
- Increase the per-household set-aside grant amount to $22,000 with an annual housing price inflation adjustment (up from the current fixed limit of $15,000);
- Clarify the requirements for remediating AHP noncompliance;
- Prohibit our board of directors from delegating approval of AHP strategic policy decisions to a committee; and
- Further align AHP monitoring with certain federal government funding programs.

The majority of the final rule's provisions take effect January 1, 2021, while the owner-occupied retention agreement requirements take effect January 1, 2020. We do not expect this rule to materially affect our financial condition or results of operations.

OCC, FRB, FDIC, Farm Credit Administration and Finance Agency Final Rule on Margin and Capital Requirements for Covered Swap Entities. On October 10, 2018, the OCC, FRB, FDIC, Farm Credit Administration, and the Finance Agency published a final rule, which became effective November 9, 2018, that amended each agency's rule on Margin and Capital Requirements for Covered Swap Entities ("Swap Margin Rules") to conform the definition of "eligible master netting agreement" to the FRB's, OCC's and FDIC's final qualified financial contract ("QFC") rules. The final rule also clarifies that a legacy swap would not be deemed to be a covered swap under the Swap Margin Rules if it is amended to conform to the QFC rules. The QFC rules require regulated entities of the OCC, FRB and FDIC to amend covered QFCs to limit a regulated entity's counterparty's immediate termination or exercise of default rights in the event of bankruptcy or receivership of the regulated entity or its affiliate(s).

We do not expect this rule to materially affect our financial condition or results of operations.

Finance Agency Final Rule on Indemnification Payments. On October 4, 2018, the Finance Agency published a final rule establishing standards for identifying when an indemnification payment by an FHLBank or the Office of Finance to an officer, director, employee, or other affiliated party in connection with an administrative proceeding or civil action instituted by the Finance Agency is prohibited or permissible. The rule generally prohibits these payments except in the following circumstances:

- Premiums for any commercial insurance or fidelity bonds for directors and officers, to the extent that the insurance or fidelity bond covers expenses and restitution, but not a judgment in favor of the Finance Agency or a civil money penalty imposed by the Finance Agency;
- Expenses of defending an action, subject to an agreement to repay those expenses in certain instances; and
- Amounts due under an indemnification agreement entered into with a named affiliated party on or prior to September 20, 2016 (the date the rule was proposed).

The rule also outlines the process the board of directors must undertake prior to making a permitted payment related to expenses of defending an action brought by the Finance Agency. The rule became effective November 5, 2018.

Although we do not expect the rule to materially impact our financial condition or results of operations, certain provisions of the rule may adversely affect our ability to attract and retain highly-qualified and eligible individuals to serve on our board of directors.

Federal Reserve Board Adoption of Single-Counterparty Credit Limits for Bank Holding Companies and Foreign Banking Organizations. On August 6, 2018, the Board of Governors of the Federal Reserve System published a final rule, which became effective October 5, 2018, establishing single-counterparty credit limits applicable to bank holding companies and foreign banking organizations with total consolidated assets of $250 billion or more, including global systemically important bank holding companies ("GSIBs") in the United States. These entities are considered to be covered companies under the rule. The FHLBanks are themselves exempt from the limits and reporting requirements contained in this rule. However, credit exposure to individual FHLBanks must be monitored, and reported on as required, by any entity that is a covered company under this rule.

Under the final rule, a covered company and its subsidiaries may not have aggregate net credit exposure to an FHLBank (and, in certain cases, economically interdependent entities) in excess of 25 percent of the company's tier 1 capital. Such credit exposure does not include advances from an FHLBank, but generally includes collateral pledged to an FHLBank in excess of a covered company's outstanding advances. Also included towards a covered company's net credit exposure is its investment in FHLBank capital stock and debt instruments, deposits with an FHLBank, FHLBank-issued letters of credit where a covered company is the named beneficiary, and other obligations to an FHLBank, including repurchase or reverse repurchase transactions net of collateral that create a credit exposure to an FHLBank. Intra-day exposures are exempt from the final rule.

With respect to the FHLBanks' consolidated obligations held by a covered company, the company must monitor, and report on as required, its credit exposure for such obligations. It is not clear if the Federal Reserve will require consolidated obligations to be aggregated with other exposures to an FHLBank or the FHLBank System.

The final rule gives the GSIBs until January 1, 2020 to comply, and all other covered companies will have until July 1, 2020 to comply.

We do not expect the rule to materially affect our financial condition or results of operations.

Proposed Rule.

Finance Agency Proposed Rule on Housing Goals. On November 2, 2018, the Finance Agency published a proposed rule that would amend the existing FHLBank Housing Goals regulation. The proposed amendments are intended to replace existing FHLBank housing goals with a more streamlined set of goals. Under the current rule, housing goals are established retrospectively. The proposed rule, however, would establish the levels of annual housing goals in advance, thereby eliminating uncertainty about the achievement of housing goals from year-to-year. If adopted as proposed, the proposed amendments would:

- Eliminate the $2.5 billion AMA mortgage purchase volume threshold that triggers the application of housing goals;
- Establish the target level for the new prospective AMA mortgage purchase housing goal at 20 percent of total AMA mortgage purchases that are for very low-income families, low-income families, or families in low-income areas, and require that at least 75 percent of all mortgage purchases that count toward the goal be for borrowers with incomes at or below 80 percent of the area median income;
- Establish a goal that 50 percent of AMA program users meet the definition of "small members" whose assets do not exceed the "community financial institution" asset cap, which under Finance Agency regulations is currently $1.199 billion; and
- Allow the FHLBanks to request FHFA approval of alternative target percentages for mortgage purchase housing goals and small member participation goals.

We submitted a joint comment letter with the other FHLBanks on the proposed rule on January 29, 2019. We continue to evaluate the proposed rule but do not expect this rule, if adopted as proposed, to materially affect our financial condition or results of operations.

Advisory Bulletin.

Finance Agency Advisory Bulletin 2018-07 Federal Home Loan Bank Liquidity Guidance. On August 23, 2018, the Finance Agency issued an Advisory Bulletin on FHLBank liquidity ("Liquidity Guidance AB") that communicates the Finance Agency's expectations with respect to the maintenance of sufficient liquidity to enable us to provide advances and letters of credit for members. Contemporaneously with the issuance of the Liquidity Guidance AB, the Finance Agency issued a supervisory letter that identifies initial thresholds for measures of liquidity within the established ranges set forth in the Liquidity Guidance AB.

The Liquidity Guidance AB provides direction on the level of on-balance sheet liquid assets related to base case liquidity. As part of the base case liquidity measure, the Liquidity Guidance AB also includes a separate provision covering off-balance sheet commitments for standby letters of credit ("SLOCs"). In addition, the Liquidity Guidance AB provides direction related to asset/liability maturity funding gap limits.

With respect to base case liquidity, the Finance Agency revised previous guidance that required us to assume a 5-day period without access to capital markets due to a change in certain assumptions underlying that guidance. Under the Liquidity Guidance AB, we are required to maintain positive cash flow assuming no access to capital markets and assuming renewal of all maturing advances for a period of between ten to thirty calendar days. The Liquidity Guidance AB also sets forth the initial cash flow assumptions and formula to calculate base case liquidity. For SLOCs, the Liquidity Guidance AB states that we should maintain a liquidity reserve of between one percent and 20 percent of our outstanding SLOC commitments.

As to funding gaps and possible asset and liability mismatches, the Liquidity Guidance AB provides direction on maintaining appropriate funding gap limits for three-month (-10 to -20 percent) and one-year (-25 to -35 percent) maturity horizons. The Liquidity Guidance AB provides for these limits to reduce the liquidity risks associated with a mismatch in asset and liability maturities, including an undue reliance on short-term debt funding.

The Liquidity Guidance AB also addresses liquidity stress testing, contingency funding plans and an adjustment to the core mission achievement calculation. Portions of the Liquidity Guidance AB relating to funding gap measures were implemented on December 31, 2018; for the SLOC component of the Base Case Liquidity provisions, the implementation date is March 31, 2019. Phased-in measures for the cash flow component of the Base Case Liquidity provisions will begin on March 31, 2019 with full implementation on December 31, 2019.

The Liquidity Guidance AB may require us to hold an additional amount of liquid assets, which could reduce our ability to invest in higher-yielding assets. Further, our cost of funding may increase if we were required to achieve the appropriate funding gap with longer-term funding.

Risk Management

We have exposure to a number of risks in pursuing our business objectives. These risks may be broadly classified as market, credit, liquidity, operational, and business. Market risk is discussed in detail in *Item 7A. Quantitative and Qualitative Disclosures about Market Risk*.

Active risk management is an integral part of our operations because these risks are an inherent part of our business activities. We manage these risks by, among other actions, setting and enforcing appropriate limits and developing and maintaining internal policies and processes to ensure an appropriate risk profile. In order to enhance our ability to manage Bank-wide risk, our risk management function is structured to segregate risk measurement, monitoring, and evaluation from our business units where risk-taking occurs through financial transactions and positions.

The Finance Agency has established certain risk-related compliance requirements. In addition, our board of directors has established a Risk Appetite Statement that summarizes the amounts, levels and types of enterprise-wide risk that our management is authorized to undertake in pursuit of achieving our mission and executing our strategic plans. The Risk Appetite Statement incorporates high level qualitative and quantitative risk limits and tolerances from our Enterprise Risk Management Policy, which serves as a key policy to address our exposures to market, credit, liquidity, operational and business risks, and from various other key risk-related policies approved by our board of directors, including the Operational Risk Management Policy, the Model Risk Management Policy, the Credit Policy, the Capital Markets Policy, and the Enterprise Information Security Policy.

Effective risk management programs include not only conformance of specific risk management practices to the Enterprise Risk Management Policy and other key risk-related policy requirements, but also the active involvement of our board of directors. Our board of directors has established a Risk Oversight Committee that provides focus, direction and accountability for our risk management process. Further, pursuant to the Enterprise Risk Management Policy, the following internal management committees focus on risk management, among other duties:

- Executive Management Committee
    - Facilitates planning, coordination and communication among our operating divisions and the other committees;
    - Focuses on leadership, teamwork and our resources to best serve organizational priorities; and
    - Generally oversees the following committees' activities.
        - Member Services Committee
            - Focuses on new and existing member services and products and oversees the effectiveness of the risk mitigation framework for member services and products; and
            - Promotes cross-functional communication and exchange of ideas pertaining to member products offered to achieve financial objectives established by the board of directors and senior management while remaining within prescribed risk parameters.
        - Capital Markets Committee
            - Focuses on the Bank's investment and funding activities as they relate to financial performance, risk profile and the Bank's strategic direction; and
            - Deliberates proposed strategies to meet funding needs and achieve financial performance objectives established by the board of directors and senior management, while remaining within established risk control parameters.
        - IT Steering Committee
            - Monitors our technology-related activities, strategies, risk positions and issues; and
            - Promotes cross-functional communication and exchange of ideas pertaining to the technology directions and actions undertaken to achieve our strategic and financial objectives.
- Strategy Risk Management Committee
    - Provides strategic direction in the management of key risk exposures and risk policies, and adjudicates strategic risk issues as they arise (credit, market, liquidity, advance lending, AMA, investment portfolio, treasury, operations, regulatory and reputation); and
    - Identifies and evaluates current and emerging risks and opportunities - makes course corrections as circumstances and events dictate.
    - Oversees the actions of the following committees.
        - Risk Committee
            - Oversees the identification, monitoring, measurement, evaluation and reporting of risks; and
            - Promotes cross-functional communication and exchange of ideas pertaining to oversight of our risk profile in accordance with guidelines and objectives established by our board of directors and senior management.
        - Information Security Steering Committee
            - Oversees the Bank's Information Security Program, which includes enterprise information security, cybersecurity, and physical security.

Each of the committees is responsible for overseeing its respective business activities in accordance with specified policies, in addition to ongoing consideration of pertinent risk-related issues.

We have a formal process for the assessment of Bank-wide risk and risk-related issues. Our risk assessment process is designed to identify and evaluate material risks, including both quantitative and qualitative aspects, which could adversely affect achievement of our financial performance objectives and compliance with applicable requirements. Business unit managers play a significant role in this process, as they are best positioned to identify and understand the risks inherent in their respective operations. These assessments evaluate the inherent risks within each of the key processes as well as the controls and strategies in place to manage those risks, identify primary weaknesses, and recommend actions that should be undertaken to address the identified weaknesses. The results of these assessments are summarized in an annual risk assessment report, which is reviewed by senior management and our board of directors.

Credit Risk Management. Credit risk is the risk that members or other counterparties may be unable to meet their contractual obligations to us, or that the values of those obligations will decline as a result of deterioration in the members' or other counterparties' creditworthiness. Credit risk arises when our funds are extended, committed, invested or otherwise exposed through actual or implied contractual agreements. We face credit risk on advances and other credit products, investments, mortgage loans, derivative financial instruments, and AHP grants.

The most important step in the management of credit risk is the initial decision to extend credit. We also manage credit risk by following established policies, evaluating the creditworthiness of our members and counterparties, and utilizing collateral agreements and settlement netting. Periodic monitoring of members and other counterparties is performed whenever we are exposed to credit risk.

Advances and Other Credit Products. We manage our exposure to credit risk on advances primarily through a combination of our security interests in assets pledged by our borrowers and ongoing reviews of our borrowers' financial strength. Credit analyses are performed on existing borrowers, with the frequency and scope determined by the financial strength of the borrower and/or the amount of our credit products outstanding to that borrower. We establish limits and other requirements for advances and other credit products.

Section 10(a) of the Bank Act prohibits us from making an advance without sufficient collateral to fully secure the advance. Security is provided via thorough underwriting and establishing a perfected position in eligible assets pledged by the borrower as collateral before an advance is made by filing Uniform Commercial Code financing statements in the appropriate jurisdictions. Each member's collateral reporting requirement is based on its collateral status, which reflects its financial condition and type of institution, and our review of conflicting liens, with our level of control increasing when a borrower's financial performance deteriorates. We continually evaluate the quality and value of collateral pledged to support advances and work with members to improve the accuracy of valuations.

As of December 31, 2018 and 2017, advances to our insurance company members represented 47% and 45%, respectively, of our total advances, at par. We believe that advances outstanding to our insurance company members and the relative percentage of their advances to the total could increase, based upon the significant portion of total financial assets held by insurance companies in our district. Although insurance companies represent growth opportunities for our credit products, they have different risk characteristics than our depository members. Some of the ways we mitigate this risk include requiring insurance companies to deliver collateral to us or our custodian and using industry-specific underwriting approaches as part of our ongoing evaluation of our insurance company members' financial strength.

A captive insurance company insures risks of its parent, affiliated companies and/or other entities under common control. We generally require captive insurance company members to, among other requirements: (i) pledge the collateral free of other encumbrances, (ii) collateralize all obligations to us, including prepayment fees, accrued interest and any outstanding AHP or MPP obligations, (iii) obtain our prior approval before pledging whole loan collateral, and (iv) provide annual audit reports of the member entity and its ultimate parent, as well as quarterly unaudited financial statements.

Borrowing Limits. Generally, we maintain a credit products borrowing limit of 50% of a depository member's adjusted assets, defined as total assets less borrowings from all sources. As of December 31, 2018, we had no advances outstanding to a depository member whose total credit products exceeded 50% of its adjusted assets.

The initial borrowing limit for our insurance company members (excluding captive insurance companies) is 25% of their total general account assets less money borrowed. Credit extensions to insurance company members whose total credit products exceed this threshold require an additional approval by our Bank as provided in our credit policy. The approval is based upon a number of factors that may include the member's financial condition, collateral quality, business plan and earnings stability. We also monitor these members more closely on an ongoing basis. As of December 31, 2018, we had no advances outstanding to an insurance company member whose total credit products exceeded 25% of their general account assets, net of money borrowed.

New or renewed credit extensions to captive insurance companies that became members prior to September 12, 2014 are subject to certain regulatory restrictions relating to maturity dates and cannot exceed 40% of the member's total assets. As of December 31, 2018, one such captive insurance company member's total credit products exceeded the percentage limit. Therefore, no new or renewed credit extensions have been extended to this member. We may impose additional restrictions on extensions of credit to our members, including captive insurance companies, at our discretion.

Concentration. Our credit risk is magnified due to the concentration of advances in a few borrowers. As of December 31, 2018, our top borrower held 12% of total advances outstanding, at par, and our top five borrowers held 40% of total advances outstanding, at par. As a result of this concentration, we perform frequent credit and collateral reviews on our largest borrowers. In addition, we analyze the implications to our financial management and profitability if we were to lose the business of one or more of these borrowers.

Collateral Requirements. We generally require all borrowers to execute a security agreement that grants us a blanket lien on substantially all assets of the member. Our agreements with borrowers require each borrowing entity to fully secure all outstanding extensions of credit at all times, including advances, accrued interest receivable, standby letters of credit, correspondent services, certain AHP transactions, and all indebtedness, liabilities or obligations arising or incurred as a result of a member transacting business with our Bank. We may also require a member to pledge additional collateral to cover exposure resulting from any applicable prepayment fees on advances.

The assets that constitute eligible collateral to secure extensions of credit are set forth in Section 10(a) of the Bank Act. In accordance with the Bank Act, we accept the following assets as collateral:

- fully disbursed, whole first mortgages on improved residential property, or securities representing a whole interest in such mortgages;
- securities issued, insured, or guaranteed by the United States government or any Agency thereof (including, without limitation, MBS issued or guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae);
- cash or deposits in an FHLBank; and
- ORERC acceptable to us if such collateral has a readily ascertainable value and we can perfect our interest in the collateral.

Additionally, for any CFI, as defined in accordance with the Bank Act, we may also accept secured loans for small business, agricultural and community development activities.

In addition to our internal credit risk management policies and procedures, Section 10(e) of the Bank Act affords priority of any security interest granted to us, by a member or such member's affiliate, over the claims or rights of any other party, including any receiver, conservator, trustee, or similar entity that has the rights of a lien creditor, except for claims held by bona fide purchasers for value or by parties that are secured by prior perfected security interests, provided that such claims would otherwise be entitled to priority under applicable law. Moreover, with respect to federally-insured depository institution borrowers, our claims are given certain preferences pursuant to the receivership provisions of the Federal Deposit Insurance Act. With respect to insurance company members, however, Congress provided in the McCarran-Ferguson Act of 1945 that state law generally governs the regulation of insurance and shall not be preempted by federal law unless the federal law expressly regulates the business of insurance. Thus, if a court were to determine that the priority provision of Section 10(e) of the Bank Act conflicts with state insurance law applicable to our insurance company members, the court might then determine that the priority of our security interest would be governed by state law, not Section 10(e). Under these circumstances, the "super lien" priority protection afforded to our security interest under Section 10(e) may not fully apply when we lend to such insurance company members. However, we monitor applicable states' laws, and our security interests in collateral posted by insurance company members have express statutory protections in the jurisdictions where our members are domiciled. In addition, we take all necessary action under applicable state law to obtain and maintain a prior perfected security interest in the collateral, including by taking possession or control of the collateral as appropriate.

Collateral Status. When an institution becomes a member of our Bank, we assign the member to a collateral status after the initial underwriting review. The assignment of a member to a collateral status category reflects, in part, our philosophy of increasing our level of control over the collateral pledged by the member, when warranted, based on our underwriting conclusions and a review of our lien priority. Some members pledge and report collateral under a blanket lien established through the security agreement, while others are placed on specific listings or possession status or a combination of the three via a hybrid status. We take possession of all collateral posted by insurance companies to further ensure our position as a first-priority secured creditor. A depository institution member may elect a more restrictive collateral status to receive a higher lendable value for their collateral.

The primary features of these three collateral status categories are:

Blanket:

- only certain financially sound depository institutions are eligible;
- institutions that have granted a blanket lien to another creditor are ineligible;
- review and approval by credit services management is required;
- member retains possession of eligible whole loan collateral pledged to us;
- member executes a written security agreement and agrees to hold such collateral for our benefit; and
- member provides periodic reports of all eligible collateral.

Specific Listings:

- applicable to depository institutions that demonstrate potential weakness in their financial condition or seek lower over-collateralization requirements;
- may be available to institutions that have granted a blanket lien to another creditor if an inter-creditor or subordination agreement is executed;
- member retains possession of eligible whole loan collateral pledged to us;
- member executes a written security agreement and agrees to hold such collateral for our benefit; and
- member provides loan level detail on the pledged collateral on at least a monthly basis.

Possession:

- applicable to all insurance companies and those depository institutions demonstrating less financial strength than those approved for specific listings;
- required for all de novo institutions and institutions that have granted a blanket lien to another creditor but have not executed an inter-creditor or subordination agreement;
- safekeeping for securities pledged as collateral can be with us or a third-party custodian that we have pre-approved;
- original notes and other documents related to whole loans pledged as collateral are held with a third-party custodian that we have pre-approved; and
- member provides loan level detail on the pledged collateral on at least a monthly basis.

Collateral Valuation. In order to mitigate the market, credit, liquidity, operational and business risk associated with collateral, we apply an over-collateralization requirement to the book value or market value of pledged collateral to establish its lendable value. Collateral that we have determined to contain a low level of risk, such as United States government obligations, is over-collateralized at a lower rate than collateral that carries a higher level of risk, such as small business loans. The over-collateralization requirement applied to asset classes may vary depending on collateral status, because lower requirements are applied as our levels of information and control over the assets increase.

We have made changes to, and continue to update, our internal valuation model to gain greater consistency between model-generated valuations and observed market prices, resulting in adjustments to lendable values on whole loan collateral. We routinely engage outside pricing vendors to benchmark our modeled pricing on residential and commercial real estate collateral, and we modify valuations where appropriate.

The following table provides information regarding credit products outstanding with borrowers based on their reporting status at December 31, 2018, along with their corresponding collateral balances. The table only lists collateral that was identified and pledged by borrowers with outstanding credit products at December 31, 2018, and therefore does not include all assets against which we have liens via our security agreements and Uniform Commercial Code filings ($ amounts in millions).

		Collateral Types					
Collateral Status	**# of Borrowers**	**1st lien Residential**	**ORERC/ CFI**	**Securities/ Delivery**	**Total Collateral**	**Lendable Value [1]**	**Credit Outstanding [2]**
Blanket	59	$ 8,886	$ 7,787	$ —	$ 16,673	$ 10,097	$ 4,450
Specific listings	84	18,905	3,371	3,015	25,291	18,102	8,088
Possession	27	5,522	12,419	9,523	27,464	19,347	15,623
Hybrid [3]	32	7,497	3,218	2,402	13,117	9,188	5,008
Total	202	$ 40,810	$ 26,795	$ 14,940	$ 82,545	$ 56,734	$ 33,169

(1) Lendable Value is the borrowing capacity, based upon collateral pledged after a market value has been estimated (excluding blanket-pledged collateral) and an over-collateralization requirement has been applied.
(2) Credit outstanding includes advances (at par value), lines of credit used, and letters of credit.
(3) Hybrid collateral status is a combination of any of the others: blanket, specific listings and possession.

Collateral Review and Monitoring. Our agreements with borrowers allow us, at any time and in our sole discretion, to refuse to make extensions of credit against any collateral, require substitution of collateral, or adjust the over-collateralization requirements applied to collateral. We also may require borrowers to pledge additional collateral regardless of whether the collateral would be eligible to originate a new extension of credit. Our agreements with our borrowers also afford us the right, in our sole discretion, to declare any borrower to be in default if we deem our Bank to be inadequately secured.

Credit services management continually monitors members' collateral status and may require a member to change its collateral status based upon deteriorating financial performance, results of on-site collateral reviews, or a high level of borrowings as a percentage of its assets. The blanket lien created by the security agreement remains in place regardless of a member's collateral status.

The Bank conducts regular on-site reviews of collateral pledged by members to confirm the existence of the pledged collateral, confirm that the collateral conforms to our eligibility requirements, and score the collateral for concentration and credit risk. Based on the results of such on-site reviews, a member may have its over-collateralization requirements adjusted, limitations may be placed on the amount of certain asset types accepted as collateral or, in some cases, the member may be changed to a more stringent collateral status. We may conduct a review of any borrower's collateral at any time.

Credit Review and Monitoring. We monitor the financial condition of all member and non-member borrowers by reviewing certain available financial data, such as regulatory call reports filed by depository institution borrowers, regulatory financial statements filed with the appropriate state insurance department by insurance company borrowers, SEC filings, and rating agency reports, to ensure that potentially troubled institutions are identified as soon as possible. In addition, we have the ability to obtain borrowers' regulatory examination reports and, when appropriate, may contact borrowers' management teams to discuss performance and business strategies. We analyze this information on a regular basis and use it to determine the appropriate collateral status for a borrower.

We use models to assign a quarterly financial performance measure for all depository institution borrowers. This measure, combined with other credit monitoring tools and the level of a member's usage of credit products, determines the frequency and depth of underwriting analysis for these institutions.

Investments. We are also exposed to credit risk through our investment portfolios. Our policies restrict the acquisition of investments to high-quality, short-term money market instruments and high-quality long-term securities.

Short-Term Investments. Our short-term investment portfolio typically includes securities purchased under agreements to resell, which are secured by United States Treasuries or Agency MBS passthroughs. Although we are permitted to purchase these securities for terms of up to 275 days, most mature overnight. Our short-term investment portfolio can also include federal funds sold, which can be overnight or term placements of our funds. We place these funds with large, high-quality financial institutions with investment-grade long-term credit ratings on an unsecured basis for terms of up to 275 days. Lastly, our short-term investment portfolio also includes interest-bearing demand deposit accounts which are commercial deposit accounts generally opened with large, high-quality domestic financial institutions. The funds within these accounts are available for withdrawal at any time during business hours.

We monitor counterparty creditworthiness, ratings, performance, and capital adequacy in an effort to mitigate unsecured credit risk on the short-term investments, with an emphasis on the potential impacts of changes in global economic conditions. As a result, we may limit or suspend exposure to certain counterparties.

Finance Agency regulations include limits on the amount of unsecured credit we may extend to a private counterparty or to a group of affiliated counterparties. This limit is based on a percentage of eligible regulatory capital and the counterparty's long-term NRSRO credit rating. Under these regulations, (i) the level of eligible regulatory capital is determined as the lesser of our total regulatory capital or the eligible amount of regulatory capital of the counterparty; (ii) the eligible amount of regulatory capital is then multiplied by a stated percentage; and (iii) the percentage that we may offer for term extensions of unsecured credit ranges from 1% to 15% based on the counterparty's NRSRO credit rating. The calculation of term extensions of unsecured credit includes on-balance sheet transactions, off-balance sheet commitments and derivative transactions.

The Finance Agency regulation also permits us to extend additional unsecured credit for overnight federal funds sold up to a total unsecured exposure to a single counterparty of 2% to 30% of the eligible amount of regulatory capital, based on the counterparty's credit rating.

Additionally, we are prohibited by Finance Agency regulation from investing in financial instruments issued by non-United States entities other than those issued by United States branches and agency offices of foreign commercial banks. Our unsecured credit exposures to United States branches and 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 its contractual repayment obligations. During the year ended December 31, 2018, our unsecured investment credit exposure to United States branches and agency offices of foreign commercial banks was limited to federal funds sold. Our unsecured credit exposures to domestic counterparties and United States subsidiaries of foreign commercial banks include the risk that these counterparties have extended credit to foreign counterparties.

The following table presents the unsecured investment credit exposure to private counterparties, categorized by the domicile of the counterparty's ultimate parent, based on the lowest of the counterparty's NRSRO long-term credit ratings, stated in terms of the S&P equivalent. The table does not reflect the foreign sovereign government's credit rating ($ amounts in millions).

December 31, 2018	**AA**	**A**	**Total**
Domestic	$ 815	$ 2,371	$ 3,186
Canada	—	295	295
Australia	815	—	815
Total unsecured credit exposure	$ 1,630	$ 2,666	$ 4,296

Long-Term Investments. Our long-term investments include MBS guaranteed by the housing GSEs (Fannie Mae and Freddie Mac), other U.S. obligations - guaranteed MBS (Ginnie Mae), and debentures issued by Fannie Mae, Freddie Mac, the TVA and the Federal Farm Credit Banks.

Our long-term investments also included private-label RMBS and ABS, which are directly or indirectly secured by underlying mortgage loans. During the year ended December 31, 2018, for strategic, economic and operational reasons, we sold all of our private-label RMBS and ABS.

A Finance Agency regulation provides that the total amount of our investments in MBS and ABS, calculated using amortized historical cost, must not exceed 300% of our total regulatory capital, as of the day we purchase the securities, based on the capital amount most recently reported to the Finance Agency. At December 31, 2018, these investments totaled 289% of total regulatory capital. Generally, our goal is to maintain these investments near the 300% limit in order to enhance earnings and capital for our members and diversify our revenue stream.

The following table presents the carrying values of our investments, excluding accrued interest, grouped by credit rating and investment category. Applicable rating levels are determined using the lowest relevant long-term rating from S&P, Moody's and Fitch Ratings, Inc., each stated in terms of the S&P equivalent. Rating modifiers are ignored when determining the applicable rating level for a given counterparty or investment. Amounts reported do not reflect any subsequent changes in ratings, outlook, or watch status ($ amounts in millions).

December 31, 2018	**AAA**	**AA**	**A**	**BBB**	**Below Investment Grade**	**Total**
Short-term investments:						
Interest-bearing deposits	$ —	$ 1	$ 1,210	$ —	$ —	$ 1,211
Securities purchased under agreements to resell	—	3,213	—	—	—	3,213
Federal funds sold	—	1,630	1,455	—	—	3,085
Total short-term investments	—	4,844	2,665	—	—	7,509
Long-term investments:						
GSE and TVA debentures	—	4,277	—	—	—	4,277
GSE MBS	—	5,632	—	—	—	5,632
Other U.S. obligations - guaranteed RMBS	—	3,469	—	—	—	3,469
Total long-term investments	—	13,378	—	—	—	13,378
Total investments, carrying value	$ —	$ 18,222	$ 2,665	$ —	$ —	$ 20,887
Percentage of total	—%	87%	13%	—%	—%	100%
December 31, 2017						
Short-term investments:						
Interest-bearing deposits	$ —	$ —	$ 660	$ —	$ —	$ 660
Securities purchased under agreements to resell	—	2,606	—	—	—	2,606
Federal funds sold	—	780	500	—	—	1,280
Total short-term investments	—	3,386	1,160	—	—	4,546
Long-term investments:						
GSE and TVA debentures	—	4,404	—	—	—	4,404
GSE MBS	—	5,060	—	—	—	5,060
Other U.S. obligations - guaranteed RMBS	—	3,299	—	—	—	3,299
Private-label RMBS and ABS	—	4	16	2	242	264
Total long-term investments	—	12,767	16	2	242	13,027
Total investments, carrying value	$ —	$ 16,153	$ 1,176	$ 2	$ 242	$ 17,573
Percentage of total	—%	92%	7%	—%	1%	100%

Mortgage Loans Held for Portfolio.

MPP. We are exposed to credit risk on the loans purchased from our PFIs through the MPP. Each loan we purchase must meet the guidelines for our MPP or be specifically approved as an exception based on compensating factors. For example, the maximum LTV ratio for any conventional mortgage loan purchased is 95% , and the borrowers must meet certain minimum credit scores depending upon the type of loan or property.

Credit Enhancements. Credit enhancements for conventional loans include (in order of priority):

- PMI (when applicable);
- LRA; and
- SMI (as applicable) purchased by the seller from a third-party provider naming us as the beneficiary.

PMI. For a conventional loan, PMI, if applicable, covers losses or exposure down to approximately an LTV ratio between 65% and 80% based upon the original appraisal, original LTV ratio, term, and amount of PMI coverage. As of December 31, 2018, we had PMI coverage on $1.9 billion or 18% of our conventional MPP mortgage loans, which included coverage of $0.9 million on seriously delinquent loans, i.e., 90 days or more past due or in the process of foreclosure, of $3.0 million.

LRA. We use either a "spread LRA" or a "fixed LRA" for credit enhancement. The spread LRA was used in combination with SMI for credit enhancement of conventional mortgage loans purchased under our original MPP, and the fixed LRA is used for credit enhancement of conventional mortgage loans purchased under Advantage MPP. At this time, substantially all of the additions are from Advantage MPP , and substantially all of the claims paid are from the original MPP.

The following table presents the changes in the LRA for original MPP and Advantage MPP ($ amounts in millions).

	2018		
LRA Activity	**Original**	**Advantage**	**Total**
Liability, beginning of year	$ 7	$ 142	$ 149
Additions	1	26	27
Claims paid	(1)	—	(1)
Distributions to PFIs	—	(1)	(1)
Liability, end of year	$ 7	$ 167	$ 174

SMI. Losses that exceed available LRA funds are covered by SMI (for original MPP loans) up to a severity of approximately 50% of the original property value of the loan, depending on the SMI contract terms. We absorb any losses in excess of available LRA funds and SMI.

Our current SMI providers are Mortgage Guaranty Insurance Corporation and Genworth Mortgage Insurance Corporation. For pools of loans acquired under the original MPP, we entered into the insurance contracts directly with the SMI providers, including a contract for each pool or aggregate pool. Pursuant to Finance Agency regulation, the PFI must be responsible for all expected credit losses on the mortgages sold to us. Therefore, the PFI was the purchaser of the SMI policy, and we are designated as the beneficiary. The premiums are the PFI's obligation. As an administrative convenience, we collect the SMI premiums from the monthly mortgage remittances received from the PFIs or their designated servicer and remit them to the SMI provider.

Credit Risk Exposure to SMI Providers. As of December 31, 2018, we were the beneficiary of SMI coverage, under our original MPP, on conventional mortgage pools with a total UPB of $688 million.

We evaluate the recoverability related to PMI and SMI for mortgage loans that we hold, including insurance companies placed under enhanced supervision of state regulators. We also evaluate the recoverability of outstanding receivables from our PMI and SMI providers related to outstanding and unpaid claims.

The following table presents the lowest credit rating from S&P, Moody's and Fitch Ratings, Inc., stated in terms of the S&P equivalent, for our SMI companies and the estimated SMI exposure as of December 31, 2018 ($ amounts in millions).

Mortgage Insurance Company	Credit Rating	SMI Exposure
Mortgage Guaranty Insurance Corporation	BBB	$ 1
Genworth Mortgage Insurance Corporation	BB+	—
Total		$ 1

See *Notes to Financial Statements - Note 7 - Allowance for Credit Losses* for our estimates of recovery associated with the expected amount of our claims for all providers of these policies in determining our allowance for loan losses.

MPF Program. Credit risk arising from AMA activities under our participation in mortgage loans originated under the MPF Program falls into three categories: (i) the risk of credit losses arising from our FLA and last loss positions; (ii) the risk that a PFI will not perform as promised with respect to its loss position provided through its CE Obligations on mortgage loan pools; and (iii) the risk that a third-party insurer (obligated under PMI arrangements) will fail to perform as expected. Should a PMI third-party insurer fail to perform, our credit risk exposure would increase because our FLA is the next layer to absorb credit losses on mortgage loan pools.

Credit Enhancements. Our management of credit risk in the MPF Program considers the several layers of loss protection that are defined in agreements among the FHLBank of Topeka and its PFIs. The availability of loss protection may differ slightly among MPF products. Our loss protection consists of the following loss layers, in order of priority:

(i) Borrower equity;
(ii) PMI (when applicable);
(iii) FLA, which functions as a tracking mechanism for determining our potential loss exposure under each pool prior to the PFI's CE Obligation; and
(iv) CE Obligation, which absorbs losses in excess of the FLA in order to limit our loss exposure to that of an investor in an MBS deemed to be investment-grade.

PMI. For a conventional loan, PMI, if applicable, covers losses or exposure down to approximately an LTV ratio between 65% and 80% based upon the original appraisal, original LTV ratio, term, and amount of PMI coverage. As of December 31, 2018, we had PMI coverage on $24 million or 11% of our conventional MPF Program mortgage loans.

FLA and CE Obligation. If losses occur in a pool, these losses will either be: (i) recovered through the withholding of future performance-based CE fees from the PFI or (ii) absorbed by us in the FLA. As of December 31, 2018, our exposure under the FLA was $4 million, and CE obligations available to cover losses in excess of the FLA were $2 million. PFIs must fully collateralize their CE Obligation with assets considered acceptable by the FHLBank of Topeka.

MPP and MPF Program Loan Characteristics. Two indicators of credit quality at origination are LTV ratios and credit scores provided by FICO®. FICO® provides a commonly used measure to assess a borrower's credit quality, with scores ranging from a low of 300 to a high of 850. The combination of a lower FICO® score and a higher LTV ratio is a key driver of potential mortgage delinquencies and defaults.

The following tables present these two characteristics at origination of our MPP and MPF Program conventional loan portfolios as a percentage of the UPB outstanding ($ amounts in millions).

	December 31, 2018				
		% of UPB Outstanding			
FICO® SCORE [1]	**UPB**	**Current**	**Past Due 30-59 Days**	**Past Due 60-89 Days**	**Past Due 90 Days or More**
619 or less	$ 3	91.2%	5.0%	—%	3.8%
620-659	66	89.9%	4.7%	1.3%	4.1%
660-699	726	98.1%	1.1%	0.3%	0.5%
700-739	2,142	99.2%	0.5%	0.1%	0.2%
740 or higher	7,833	99.7%	0.2%	—%	0.1%
Total	$ 10,770	99.5%	0.3%	0.1%	0.1%

For borrowers in our conventional loan portfolio at December 31, 2018, 99% of the borrowers had FICO® scores greater than 660 at origination and the weighted average FICO® score at origination was 761.

LTV Ratio [2]	**December 31, 2018**
< = 60%	15%
> 60% to 70%	15%
> 70% to 80%	53%
> 80% to 90% [3]	12%
> 90% [3]	5%
Total	100%

(1) Represents the FICO® score at origination of the lowest scoring borrower for the related loan.
(2) At origination.
(3) These conventional loans were required to have PMI at origination.

For borrowers in our conventional loan portfolio at December 31, 2018, 83% of the borrowers had an LTV ratio of 80% or lower at origination and the weighted average LTV ratio at origination was 74%.

We believe these two measures indicate that these loans have a low risk of default.

We do not knowingly purchase any loan that violates the terms of our Anti-Predatory Lending Policy. In addition, we require our members to warrant to us that all of the loans pledged or sold to us are in compliance with all applicable laws, including prohibitions on anti-predatory lending.

MPP and MPF Program Loan Concentration. The following table presents the percentage of UPB of MPP and MPF Program conventional loans outstanding at December 31, 2018 for the five largest state concentrations.

By State	**December 31, 2018**
Michigan	30%
Indiana	29%
California	12%
Virginia	3%
Colorado	3%
All others	23%
Total	100%

MPP and MPF Program Credit Performance. The UPB of our MPP and MPF Program conventional and FHA loans 90 days or more past due and accruing interest, non-accrual loans and TDRs, along with the allowance for loan losses, are presented in the table below ($ amounts in millions).

	As of and for the Years Ended December 31,				
	2018	2017	2016	2015	2014
Past Due, Non-Accrual and Restructured Loans					
Past due 90 days or more and still accruing interest	$ 14	$ 19	$ 27	$ 34	$ 50
Non-accrual loans [1] [2]	2	3	5	9	7
TDRs [3]	12	14	14	15	14
Allowance for Loan Losses on Mortgage Loans [4]					
Allowance for loan losses, beginning of the year	$ 1	$ 1	$ 1	$ 3	$ 5
Charge-offs	—	—	—	(1)	(1)
Provision for (reversal of) loan losses	—	—	—	(1)	(1)
Allowance for loan losses, end of the year	$ 1	$ 1	$ 1	$ 1	$ 3

(1) Non-accrual loans are defined as conventional mortgage loans where either (i) the collection of interest or principal is doubtful, or (ii) interest or principal is past due for 90 days or more, except when the loan is well secured and in the process of collection (e.g., through credit enhancements and monthly servicer remittances on a scheduled/scheduled basis).

(2) The interest income shortfall on non-accrual loans was less than $1 million for the years ended December 31, 2018, 2017, 2016, 2015, and 2014.

(3) Represents TDRs that are still performing. TDRs related to mortgage loans are considered to have occurred when a concession is granted to the debtor related to the debtor's financial difficulties that would not otherwise be considered for economic or legal reasons. We do not participate in government-sponsored loan modification programs.

(4) At December 31, 2018, 2017, 2016, 2015, and 2014, our allowance for loan losses included an evaluation of $2 million, $2 million, $3 million, $5 million, and $6 million, respectively, of principal previously paid in full by the servicers that remained subject to potential claims by those servicers for any losses resulting from past or future liquidations of the underlying properties.

The serious delinquency rate for government-guaranteed or -insured mortgages was 0.45% and 0.59% at December 31, 2018 and 2017, respectively. We rely on insurance provided by the FHA, which generally provides coverage for 100% of the principal balance of the underlying mortgage loan and defaulted interest at the debenture rate. However, we would receive defaulted interest at the contractual rate from the servicer. The serious delinquency rate for conventional mortgages was 0.12% at December 31, 2018, compared to 0.20% at December 31, 2017. Both rates were below the national serious delinquency rate.

Although we establish credit enhancements in each mortgage pool purchased under our original MPP at the time of the pool's origination that are sufficient to absorb loan losses up to approximately 50% of the property's original value (subject, in certain cases, to an aggregate stop-loss provision in the SMI policy), the magnitude of the declines in home prices and increases in the time to complete foreclosures in past years resulted in losses in some of the mortgage pools that have exhausted the LRA; however, credit enhancement support is still available through the SMI coverage. Some of our mortgage pools have loans originated in states and localities (e.g., Florida, Illinois, Pennsylvania, New Jersey and New York) that have had the most lengthy foreclosure processes. We purchased most of these loan pools from institutions that are no longer members of our Bank and, thus, have stopped selling mortgage loans to us. When a mortgage pool's credit enhancements are exhausted, we will incur any additional loan losses in that pool.

Overall, the trends in the credit performance of our mortgage loans held for portfolio over the last five years have been positive.

Derivatives. The Dodd-Frank Act provides statutory and regulatory requirements for derivatives transactions, including those we use to hedge our interest rate and other risks. We are required to clear certain interest-rate swaps that fall within the scope of the first mandatory clearing determination. Certain derivatives designated by the CFTC as "made available to trade" are required to be executed on a swap execution facility.

Our over-the-counter derivative transactions are either (i) held with a counterparty (uncleared derivatives) or (ii) cleared through a Futures Commission Merchant (i.e., clearing agent) with a clearinghouse (cleared derivatives).

- *Uncleared Derivatives.* We are subject to credit risk due to the potential non-performance by the counterparties to our uncleared derivative transactions. We require collateral agreements with our uncleared derivative counterparties. The exposure thresholds above which collateral must be delivered vary; the threshold is zero in some cases.

- *Cleared Derivatives.* We are subject to credit risk due to the potential non-performance by the clearinghouse and clearing agent because we are required to post initial and variation margin through the clearing agent, on behalf of the clearinghouse, which exposes us to institutional credit risk if either the clearing agent or the clearinghouse fails to meet its obligations. Collateral is required to be posted daily for changes in the value of cleared derivatives to mitigate each counterparty's credit risk. In addition, all derivative transactions are subject to mandatory reporting and record-keeping requirements.

The contractual or notional amount of derivative transactions reflects the extent of our participation in the various classes of financial instruments. Our credit risk with respect to derivative transactions is the estimated cost of replacing the derivative positions if there is a default, minus the value of any related collateral. In determining credit risk, we consider accrued interest receivables and payables as well as the requirements to net assets and liabilities. For more information, see *Notes to Financial Statements - Note 9 - Derivatives and Hedging Activities*.

The following table presents key information on derivative positions with counterparties on a settlement date basis using the lowest credit ratings from S&P or Moody's, stated in terms of the S&P equivalent ($ amounts in millions).

December 31, 2018	Notional Amount	Net Estimated Fair Value Before Collateral	Cash Collateral Pledged To (From) Counterparty	Net Credit Exposure
Non-member counterparties:				
Asset positions with credit exposure				
Uncleared derivatives - AA	$ 282	$ 6	$ —	$ 6
Uncleared derivatives - A	72	1	—	1
Liability positions with credit exposure				
Cleared derivatives [1]	21,412	(15)	125	110
Total derivative positions with credit exposure to non-member counterparties	21,766	(8)	125	117
Total derivative positions with credit exposure to member institutions [2]	39	—	—	—
Subtotal - derivative positions with credit exposure	21,805	$ (8)	$ 125	$ 117
Derivative positions without credit exposure	16,014			
Total derivative positions	$ 37,819			

(1) Represents derivative transactions cleared with a clearinghouse, which is not rated.
(2) Includes MDCs from member institutions under our MPP.

AHP. Our AHP requires members and project sponsors to make commitments with respect to the usage of the AHP grants to assist very low-, low-, and moderate-income families, as defined by regulation. If these commitments are not met, we may have an obligation to recapture these funds from the member or project sponsor to replenish the AHP fund. This credit exposure is addressed in part by evaluating project feasibility at the time of an award and the member's ongoing monitoring of AHP projects.

Liquidity Risk Management. The primary objectives of liquidity risk management are to maintain the ability to meet obligations as they come due and to meet the credit needs of our member borrowers in a timely and cost-efficient manner. We routinely monitor the sources of cash available to meet liquidity needs and use various tests and guidelines to manage our liquidity risk.

Daily projections of required liquidity are prepared to help us maintain adequate funding for our operations. Operational liquidity levels are determined assuming sources of cash from both the FHLBank System's ongoing access to the capital markets and our holding of liquid assets to meet operational requirements in the normal course of business. Contingent liquidity levels are determined based upon the assumption of an inability to readily access the capital markets for a period of five business days. These analyses include projections of cash flows and funding needs, targeted funding terms, and various funding alternatives for achieving those terms. A contingency plan allows us to maintain sufficient liquidity in the event of operational disruptions at our Bank, at the Office of Finance, or in the capital markets.

Operational Risk Management. Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events. Our management has established policies, procedures, and controls and acquired insurance coverage to mitigate operational risk. Our Internal Audit department, which reports directly to the Audit Committee of the board of directors, regularly monitors our adherence to established policies, procedures, applicable regulatory requirements and best practices.

Our enterprise risk management function and business units complete a comprehensive annual risk and control assessment that serves to reinforce our focus on maintaining strong internal controls by identifying significant inherent risks and the mitigating internal controls in order for the residual risks to be assessed and the appropriate strategy designed to accept, transfer, avoid or mitigate such risks. The risk assessment process provides management and the board of directors with a detailed and transparent view of our identified risks and related internal control structure.

We use various financial models to quantify financial risks and analyze potential strategies. We maintain a model risk management program that includes a validation program intended to mitigate the risk of loss resulting from model errors or the incorrect use or application of model output, which could potentially lead to inappropriate business or operational decisions.

Our operations rely on the secure processing, storage and transmission of confidential and other information in our computer systems, software and networks. As a result, our Cyber Risk Management Program is designed to protect our information assets, information systems and sensitive data from internal, external, vendor and third party cyber risks, including due diligence, risk assessments, and ongoing monitoring of critical vendors by our Vendor Management Office. The Cyber Risk Management Program includes processes for monitoring existing, emerging and imminent threats as well as cyber attacks impacting our industry in order to develop appropriate risk management strategies. Protective security controls, detective controls, and responsive controls are in place for critical infrastructure, systems and services. Periodically, we engage external third parties to assess our Cyber Risk Management Program and perform testing to validate the effectiveness of the program.

In order to ensure our ongoing ability to provide liquidity and service to our members, we have business continuity plans designed to restore critical business processes and systems in the event of a business interruption. We operate both a business resumption center and a disaster recovery data center, at separate locations, with the objective of being able to fully recover all critical activities in a timely manner. Both facilities are subject to periodic testing to demonstrate the Bank can recover operations in the event of a disaster. We also have a back-up agreement in place with the FHLBank of Cincinnati in the event the Bank's primary and back-up facilities are inoperable.

We have insurance coverage for cybersecurity, employee fraud, forgery and wrongdoing, as well as Directors' and Officers' liability coverage that provides protection for claims alleging breach of duty, misappropriation of funds, neglect, acts of omission, employment practices, and fiduciary liability. We also have property, casualty, computer equipment, automobile, and other various types of insurance coverage. We maintain all insurance coverages at commercially appropriate levels.

Business Risk Management. Business risk is the risk of an adverse impact on profitability resulting from external factors that may occur in both the short and long term. Business risk includes political, strategic, reputation and/or regulatory events that are beyond our control. Our board of directors and management seek to mitigate these risks by, among other actions, maintaining an open and constructive dialogue with regulators, providing input on potential legislation, conducting long-term strategic planning and continually monitoring general economic conditions and the external environment.

Our financial strategies are generally designed to enable us to safely expand and contract our assets, liabilities, and capital in response to changes in our member base and in our members' credit needs. Our capital generally grows when members are required to purchase additional capital stock as they increase their advances borrowings or other business activities with us. We may also repurchase excess capital stock from our members as business activities with them decline. In addition, in order to meet internally established thresholds or to meet our regulatory capital requirement, we, at the discretion of our board of directors, could undertake capital preservation initiatives such as: (i) voluntarily reducing or eliminating dividend payments; (ii) suspending excess capital stock repurchases; or (iii) raising capital stock holding requirements for our members.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As used in this Item, unless the context otherwise requires, the terms "we," "us," "our", and the "Bank" refer to the Federal Home Loan Bank of Indianapolis or its management. We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*.

Market risk is the risk that the market value or estimated fair value of our overall portfolio of assets and liabilities, including derivatives, or our net earnings will decline as a result of changes in interest rates or financial market volatility. Market risk includes the risks related to:

- movements in interest rates over time;
- changes in mortgage prepayment speeds over time;
- advance prepayments;
- actual and implied interest-rate volatility;
- the change in the relationship between short-term and long-term interest rates (i.e., the slope of the consolidated obligation and LIBOR yield curves);
- the change in the relationship of FHLBank System debt spreads to relevant indices, primarily LIBOR (commonly referred to as "basis" risk); and
- the change in the relationship between fixed rates and variable rates.

The goal of market risk management is to preserve our financial strength at all times, including during periods of significant market volatility and across a wide range of possible interest-rate scenarios. We regularly assess our exposure to changes in interest rates using a diverse set of analyses and measures. As appropriate, we may rebalance our portfolio to help attain our risk management objectives.

Our general approach toward managing interest-rate risk is to acquire and maintain a portfolio of assets and liabilities that, together with their associated hedges, limit our expected interest-rate sensitivity to within our specified tolerances. The outstanding balance of mortgage loans is limited to a proportion of total assets. Derivative financial instruments, primarily interest-rate swaps, are frequently employed to hedge the interest-rate risk and/or embedded option risk on advances, debt, GSE debentures and Agency MBS held as investments.

The prepayment option on an advance can create interest-rate risk. If a member prepays an advance, we could suffer lower future income if the principal portion of the prepaid advance is reinvested in lower yielding assets that continue to be funded by higher cost debt. To protect against this risk, we charge a prepayment fee, thereby substantially reducing market risk.

We have significant investments in mortgage loans and MBS. The prepayment options embedded in mortgages can result in extensions or contractions in the expected weighted average life of these investments, depending on changes in interest rates and other economic factors. We primarily manage the interest-rate and prepayment risk associated with mortgages through debt issuance, which includes both callable and non-callable debt, to achieve cash-flow patterns and liability durations similar to those expected on the mortgage portfolios. Due to the use of call options and lockouts, and by selecting appropriate maturity sectors, callable debt provides an element of protection for the prepayment risk in the mortgage portfolios. The duration of callable debt, like that of a mortgage, shortens when interest rates decrease and lengthens when interest rates increase.

Significant resources, including analytical computer models and an experienced professional staff, are devoted to assuring that the level of interest-rate risk in the balance sheet is properly measured, thus allowing us to monitor the risk against policy and regulatory limits. We use asset and liability models to calculate market values under alternative interest-rate scenarios. The models analyze our financial instruments, including derivatives, using broadly accepted algorithms with consistent and appropriate behavioral assumptions, market prices, market data (such as rates, volatility, etc.) and current position data. On at least an annual basis, we review the major assumptions and methodologies used in the models, including discounting curves, spreads for discounting, and prepayment assumptions.

Types of Key Market Risks

Our market risk results from various factors, such as:

- **Interest Rates** - parallel and non-parallel shifts in the yield curve;
- **Basis Risk** - the risk that changes to one interest-rate index will not perfectly offset changes to another interest-rate index;
- **Volatility** - varying values of assets or liabilities with embedded options, such as mortgages and callable bonds, created by the changing expectations of the magnitude or frequency of changes in interest rates;
- **Option-Adjusted Spread** - an estimate of the incremental yield spread between a particular financial instrument (i.e., an advance, investment or derivative contract) and a benchmark yield (e,g,, LIBOR). This includes consideration of potential variability in the instrument's cash flows resulting from any options embedded in the instrument, such as prepayment options; and
- **Prepayment Speeds** - expected levels of principal payments on mortgage loans held in a portfolio or supporting an MBS, variations from which alter their cash flows, yields, and values, particularly in cases where the loans or MBS are acquired at a premium or discount.

Measuring Market Risks

To evaluate market risk, we utilize multiple risk measurements, including duration of equity, duration gap, convexity, VaR, earnings at risk, and changes in MVE. Periodically, we conduct stress tests to measure and analyze the effects that extreme movements in the level of interest rates and the shape of the yield curve would have on our risk position.

Market Risk-Based Capital Requirement. We are subject to the Finance Agency's risk-based capital regulations. This regulatory framework requires the maintenance of sufficient permanent capital to meet the combined credit risk, market risk, and operations risk components. The market risk-based capital component is the sum of two factors. The first factor is the market value of the portfolio at risk from movements in interest rates that could occur during times of market stress. This estimation is accomplished through an internal VaR-based modeling approach that was approved by the Finance Board before the implementation of our capital plan.

The VaR approach used for calculating the first factor is primarily based upon historical simulation methodology. The estimation incorporates scenarios that reflect interest-rate shifts, interest-rate volatility, and changes in the shape of the yield curve. These observations are based on historical information from 1978 to the present. When calculating the risk-based capital requirement, the VaR comprising the first factor of the market risk component is defined as the potential dollar loss from adverse market movements, for a holding period of 120 business days, with a 99% confidence interval, based on those historical prices and market rates. The table below presents the VaR ($ amounts in millions).

		Years Ended		
	VaR	High	Low	Average
December 31, 2018	$ 298	$ 381	$ 298	$ 336
December 31, 2017	336	336	227	275

The second factor is the amount, if any, by which the current market value of total regulatory capital is less than 85% of the book value of total regulatory capital.

Duration of Equity. Duration of equity is a measure of interest-rate risk and is one of the primary metrics used to manage our market risk exposure. It is an estimate of the percentage change in our MVE that could be caused by a 100 bps parallel upward or downward shift in the interest-rate curves. We value our portfolios using the LIBOR curve, the OIS curve, the consolidated obligation curve or external prices. The market value and interest-rate sensitivity of each asset, liability, and off-balance sheet position is determined to compute our duration of equity. We calculate duration of equity using the interest-rate curve as of the date of calculation and for defined interest rate shock scenarios, including scenarios for which the interest-rate curve is 100 bps and 200 bps higher or lower than the base level. Our board of directors determines acceptable ranges for duration of equity for the base scenario. A negative duration of equity suggests adverse exposure to falling rates and a favorable response to rising rates, while a positive duration suggests adverse exposure to rising rates and a favorable response to falling rates.

The Bank's duration of equity is impacted by the convexity of its financial instruments. Convexity measures the rate of change of duration as a function of interest-rate changes. Measurement of convexity is important because of the optionality embedded in the mortgage assets and callable debt liabilities. The mortgage assets exhibit negative convexity due to embedded prepayment options. Callable debt liabilities exhibit positive convexity due to embedded options that we can exercise to redeem the debt prior to maturity. Management routinely reviews the net convexity exposure and considers it when developing funding and hedging strategies for the acquisition of mortgage-based assets. A primary strategy for managing convexity risk arising from our mortgage portfolio is the issuance of callable debt. The negative convexity of the mortgage assets tends to be partially offset by the positive convexity contributed by underlying callable debt liabilities.

Market Value of Equity. MVE represents the difference between the estimated market value of total assets and the estimated market value of total liabilities, including any off-balance sheet positions. It measures, in present value terms, the long-term economic value of current capital and the long-term level and volatility of net interest income.

We also monitor the sensitivities of MVE to potential interest-rate scenarios. We measure potential changes in the market value to book value of equity based on the current month-end level of rates versus large parallel rate shifts in rates. Our board of directors determines acceptable ranges for the change in MVE for 200 bps shock scenario.

Key Metrics. The following table presents certain market and interest-rate metrics under different interest-rate scenarios ($ amounts in millions).

December 31, 2018	Down 200 [1]	Down 100 [1]	Base	Up 100	Up 200
MVE	$ 3,326	$ 3,276	$ 3,206	$ 3,110	$ 3,080
Percent change in MVE from base	3.7%	2.2%	0%	(3.0)%	(3.9)%
MVE/book value of equity [2]	103.3%	101.8%	99.6%	96.6 %	95.7 %
Duration of equity [3]	1.3	1.7	2.8	2.4	(0.3)

December 31, 2017	Down 200 [1]	Down 100 [1]	Base	Up 100	Up 200
MVE	$ 3,302	$ 3,200	$ 3,096	$ 3,001	$ 2,895
Percent change in MVE from base	6.7%	3.4%	0%	(3.1)%	(6.5)%
MVE/book value of equity [2]	106.2%	102.9%	99.5%	96.5 %	93.1 %
Duration of equity [3]	2.3	3.7	2.9	3.4	3.7

(1) Given the current low interest rates in the short-to-medium term points of the yield curves, downward rate shocks are constrained to prevent rates from becoming negative.

(2) The change in the base MVE/book value of equity from December 31, 2017 resulted primarily from the change in market value of the assets and liabilities in response to changes in the market environment, changes in portfolio composition, and changes in hedging strategies.

(3) We use interest-rate shocks in 50 bps increments to determine duration of equity.

Duration Gap. A related measure of interest-rate risk is duration gap, which is the difference between the estimated durations (market value sensitivity) of assets and liabilities. Duration gap measures the sensitivity of assets and liabilities to interest-rate changes. Duration generally indicates the expected change in an instrument's market value resulting from an increase or a decrease in interest rates. Higher duration numbers, whether positive or negative, indicate greater volatility of market value in response to changing interest rates. The base case duration gap was 0.09% and 0.10% at December 31, 2018 and 2017, respectively.

As part of our overall interest-rate risk management process, we continue to evaluate strategies to manage interest-rate risk. Certain strategies, if implemented, could have an adverse impact on future earnings.

Use of Derivative Hedges

We use derivatives to hedge our market risk exposures. The primary types of derivatives used are interest-rate swaps and caps. Interest-rate swaps and caps increase the flexibility of our funding alternatives by providing specific cash flows or characteristics that might not be as readily available or cost effective if obtained in the cash debt market. We do not speculate using derivatives and do not engage in derivatives trading.

Hedging Debt Issuance. When CO bonds are issued, we often use the derivatives market to create funding that is more attractively priced than the funding available in the consolidated obligations market. A typical hedge of this type occurs when a CO bond is issued, while we simultaneously execute a matching interest rate swap. The counterparty pays a rate on the swap to us, which is designed to mirror the interest rate we pay on the CO bond. In this transaction we typically pay a variable interest rate, generally LIBOR, which closely matches the interest payments we receive on short-term or variable-rate advances or investments. This intermediation between the capital and swap markets permits the acquisition of funds by us at lower all-in costs than would otherwise be available through the issuance of simple fixed- or floating-rate consolidated obligations in the capital markets. The continued attractiveness of such debt depends on yield relationships between the debt and derivative markets. If conditions in these markets change, we may alter the types or terms of the CO bonds that we issue. Occasionally, interest rate swaps are executed to hedge discount notes.

Hedging Advances. Interest-rate swaps are also used to increase the flexibility of advance offerings by effectively converting the specific cash flows or characteristics that the borrower prefers into cash flows or characteristics that may be more readily or cost effectively funded in the debt markets.

Hedging Mortgage Loans. We use Agency TBAs to hedge MDC positions.

Hedging Investments. Some interest-rate swaps are executed to hedge investments. In addition, interest-rate caps are purchased to reduce the risk inherent in floating-rate instruments that include caps as part of the structure.

Other Hedges. We occasionally use derivatives, such as swaptions, to maintain our risk profile within the approved risk limits set forth in our Enterprise Risk Management Policy. On an infrequent basis, we may act as an intermediary between certain smaller member institutions and the capital markets by executing interest-rate swaps with members.

The volume of derivative hedges is often expressed in terms of notional amount, which is the amount upon which interest payments are calculated. The following table highlights the notional amounts by type of hedged item, hedging instrument, and hedging objective ($ amounts in millions).

Hedged Item/Hedging Instrument	Hedging Objective	Hedge Accounting Designation	December 31, 2018	December 31, 2017
Advances:				
Pay fixed, receive floating interest-rate swap (without options)	Converts the advance's fixed rate to a variable-rate index.	Fair-value	$ 10,800	$ 9,335
		Economic	26	29
Pay fixed, receive floating interest-rate swap (with options)	Converts the advance's fixed rate to a variable-rate index and offsets option risk in the advance.	Fair-value	3,152	1,880
Pay floating with embedded features, receive floating interest-rate swap (non-callable)	Reduces interest-rate sensitivity and repricing gaps by converting the advance's variable rate to a different variable-rate index and/or offsets embedded option risk in the advance.	Fair-value	—	2
		Economic	2	—
Pay floating with embedded features, receive floating interest-rate swap (callable)	Reduces interest-rate sensitivity and repricing gaps by converting the advance's variable rate to a different variable-rate index and/or offsets embedded option risk in the advance.	Fair-value	—	50
Sub-total advances			13,980	11,296
Investments:				
Pay fixed, receive floating interest-rate swap	Converts the investment's fixed rate to a variable-rate index.	Fair-value	4,381	4,464
Pay fixed, receive floating interest-rate swap (with options)	Converts the investment's fixed rate to a variable-rate index and offsets option risk in the investment.	Fair-value	3,501	2,528
Interest-rate cap	Offsets the interest-rate cap embedded in a variable-rate investment.	Economic	680	246
Sub-total investments			8,562	7,238
Mortgage loans:				
Interest-rate swaption	Provides the option to enter into an interest-rate swap to offset interest-rate or prepayment risk in a pooled mortgage portfolio hedge.	Economic	950	—
Forward settlement agreement	Protects against changes in market value of fixed-rate MDCs resulting from changes in interest rates.	Economic	44	73
Sub-total mortgage loans			994	73
CO bonds:				
Receive fixed, pay floating interest-rate swap (without options)	Converts the bond's fixed rate to a variable-rate index.	Fair-value	6,903	6,916
		Economic	928	100
Receive fixed or structured, pay floating interest-rate swap (with options)	Converts the bond's fixed rate to a variable-rate index and offsets option risk in the bond.	Fair-value	6,398	5,908
		Economic	10	—
Receive float, pay float basis swap	Reduces interest-rate sensitivity and repricing gaps by converting the bond's variable rate to a different variable-rate index.	Economic	—	600
Sub-total CO bonds			14,239	13,524
Discount notes:				
Receive fixed, pay floating interest-rate swap	Converts the discount note's fixed rate to a variable-rate index.	Economic	—	298
Sub-total discount notes			—	298
Stand-alone derivatives:				
MDCs	Protects against fair value risk associated with fixed-rate mortgage purchase commitments.	Economic	44	71
Sub-total stand-alone derivatives			44	71
Total notional			$ 37,819	$ 32,500

Complex swaps include, but are not limited to, step-up bonds. The level of different types of derivatives is contingent upon and tends to vary with our balance sheet size, our members' demand for advances, mortgage loan purchase activity, and consolidated obligation issuance levels.

Interest-Rate Swaps. The following table presents the amount swapped by interest-rate payment terms for AFS securities, advances, CO bonds, and discount notes ($ amounts in millions).

	December 31, 2018			December 31, 2017		
Interest-Rate Payment Terms	**Total Outstanding**	**Amount Swapped**	**% Swapped**	**Total Outstanding**	**Amount Swapped**	**% Swapped**
AFS securities:						
Total fixed-rate	$ 7,651	$ 7,651	100%	$ 6,820	$ 6,818	100%
Total variable-rate	—	—	—%	187	—	—%
Total AFS securities, amortized cost	$ 7,651	$ 7,651	100%	$ 7,007	$ 6,818	97%
Advances:						
Total fixed-rate	$ 24,750	$ 13,978	56%	$ 25,133	$ 11,244	45%
Total variable-rate	8,079	2	—%	9,036	52	1%
Total advances, par value	$ 32,829	$ 13,980	43%	$ 34,169	$ 11,296	33%
CO bonds:						
Total fixed-rate	$ 27,520	$ 14,239	52%	$ 25,033	$ 12,924	52%
Total variable-rate	12,855	—	—%	12,950	600	5%
Total CO bonds, par value	$ 40,375	$ 14,239	35%	$ 37,983	$ 13,524	36%
Discount notes:						
Total fixed-rate	$ 20,953	$ —	—%	$ 20,394	$ 300	1%
Total variable-rate	—	—	—%	—	—	—%
Total discount notes, par value	$ 20,953	$ —	—%	$ 20,394	$ 300	1%

For information on credit risk related to derivatives, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Management - Credit Risk Management - Derivatives*.

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Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting ("ICFR"), as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Our ICFR 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 and includes those policies and procedures that:

- pertain to the maintenance of our records that, in reasonable detail, accurately and fairly reflect our transactions and asset dispositions;
- provide reasonable assurance that our transactions are recorded as necessary to permit the preparation of our financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and board of directors; and
- provide reasonable assurance regarding the prevention or timely detection of any unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Reasonable assurance, as defined in Section 13(b)(7) of the Exchange Act, is the level of detail and degree of assurance that would satisfy prudent officials in the conduct of their own affairs in devising and maintaining a system of internal accounting controls.

Because of its inherent limitations, ICFR 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.

Under the supervision and with the participation of our management, including our principal executive officer, principal financial officer and principal accounting officer, we assessed the effectiveness of our ICFR as of December 31, 2018. Our assessment included extensive documentation, evaluation, and testing of the design and operating effectiveness of our ICFR. In making this assessment, our management used the criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. These criteria include the areas of control environment, risk assessment, control activities, information and communication, and monitoring. Based on our assessment using these criteria, our management concluded that we maintained effective ICFR as of December 31, 2018.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of the
Federal Home Loan Bank of Indianapolis

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 Indianapolis (the "Bank") as of December 31, 2018 and 2017, and the related statements of income, comprehensive income, capital and cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the "financial statements"). We also have audited the Bank's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control —Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Bank as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Bank maintained in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The 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.

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.

/s/ PricewaterhouseCoopers LLP
Indianapolis, Indiana
March 8, 2019

We have served as the Bank's auditor since 1990.

Federal Home Loan Bank of Indianapolis
Statements of Condition
($ amounts in thousands, except par value)

	December 31, 2018	December 31, 2017
Assets:		
Cash and due from banks (Note 3)	$ 100,735	$ 55,269
Interest-bearing deposits	1,210,705	660,342
Securities purchased under agreements to resell	3,212,726	2,605,460
Federal funds sold	3,085,000	1,280,000
Available-for-sale securities (Note 4)	7,703,596	7,128,758
Held-to-maturity securities (estimated fair values of $5,676,145 and $5,919,299, respectively) (Note 4)	5,673,720	5,897,668
Advances (Note 5)	32,727,668	34,055,064
Mortgage loans held for portfolio, net of allowance for loan losses of $(600) and $(850), respectively (Notes 6 and 7)	11,384,978	10,356,341
Accrued interest receivable	124,611	105,314
Premises, software, and equipment, net (Note 8)	37,198	36,795
Derivative assets, net (Note 9)	116,764	128,206
Other assets	33,998	39,689
Total assets	$ 65,411,699	$ 62,348,906
Liabilities:		
Deposits (Note 10)	$ 500,440	$ 564,799
Consolidated obligations (Note 11):		
Discount notes	20,895,262	20,358,157
Bonds	40,265,465	37,895,653
Total consolidated obligations, net	61,160,727	58,253,810
Accrued interest payable	179,728	135,691
Affordable Housing Program payable (Note 12)	40,747	32,166
Derivative liabilities, net (Note 9)	21,067	2,718
Mandatorily redeemable capital stock (Note 13)	168,876	164,322
Other liabilities	289,665	249,894
Total liabilities	62,361,250	59,403,400
Commitments and contingencies (Note 18)		
Capital (Note 13):		
Capital stock (putable at par value of $100 per share):		
Class B-1 issued and outstanding shares: 19,306,333 and 18,566,388, respectively	1,930,633	1,856,639
Class B-2 issued and outstanding shares: 3,192 and 11,271, respectively	319	1,127
Total capital stock	1,930,952	1,857,766
Retained earnings:		
Unrestricted	855,311	792,783
Restricted	222,499	183,551
Total retained earnings	1,077,810	976,334
Total accumulated other comprehensive income (Note 14)	41,687	111,406
Total capital	3,050,449	2,945,506
Total liabilities and capital	$ 65,411,699	$ 62,348,906

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

Federal Home Loan Bank of Indianapolis
Statements of Income
($ amounts in thousands)

	Years Ended December 31,		
	2018	**2017**	**2016**
Interest Income:			
Advances	$ 726,243	$ 405,863	$ 219,538
Interest-bearing deposits	21,004	3,397	808
Securities purchased under agreements to resell	58,940	6,144	6,481
Federal funds sold	54,602	44,054	10,494
Available-for-sale securities	197,600	121,049	69,106
Held-to-maturity securities	152,581	119,347	112,959
Mortgage loans held for portfolio	354,091	314,827	274,343
Other interest income, net	17	1,955	1,162
Total interest income	1,565,078	1,016,636	694,891
Interest Expense:			
Consolidated obligation discount notes	392,281	182,104	64,370
Consolidated obligation bonds	865,298	559,711	425,006
Deposits	11,021	4,784	709
Mandatorily redeemable capital stock	8,391	7,034	6,613
Total interest expense	1,276,991	753,633	496,698
Net interest income	288,087	263,003	198,193
Provision for (reversal of) credit losses	(231)	51	(45)
Net interest income after provision for credit losses	288,318	262,952	198,238
Other Income:			
Net other-than-temporary impairment losses, credit portion	—	(207)	(197)
Net realized gains from sale of available-for-sale securities	32,407	—	—
Net realized losses from sale of held-to-maturity securities	(45)	—	—
Net gains (losses) on derivatives and hedging activities	(13,350)	(9,258)	2,272
Service fees	995	947	1,200
Standby letters of credit fees	609	747	736
Other, net (Note 18)	(107)	1,775	1,647
Total other income (loss)	20,509	(5,996)	5,658
Other Expenses:			
Compensation and benefits	49,938	45,630	43,477
Other operating expenses	28,476	26,349	24,945
Federal Housing Finance Agency	3,633	3,328	2,955
Office of Finance	4,503	3,687	3,020
Other	4,971	3,368	3,202
Total other expenses	91,521	82,362	77,599
Income before assessments	217,306	174,594	126,297
Affordable Housing Program assessments	22,570	18,163	13,291
Net income	$ 194,736	$ 156,431	$ 113,006

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

Federal Home Loan Bank of Indianapolis
Statements of Comprehensive Income
($ amounts in thousands)

	Years Ended December 31,		
	2018	**2017**	**2016**
Net income	$ 194,736	$ 156,431	$ 113,006
Other Comprehensive Income:			
Net change in unrealized gains (losses) on available-for-sale securities	(39,533)	53,051	39,371
Net non-credit portion of other-than-temporary impairment losses on available-for-sale securities	(29,322)	2,384	(3,291)
Net non-credit portion of other-than-temporary impairment losses on held-to-maturity securities	51	52	29
Pension benefits, net (Note 15)	(915)	(449)	(2,619)
Total other comprehensive income (loss)	(69,719)	55,038	33,490
Total comprehensive income	$ 125,017	$ 211,469	$ 146,496

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

Federal Home Loan Bank of Indianapolis
Statements of Capital
Years Ended December 31, 2016, 2017, and 2018
($ amounts and shares in thousands)

	Capital Stock		Retained Earnings			Accumulated Other Comprehensive Income (Loss)	Total Capital
	Shares	Par Value	Unrestricted	Restricted	Total		
Balance, December 31, 2015	15,278	$ 1,527,806	$ 705,449	$ 129,664	$ 835,113	$ 22,878	$ 2,385,797
Total comprehensive income			90,405	22,601	113,006	33,490	146,496
Proceeds from issuance of capital stock	1,478	147,831					147,831
Shares reclassified to mandatorily redeemable capital stock, net	(1,830)	(183,056)					(183,056)
Distributions on mandatorily redeemable capital stock			(1,072)	—	(1,072)		(1,072)
Cash dividends on capital stock (4.25%)			(59,800)	—	(59,800)		(59,800)
Balance, December 31, 2016	14,926	$ 1,492,581	$ 734,982	$ 152,265	$ 887,247	$ 56,368	$ 2,436,196
Total comprehensive income			125,145	31,286	156,431	55,038	211,469
Proceeds from issuance of capital stock	3,652	365,185					365,185
Cash dividends on capital stock (4.25%)			(67,344)	—	(67,344)		(67,344)
Balance, December 31, 2017	18,578	$ 1,857,766	$ 792,783	$ 183,551	$ 976,334	$ 111,406	$ 2,945,506
Total comprehensive income			155,788	38,948	194,736	(69,719)	125,017
Proceeds from issuance of capital stock	1,044	104,432					104,432
Redemption/repurchase of capital stock	—	(32)					(32)
Shares reclassified to mandatorily redeemable capital stock, net	(312)	(31,214)					(31,214)
Distributions on mandatorily redeemable capital stock			(38)	—	(38)		(38)
Cash dividends on capital stock (5.00%)			(93,222)	—	(93,222)		(93,222)
Balance, December 31, 2018	19,310	$ 1,930,952	$ 855,311	$ 222,499	$1,077,810	$ 41,687	$ 3,050,449

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

Federal Home Loan Bank of Indianapolis
Statements of Cash Flows
($ amounts in thousands)

	Years Ended December 31,		
	2018	2017	2016
Operating Activities:			
Net income	$ 194,736	$ 156,431	$ 113,006
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization and depreciation	74,366	69,111	57,040
Prepayment fees on advances, net of related swap termination fees	—	—	(526)
Changes in net derivative and hedging activities	45,201	(13,643)	22,701
Net other-than-temporary impairment losses, credit portion	—	207	197
Loss on disposition of equipment	37	—	—
Provision for (reversal of) credit losses	(231)	51	(45)
Net realized gains from sale of available-for-sale securities	(32,407)	—	—
Net realized losses from sale of held-to-maturity securities	45	—	—
Changes in:			
Accrued interest receivable	(19,387)	(11,783)	(5,541)
Other assets	541	(1,867)	(2,674)
Accrued interest payable	44,192	37,343	16,597
Other liabilities	46,224	27,890	38,187
Total adjustments, net	158,581	107,309	125,936
Net cash provided by operating activities	353,317	263,740	238,942
Investing Activities:			
Net change in:			
Interest-bearing deposits	(547,189)	(464,287)	(39,205)
Securities purchased under agreements to resell	(607,266)	(824,151)	(1,781,309)
Federal funds sold	(1,805,000)	370,000	(1,650,000)
Available-for-sale securities:			
Proceeds from maturities	102,522	1,041,227	855,927
Proceeds from sales	203,841	—	—
Purchases	(972,799)	(2,213,866)	(2,906,310)
Held-to-maturity securities:			
Proceeds from maturities	961,778	1,245,438	1,351,512
Proceeds from sales	41,226	—	—
Purchases	(780,272)	(1,325,424)	(983,718)
Advances:			
Principal repayments	343,131,228	280,448,048	146,368,448
Disbursements to members	(341,791,120)	(286,485,558)	(147,692,939)
Mortgage loans held for portfolio:			
Principal collections	1,191,873	1,245,983	1,701,633
Purchases from members	(2,255,741)	(2,144,552)	(3,074,847)
Purchases of premises, software, and equipment	(6,765)	(5,176)	(4,957)
Loans to other Federal Home Loan Banks:			
Principal repayments	400,000	100,000	300,000
Disbursements	(400,000)	(100,000)	(300,000)
Net cash used in investing activities	(3,133,684)	(9,112,318)	(7,855,765)

(continued)

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

Federal Home Loan Bank of Indianapolis
Statements of Cash Flows, continued
($ amounts in thousands)

	Years Ended December 31,		
	2018	**2017**	**2016**
Financing Activities:			
Changes in deposits	(68,140)	73,891	22,268
Net payments on derivative contracts with financing elements	(340)	(16,683)	(32,898)
Net proceeds from issuance of consolidated obligations:			
Discount notes	352,096,048	216,011,184	331,383,919
Bonds	17,386,007	23,856,245	31,636,349
Payments for matured and retired consolidated obligations:			
Discount notes	(351,576,032)	(212,480,262)	(333,840,103)
Bonds	(14,996,190)	(19,379,260)	(25,997,585)
Proceeds from issuance of capital stock	104,432	365,185	147,831
Payments for redemption/repurchase of capital stock	(32)	—	—
Payments for redemption/repurchase of mandatorily redeemable capital stock	(26,698)	(5,721)	(28,148)
Dividend payments on capital stock	(93,222)	(67,344)	(59,800)
Net cash provided by financing activities	2,825,833	8,357,235	3,231,833
Net increase (decrease) in cash and due from banks	45,466	(491,343)	(4,384,990)
Cash and due from banks at beginning of year	55,269	546,612	4,931,602
Cash and due from banks at end of year	$ 100,735	$ 55,269	$ 546,612
Supplemental Disclosures:			
Interest payments	$ 1,193,500	$ 682,034	$ 473,058
Purchases of securities, traded but not yet settled	—	—	120,266
Affordable Housing Program payments	13,989	12,595	17,796
Capitalized interest on certain held-to-maturity securities	4,984	3,282	975
Par value of shares reclassified to mandatorily redeemable capital stock, net	31,214	—	183,056

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

These Notes to Financial Statements should be read in conjunction with the Statements of Condition as of December 31, 2018 and 2017, and the Statements of Income, Comprehensive Income, Capital, and Cash Flows for the years ended December 31, 2018, 2017, and 2016. We use acronyms and terms throughout these Notes to Financial Statements that are defined herein or in the *Glossary of Terms*. Unless the context otherwise requires, the terms "Bank," "we," "us," and "our" refer to the Federal Home Loan Bank of Indianapolis or its management.

Background Information

The Federal Home Loan Bank of Indianapolis, a federally chartered corporation, is one of 11 regional wholesale FHLBanks in the United States. The FHLBanks are GSEs that were organized under the Bank Act to serve the public by enhancing the availability of credit for residential mortgages and targeted community development. Even though we are part of the FHLBank System, we operate as a separate entity with our own management, employees and board of directors.

Each FHLBank is a financial cooperative that provides a readily available, competitively-priced source of funds to its member institutions. Regulated financial depositories and non-captive insurance companies engaged in residential housing finance that have their principal place of business located in, or are domiciled in, our district states of Michigan or Indiana are eligible for membership in our Bank. Additionally, qualified CDFIs are eligible to be members. Housing Associates, including state and local housing authorities, that meet certain statutory and regulatory criteria may also borrow from us. While eligible to borrow, Housing Associates are not members and, as such, are not allowed to hold our capital stock.

Each member must purchase a minimum amount of our capital stock based on the amount of its total mortgage assets. A member may be required to purchase additional activity-based capital stock as it engages in certain business activities with us. Members and former members own all of our capital stock. Former members (including certain non-member institutions that own our capital stock as a result of a merger with or acquisition of a member) hold our capital stock solely to support credit products or mortgage loans still outstanding on our statement of condition. All owners of our capital stock, to the extent declared by our board of directors, receive dividends on their capital stock, subject to the applicable regulations as discussed in *Note 13 - Capital*. For more information about transactions with related parties, see *Note 19 - Related Party and Other Transactions*.

The FHLBanks' Office of Finance was established to facilitate the issuance and servicing of the debt instruments of the FHLBanks, known as consolidated obligations, consisting of bonds and discount notes, and to prepare and publish the FHLBanks' combined quarterly and annual financial reports.

Consolidated obligations are the primary source of funds for the FHLBanks. Deposits, other borrowings and capital stock issued to members provide additional funds. We primarily use these funds to:

- disburse advances to members;
- acquire mortgage loans from PFIs through our MPP;
- maintain liquidity; and
- invest in other opportunities to support the residential housing market.

We also provide correspondent services, such as wire transfer, security safekeeping, and settlement services, to our members.

The Finance Agency is the independent federal regulator of the FHLBanks, Freddie Mac, and Fannie Mae. The Finance Agency's stated mission is to ensure that the housing GSEs operate in a safe and sound manner so that they serve as a reliable source of liquidity and funding for housing finance and community investment.

Note 1 - Summary of Significant Accounting Policies

Basis of Presentation. The accompanying financial statements have been prepared in accordance with GAAP and SEC requirements.

The financial statements contain all adjustments that are, in the opinion of management, necessary for a fair statement of our financial position, results of operations and cash flows for the periods presented. All such adjustments were of a normal recurring nature.

Use of Estimates. When preparing financial statements in accordance with GAAP, we are required to make subjective assumptions and estimates that may affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported amounts of income and expense. The most significant estimates pertain to derivatives and hedging activity, fair value, the provision for credit losses, and OTTI. Although the reported amounts and disclosures reflect our best estimates, actual results could differ significantly from these estimates.

Estimated Fair Value. The estimated fair value amounts, recorded on the statement of condition and presented in the accompanying disclosures, have been determined based on the assumptions that we believe market participants would use in pricing the asset or liability and reflect our best judgment of appropriate valuation methods. Although we use our best judgment in estimating fair value, there are inherent limitations in any valuation technique. Therefore, these estimated fair values may not be indicative of the amounts that would have been realized in market transactions on the reporting dates. For more information, see *Note 17 - Estimated Fair Values*.

Reclassifications. We have reclassified certain amounts from the prior period to conform to the current period presentation. These reclassifications had no effect on total assets, total liabilities, total capital, net income, total comprehensive income or net cash flows.

Interest-Bearing Deposits, Securities Purchased under Agreements to Resell, and Federal Funds Sold. These investments provide short-term liquidity and are carried at cost. Securities purchased under agreements to resell are considered short-term collateralized financings. These securities are held in safekeeping in our name by third-party custodians approved by us. If the market value of the underlying assets declines below the market value required as collateral, the counterparty must (i) place an equivalent amount of additional securities in safekeeping in our name, and/or (ii) remit an equivalent amount of cash, or the dollar value of the resale agreement will be reduced accordingly. Federal funds sold consist of short-term, unsecured loans made to investment-grade counterparties.

Investment Securities. Purchases and sales of securities are recorded on a trade date basis. We classify investments as trading, HTM or AFS at the date of acquisition.

Trading Securities. Securities classified as trading are held for liquidity purposes and carried at fair value. We record changes in the fair value of these securities through other income as net gains (losses) on trading securities. Finance Agency regulation and our Enterprise Risk Management Policy prohibit trading in or the speculative use of these instruments and limit credit risk arising from these instruments. We did not have any investments classified as trading securities as of or during the years ended December 31, 2018, 2017 or 2016.

HTM Securities. Securities for which we have both the positive intent and ability to hold to maturity are classified as HTM. The carrying value includes adjustments made to the cost basis of the security for accretion, amortization, collection of principal, and, if applicable, OTTI recognized in earnings (credit losses) and OCI (non-credit losses).

Certain changes in circumstances may cause us to change our intent to hold a particular security to maturity without necessarily calling into question our intent to hold other debt securities to maturity. Thus, the sale or transfer of an HTM security due to certain changes in circumstances, such as evidence of significant deterioration in the issuer's creditworthiness or changes in regulatory requirements, is not considered to be inconsistent with its original classification. Other isolated, non-recurring, and unusual events, which could not have been reasonably anticipated, may also cause us to sell or transfer an HTM security without necessarily calling into question our intent to hold other debt securities to maturity.

In addition, sales of HTM debt securities that meet either of the following two conditions may be considered as maturities for purposes of the classification of securities: (i) the sale occurs near enough to its maturity date (or call date, if exercise of the call is probable) that interest-rate risk is substantially eliminated as a pricing factor and any changes in market interest rates would not have a significant effect on the security's fair value, or (ii) the sale occurs after we have already collected a substantial portion (at least 85%) of the principal outstanding at acquisition due either to prepayments or to scheduled payments payable in equal installments (both principal and interest) over its term.

AFS Securities. Securities that are not classified as trading or HTM are classified as AFS and carried at estimated fair value. We record changes in the fair value of these securities in OCI as net change in unrealized gains (losses) on AFS securities, except for AFS securities that have been hedged and for which the hedging relationship qualifies as a fair-value hedge. For these securities, we record the portion of the change in fair value attributable to the risk being hedged in other income as net gains (losses) on derivatives and hedging activities together with the related change in the fair value of the derivative. For AFS securities that are OTTI, changes in fair value, net of any credit loss, are recorded in OCI as the non-credit portion.

Premiums and Discounts. Since we own a large number of similar loans underlying our MBS and ABS, for which prepayments are probable and the timing and amount of prepayments can be reasonably estimated, we consider estimates of future principal prepayments in the calculation of the constant effective yield necessary to apply the interest method. Therefore, we amortize or accrete premiums and discounts on MBS and ABS to interest income at an individual security level using a level-yield methodology over the estimated remaining cash flows of each security. This method requires that we estimate prepayments over the estimated life of the securities and make a retrospective adjustment of the effective yield each time we change the estimated remaining cash flows of the securities as if the new estimates had been used since the acquisition date. Changes in interest rates are a significant assumption used in prepayment speed estimates.

We amortize or accrete premiums and discounts on all other investments at an individual security level using a level-yield methodology over the contractual life of the securities, under which prepayments are only taken into account as they actually occur.

Gains and Losses on Sales. We compute gains and losses on sales of investment securities using the specific identification method and include these gains and losses in other income as net realized gains (losses) from sale of securities.

Investment Securities - Other-Than-Temporary Impairment. On a quarterly basis, we evaluate our individual AFS and HTM securities that have been previously OTTI or are in an unrealized loss position to determine if any such securities are OTTI. A security is in an unrealized loss position (i.e., impaired) when its estimated fair value is less than its amortized cost. We consider an impaired debt security to be OTTI under any of the following conditions:

- we intend to sell the debt security;
- based on available evidence, we believe it is more likely than not that we will be required to sell the debt security before the anticipated recovery of its remaining amortized cost; or
- we do not expect to recover the entire amortized cost of the debt security.

Recognition of OTTI. If either of the first two conditions above is met, we recognize an OTTI loss in earnings equal to the entire difference between the debt security's amortized cost and its estimated fair value as of the statement of condition date. For those impaired securities that meet neither of these two conditions, we perform a cash flow analysis to determine whether we expect to recover the entire amortized cost of each security.

If the present value of the cash flows expected to be collected is less than the amortized cost of the debt security, a credit loss equal to that difference is recorded, and the carrying value of the debt security is adjusted to its estimated fair value. However, rather than recognizing the entire difference between the amortized cost and estimated fair value in earnings, only the amount of the impairment representing the credit loss (i.e., the credit component) is recognized in earnings, while the remaining amount, if any, related to all other factors (i.e., the non-credit component) is recognized in OCI. The credit loss on a debt security is capped at the amount of that security's unrealized loss. The new amortized cost basis of the OTTI security, which reflects the credit loss, will not be adjusted for any subsequent recoveries of fair value.

The total OTTI loss is included in other income with an offset for the portion recognized in OCI. The remaining amount represents the credit loss.

Additional OTTI. Subsequent to any recognition of OTTI, if the present value of cash flows expected to be collected is less than the amortized cost basis (which reflects previous credit losses), we record an additional credit loss equal to that difference as additional OTTI. The total amount of additional OTTI (both credit and non-credit component, if any) is determined as the difference between the security's amortized cost, less the amount of OTTI recognized in AOCI prior to the determination of this additional OTTI, and its fair value. For certain AFS or HTM securities that were previously impaired and have subsequently incurred additional credit losses, an amount equal to the additional credit losses, up to the amount of non-credit losses remaining in AOCI, is reclassified out of AOCI and into other income.

Subsequent increases and decreases (if not an additional OTTI) in the estimated fair value of OTTI AFS securities are netted against the non-credit component of OTTI recognized previously in AOCI. For HTM securities, the OTTI in AOCI is accreted to the carrying value of each security on a prospective basis, based on the amount and timing of future projected cash flows (with no effect on earnings unless the security is subsequently sold, matures or additional OTTI is recognized). For debt securities classified as AFS, we do not accrete the OTTI in AOCI to the carrying value because the subsequent measurement basis for these securities is estimated fair value.

Interest Income Recognition. As of the initial OTTI measurement date, a new accretable yield is calculated for the OTTI debt security. This yield is then used to calculate the portion of the credit losses included in the amortized cost of the security to be recognized into interest income each period over the remaining life of the security so as to match the amount and timing of future cash flows expected to be collected.

On a quarterly basis, we re-evaluate the estimated cash flows and accretable yield. If there is no additional OTTI and there is either (i) a significant increase in the security's expected cash flows or (ii) a favorable change in the timing and amount of the security's expected cash flows, we adjust the accretable yield on a prospective basis.

Advances. We record advances at amortized cost, adjusted for unamortized premiums, discounts, prepayment fees and swap termination fees, unearned commitment fees, and fair-value hedging adjustments. We amortize or accrete premiums, discounts, hedging basis adjustments, deferred prepayment fees, and deferred swap termination fees, and recognize unearned commitment fees, to interest income using a level-yield methodology over the contractual life of the advance. When an advance is prepaid, a proportionate share of any remaining premium or discount is amortized at the time of prepayment. We record interest on advances to interest income as earned.

Prepayment Fees. We charge a borrower a prepayment fee when the borrower repays certain advances prior to the original maturity. We report prepayment fees net of any swap termination fees and hedge accounting basis adjustments.

Advance Modifications. When we fund a new advance concurrent with, or within a short period of time after, the prepayment of an original advance, we determine whether the transaction is effectively either (i) two separate transactions (the prepayment of an original advance and the disbursement of a new advance), defined as an advance extinguishment, or (ii) the continuation of the original advance as modified, defined as an advance modification.

We account for the transaction as an extinguishment if both of the following criteria are met: (i) the effective yield of the new advance is at least equal to the effective yield for a comparable advance to a member with similar collection risks who is not prepaying, and (ii) modifications of the original advance are determined to be more than minor, i.e., if the present value of the cash flows under the terms of the new advance is at least 10% different from the present value of the remaining cash flows under the terms of the original advance or through an evaluation of qualitative factors which may include changes in the interest-rate exposure to the member by moving from a fixed to an adjustable rate advance. In all other instances, the transaction is accounted for as an advance modification.

If the transaction is determined to be an advance extinguishment, we recognize income from nonrefundable prepayment fees, net of swap termination fees, in the period that the extinguishment occurs. Alternatively, if no prepayment fees are received (e.g., the member requests that we embed the prepayment fee into the rate of the new advance), the difference between the present value of the cash flows of the new advance and that of a current market rate advance of comparable terms is recognized in current income, and the basis of the new advance is adjusted accordingly.

If the transaction is determined to be an advance modification, the income from nonrefundable prepayment fees, net of swap termination fees, associated with the modification of the original advance is not recognized in current income but is (i) included in the carrying value of the modified advance and amortized into interest income over the life of the new advance using a level-yield methodology when the prepayment fee is received up front or (ii) embedded into the rate of the modified advance and recorded as an adjustment to the interest accrual.

Mortgage Loans Held for Portfolio. We classify mortgage loans, for which we have the intent and ability to hold for the foreseeable future or until maturity or payoff, as held for portfolio. Accordingly, these mortgage loans are reported at cost, adjusted for premiums paid to and discounts received from PFIs, deferred loan fees or costs, hedging basis adjustments, and the allowance for loan losses.

Premiums and Discounts. We amortize or accrete premiums and discounts, certain loan fees or costs, and hedging basis adjustments to interest income using a level-yield methodology over the contractual life of the loans. When a loan is prepaid, a proportionate share of any remaining premium or discount is amortized to interest income in the period in which the loan is prepaid and derecognized.

Non-accrual Loans. We place a conventional mortgage loan on non-accrual status if it is determined that either (i) the collection of interest or principal is doubtful, or (ii) interest or principal is past due for 90 days or more, except when the loan is well secured and in the process of collection (e.g., through credit enhancements and monthly servicer remittances on a scheduled/scheduled basis). Monthly servicer remittances on MPP loans on an actual/actual basis may also be well secured; however, servicers on actual/actual remittance do not advance principal and interest due until the payments are received from the borrower or when the loan is repaid.

A government-guaranteed or -insured mortgage loan is not placed on non-accrual status when the collection of the contractual principal or interest is 90 days or more past due because of the contractual obligation of the loan servicer to pay defaulted interest at the contractual rate.

For those mortgage loans placed on non-accrual status, accrued but uncollected interest is reversed against interest income (for any interest accrued in the current year) and/or the allowance for loan losses (for any interest accrued in the previous year). We record cash payments received on non-accrual loans as a direct reduction of the recorded investment in the loan. When the recorded investment has been fully collected, any additional amounts collected are recognized as interest income. A loan on non-accrual status may be restored to accrual status when it becomes current (zero days past due) and three consecutive and timely monthly payments have been made.

REO. Our MPP was designed to require loan servicers to foreclose and liquidate in the servicer's name rather than in our name. Therefore, we do not take title to any foreclosed property or enter into any other legal agreement under which the borrower conveys all interest in the property to us to satisfy the loan. Upon completion of a triggering event (short sale, deed in lieu of foreclosure, foreclosure sale or post-sale confirmation or ratification, as applicable), the servicer is required to remit to us the full UPB and accrued interest at the next feasible remittance. Upon full receipt, the mortgage loan is derecognized from the statement of condition. As a result of these factors, we do not classify as REO any foreclosed properties collateralizing MPP loans that were previously recorded on our statement of condition.

In the case of a delay in receiving final payoff from the servicer beyond the second remittance cycle after a triggering event, we reclassify the amount owed from mortgage loans to a separate amount receivable from the servicer. The receivable is then evaluated for the amount expected to be recovered.

Under the MPF Program, REO is recorded in other assets and includes assets that have been received in satisfaction of debt through foreclosures. REO is recorded at the lower of cost or fair value less estimated selling costs. We recognize a charge-off to the allowance for credit losses if the fair value of the REO less estimated selling costs is less than the recorded investment in the loan at the date of the transfer from mortgage loans to REO. Any subsequent gains, losses, and carrying costs are included in other expense.

Loan Participations. We may sell participating interests in MPP loans acquired from our PFIs to other FHLBanks. The terms of the sale of these participating interests meet the accounting requirements for a sale and, therefore, the participating interests are de-recognized from our reported mortgage loan balances and a pro-rata portion of the fixed LRA is assumed by the participating FHLBank for its use in loss mitigation. As a result, available funds remaining in our LRA are limited to our pro-rata portion of the fixed LRA that is associated with the participating interests retained by us. The portion of the participation fees received related to our upfront costs is recognized immediately into income, while the remaining portion related to our ongoing costs is deferred and amortized to income over the remaining life of the participated loans.

Allowance for Credit Losses. An allowance for credit losses is separately established for each identified portfolio segment if it is probable that impairment has occurred as of the statement of condition date and the amount of loss can be reasonably estimated.

Portfolio Segments. A portfolio segment is defined as the level at which an entity develops and documents a systematic methodology for determining its allowance for credit losses. We have developed and documented a systematic methodology for determining an allowance for credit losses, where applicable, for (i) credit products (advances, letters of credit, and other extensions of credit to members); (ii) term securities purchased under agreements to resell and term federal funds sold; (iii) government-guaranteed or -insured mortgage loans held for portfolio; and (iv) conventional mortgage loans held for portfolio. For details on each segment's allowance methodology, see *Note 7 - Allowance for Credit Losses*.

Classes of Financing Receivables. Classes of financing receivables generally are a disaggregation of a portfolio segment to the extent that they are needed to understand the exposure to credit risk arising from these financing receivables. We determined that no further disaggregation of our portfolio segments is needed, as the credit risk arising from these financing receivables is adequately assessed and measured at the portfolio segment level.

Troubled Debt Restructuring. A TDR related to MPP loans occurs when a concession is granted to a borrower for economic or legal reasons related to the borrower's financial difficulties that would not have been otherwise considered. Although we do not participate in government-sponsored loan modification programs, we do consider certain conventional loan modifications to be TDRs when the modification agreement permits the recapitalization of past due amounts, generally up to the original loan amount. If a borrower is having financial difficulty and a concession has been granted by the PFI with our approval, the loan modification is considered a TDR. No other terms of the original loan are modified, except for the possible extension of the contractual maturity date on a case-by-case basis. In no event does the borrower's original interest rate change.

MPP loans discharged in Chapter 7 bankruptcy proceedings without a reaffirmation of the debt are considered TDRs unless they are covered by SMI policies. Loans discharged in Chapter 7 bankruptcy proceedings with SMI policies are also considered to be TDRs unless (i) we will not suffer more than an insignificant delay in receiving all principal and interest due or (ii) we are not relinquishing a legal right to pursue the borrower for deficiencies for those loans not affirmed.

TDRs related to MPF Program loans occur when a concession is granted to a borrower for economic or legal reasons related to the borrower's financial difficulties that would not have been otherwise considered. Such TDRs generally involve modifying the borrower's monthly payment for a period of up to 36 months. MPF Program loans discharged in Chapter 7 bankruptcy proceedings without a reaffirmation of the debt are also considered TDRs.

For both the MPP and the MPF Program, modifications of government loans are not considered or accounted for as TDRs because we anticipate no loss of principal or interest accrued at the original contract rate, or significant delay, due to the government guarantee or insurance.

Impairment Methodology. A loan is considered impaired when, based on current and historical information and events, it is probable that not all amounts due according to the contractual terms of the loan agreement will be collected.

Loans that are considered collateral dependent are subject to individual evaluation for impairment instead of collective evaluation. Loans are considered collateral dependent if repayment is expected to be provided solely by the sale of the underlying property, i.e., there is no other available and reliable source of repayment (including LRA and SMI). We consider all impaired loans to be collateral dependent and, therefore, measure impairment based on the fair value of the underlying collateral less costs to sell.

Interest income on impaired loans is recognized in the same manner as non-accrual loans.

Charge-Off Policy. A charge-off is recorded to the extent that the recorded investment (including UPB, accrued interest, unamortized premiums or discounts, and hedging adjustments) in a loan will not be fully recovered. We record a charge-off on a conventional mortgage loan against the loan loss allowance upon the occurrence of a confirming event. Confirming events include, but are not limited to, the settlement of a claim against any of the credit enhancements, delinquency in excess of 180 days, and filing for bankruptcy protection. We charge-off the portion of the outstanding conventional mortgage loan balance in excess of the fair value of the underlying property, less cost to sell and adjusted for any available credit enhancements.

Derivatives. We record derivative instruments, related cash collateral (including initial and variation margin received or pledged/posted) and associated accrued interest on a net basis, by clearing agent and/or by counterparty when the netting requirements have been met, as either derivative assets or derivative liabilities at their estimated fair values. For derivative instruments that meet the netting requirements, any excess cash collateral received or pledged is recognized as a derivative liability or derivative asset, respectively.

Cash flows associated with derivatives are reported as cash flows from operating activities in the statement of cash flows unless the derivatives contain financing elements, in which case they are reflected as cash flows from financing activities. Derivative instruments that include non-standard terms, or require an upfront cash payment, or both, often contain a financing element.

Changes in the estimated fair value of derivatives are recorded in earnings, specifically other income, regardless of how changes in the estimated fair value of the assets or liabilities being hedged may be recorded.

Designations. Each derivative is designated as one of the following:

(i) a qualifying fair-value hedge of the change in fair value of a recognized asset or liability, an unrecognized firm commitment, or a forecasted transaction (a fair-value hedge); or
(ii) a non-qualifying hedge (economic hedge) for asset/liability management purposes.

Derivatives are recorded beginning on the trade date and typically executed and designated in a qualifying hedging relationship at the same time as the acquisition of the hedged item. We may also designate the hedging relationship upon the Bank's commitment to disburse an advance, purchase financial instruments, or issue a consolidated obligation in which settlement occurs within the shortest period of time possible for the type of instrument based on market settlement conventions.

Accounting for Qualifying Hedges. Hedging relationships must meet certain criteria including, but not limited to, formal documentation of the hedging relationship and an expectation to be highly effective to qualify for hedge accounting. Two approaches to hedge accounting include:

(i) Long-haul hedge accounting - The application of long-haul hedge accounting requires us to formally assess (both at the hedge's inception and at least quarterly) whether the derivatives used in hedging transactions are highly effective in offsetting changes in the fair value of hedged items or forecasted transactions and whether those derivatives may be expected to remain highly effective in future periods.
(ii) Short-cut hedge accounting - Transactions that meet certain criteria qualify for the short-cut method of hedge accounting in which an assumption can be made that the entire change in fair value of a hedged item, due to changes in the benchmark rate, exactly offsets the entire change in fair value of the related derivative. Therefore, the derivative is considered to be highly effective at achieving offsetting changes in fair values of the hedged asset or liability. For all existing hedging relationships entered into prior to April 1, 2008, we continue to use the short-cut method of accounting provided they still meet the assumption of "no ineffectiveness." We no longer apply this method to any other hedging relationships.

Changes in the fair value of a derivative that is designated and qualifies as a fair-value hedge, along with changes in the fair value of the hedged asset or liability that are attributable to the hedged risk (including changes that reflect losses or firm commitments), are recorded in other income as net gains (losses) on derivatives and hedging activities. As a result, for fair-value hedges, any hedge ineffectiveness (which represents the amount by which the change in the fair value of the derivative differs from the change in the fair value of the hedged item attributable to the hedged risk) is recorded in other income as net gains (losses) on derivatives and hedging activities.

Accounting for Non-Qualifying Hedges. An economic hedge is defined as a derivative that hedges specific or non-specific underlying assets, liabilities, or firm commitments and does not qualify, or was not designated, for hedge accounting. As a result, we recognize only the net interest settlements and the change in fair value of these derivatives in other income as net gains (losses) on derivatives and hedging activities with no offsetting fair value adjustments in earnings for the hedged assets, liabilities, or firm commitments. An economic hedge by definition, therefore, introduces the potential for earnings variability.

Accrued Interest Receivables and Payables. The difference between the interest receivable and payable on a derivative designated as a qualifying hedge is recognized as an adjustment to the income or expense of the designated hedged item.

Discontinuance of Hedge Accounting. We discontinue hedge accounting prospectively when: (i) the hedging relationship ceases to be highly effective; (ii) the derivative and/or the hedged item expires or is sold, terminated, or exercised; (iii) a hedged firm commitment no longer meets the definition of a firm commitment; or (iv) we elect to discontinue hedge accounting.

When hedge accounting is discontinued, we either terminate the derivative or continue to carry the derivative at its fair value, cease to adjust the hedged asset or liability for changes in fair value and amortize the cumulative basis adjustment on the hedged item into interest income over the remaining life of the hedged item using a level-yield methodology.

Embedded Derivatives. We may issue consolidated obligations, disburse advances, or purchase financial instruments in which a derivative instrument is embedded. In order to determine whether an embedded derivative must be bifurcated from the host instrument and separately valued, we must assess, upon execution of the transaction, whether the economic characteristics of the embedded derivative are clearly and closely related to the economic characteristics of the remaining component of the consolidated obligation, advance or purchased financial instrument (the host contract) and whether a separate, non-embedded instrument with the same terms as the embedded instrument would meet the definition of a derivative instrument.

If we determine that (i) the embedded derivative has economic characteristics that are not clearly and closely related to the economic characteristics of the host contract and (ii) a separate, stand-alone instrument with the same terms would qualify as a derivative instrument, the embedded derivative is separated from the host contract, carried at fair value, and designated as a stand-alone derivative instrument pursuant to an economic hedge, and the host contract is accounted for based on the guidance applicable to instruments of that type that are not hedged. However, if (i) the entire contract (the host contract and the embedded derivative) is required to be measured at fair value, with changes in fair value reported in earnings (such as an investment security classified as trading), or (ii) we cannot reliably identify and measure the embedded derivative for purposes of separating that derivative from its host contract, the entire contract is carried at fair value, and no portion of the contract is designated as a hedging instrument.

Financial Instruments Meeting Netting Requirements. We present certain financial instruments, including our derivative asset and liability positions as well as cash collateral received or pledged, on a net basis when we have a legal right of offset and all other requirements for netting are met (collectively referred to as the netting requirements).

The net exposure for these financial instruments can change on a daily basis; therefore, there may be a delay between the time a change in the exposure is identified and additional collateral is requested, and the time the additional collateral is received or pledged. Likewise, there may be a delay before excess collateral is returned. For derivative instruments that meet the netting requirements, any excess cash collateral received or pledged is recognized as a derivative liability or derivative asset, respectively. Additional information regarding these transactions is provided in *Note 9 - Derivatives and Hedging Activities.*

Premises, Software, and Equipment. We record premises, software, and equipment at cost, less accumulated depreciation and amortization, and compute depreciation and amortization using the straight-line method over their respective estimated useful lives, which range from 1 to 40 years. We capitalize improvements and major renewals, but expense maintenance and repairs when incurred. We depreciate building improvements using the straight-line method over the shorter of the estimated useful life of the improvement or the remaining life of the building. In addition, we capitalize software development costs for internal use software with an estimated economic useful life of at least one year. If capitalized, we use the straight-line method for computing amortization. We include any gain or loss on disposal (other than abandonment) of premises, software, and equipment in other income. Any loss on abandonment is included in other operating expenses.

Consolidated Obligations. Consolidated obligations are recorded at amortized cost, adjusted for concessions, accretion of discounts, amortization of premiums, principal payments, and fair-value hedging adjustments.

Discounts and Premiums. We amortize or accrete the discounts and premiums as well as hedging basis adjustments to interest expense using a level-yield methodology over the term to contractual maturity of the corresponding CO bonds. When we prepay a CO, a proportionate share of any remaining premium or discount is recognized.

Concessions. Concessions are paid to dealers in connection with the issuance of certain consolidated obligations. The Office of Finance prorates the amount of our concession based upon the percentage of the debt issued on our behalf. We record concessions paid on consolidated obligations as a direct deduction from their carrying amounts, consistent with the presentation of discounts on consolidated obligations. The concessions are deferred and amortized, using a level-yield methodology, to interest expense over the term to contractual maturity of the corresponding consolidated obligations. When we prepay a CO, a proportionate share of any remaining concession is recognized.

Mandatorily Redeemable Capital Stock. When a member withdraws or attains non-member status by merger or acquisition, charter termination, relocation or other involuntary termination from membership, the member's shares are then subject to redemption, at which time a five-year redemption period commences. Since the shares meet the definition of a mandatorily redeemable financial instrument, the shares are reclassified from capital to liabilities as MRCS at estimated fair value, which is equal to par value. Dividends declared on shares classified as a liability are accrued at the expected dividend rate and reported as interest expense.

We reclassify MRCS from liabilities to capital when non-members subsequently become members through either acquisition, merger, or election. After the reclassification, dividends declared on that capital stock are no longer classified as interest expense.

Employee Retirement and Deferred Compensation Plans. We recognize the minimum required contribution to the DB plan as expense ratably over the plan year to which it relates. Without a prefunding election, any contribution made in excess of the minimum required contribution is recorded as an expense in the quarterly reporting period in which the contribution is made; with a prefunding election, such excess contribution is recorded as a prepaid asset.

Restricted Retained Earnings. In accordance with the Bank's JCE Agreement, we allocate 20% of our net income each quarter to a separate restricted retained earnings account until the balance of that account equals at least 1% of the average balance of our outstanding consolidated obligations for the previous quarter.

Gains on Litigation Settlements. Litigation settlement gains, net of related legal fees and litigation expenses, are recorded in other income when realized. A litigation settlement gain is considered realized when we receive cash or assets that are readily convertible to known amounts of cash or claims to cash. In addition, a settlement gain is considered realized when we enter into a signed agreement not subject to appeal, the counterparty has the ability to pay, and the amount to be received can be reasonably estimated. Prior to being realized, we consider potential litigation settlement gains to be gain contingencies and, therefore, they are not recorded in the statement of income.

Finance Agency Expenses. The portion of the Finance Agency's expenses and working capital fund not allocated to Freddie Mac and Fannie Mae is allocated among the FHLBanks as assessments, which are based on the ratio of each FHLBank's minimum required regulatory capital to the aggregate minimum required regulatory capital of every FHLBank. We record our share of these assessments in other expenses.

Office of Finance Expenses. Our proportionate share of the Office of Finance's operating and capital expenditures is calculated based upon two components as follows: (i) two-thirds based on our share of total consolidated obligations outstanding and (ii) one-third based on equal pro rata allocation. We record our share of these expenditures in other expenses.

Cash Flows. We consider cash and due from banks on the statement of condition as cash and cash equivalents within the statement of cash flows because of their highly liquid nature. Federal funds sold, securities purchased under agreements to resell, and interest-bearing deposits are not treated as cash and cash equivalents, but instead are treated as short-term investments. Accordingly, their associated cash flows are reported in the investing activities section of the statement of cash flows.

Note 2 - Recently Adopted and Issued Accounting Guidance

Recently Adopted Accounting Guidance.

Revenue from Contracts with Customers (ASU 2014-09). On May 28, 2014, the FASB issued guidance on revenue from contracts with customers. This guidance outlines a comprehensive model for recognizing revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry specific guidance. In addition, this guidance amends the existing requirements for the recognition of a gain or loss on the transfer of nonfinancial assets that are not in a contract with a customer. This guidance applies to all contracts with customers except those that are within the scope of certain other standards, such as financial instruments, certain guarantees, insurance contracts, or lease contracts.

The guidance, which included subsequent amendments, was effective for interim and annual periods beginning on January 1, 2018. The adoption of this guidance on a retrospective basis had no effect on our financial condition, results of operations, or cash flows.

Recognition and Measurement of Financial Assets and Financial Liabilities (ASU 2016-01). On January 5, 2016, the FASB issued amended guidance on certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. The guidance, among other provisions, permits a reduction in the disclosure of the methods and significant assumptions used to estimate the fair value of financial instruments that are measured at amortized cost on the statement of condition.

The guidance was effective for the interim and annual periods beginning on January 1, 2018. The adoption of this guidance on a prospective basis had no effect on our financial condition, results of operations, or cash flows.

Classification of Certain Cash Receipts and Cash Payments (ASU 2016-15). On August 26, 2016, the FASB issued guidance intended to reduce diversity in practice in how cash receipts and cash payments are presented and classified on the statement of cash flows for certain transactions.

This guidance was adopted on a retrospective basis beginning on January 1, 2018. The adoption of this guidance had no effect on our financial condition, results of operations or cash flows. However, the total amount of interest payments as reported in the supplemental disclosures on the statement of cash flows for the years ended December 31, 2017 and 2016 increased by $156,631 and $57,796, respectively.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost (ASU 2017-07). On March 10, 2017, the FASB issued guidance to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost. The guidance requires that an employer disaggregate the service cost component from the other components of net pension and benefit cost and provides explicit instructions on how to present such components in the statement of income.

This guidance was effective for interim and annual periods beginning on January 1, 2018. The adoption of this guidance had no effect on our financial condition, results of operations, or cash flows. However, the guidance was applied retrospectively for the presentation of the service cost component and the other components of net periodic pension cost in the statement of income, which resulted in a reclassification from compensation and benefits to other expenses for the non-service components of $2,001 and $2,170 for the years ended December 31, 2017 and 2016.

Recently Issued Accounting Guidance.

Leases (ASU 2016-02). On February 25, 2016, the FASB issued guidance which requires a lessee, in an operating or finance lease, to recognize on the statement of condition a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term. However, for a lease with a term of 12 months or less, a lessee is permitted to make an accounting policy election not to recognize a lease asset and lease liability. Under previous guidance, a lessee was not required to recognize a lease asset and lease liability arising from an operating lease on the statement of condition. While this guidance does not fundamentally change lessor accounting, some changes have been made to align that guidance with the lessee guidance and other areas within GAAP.

This guidance became effective for the interim and annual periods beginning on January 1, 2019. Upon adoption, we will report higher assets and liabilities as a result of including right-of-use assets and lease liabilities on the statement of condition, but its effect on our financial condition, results of operations, and cash flows will not be material.

Premium Amortization on Purchased Callable Debt Securities (ASU 2017-08). On March 30, 2017, the FASB issued guidance to shorten the amortization period for certain callable debt securities purchased at a premium. Specifically, the guidance requires the premium to be amortized to the earliest call date. No change is required for securities purchased at a discount, which continue to be amortized to their contractual maturities.

This guidance became effective for interim and annual periods beginning on January 1, 2019. The guidance should be applied using a modified retrospective method through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. The adoption of this guidance will have no effect on our financial condition, results of operations, or cash flows.

Targeted Improvements to Accounting for Hedging Activities (ASU 2017-12). On August 28, 2017, the FASB issued amended guidance to improve the financial reporting of hedging relationships to better portray the economic results of an entity's risk management activities in its financial statements. This guidance requires that, for fair value hedges, the entire change in the fair value of the hedging instrument included in the assessment of hedge effectiveness be presented in the same income statement line that is used to present the earnings effect of the hedged item.

This guidance became effective for interim and annual periods beginning on January 1, 2019. The adoption of this guidance will have no effect on our financial condition, net income, or cash flows. However, the amended presentation and disclosure guidance will result in a prospective reclassification in the statement of income of the change in fair value of hedging instruments and related hedged items in fair value hedging relationships from other income to interest income.

Inclusion of SOFR OIS Rate as a Benchmark Interest Rate for Hedge Accounting Purposes (ASU 2018-16). On October 25, 2018, to facilitate the LIBOR to SOFR transition, the FASB issued guidance permitting the use of the OIS rate based on SOFR as an eligible U.S. benchmark interest rate for hedge accounting purposes.

This guidance became effective for the interim and annual periods beginning on January 1, 2019, concurrent with the adoption of ASU 2017-12. The adoption of this guidance will have no effect on our financial condition, results of operations, or cash flows.

Measurement of Credit Losses on Financial Instruments (ASU 2016-13). On June 16, 2016, the FASB issued guidance replacing the current incurred loss model. The guidance requires entities to measure expected credit losses based on consideration of a broad range of relevant information, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount of the financial instrument.

This guidance is effective for the interim and annual periods beginning on January 1, 2020. Early adoption is permitted as of the interim and annual reporting periods beginning after December 15, 2018; however, we plan to adopt this guidance on the effective date. This guidance should be applied using a modified-retrospective approach whereby a cumulative-effect adjustment is recorded to retained earnings as of the beginning of the first reporting period in which the guidance is adopted.

We currently expect the adoption of this guidance to have no effect on our expected credit losses for advances, investment securities, securities purchased under agreements to resell, and short-term investments. While we are in the process of evaluating the effect of the adoption of this guidance on our mortgage loan portfolio, we currently expect an increase in the allowance for loan losses, primarily due to the requirement to measure losses for the entire estimated life of the financial asset. However, we do not currently expect the effect on our financial condition, results of operations, and cash flows to be material.

Changes to the Disclosure Requirements for Fair Value Measurement (ASU 2018-13). On August 28, 2018, the FASB issued guidance to update the disclosure requirements for fair value measurement. This guidance was issued as part of the FASB's disclosure framework project and is intended to improve disclosure effectiveness.

The guidance is effective for the interim and annual periods beginning on January 1, 2020, and early adoption is permitted; however, we currently plan to adopt this guidance on the effective date. The adoption may have an effect on our disclosures, but will have no effect on our financial condition, results of operations, or cash flows.

Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract (ASU 2018-15). On August 29, 2018, the FASB issued guidance on implementation costs incurred in a hosting arrangement that is a service contract. The guidance aligns the requirements for capitalizing such costs with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software and hosting arrangements that include an internal-use software license.

This guidance is effective for the interim and annual periods beginning on January 1, 2020, and early adoption is permitted; however, we currently plan to adopt this guidance on the effective date. We are in the process of evaluating this guidance, but we currently do not expect its effect on our financial condition, results of operations, or cash flows to be material.

Changes to the Disclosure Requirements for Defined Benefit Plans (ASU 2018-14). On August 28, 2018, the FASB issued guidance to modify the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. This guidance was issued as part of the FASB's disclosure framework project and is intended to improve disclosure effectiveness.

The guidance is effective for the annual period ended December 31, 2020, and early adoption is permitted; however, we currently plan to adopt this guidance on the effective date. The adoption may have an effect on our disclosures, but will have no effect on our financial condition, results of operations, or cash flows.

Note 3 - Cash and Due from Banks

Compensating Balances. We maintain cash balances with commercial banks in return for certain services. These agreements contain no legal restrictions on the withdrawal of funds. The average cash balances were $22,300, $35,592, and $101,311 for the years ended December 31, 2018, 2017, and 2016, respectively.

Pass-through Deposit Reserves. We act as a pass-through correspondent for member institutions required to deposit reserves with the Federal Reserve Banks. The amount reported as cash and due from banks includes pass-through reserves deposited with the Federal Reserve Banks of $65,871 and $51,576 at December 31, 2018 and 2017, respectively.

Note 4 - Investment Securities

Available-for-Sale Securities.

Major Security Types. The following table presents our AFS securities by type of security.

December 31, 2018	Amortized Cost [1]	Non-Credit OTTI	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
GSE and TVA debentures	$ 4,239,622	$ —	$ 37,458	$ —	$ 4,277,080
GSE MBS	3,410,988	—	27,797	(12,269)	3,426,516
Total AFS securities	$ 7,650,610	$ —	$ 65,255	$ (12,269)	$ 7,703,596
December 31, 2017					
GSE and TVA debentures	$ 4,357,250	$ —	$ 46,679	$ —	$ 4,403,929
GSE MBS	2,460,455	—	45,840	—	2,506,295
Private-label RMBS	189,212	(68)	29,390	—	218,534
Total AFS securities	$ 7,006,917	$ (68)	$ 121,909	$ —	$ 7,128,758

[1] Includes adjustments made to the cost basis of an investment for accretion, amortization, collection of principal, and, if applicable, OTTI recognized in earnings (credit losses) and fair-value hedge accounting adjustments.

Unrealized Loss Positions. The following table presents impaired AFS securities (i.e., in an unrealized loss position), aggregated by major security type and length of time that individual securities have been in a continuous unrealized loss position.

	Less than 12 months		12 months or more		Total	
December 31, 2018	Estimated Fair Value	Unrealized Losses	Estimated Fair Value	Unrealized Losses	Estimated Fair Value	Unrealized Losses
GSE MBS	$ 1,256,816	$ (12,269)	$ —	$ —	$ 1,256,816	$ (12,269)
Total impaired AFS securities	$ 1,256,816	$ (12,269)	$ —	$ —	$ 1,256,816	$ (12,269)
December 31, 2017						
Private-label RMBS	$ —	$ —	$ 2,494	$ (68)	$ 2,494	$ (68)
Total impaired AFS securities	$ —	$ —	$ 2,494	$ (68)	$ 2,494	$ (68)

Contractual Maturity. The amortized cost and estimated fair value of non-MBS AFS securities are presented below by contractual maturity. MBS are not presented by contractual maturity because their actual maturities will likely differ from their contractual maturities as borrowers have the right to prepay their obligations with or without prepayment fees.

	December 31, 2018		December 31, 2017	
Year of Contractual Maturity	**Amortized Cost**	**Estimated Fair Value**	**Amortized Cost**	**Estimated Fair Value**
Due in 1 year or less	$ 507,355	$ 507,832	$ 83,666	$ 83,754
Due after 1 year through 5 years	1,933,682	1,947,240	2,317,516	2,336,699
Due after 5 years through 10 years	1,646,892	1,668,409	1,766,440	1,791,829
Due after 10 years	151,693	153,599	189,628	191,647
Total non-MBS	4,239,622	4,277,080	4,357,250	4,403,929
Total MBS	3,410,988	3,426,516	2,649,667	2,724,829
Total AFS securities	$ 7,650,610	$ 7,703,596	$ 7,006,917	$ 7,128,758

Realized Gains and Losses. During the year ended December 31, 2018, for strategic, economic and operational reasons, we sold all of our AFS investments in private-label RMBS. Of the OTTI AFS securities sold in 2018, none were in an unrealized loss position. Proceeds from the AFS sales totaled $203,841, resulting in realized gains of $32,407. There were no sales during the years ended December 31, 2017 or 2016.

As of December 31, 2018, we had no intention of selling any AFS securities in an unrealized loss position nor did we consider it more likely than not that we will be required to sell these securities before our anticipated recovery of each security's remaining amortized cost basis.

Held-to-Maturity Securities.

Major Security Types. The following table presents our HTM securities by type of security.

December 31, 2018	**Amortized Cost** [1]	**Non-Credit OTTI**	**Carrying Value**	**Gross Unrecognized Holding Gains**	**Gross Unrecognized Holding Losses**	**Estimated Fair Value**
MBS and ABS:						
Other U.S. obligations - guaranteed MBS	$ 3,468,882	$ —	$ 3,468,882	$ 11,034	$ (1,552)	$ 3,478,364
GSE MBS	2,204,838	—	2,204,838	7,673	(14,730)	2,197,781
Total HTM securities	$ 5,673,720	$ —	$ 5,673,720	$ 18,707	$ (16,282)	$ 5,676,145
December 31, 2017						
MBS and ABS:						
Other U.S. obligations - guaranteed MBS	$ 3,299,157	$ —	$ 3,299,157	$ 6,555	$ (6,690)	$ 3,299,022
GSE MBS	2,553,193	—	2,553,193	26,727	(4,529)	2,575,391
Private-label RMBS	37,889	—	37,889	240	(307)	37,822
Private-label ABS	7,480	(51)	7,429	40	(405)	7,064
Total HTM securities	$ 5,897,719	$ (51)	$ 5,897,668	$ 33,562	$ (11,931)	$ 5,919,299

[1] Includes adjustments made to the cost basis of an investment for accretion, amortization, collection of principal, and, if applicable, OTTI recognized in earnings (credit losses).

Unrealized Loss Positions. The following table presents impaired HTM securities (i.e., in an unrealized loss position), aggregated by major security type and length of time that individual securities have been in a continuous unrealized loss position.

	Less than 12 months		12 months or more		Total	
December 31, 2018	**Estimated Fair Value**	**Unrealized Losses**	**Estimated Fair Value**	**Unrealized Losses**	**Estimated Fair Value**	**Unrealized Losses [1]**
MBS and ABS:						
Other U.S. obligations - guaranteed MBS	$ 829,121	$ (873)	$ 417,952	$ (679)	$ 1,247,073	$ (1,552)
GSE MBS	435,756	(890)	716,647	(13,840)	1,152,403	(14,730)
Total impaired HTM securities	$ 1,264,877	$ (1,763)	$ 1,134,599	$ (14,519)	$ 2,399,476	$ (16,282)
December 31, 2017						
MBS and ABS:						
Other U.S. obligations - guaranteed MBS	$ 1,140,624	$ (3,274)	$ 886,359	$ (3,416)	$ 2,026,983	$ (6,690)
GSE MBS	513,244	(2,191)	203,401	(2,338)	716,645	(4,529)
Private-label RMBS	14,712	(26)	11,369	(281)	26,081	(307)
Private-label ABS	—	—	7,064	(416)	7,064	(416)
Total impaired HTM securities	$ 1,668,580	$ (5,491)	$ 1,108,193	$ (6,451)	$ 2,776,773	$ (11,942)

[1] For private-label ABS, at December 31, 2017, the total of unrealized losses does not agree to total gross unrecognized holding losses of $405. Total unrealized losses include non-credit-related OTTI losses recorded in AOCI of $51, and gross unrecognized holding gains on previously OTTI securities of $40.

Contractual Maturity. MBS and ABS are not presented by contractual maturity because their actual maturities will likely differ from contractual maturities as certain borrowers have the right to prepay their obligations with or without prepayment fees.

Realized Gains and Losses. During the year ended December 31, 2018, for strategic, economic and operational reasons, we sold all of our HTM investments in private-label RMBS and ABS. The amortized cost of the HTM securities sold totaled $41,271. Proceeds from the HTM sales totaled $41,226, resulting in realized losses of $45. For each of these HTM securities, we had previously collected at least 85% of the principal outstanding at the time of acquisition due to prepayments or scheduled payments over the term. As such, the sales were considered maturities for purposes of security classification. There were no sales of HTM securities during the years ended December 31, 2017 or 2016.

As of December 31, 2018, we had no intention of selling any HTM securities in an unrealized loss position nor did we consider it more likely than not that we will be required to sell these securities before our anticipated recovery of each security's remaining amortized cost basis.

Other-Than-Temporary Impairment.

OTTI Evaluation Process and Results - Private-label RMBS and ABS.

Results of OTTI Evaluation Process - Private-label RMBS and ABS. As part of our evaluation as described in *Note 1 - Summary of Significant Accounting Policies*, we did not have any change in intent to sell, nor were we required to sell, any OTTI security prior to the sale of our private-label RMBS and ABS during the year ended December 31, 2018 or during the years ended December 31, 2017 and 2016. Therefore, we performed a cash flow analysis to determine whether we expected to recover the entire amortized cost of each security. As a result of our cash flow analysis, we recognized credit losses of $0, $207 and $197 during the years ended December 31, 2018, 2017, and 2016, respectively. During those periods, we determined that the unrealized losses on any remaining private-label RMBS and ABS were temporary as we expected to recover the entire amortized cost.

The following table presents a rollforward of the amounts related to credit losses recognized in earnings.

Credit Loss Rollforward	2018	2017	2016
Balance at beginning of year	$ 44,935	$ 51,514	$ 60,673
Additions:			
Additional credit losses for which OTTI was previously recognized [1]	—	207	197
Reductions:			
Credit losses on securities sold, matured, paid down or prepaid	(43,049)	—	—
Increases in cash flows expected to be collected (accreted as interest income over the remaining lives of the applicable securities)	(1,886)	(6,786)	(9,356)
Balance at end of year	$ —	$ 44,935	$ 51,514

[1] Relates to all securities impaired prior to January 1, 2018, 2017, and 2016, respectively.

Evaluation Process and Results - All Other Investment Securities.

Other U.S. and GSE Obligations and TVA Debentures. For other U.S. obligations, GSE obligations, and TVA debentures, we determined that, based on current expectations, the strength of the issuers' guarantees through direct obligations of or support from the United States government is sufficient to protect us from any losses. As a result, all of the gross unrealized losses as of December 31, 2018 are considered temporary.

Note 5 - Advances

We offer a wide range of fixed- and adjustable-rate advance products with different maturities, interest rates, payment characteristics and optionality. Adjustable-rate advances have interest rates that reset periodically at a fixed spread to LIBOR or another specified index. Longer-term advances may be available subject to market conditions for both fixed-rate and adjustable-rate products.

The following table presents advances outstanding by redemption term.

	December 31, 2018		December 31, 2017	
Redemption Term	Amount	WAIR %	Amount	WAIR %
Overdrawn demand and overnight deposit accounts	$ —	—	$ —	—
Due in 1 year or less	15,595,985	2.47	16,935,411	1.46
Due after 1 year through 2 years	2,957,861	2.19	2,701,784	1.96
Due after 2 years through 3 years	2,444,486	2.46	2,682,073	1.69
Due after 3 years through 4 years	2,139,695	2.36	2,172,549	1.78
Due after 4 years through 5 years	1,977,925	2.76	2,213,319	1.93
Thereafter	7,713,409	2.41	7,464,333	1.66
Total advances, par value	32,829,361	2.44	34,169,469	1.61
Fair-value hedging adjustments	(106,499)		(126,137)	
Unamortized swap termination fees associated with modified advances, net of deferred prepayment fees	4,806		11,732	
Total advances	$ 32,727,668		$ 34,055,064	

We offer our members certain advances that provide them the right, at predetermined future dates, to call (i.e., prepay) the advance prior to maturity without incurring prepayment or termination fees. Borrowers typically exercise their call options for fixed-rate advances when interest rates decline. We also offer certain adjustable-rate advances that may be contractually prepaid by the borrower at the interest-rate reset date without incurring prepayment or termination fees. All other advances may only be prepaid by paying a fee that is sufficient to make us financially indifferent to the prepayment of the advance. We also offer putable advances. Under the terms of a putable advance, we retain the right to extinguish or put the fixed-rate advance to the member on predetermined future dates and offer replacement funding at prevailing market rates, subject to certain conditions.

The following table presents advances outstanding by the earlier of the redemption term or the next call date and next put date.

	Redemption Term or Next Call Date		Redemption Term or Next Put Date	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Overdrawn demand and overnight deposit accounts	$ —	$ —	$ —	$ —
Due in 1 year or less	22,574,897	25,067,272	15,595,985	17,032,411
Due after 1 year through 2 years	2,061,411	2,412,184	3,682,461	2,701,784
Due after 2 years through 3 years	1,356,186	1,716,873	3,660,486	3,406,673
Due after 3 years through 4 years	1,581,905	928,649	2,547,995	2,718,049
Due after 4 years through 5 years	1,425,525	1,494,529	2,633,030	2,524,619
Thereafter	3,829,437	2,549,962	4,709,404	5,785,933
Total advances, par value	$ 32,829,361	$ 34,169,469	$ 32,829,361	$ 34,169,469

Under the Final Membership Rule, captive insurance companies that were admitted as FHLBank members prior to September 12, 2014, and do not meet the new definition of "insurance company" or fall within another category of institution that is eligible for FHLBank membership, shall have their memberships terminated no later than February 19, 2021. Prior to termination, new or renewed extensions of credit to such members will be subject to certain restrictions relating to maturity dates and the ratio of advances to the captive insurer's total assets and may be subject to additional restrictions at our discretion. The outstanding advances to these captive insurers mature on various dates through 2025.

Credit Risk Exposure and Security Terms. We lend to members according to Federal statutes, including the Bank Act. The Bank Act requires each FHLBank to hold, or have access to, collateral to fully secure its advances. At December 31, 2018 and 2017, our top five borrowers held 40% and 45%, respectively, of total advances outstanding, at par. As security for the advances to these and our other borrowers, we held, or had access to, collateral with an estimated fair value at December 31, 2018 and 2017 that was well in excess of the advances outstanding on those dates, respectively. For information related to our credit risk on advances and allowance methodology for credit losses, see *Note 7 - Allowance for Credit Losses*.

Note 6 - Mortgage Loans Held for Portfolio

Mortgage loans held for portfolio consist of residential loans acquired from our members through the MPP and participating interests purchased in 2012 - 2014 from the FHLBank of Topeka in residential loans that were originated by certain of its PFIs through their participation in the MPF Program offered by the FHLBank of Chicago. The MPP and MPF Program loans are fixed rate and either credit enhanced by PFIs, if conventional, or guaranteed or insured by government agencies.

The following tables present information on mortgage loans held for portfolio by term, type and product.

Term	December 31, 2018	December 31, 2017
Fixed-rate long-term mortgages	$ 10,145,476	$ 8,989,545
Fixed-rate medium-term [1] mortgages	992,059	1,134,303
Total mortgage loans held for portfolio, UPB	11,137,535	10,123,848
Unamortized premiums	251,778	234,519
Unamortized discounts	(2,415)	(2,426)
Fair-value hedging adjustments	(1,320)	1,250
Allowance for loan losses	(600)	(850)
Total mortgage loans held for portfolio, net	$ 11,384,978	$ 10,356,341

[1] Defined as a term of 15 years or less at origination.

Type	December 31, 2018	December 31, 2017
Conventional	$ 10,769,980	$ 9,701,600
Government -guaranteed or -insured	367,555	422,248
Total mortgage loans held for portfolio, UPB	$ 11,137,535	$ 10,123,848

Product	December 31, 2018	December 31, 2017
MPP	$ 10,875,079	$ 9,819,069
MPF Program	262,456	304,779
Total mortgage loans held for portfolio, UPB	$ 11,137,535	$ 10,123,848

In December 2016, we agreed to sell a 90% participating interest in a $100 million MCC of certain newly acquired MPP loans to the FHLBank of Atlanta. Principal amounts settled in December 2016 totaled $72 million, and the remaining $18 million settled in January 2017.

For information related to our credit risk on mortgage loans and allowance methodology for loan losses, see *Note 7 - Allowance for Credit Losses*.

Note 7 - Allowance for Credit Losses

We have established a methodology to determine the allowance for credit losses for each of our portfolio segments: credit products (advances, letters of credit, and other extensions of credit to members); term securities purchased under agreements to resell and term federal funds sold (including interest-bearing demand deposit accounts); government-guaranteed or -insured mortgage loans held for portfolio; and conventional mortgage loans held for portfolio.

Credit Products. We manage our exposure to credit products through an integrated approach that generally includes establishing a credit limit for each borrower, and an ongoing review of each borrower's financial condition, coupled with conservative collateral/lending policies to limit the risk of loss while balancing the borrower's needs for a reliable source of funding. In addition, we lend to eligible borrowers in accordance with federal statutes and Finance Agency regulations. Specifically, we comply with the Bank Act, which requires us to obtain sufficient collateral to fully secure credit products. We evaluate and update our collateral guidelines, as necessary, based on current market conditions.

We accept certain investment securities, residential mortgage loans, deposits, and other real estate-related assets as collateral. In addition, certain members that qualify as CFIs are eligible to utilize expanded statutory collateral provisions for small business and agriculture loans. Under the Bank Act, our members' capital stock in our Bank serves as additional security. Collateral arrangements may vary depending upon borrower credit quality, financial condition and performance; borrowing capacity; and overall credit exposure to the borrower. To ensure that we are sufficiently protected, we evaluate and determine whether a member may retain physical possession of its collateral that is pledged to us or must specifically deliver the collateral to us or our safekeeping agent. We perfect our security interest in all pledged collateral and we can also require additional or substitute collateral to protect our security interest.

We determine the estimated value of the collateral required to secure each member's credit products by applying collateral discounts, or haircuts, to the market value or UPB of the collateral, as applicable. Using a risk-based approach, we consider the amount and quality of the collateral pledged and the borrower's financial condition to be the primary indicators of credit quality on the borrower's credit products. At December 31, 2018 and 2017, we had rights to collateral on a borrower-by-borrower basis with an estimated value equal to or in excess of our outstanding extensions of credit.

At December 31, 2018 and 2017, we did not have any credit products that were past due, on non-accrual status, or considered impaired. In addition, there were no TDRs related to credit products during the years ended December 31, 2018, 2017, or 2016.

Based upon the collateral held as security, our credit extension and collateral policies, our credit analysis and the repayment history on credit products, we have not recorded any allowance for credit losses on credit products, and no liability was recorded to reflect an allowance for credit losses for off-balance sheet credit exposures. For additional information about off-balance sheet credit exposure, see *Note 18 - Commitments and Contingencies*.

Interest-Bearing Deposits, Term Securities Purchased Under Agreements to Resell and Term Federal Funds Sold. Except for interest-bearing deposits, which may be redeemed at any time during business hours, these assets generally have maturities ranging from 1 to 270 days. Given their short-term nature and the credit quality of the counterparties, credit risk is minimal and, as such, we have not established an allowance for credit losses for these products.

Government-Guaranteed or -Insured Mortgage Loans. We invest in fixed-rate mortgage loans that are guaranteed or insured by the FHA, Department of Veterans Affairs, Rural Housing Service of the Department of Agriculture, or HUD. The servicer provides and maintains a guaranty or insurance from the applicable government agency. The servicer is responsible for compliance with all government agency requirements and for obtaining the benefit of the applicable guaranty or insurance with respect to defaulted government-guaranteed or -insured mortgage loans. Any losses incurred on these loans that are not recovered from the insurer or guarantor are absorbed by the servicers. Therefore, we did not establish an allowance for credit losses for government-guaranteed or -insured mortgage loans at December 31, 2018 or 2017.

Conventional Mortgage Loans. We invest in conventional mortgage loans primarily through the MPP. Additionally, we hold participating interests in conventional mortgage loans that were originated by PFIs of the FHLBank of Topeka through the MPF Program.

Conventional MPP. Our management of credit risk considers the several layers of loss protection that are defined in our agreements with the PFIs. Our loss protection consists of the following loss layers, in order of priority, (i) borrower equity; (ii) PMI up to coverage limits (when applicable for the acquisition of mortgages with an initial LTV ratio of over 80% at the time of purchase); (iii) available funds remaining in the LRA; and (iv) SMI coverage (as applicable) purchased by the seller from a third-party provider naming the Bank as the beneficiary, up to the policy limits. Any losses not absorbed by the loss protection are borne by the Bank.

For conventional mortgage loans under our original MPP, credit enhancement is provided through allocating a portion of the periodic interest payments on the loans into an LRA. In addition, the PFI selling conventional loans to us is required to purchase SMI, paid through periodic interest payments, as an enhancement to cover credit losses over and above those covered by the LRA, but the covered losses are limited to the terms of the policy.

Beginning with Advantage MPP, we discontinued the use of SMI for all loan purchases and replaced it with a fixed LRA. The fixed LRA is funded with a portion of each loan's purchase proceeds.

The LRA is segregated by pools of loans and used to cover losses in a pool beyond those covered by an individual loan's PMI (as applicable), but is limited to covering losses of that specific pool only. Any excess funds are ultimately distributed to the member in accordance with a step-down schedule that is established upon execution of an MCC, subject to performance of the related pool.

The following table presents the activity in the LRA, which is reported in other liabilities.

LRA Activity	2018	2017	2016
Liability, beginning of year	$ 148,715	$ 125,683	$ 91,552
Additions	26,662	25,350	36,341
Claims paid	(508)	(617)	(1,054)
Distributions to PFIs	(773)	(1,701)	(1,156)
Liability, end of year	$ 174,096	$ 148,715	$ 125,683

We determine our allowance for loan losses based on our best estimate of probable losses over the loss emergence period. We use the MPP portfolio's delinquency migration (movement of loans through the various stages of delinquency) to determine whether a loss event is probable. Once a loss event is deemed to be probable, we utilize a systematic methodology that incorporates all credit enhancements and servicer advances to establish the allowance for loan losses. Although we do not reserve for any estimated losses that would be recovered from the credit enhancements, as part of the estimate of the recoverable credit enhancements, we evaluate the recovery and collectability of amounts under our PMI/SMI policies.

Conventional MPF Program. Our management of credit risk in the MPF Program considers the several layers of loss protection that are defined in agreements among the FHLBank of Topeka and its PFIs. The availability of loss protection may differ slightly among MPF products. The loss layers, in order of priority, are (i) borrower equity; (ii) PMI, (when applicable for the purchase of mortgages with an initial LTV ratio of over 80% at the time of purchase); (iii) FLA, which represents the first layer or portion of credit losses that we absorb after the borrower's equity, PMI, and recoverable CE fees; and (iv) the CE Obligation of a PFI, which absorbs losses in excess of the FLA in order to limit our loss exposure to that of an investor in an MBS deemed to be investment-grade. Any losses not absorbed by the loss protection are shared among the participating FHLBanks based upon the applicable percentage of participation.

PFIs retain a portion of the credit risk on the loans they sell by providing credit enhancement through a direct liability to pay credit losses up to a specified amount. PFIs are paid a CE fee for assuming credit risk and, in some instances, all or a portion of the CE fee may be performance-based. To the extent the Bank is responsible for losses in a pool, it may be able to recapture CE fees paid to that PFI to offset those losses. All CE fees are paid monthly based on the remaining UPB of the loans in a pool.

The allowance for MPF Program conventional loans is determined by analyzing the portfolio's delinquency migration and charge-offs over a historical period to determine the probability of default and loss severity rates. The analysis of conventional loans evaluated for impairment (i) considers loan pool-specific attribute data; (ii) applies estimated default probabilities and loss severities; and (iii) incorporates the applicable credit enhancements in order to determine our best estimate of probable losses.

Collectively Evaluated Mortgage Loans.

MPP. For loans past due and collectively evaluated for impairment, we use a recognized third-party credit model to estimate potential ranges of credit loss exposure. The loss projection is based upon distinct underlying loan characteristics, including loan vintage (year of origination), geographic location, credit support features and other factors, and a projected migration of loans through the various stages of delinquency.

MPF Program. Our loan loss analysis includes collectively evaluating conventional loans for impairment within each pool. The measurement of the allowance for loan losses consists of (i) evaluating homogeneous pools of current and delinquent mortgage loans; and (ii) estimating credit losses in the pool based upon the default probability ratios, loss severity rates, FLAs and CE obligations. Additional analyses include consideration of various data observations such as past performance, current performance, loan portfolio characteristics, collateral-related characteristics, industry data and prevailing economic conditions.

Individually Evaluated Mortgage Loans.

The measurement of our allowance for loans individually evaluated for loss considers loan-specific attribution data similar to homogeneous pools of delinquent loans evaluated on a collective basis, including the use of loan-level property values from a third-party.

We also individually evaluate any remaining exposure to delinquent MPP conventional loans paid in full by the servicers. An estimate of the loss, if any, is equal to the estimated cost associated with maintaining and disposing of the property (which includes the UPB, interest owed on the delinquent loan to date, and estimated costs associated with disposing of the collateral) less the estimated fair value of the collateral (net of estimated selling costs) and the amount of credit enhancements including the PMI, LRA and SMI. The fair value of the collateral is obtained from HUD statements, sales listings or other evidence of current expected liquidation amounts.

Interest income recognized on impaired MPP conventional loans was not material for the periods presented.

Credit Quality Indicators. The tables below present the key credit quality indicators for our mortgage loans held for portfolio.

Delinquency Status as of December 31, 2018	**Conventional**	**Government**	**Total**
Past due:			
30-59 days	$ 36,594	$ 9,352	$ 45,946
60-89 days	7,904	2,870	10,774
90 days or more	13,764	1,697	15,461
Total past due	58,262	13,919	72,181
Total current	11,003,243	359,758	11,363,001
Total mortgage loans, recorded investment [1]	$ 11,061,505	$ 373,677	$ 11,435,182
Delinquency Status as of December 31, 2017			
Past due:			
30-59 days	$ 63,670	$ 11,848	$ 75,518
60-89 days	9,944	2,121	12,065
90 days or more	19,576	2,555	22,131
Total past due	93,190	16,524	109,714
Total current	9,878,030	412,869	10,290,899
Total mortgage loans, recorded investment [1]	$ 9,971,220	$ 429,393	$ 10,400,613

Other Delinquency Statistics as of December 31, 2018	**Conventional**	**Government**	**Total**
In process of foreclosure [2]	$ 6,836	$ —	$ 6,836
Serious delinquency rate [3]	0.12%	0.45%	0.14%
Past due 90 days or more still accruing interest [4]	$ 12,849	$ 1,697	$ 14,546
On non-accrual status	$ 1,762	$ —	$ 1,762
Other Delinquency Statistics as of December 31, 2017			
In process of foreclosure [2]	$ 11,081	$ —	$ 11,081
Serious delinquency rate [3]	0.20%	0.59%	0.21%
Past due 90 days or more still accruing interest [4]	$ 16,603	$ 2,555	$ 19,158
On non-accrual status	$ 3,464	$ —	$ 3,464

(1) The recorded investment in a loan is the UPB of the loan, adjusted for accrued interest, net of any deferred loan fees or costs, unamortized premiums or discounts (which may include the basis adjustment related to any gain or loss on a delivery commitment prior to being funded) and direct charge-offs. The recorded investment is not net of any valuation allowance.

(2) Includes loans for which the decision of foreclosure or similar alternative, such as pursuit of deed-in-lieu of foreclosure, has been reported. Loans in process of foreclosure are included in past due categories depending on their delinquency status, but are not necessarily considered to be on non-accrual status.

(3) Represents loans 90 days or more past due (including loans in process of foreclosure) expressed as a percentage of the total recorded investment in mortgage loans. The percentage excludes principal and interest amounts previously paid in full by the servicers on conventional loans that are pending resolution of potential loss claims. Our servicers repurchase seriously delinquent government loans, including FHA loans, when certain criteria are met.

(4) Although our past due scheduled/scheduled MPP loans are classified as loans past due 90 days or more based on the loan's delinquency status, we do not consider these loans to be on non-accrual status.

Qualitative Factors. We also assess qualitative factors in the estimation of loan losses. These factors represent a subjective management judgment based on facts and circumstances that exist as of the reporting date that is not ascribed to any specific measurable economic or credit event and is intended to address other inherent losses that may not otherwise be captured in our methodology.

Allowance for Loan Losses on Mortgage Loans. Our loan loss analysis also compares, or benchmarks, our estimated losses, after credit enhancements, to actual losses occurring in the portfolio. As a result of our methodology, our allowance for loan losses reflects our best estimate of the probable losses in our original MPP, Advantage MPP, and MPF Program portfolios.

The following table presents the components of the allowance for loan losses, including the credit enhancement waterfall for MPP.

Components of Allowance	December 31, 2018	December 31, 2017
MPP estimated incurred losses remaining after borrower's equity, before credit enhancements [1]	$ 3,505	$ 5,360
Portion of estimated incurred losses recoverable from credit enhancements:		
PMI	(627)	(995)
LRA [2]	(1,137)	(1,262)
SMI	(1,256)	(2,383)
Total portion recoverable from credit enhancements	(3,020)	(4,640)
Allowance for unrecoverable PMI/SMI	15	30
Allowance for MPP loan losses	500	750
Allowance for MPF Program loan losses	100	100
Total allowance for loan losses	$ 600	$ 850

(1) Based on a loss emergence period of 24 months.
(2) Amounts recoverable are limited to (i) the estimated losses remaining after borrower's equity and PMI and (ii) the remaining balance in each pool's portion of the LRA. The remainder of the total LRA balance is available to cover any losses not yet incurred and to distribute any excess funds to the PFIs.

The tables below present a rollforward of our allowance for loan losses, the allowance for loan losses by impairment methodology, and the recorded investment in mortgage loans by impairment methodology.

Rollforward of Allowance for Loan Losses	2018	2017	2016
Balance, beginning of year	$ 850	$ 850	$ 1,125
Charge-offs	(444)	(647)	(857)
Recoveries	425	596	627
Provision for (reversal of) loan losses	(231)	51	(45)
Balance, end of year	$ 600	$ 850	$ 850

Allowance for Loan Losses by Impairment Methodology	December 31, 2018	December 31, 2017
Conventional loans collectively evaluated for impairment	$ 563	$ 652
Conventional loans individually evaluated for impairment [1]	37	198
Total allowance for loan losses	$ 600	$ 850

Recorded Investment by Impairment Methodology	December 31, 2018	December 31, 2017
Conventional loans collectively evaluated for impairment	$ 11,048,075	$ 9,956,689
Conventional loans individually evaluated for impairment [1]	13,430	14,531
Total recorded investment in conventional loans	$ 11,061,505	$ 9,971,220

(1) The recorded investment in our MPP conventional loans individually evaluated for impairment excludes principal previously paid in full by the servicers as of December 31, 2018 and 2017 of $1,552 and $2,498, respectively, that remains subject to potential claims by those servicers for any losses resulting from past or future liquidations of the underlying properties. However, the MPP allowance for loan losses as of December 31, 2018 and 2017 includes $16 and $144, respectively, for these potential claims.

Note 8 - Premises, Software and Equipment

The following table presents the types of our premises, software and equipment.

Type	December 31, 2018	December 31, 2017
Premises	$ 15,059	$ 15,242
Computer software	43,186	38,559
Data processing equipment	5,054	8,846
Furniture and equipment	5,237	4,539
Other	724	563
Premises, software and equipment, in service	69,260	67,749
Accumulated depreciation and amortization	(34,789)	(36,085)
Premises, software and equipment, in service, net	34,471	31,664
Capitalized assets in progress	2,727	5,131
Premises, software and equipment, net	$ 37,198	$ 36,795

For the years ended December 31, 2018, 2017, and 2016, the depreciation and amortization expense for premises, software and equipment was $6,230, $5,965, and $5,820, respectively, including amortization of computer software costs of $4,237, $4,276, and $4,055, respectively.

Note 9 - Derivatives and Hedging Activities

Nature of Business Activity. We are exposed to interest-rate risk primarily from the effect of changes in market interest rates on our interest-earning assets and our interest-bearing liabilities that finance those assets. The goal of our interest-rate risk management strategies is not to eliminate interest-rate risk, but to manage it within appropriate limits. To mitigate the risk of loss, we have established policies and procedures, which include guidelines on the amount of exposure to interest rate changes that we are willing to accept. In addition, we monitor the risk to our interest income, net interest margin and average maturity of interest-earning assets and interest-bearing liabilities.

Consistent with Finance Agency regulation, we enter into derivatives to (i) manage the interest-rate risk exposures inherent in our otherwise unhedged assets and funding positions, (ii) achieve our risk management objectives, and (iii) act as an intermediary between our members and counterparties. Finance Agency regulation and our Capital Markets Policy prohibit trading in, or the speculative use of, these derivative instruments and limit credit risk arising from these instruments. However, the use of derivatives is an integral part of our financial management strategy.

We use derivative financial instruments when they are considered to be the most cost-effective alternative to achieve our financial and risk management objectives. The most common ways in which we use derivatives are to:

- reduce funding costs by executing a derivative concurrently with the issuance of a consolidated obligation as the cost of a combined funding structure can be lower than the cost of a comparable CO bond;
- reduce the interest-rate sensitivity and repricing gaps of assets and liabilities;
- preserve a favorable interest-rate spread between the yield of an asset (e.g., an advance) and the cost of the related liability (e.g., CO bond used to fund advance);
- mitigate the adverse earnings effects of the shortening or extension of the duration of certain assets (e.g., advances or mortgage assets) and liabilities;
- protect the value of existing asset and liability positions or of commitments and forecasted transactions;
- manage embedded options in assets and liabilities; and
- manage our overall asset/liability structure.

We reevaluate our hedging strategies from time to time and, consequently, we may adopt new strategies or change our hedging techniques.

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 thus do not trade derivatives for short-term profit. Over-the-counter derivative transactions may be either executed with a counterparty (uncleared derivatives) or cleared through a Futures Commission Merchant (i.e., clearing agent) with a clearinghouse (cleared derivatives). Once a derivative transaction has been accepted for clearing by a clearinghouse, the derivative transaction is novated, and the executing counterparty is replaced with the clearinghouse.

Types of Derivatives. We use the following derivative instruments to reduce funding costs and to manage our exposure to interest-rate risks inherent in the normal course of business.

Interest-Rate Swaps. An interest-rate swap is an agreement between two entities to exchange cash flows in the future. The agreement sets forth the manner in which the cash flows will be determined and the dates on which they will be paid. One of the simplest forms of an interest-rate swap involves the promise by one party to pay cash flows equivalent to the interest on a notional amount at a predetermined fixed rate for a given period of time. In return for this promise, the party receives cash flows equivalent to the interest on the same notional amount at a variable-rate index for the same period of time. The variable rate we receive or pay in most interest-rate swaps is currently indexed to LIBOR.

Interest-Rate Cap and Floor Agreements. In an interest-rate cap agreement, a cash flow is generated if the price or rate of an underlying variable rises above a certain threshold (or "cap") price. In an interest-rate floor agreement, a cash flow is generated if the price or rate of an underlying variable falls below a certain threshold (or "floor") price. Caps may be used in conjunction with liabilities, and floors may be used in conjunction with assets. Caps and floors are designed to protect against the interest rate on a variable-rate asset or liability falling below or rising above a certain level.

Interest-Rate Swaptions. A swaption is an option on a swap that gives the buyer the right, but not the obligation, to enter into a specified interest-rate swap with the following agreed upon terms with the seller: option premium, time until expiration, fixed vs. floating rates, and notional amount. When used as a hedge, a swaption can protect the buyer against sudden adverse moves in interest rates. To protect against the adverse effects of a sudden decrease in interest rates, a receiver swaption may be utilized in which the buyer has the option to enter into a swap to receive the fixed rate and pay the floating rate. To protect against the adverse effects of a sudden increase in interest rates, a payer swaption may be utilized in which the buyer has the option to enter into a swap to pay the fixed rate and receive the floating rate.

Forward Contracts. Forward contracts give the buyer the right to buy or sell a specific type of asset at a specific time at a given price. For example, certain MDCs entered into by us are considered derivatives. We may hedge these MDCs by selling TBAs for forward settlement.

Types of Hedged Items. We document at inception all relationships between the derivatives designated as hedging instruments and the hedged items, our risk management objectives and strategies for undertaking various hedge transactions, and our method of assessing effectiveness. This process includes linking all derivatives that are designated as fair-value hedges to (i) assets and liabilities on the statements of condition, or (ii) firm commitments. We also formally assess (both at the hedge's inception and at least quarterly), using regression analyses, whether the derivatives that are used in hedging transactions have been effective in offsetting changes in the fair value of the hedged items attributable to the hedged risk and whether those derivatives may be expected to remain effective in future periods. We have the following types of hedged items:

Investments. We primarily invest in MBS and debentures, which may be classified as HTM or AFS securities. The interest-rate and prepayment risks associated with these investment securities are managed through a combination of debt issuance and derivatives. We may manage the prepayment, interest-rate and duration risks by funding investment securities with consolidated obligations that contain call features or by hedging the prepayment risk with caps or floors, callable swaps or swaptions. We may also manage the risk and volatility arising from changing market prices of investment securities by matching the cash outflow on the derivatives with the cash inflow on the investment securities. On occasion, we may hold derivatives that are associated with HTM securities and are designated as economic hedges. Derivatives associated with AFS securities may qualify as a fair-value hedge or be designated as an economic hedge.

Advances. We offer a wide range of fixed- and variable-rate advance products with different maturities, interest rates, payment characteristics, and optionality. We may use derivatives to manage the repricing and/or options characteristics of advances in order to more closely match the characteristics of our funding liabilities. In general, whenever a member executes a fixed-rate advance or an adjustable-rate advance with embedded options, we may simultaneously execute a derivative with terms that offset the terms and embedded options in the advance. For example, we may hedge a fixed-rate advance with an interest-rate swap where we pay a fixed-rate and receive a variable-rate, effectively converting the fixed-rate advance to an adjustable-rate advance. This type of hedge is typically treated as a fair-value hedge. In addition, we may hedge a callable, prepayable or putable advance by entering into a cancellable interest-rate swap.

Mortgage Loans. We invest in fixed-rate mortgage loans. The prepayment options embedded in these mortgage loans can result in extensions or contractions in the expected repayment of these loans, depending on changes in prepayment speeds. We manage the interest-rate and prepayment risks associated with mortgage loans through a combination of debt issuance and derivatives. We issue both callable and noncallable consolidated obligations to achieve cash flow patterns and liability durations similar to those expected on the mortgage loans. Interest-rate swaps, to the extent the payments on the mortgages loans result in a simultaneous reduction of the notional amount of the swaps, may qualify for fair-value hedge accounting.

We may also purchase interest-rate caps and floors, swaptions, callable swaps, calls, and puts to minimize the prepayment risk embedded in the loans. Although these derivatives are valid economic hedges against the prepayment risk of the loans, they are not specifically linked to individual loans and, therefore, do not qualify for fair-value hedge accounting. These derivatives are marked to fair value through earnings.

Consolidated Obligations. We may enter into derivatives to hedge the interest-rate risk associated with our debt issues. We manage the risk and volatility arising from changing market prices of a consolidated obligation by matching the cash inflow on the derivative with the cash outflow on the consolidated obligation.

In a typical transaction, we issue a fixed-rate consolidated obligation and simultaneously enter into a matching derivative in which the counterparty pays fixed cash flows to us designed to match in timing and amount the cash outflows we pay on the consolidated obligation. In turn, we pay a variable cash flow to the counterparty that closely matches the interest payments we receive on short-term or variable-rate advances (typically one- or three-month LIBOR). These transactions are typically treated as fair-value hedges. Additionally, we may issue variable-rate CO bonds indexed to LIBOR, SOFR, the United States prime rate, or federal funds rate and simultaneously execute interest-rate swaps to hedge the basis risk of the variable-rate debt.

Firm Commitments. Certain MDCs are considered derivatives. We normally hedge these commitments by selling TBA MBS or other derivatives for forward settlement. The MDC and the TBA used in the firm commitment hedging strategy are treated as an economic hedge and are marked to fair value through earnings. When the MDC settles, the current fair value of the commitment is included with the basis of the mortgage loan and amortized accordingly.

Managing Credit Risk on Derivatives. We are also subject to credit risk due to the risk of nonperformance by the counterparties to our derivative transactions. We manage counterparty credit risk through credit analysis, collateral requirements and adherence to the requirements set forth in our policies, CFTC regulations, and Finance Agency regulations. For discussion regarding our fair value methodology for derivative assets and liabilities, including an evaluation of the potential for the estimated fair value of these instruments to be affected by counterparty credit risk, see *Note 17 - Estimated Fair Values*.

Uncleared Derivatives. For uncleared derivatives, the degree of credit risk depends on the extent to which master netting arrangements are included in such contracts to mitigate the risk. We require collateral agreements with our uncleared derivatives. The exposure thresholds above which collateral must be delivered vary; the threshold is zero in some cases. Additionally, collateral related to derivatives with member institutions includes collateral assigned to us as evidenced by a written security agreement and held by the member institution for our benefit.

For certain of our uncleared derivatives, we have credit support agreements that contain provisions requiring us to post additional collateral with our counterparties if there is deterioration in our credit rating. If our credit rating is lowered by an NRSRO, we could be required to deliver additional collateral on uncleared derivative instruments in net liability positions. The aggregate estimated fair value of all uncleared derivative instruments with credit-risk-related contingent features that were in a net liability position (before cash collateral and related accrued interest on cash collateral) at December 31, 2018 was $218, for which we were not required to post collateral. If our credit rating had been lowered by an NRSRO (from an S&P equivalent of AA+ to AA), we would not have been required to deliver additional collateral to our uncleared derivative counterparties at December 31, 2018.

Cleared Derivatives. For cleared derivatives, the clearinghouse is our counterparty. We use LCH and CME as clearinghouses for all cleared derivative transactions. Collateral is required to be posted daily for changes in the value of cleared derivatives to mitigate each counterparty's credit risk. The clearinghouse notifies the clearing agent of the required initial and variation margin, and the clearing agent notifies us. The requirement that we post initial and variation margin through the clearing agent for the benefit of the clearinghouse exposes us to institutional credit risk in the event that the clearing agent or clearinghouse fails to meet its obligations.

Effective January 3, 2017, CME made certain amendments to its rulebook, including changing the legal characterization of variation margin payments to be daily settled contracts, rather than cash collateral. Variation margin payments related to LCH contracts were characterized as cash collateral until January 16, 2018, when LCH changed the characterization of variation margin payments to be daily settled contracts, consistent with CME. Initial margin continues to be considered by both clearinghouses as cash collateral.

The clearinghouse determines margin requirements which are generally not based on credit ratings. However, clearing agents may require additional margin to be posted by us based on credit considerations, including but not limited to any credit rating downgrades. At December 31, 2018, we were not required by our clearing agents to post any additional margin.

Financial Statement Effect and Additional Financial Information.

Derivative Notional Amounts. The notional amount of derivatives serves as a factor in determining periodic interest payments, or cash flows received and paid. The notional amount of derivatives also reflects the extent of our involvement in the various classes of financial instruments but represents neither the actual amounts exchanged nor our overall exposure to credit and market risk; the overall risk is much smaller. The risks of derivatives can be measured meaningfully on a portfolio basis that takes into account the counterparties, the types of derivatives, the items being hedged and any offsets between the derivatives and the items being hedged. We record derivative instruments, related cash collateral received or pledged/posted and associated accrued interest on a net basis, by clearing agent and/or by counterparty when the netting requirements have been met. The following table presents the notional amount and estimated fair value of derivative assets and liabilities.

December 31, 2018	Notional Amount of Derivatives	Estimated Fair Value of Derivative Assets [1]	Estimated Fair Value of Derivative Liabilities [1]
Derivatives designated as hedging instruments:			
Interest-rate swaps	$ 35,135,617	$ 174,990	$ 123,331
Total derivatives designated as hedging instruments	35,135,617	174,990	123,331
Derivatives not designated as hedging instruments:			
Interest-rate swaps	965,930	562	106
Swaptions	950,000	105	—
Interest-rate caps/floors	679,500	999	—
Interest-rate forwards	44,100	—	202
MDCs	43,753	146	23
Total derivatives not designated as hedging instruments	2,683,283	1,812	331
Total derivatives before adjustments	$ 37,818,900	176,802	123,662
Netting adjustments and cash collateral [2]		(60,038)	(102,595)
Total derivatives, net		$ 116,764	$ 21,067
December 31, 2017			
Derivatives designated as hedging instruments:			
Interest-rate swaps	$ 31,084,068	$ 247,924	$ 50,445
Total derivatives designated as hedging instruments	31,084,068	247,924	50,445
Derivatives not designated as hedging instruments:			
Interest-rate swaps	1,026,778	1,174	734
Interest-rate caps/floors	245,500	92	—
Interest-rate forwards	72,800	37	1
MDCs	70,831	73	48
Total derivatives not designated as hedging instruments	1,415,909	1,376	783
Total derivatives before adjustments	$ 32,499,977	249,300	51,228
Netting adjustments and cash collateral [2]		(121,094)	(48,510)
Total derivatives, net		$ 128,206	$ 2,718

(1) To conform with the current presentation, variation margin of $24,954 has been allocated to the individual derivative instruments as of December 31, 2017. Previously, this amount was included with netting adjustments and cash collateral.

(2) Represents the application of the netting requirements that allow us to settle (i) positive and negative positions and (ii) cash collateral and related accrued interest held or placed, with the same clearing agent and/or counterparty. Cash collateral pledged to counterparties at December 31, 2018 and 2017 totaled $127,952 and $16,437, respectively. Cash collateral received from counterparties at December 31, 2018 and 2017 totaled $85,395 and $89,021, respectively.

The following table presents separately the estimated fair value of derivative instruments meeting and not meeting netting requirements, including the effect of the related collateral received from or pledged to counterparties.

	December 31, 2018		December 31, 2017	
	Derivative Assets	Derivative Liabilities	Derivative Assets [1]	Derivative Liabilities [1]
Derivative instruments meeting netting requirements:				
Gross recognized amount				
Uncleared	$ 174,725	$ 106,333	$ 118,932	$ 27,491
Cleared	1,931	17,104	130,258	23,688
Total gross recognized amount	176,656	123,437	249,190	51,179
Gross amounts of netting adjustments and cash collateral				
Uncleared	(168,426)	(85,491)	(113,842)	(24,822)
Cleared	108,388	(17,104)	(7,252)	(23,688)
Total gross amounts of netting adjustments and cash collateral	(60,038)	(102,595)	(121,094)	(48,510)
Net amounts after netting adjustments and cash collateral				
Uncleared	6,299	20,842	5,090	2,669
Cleared	110,319	—	123,006	—
Total net amounts after netting adjustments and cash collateral	116,618	20,842	128,096	2,669
Derivative instruments not meeting netting requirements [2]	146	225	110	49
Total derivatives, at estimated fair value	$ 116,764	$ 21,067	$ 128,206	$ 2,718

(1) To conform with the current presentation, variation margin of $24,954 has been allocated to the individual derivative instruments within the gross recognized amount as of December 31, 2017. Previously, this amount was included with the gross amounts of netting adjustments and cash collateral.

(2) Includes MDCs and certain interest-rate forwards.

The following table presents the components of net gains (losses) on derivatives and hedging activities reported in other income.

	Years Ended December 31,		
Type of Hedge	**2018**	**2017**	**2016**
Net gain (loss) related to fair-value hedge ineffectiveness:			
Interest-rate swaps	$ (5,323)	$ (7,414)	$ 4,488
Total net gain (loss) related to fair-value hedge ineffectiveness	(5,323)	(7,414)	4,488
Net gain (loss) on derivatives not designated as hedging instruments:			
Economic hedges:			
Interest-rate swaps	7,071	122	(196)
Swaptions	(892)	(200)	(290)
Interest-rate caps/floors	(60)	(228)	87
Interest-rate forwards	1,460	(1,728)	(207)
Net interest settlements	(7,834)	(416)	(381)
MDCs	(2,390)	835	(1,229)
Total net gain (loss) on derivatives not designated as hedging instruments	(2,645)	(1,615)	(2,216)
Price alignment amount [1]	(5,382)	(229)	—
Net gains (losses) on derivatives and hedging activities	$ (13,350)	$ (9,258)	$ 2,272

(1) Relates to derivatives for which variation margin payments are characterized as daily settled contracts.

The following table presents, by type of hedged item, the gains (losses) on the derivatives and the related hedged items in fair-value hedging relationships and the effect of those derivatives on net interest income.

Year Ended December 31, 2018	Gain (Loss) on Derivative	Gain (Loss) on Hedged Item	Net Fair-Value Hedge Ineffectiveness	Effect on Net Interest Income [1]
Advances	$ (18,331)	$ 22,557	$ 4,226	$ 48,555
AFS securities	47,268	(55,842)	(8,574)	18,391
CO bonds	(25,394)	24,419	(975)	(40,907)
Total	$ 3,543	$ (8,866)	$ (5,323)	$ 26,039
Year Ended December 31, 2017				
Advances	$ 61,439	$ (62,324)	$ (885)	$ (31,461)
AFS securities	35,620	(39,843)	(4,223)	(48,144)
CO bonds	(46,299)	43,993	(2,306)	16,289
Total	$ 50,760	$ (58,174)	$ (7,414)	$ (63,316)
Year Ended December 31, 2016				
Advances	$ 118,029	$ (117,201)	$ 828	$ (91,219)
AFS securities	193,305	(194,083)	(778)	(94,018)
CO bonds	(30,252)	34,690	4,438	16,888
Total	$ 281,082	$ (276,594)	$ 4,488	$ (168,349)

[1] Includes the effect of derivatives in fair-value hedging relationships on net interest income that is recorded in the interest income/expense line item of the respective hedged items. Excludes the interest income/expense of the respective hedged items, which fully offsets the interest income/expense of the derivatives, except to the extent of any hedge ineffectiveness. Net interest settlements on derivatives that are not in fair-value hedging relationships are reported in other income. These amounts do not include the effect of amortization/accretion related to fair value hedging activities.

Note 10 - Deposit Liabilities

We offer demand and overnight deposits to members and qualifying non-members. In addition, we offer short-term interest-bearing deposit programs to members. A member that services mortgage loans may deposit funds collected in connection with the mortgage loans, pending disbursement of such funds to the owners of the mortgage loans. We classify these items as other deposits.

Demand, overnight, and other deposits pay interest based on a daily interest rate. Time deposits pay interest based on a fixed rate determined at the origination of the deposit.

The following table presents the types of our interest-bearing and non-interest-bearing deposits.

Type	December 31, 2018	December 31, 2017
Interest-bearing:		
Demand and overnight	$ 434,557	$ 513,150
Time	—	50
Other	12	23
Total interest-bearing	434,569	513,223
Non-interest-bearing:		
Other [1]	65,871	51,576
Total non-interest-bearing	65,871	51,576
Total deposits	$ 500,440	$ 564,799

[1] Includes pass-through deposit reserves from members.

Note 11 - Consolidated Obligations

Consolidated obligations consist of CO bonds and discount notes. CO bonds may be issued to raise short-, intermediate- and long-term funds for the FHLBanks and are not subject to any statutory or regulatory limits on maturity. Discount notes are issued primarily to raise short-term funds and have original maturities of up to one year. These notes generally sell at less than their face amount and are redeemed at par value when they mature.

The FHLBanks issue consolidated obligations through the Office of Finance as our agent under the oversight of the Finance Agency and the United States Secretary of the Treasury. In connection with each debt issuance, each FHLBank specifies the amount of debt to be issued on its behalf. Each FHLBank records as a liability the specific portion of consolidated obligations issued on its behalf and for which it is the primary obligor.

In addition to being the primary obligor for all consolidated obligations issued on our behalf, we are jointly and severally liable with each of the other FHLBanks for the payment of the principal and interest on all FHLBank outstanding consolidated obligations. The par values of the FHLBanks' outstanding consolidated obligations was $1.0 trillion at both December 31, 2018 and 2017. As provided by the Bank Act and Finance Agency regulations, consolidated obligations are backed only by the financial resources of all FHLBanks.

The Finance Agency, in its discretion, may require any FHLBank to make principal or interest payments due on any consolidated obligation whether or not the consolidated obligation represents a primary liability of that FHLBank. Although an FHLBank has never paid the principal or interest payments due on a consolidated obligation on behalf of another FHLBank, if that event should occur, Finance Agency regulations provide that the paying FHLBank is entitled to reimbursement for any payments made on behalf of another FHLBank and other associated costs, including interest to be determined by the Finance Agency. If, however, the Finance Agency determines that such other FHLBank is unable to satisfy its repayment obligations to the paying FHLBank, then the Finance Agency may allocate the outstanding liability of such other FHLBank among the remaining FHLBanks on a pro-rata basis in proportion to their participation in all outstanding consolidated obligations, or in any other manner it may determine to ensure that the FHLBanks operate in a safe and sound manner. We do not believe that it is probable that we will be asked or required to make principal or interest payments on behalf of another FHLBank.

Discount Notes. The following table presents our discount notes outstanding, all of which are due within one year of issuance.

Discount Notes	December 31, 2018	December 31, 2017
Book value	$ 20,895,262	$ 20,358,157
Par value	$ 20,952,650	$ 20,394,192
Weighted average effective interest rate	2.34%	1.22%

CO Bonds. The following table presents our CO bonds outstanding by contractual maturity.

	December 31, 2018		December 31, 2017	
Year of Contractual Maturity	**Amount**	**WAIR%**	**Amount**	**WAIR%**
Due in 1 year or less	$ 18,456,870	2.07	$ 14,021,190	1.27
Due after 1 year through 2 years	8,823,285	2.30	9,392,470	1.46
Due after 2 years through 3 years	2,640,620	2.42	4,849,960	2.23
Due after 3 years through 4 years	3,024,000	2.33	1,294,470	2.17
Due after 4 years through 5 years	998,375	2.54	2,798,000	2.29
Thereafter	6,431,700	3.21	5,626,500	3.02
Total CO bonds, par value	40,374,850	2.36	37,982,590	1.80
Unamortized premiums	23,493		27,333	
Unamortized discounts	(15,992)		(13,782)	
Unamortized concessions	(14,085)		(14,188)	
Fair-value hedging adjustments	(102,801)		(86,300)	
Total CO bonds	$ 40,265,465		$ 37,895,653	

Consolidated obligations are issued with either fixed-rate or variable-rate coupon payment terms that may use a variety of indices for interest-rate resets, such as LIBOR. To meet the specific needs of certain investors in CO bonds, both fixed-rate and variable-rate CO bonds may contain features that result in complex coupon payment terms and call options. When these CO bonds are issued, we may enter into derivatives containing features that offset the terms and embedded options, if any, of the CO bonds.

CO bonds may also be callable. Such bonds may be redeemed in whole or in part, at our discretion, on predetermined call dates according to the terms of the offerings.

The following tables present our CO bonds outstanding by redemption feature and the earlier of the year of contractual maturity or next call date.

Redemption Feature	**December 31, 2018**	**December 31, 2017**
Non-callable / non-putable	$ 27,462,850	$ 26,277,590
Callable	12,912,000	11,705,000
Total CO bonds, par value	$ 40,374,850	$ 37,982,590

Year of Contractual Maturity or Next Call Date	**December 31, 2018**	**December 31, 2017**
Due in 1 year or less	$ 30,331,870	$ 24,449,190
Due after 1 year through 2 years	6,069,285	9,098,470
Due after 2 years through 3 years	1,043,620	2,125,960
Due after 3 years through 4 years	626,000	584,470
Due after 4 years through 5 years	503,375	579,000
Thereafter	1,800,700	1,145,500
Total CO bonds, par value	$ 40,374,850	$ 37,982,590

Interest-Rate Payment Types. CO bonds, beyond having fixed-rate or simple variable-rate interest payment terms, may also have the following features:

- *Step-up CO bonds* pay interest at increasing fixed rates for specified intervals over their lives. These CO bonds generally contain provisions enabling us to call them at our option on the step-up dates;
- *Ratchet CO bonds* pay a floating interest rate indexed on a reference range such as LIBOR. Each floating rate is subject to increasing floors, such that subsequent rates may not be lower than the previous rate; or
- *Conversion CO bonds* have interest rates that convert from fixed to variable, or variable to fixed, or from one index to another, on predetermined dates according to the terms of the offerings.

The following table presents our CO bonds outstanding by interest-rate payment type.

Interest-Rate Payment Type	December 31, 2018	December 31, 2017
Fixed-rate	$ 27,189,850	$ 24,747,590
Step-up	330,000	285,000
Simple variable-rate	12,855,000	12,950,000
Total CO bonds, par value	$ 40,374,850	$ 37,982,590

Note 12 - Affordable Housing Program

The Bank Act requires each FHLBank to establish an AHP, in which the FHLBank provides subsidies in the form of direct grants to members that use the funds to assist in the purchase, construction, or rehabilitation of housing for very low-, low-, and moderate-income households. Annually, the FHLBanks must set aside for the AHP the greater of the aggregate of $100 million or 10% of each FHLBank's net earnings. For purposes of the AHP calculation, net earnings is defined in a Finance Agency Advisory Bulletin as income before assessments, plus interest expense related to MRCS.

The following table summarizes the activity in our AHP funding obligation.

AHP Activity	2018	2017	2016
Liability at beginning of year	$ 32,166	$ 26,598	$ 31,103
Assessment (expense)	22,570	18,163	13,291
Subsidy usage, net [1]	(13,989)	(12,595)	(17,796)
Liability at end of year	$ 40,747	$ 32,166	$ 26,598

[1] Subsidies disbursed are reported net of returns/recaptures of previously disbursed subsidies.

As a part of the AHP, each FHLBank may also provide below-market rate advances to members.

Note 13 - Capital

We are a cooperative whose member and former member institutions own all of our capital stock. Former members (including certain non-member institutions that own our capital stock as a result of a merger with or acquisition of a member) own our capital stock solely to support credit products or mortgage loans still outstanding on our statement of condition. Member shares cannot be purchased or sold except between us and our members or, with our written approval, among our members, at the par value of one hundred dollars per share, as mandated by our capital plan and Finance Agency regulation.

Our capital plan divides our Class B stock into two sub-series: Class B-1 and Class B-2. Class B-2 stock consists solely of required stock that is subject to a redemption request. The Class B-2 dividend is presently calculated at 80% of the amount of the Class B-1 dividend; this ratio can only be changed by amendment of our capital plan by our board of directors with approval of the Finance Agency.

Our board of directors may, but is not required to, declare and pay dividends on our Class B stock in either cash or capital stock or a combination thereof, as long as we are in compliance with Finance Agency regulations. The amount of the dividend to be paid is based on the average number of shares of each sub-series held by the member during the dividend payment period (applicable quarter).

Stock Redemption and Repurchase. In accordance with the Bank Act, our Class B stock is considered putable by the member. Members can redeem Class B stock, subject to certain restrictions, by giving five years' written notice. Any member that withdraws from membership may not be readmitted as a member for a period of five years from the divestiture date for all capital stock that was held as a condition of membership, as set forth in our capital plan, unless the member has canceled or revoked its notice of withdrawal prior to the end of the five-year redemption period. This restriction does not apply if the member is transferring its membership from one FHLBank to another on an uninterrupted basis.

We may repurchase, at our sole discretion, any member's Class B stock that exceeds the required minimum amount. However, there are significant statutory and regulatory restrictions on our right to repurchase, or obligation to redeem, the outstanding stock. As a result, whether or not a member may have its Class B stock repurchased or redeemed will depend, in part, on whether we are in compliance with those restrictions.

Consistent with our capital plan, we are not required to redeem activity-based stock until the expiration of the notice of redemption, or until the activity to which the capital stock relates no longer remains outstanding, whichever is later. If activity-based stock becomes excess stock (i.e., the amount of stock held by a member or former member in excess of our stock ownership requirement for that institution) as a result of an activity no longer remaining outstanding, we may redeem the excess stock at our discretion, subject to the statutory and regulatory restrictions on capital stock redemption.

A member may cancel or revoke its written notice of redemption or its notice of withdrawal from membership prior to the five-year redemption period. However, our capital plan provides that we will charge a cancellation fee to a member that cancels or revokes its withdrawal notice. Our board of directors may change the cancellation fee with at least 15 days prior written notice to members.

Through December 31, 2018, certain members had requested redemptions of their Class B stock, but the related stock outstanding at December 31, 2018 and 2017 totaling $935 and $5,144, respectively, was not considered mandatorily redeemable and reclassified to MRCS because the requesting members may revoke their requests, without substantial penalty, throughout the five-year waiting period. Therefore, these requests are not considered sufficiently substantive in nature. However, we consider redemption requests related to mergers, acquisitions or charter terminations, as well as involuntary terminations from membership, to be sufficiently substantive when made and, therefore, the related stock is considered mandatorily redeemable and reclassified to MRCS.

Mandatorily Redeemable Capital Stock. The following table presents the activity in our MRCS.

MRCS Activity	2018	2017	2016
Liability at beginning of year	$ 164,322	$ 170,043	$ 14,063
Reclassification from capital stock	31,214	—	183,056
Redemptions/repurchases	(26,698)	(5,721)	(28,148)
Accrued distributions	38	—	1,072
Liability at end of year	$ 168,876	$ 164,322	$ 170,043

As a result of, and effective with, the Final Membership Rule in February 2016, we reclassified all of the outstanding Class B stock of our captive insurance company members totaling $178,898 to MRCS.

In accordance with the Final Membership Rule, captive insurance companies that were admitted as FHLBank members on or after September 12, 2014 had their memberships terminated by February 19, 2017. All of their outstanding Class B stock, totaling $3,021 at December 31, 2016, was repurchased on or before February 19, 2017.

Captive insurance companies that were admitted as FHLBank members prior to September 12, 2014, and do not meet the new definition of "insurance company" or fall within another category of institution that is eligible for FHLBank membership, shall have their memberships terminated no later than February 19, 2021. Upon termination, their outstanding Class B stock will be repurchased or redeemed in accordance with the Final Membership Rule.

The following table presents MRCS by contractual year of redemption. The year of redemption is the later of: (i) the final year of the five-year redemption period, or (ii) the first year in which a non-member no longer has an activity-based stock requirement.

MRCS Contractual Year of Redemption	December 31, 2018	December 31, 2017
Year 1[1]	$ 1,316	$ 7,963
Year 2	—	13
Year 3	8,649	—
Year 4	—	4,158
Year 5	26,723	—
Thereafter[2]	132,188	152,188
Total MRCS	$ 168,876	$ 164,322

(1) Balances at December 31, 2018 and 2017 include $1,304 and $2,909, respectively, of Class B stock that had reached the end of the five-year redemption period but will not be redeemed until the associated credit products and other obligations are no longer outstanding.

(2) Represents the five-year redemption period of Class B stock held by certain captive insurance companies which begins immediately upon their respective terminations of membership no later than February 19, 2021, in accordance with the Final Membership Rule. However, upon their respective terminations, we currently intend to repurchase their excess stock (if any) in accordance with our capital plan, the balances of which at December 31, 2018 and 2017 totaled $57,938 and $77,938, respectively.

When a member's membership status changes to a non-member, the member's capital stock is reclassified to MRCS. If such change occurs during a quarterly period, but not at the beginning or the end of a quarterly period, any dividends for that quarterly period are allocated between distributions from retained earnings for the shares held as capital stock during that period and interest expense for the shares held as MRCS during that period. Therefore, the distributions from retained earnings represent dividends to former members for only the portion of the period that they were members. The amounts recorded to interest expense represent dividends to former members for the portion of that period and subsequent periods that they were not members.

The following table presents the distributions related to MRCS.

	Years Ended December 31,		
MRCS Distributions	2018	2017	2016
Recorded as interest expense	$ 8,391	$ 7,034	$ 6,613
Recorded as distributions from retained earnings	38	—	1,072
Total	$ 8,429	$ 7,034	$ 7,685

Restricted Retained Earnings. In 2011, we entered into a JCE Agreement with all of the other FHLBanks to enhance the capital position of each FHLBank. In accordance with the JCE Agreement, we allocate 20% of our net income to a separate restricted retained earnings account until the balance of that account equals at least 1% of the average balance of our outstanding consolidated obligations for the previous quarter. These restricted retained earnings are not available from which to pay dividends except to the extent the restricted retained earnings balance exceeds 1.5% of the average balance of our outstanding consolidated obligations for the previous quarter.

Capital Requirements. We are subject to three capital requirements under our capital plan and Finance Agency regulations:

(i) Risk-based capital. We must maintain at all times permanent capital, defined as Class B stock (including MRCS) and retained earnings, in an amount at least equal to the sum of our credit risk, market risk, and operations risk capital requirements, all of which are calculated in accordance with Finance Agency regulations. The Finance Agency may require us to maintain a greater amount of permanent capital than is required by the risk-based capital requirements as defined.
(ii) Total regulatory capital. We are required to maintain at all times a total capital-to-assets ratio of at least 4%. Total regulatory capital is the sum of permanent capital, any general loss allowance, if consistent with GAAP and not established for specific assets, and other amounts from sources determined by the Finance Agency as available to absorb losses. For regulatory capital purposes, AOCI is not considered capital.
(iii) Leverage capital. We are required to maintain at all times a leverage capital-to-assets ratio of at least 5%. Leverage capital is defined as the sum of (i) permanent capital weighted 1.5 times and (ii) all other capital without a weighting factor.

As presented in the following table, we were in compliance with the Finance Agency's capital requirements at December 31, 2018 and 2017.

	December 31, 2018		December 31, 2017	
Regulatory Capital Requirements	**Required**	**Actual**	**Required**	**Actual**
Risk-based capital	$ 786,925	$ 3,177,638	$ 903,806	$ 2,998,422
Total regulatory capital	$ 2,616,468	$ 3,177,638	$ 2,493,956	$ 2,998,422
Total regulatory capital-to-asset ratio	4.00%	4.86%	4.00%	4.81%
Leverage capital	$ 3,270,585	$ 4,766,457	$ 3,117,445	$ 4,497,633
Leverage ratio	5.00%	7.29%	5.00%	7.21%

Note 14 - Accumulated Other Comprehensive Income

The following table presents a summary of the changes in the components of AOCI.

AOCI Rollforward	Unrealized Gains (Losses) on AFS Securities	Non-Credit OTTI on AFS Securities	Non-Credit OTTI on HTM Securities	Pension Benefits	Total AOCI
Balance, December 31, 2015	$ 97	$ 30,229	$ (132)	$ (7,316)	$ 22,878
OCI before reclassifications:					
Net change in unrealized gains (losses)	39,371	(3,332)	—	—	36,039
Net change in fair value	—	(156)	—	—	(156)
Accretion of non-credit losses	—	—	29	—	29
Reclassifications from OCI to net income:					
Non-credit portion of OTTI losses	—	197	—	—	197
Pension benefits, net	—	—	—	(2,619)	(2,619)
Total other comprehensive income (loss)	39,371	(3,291)	29	(2,619)	33,490
Balance, December 31, 2016	$ 39,468	$ 26,938	$ (103)	$ (9,935)	$ 56,368
OCI before reclassifications:					
Net change in unrealized gains (losses)	53,051	2,189	—	—	55,240
Net change in fair value	—	29	—	—	29
Accretion of non-credit losses	—	—	10	—	10
Reclassifications from OCI to net income:					
Non-credit portion of OTTI losses	—	166	42	—	208
Pension benefits, net	—	—	—	(449)	(449)
Total other comprehensive income (loss)	53,051	2,384	52	(449)	55,038
Balance, December 31, 2017	$ 92,519	$ 29,322	$ (51)	$ (10,384)	$ 111,406
OCI before reclassifications:					
Net change in unrealized gains (losses)	(39,533)	392	—	—	(39,141)
Net change in fair value	—	2,693	—	—	2,693
Accretion of non-credit losses	—	—	51	—	51
Reclassifications from OCI to net income:					
Net realized gains from sale of AFS securities	—	(32,407)	—	—	(32,407)
Pension benefits, net	—	—	—	(915)	(915)
Total other comprehensive income (loss)	(39,533)	(29,322)	51	(915)	(69,719)
Balance, December 31, 2018	$ 52,986	$ —	$ —	$ (11,299)	$ 41,687

Note 15 - Employee and Director Retirement and Deferred Compensation Plans

Qualified Defined Benefit Pension Plan. We participate in a tax-qualified, defined-benefit pension plan for financial institutions administered by Pentegra Retirement Services. This DB plan is treated as a multiemployer plan for accounting purposes but operates as a multiple-employer plan under the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code. As a result, certain multiemployer plan disclosures are not applicable.

Under the DB plan, contributions made by a participating employer may be used to provide benefits to employees of other participating employers because assets contributed by an employer are not segregated in a separate account or restricted to provide benefits to employees of that employer only. Also, in the event that a participating employer is unable to meet its contribution or funding requirements, the required contributions for the other participating employers (including us) could increase proportionately.

Our DB plan covers our officers and employees who meet certain eligibility requirements, including an employment date prior to February 1, 2010. The DB plan operates on a fiscal year from July 1 through June 30 and files one Form 5500 on behalf of all participating employers. The most recent Form 5500 available for the DB plan is for the plan year ended June 30, 2017. The Employer Identification Number is 13-5645888 and the three digit plan number is 333. There are no collective bargaining agreements in place.

The DB plan's annual valuation process includes calculating its funded status and separately calculating the funded status of each participating employer. The funded status is calculated as the market value of plan assets divided by the funding target (100% of the present value of all benefit liabilities accrued at that date utilizing the discount rate prescribed by statute). The calculation of the funding target as of July 1, 2018, 2017 and 2016 incorporated a higher discount rate in accordance with MAP-21, which resulted in a lower funding target and a higher funded status. Over time, the favorable impact of MAP-21 is expected to decline. As permitted by the Employee Retirement Income Security Act of 1974, the DB plan accepts contributions for the prior plan year up to eight and a half months after the asset valuation date. As a result, the market value of plan assets at the valuation date (July 1) will increase by any subsequent contributions designated for the immediately preceding plan year ended June 30.

Our contributions to the DB plan for the fiscal years ended December 31, 2018, 2017 and 2016 were not more than 5% of the total contributions to the DB plan for the plan years ended June 30, 2017, 2016 and 2015, respectively.

The following table presents a summary of net pension costs charged to compensation and benefits expense and the DB plan's funded status.

DB Plan Net Pension Cost and Funded Status	2018	2017	2016
Net pension cost charged to compensation and benefits expense for the year ended December 31[1]	$ 2,750	$ 4,450	$ 5,772
DB plan funded status as July 1	110% [a]	111% [b]	104%
Our funded status as of July 1	116%	117%	113%

[1] Includes voluntary contributions for the years ended December 31, 2018, 2017 and 2016 of $2,240, $3,893, and $5,265, respectively.

[a] The DB plan's funded status as of July 1, 2018 is preliminary and may increase because the participating employers were permitted to make designated contributions for the plan year ended June 30, 2018 through March 15, 2019. Any such contributions will be included in the final valuation as of July 1, 2018. The final funded status as of July 1, 2018 will not be available until the Form 5500 for the plan year ended June 30, 2019 is filed (no later than April 2020).

[b] The DB plan's final funded status as of July 1, 2017 will not be available until the Form 5500 for the plan year ended June 30, 2018 is filed (no later than April 2019).

Qualified Defined Contribution Plan. We participate in a tax-qualified, defined contribution plan for financial institutions administered by Pentegra Retirement Services. This DC plan covers our officers and employees who meet certain eligibility requirements. Our contribution is equal to a percentage of voluntary employee contributions, subject to certain limitations. During the years ended December 31, 2018, 2017, and 2016, we contributed $2,478, $1,577, and $1,488, respectively.

Nonqualified Supplemental Defined Benefit Retirement Plan. We participate in a single-employer, non-qualified, unfunded supplemental executive retirement plan for financial institutions administered by Pentegra Retirement Services. This SERP restores all of the defined benefits to participating employees who have had their qualified defined benefits limited by Internal Revenue Service regulations. Since the SERP is a non-qualified unfunded plan, no contributions are required to be made. However, we may elect to make contributions to a related grantor trust that we established to indirectly fund the SERP in order to maintain a desired funding level. Payments of benefits may be made from the related grantor trust or from our general assets.

The following table presents the changes in our SERP benefit obligation.

Change in benefit obligation	2018	2017	2016
Projected benefit obligation at beginning of year	$ 23,176	$ 20,022	$ 15,099
Service cost	1,762	1,035	808
Interest cost	863	738	735
Actuarial loss	3,452	1,712	4,055
Benefits paid	(1,660)	(331)	(675)
Projected benefit obligation at end of year	$ 27,593	$ 23,176	$ 20,022

The measurement date used to determine the benefit obligation was December 31. The following table presents the key assumptions used for the actuarial calculations to determine the benefit obligation.

	December 31, 2018	December 31, 2017
Discount rate	3.64%	3.00%
Compensation increases	5.50%	5.50%

The discount rate represents a weighted average that was determined by a discounted cash-flow approach, which incorporates the timing of each expected future benefit payment. We estimate future benefit payments based on the census data of the SERP's participants, benefit formulas and provisions, and valuation assumptions reflecting the probability of decrement and survival. We then determine the present value of the future benefit payments by using duration-based interest-rate yields from the Financial Times Stock Exchange Group Pension Discount Curve as of the measurement date, and solving for the single discount rate that produces the same present value of the future benefit payments.

The accumulated benefit obligation for the SERP, which excludes projected future salary increases, was $20,677 and $16,704 as of December 31, 2018 and 2017, respectively.

The unfunded benefit obligation is reported in other liabilities. Although there are no plan assets, the assets in the grantor trust, included as a component of other assets, had a total fair value of $18,916 and $20,071 at December 31, 2018 and 2017, respectively.

The following table presents the components of the net periodic benefit cost and the amounts recognized in OCI for the SERP.

	Years Ended December 31,		
	2018	2017	2016
Net periodic benefit cost:			
Service cost	$ 1,762	$ 1,035	$ 808
Net periodic benefit cost recognized in compensation and benefits	1,762	1,035	808
Interest cost	863	738	735
Amortization of net actuarial loss	2,539	1,263	1,436
Net periodic benefit cost recognized in other expenses	3,402	2,001	2,171
Total net periodic benefit cost recognized in the statement of income	5,164	3,036	2,979
Amounts recognized in OCI:			
Actuarial loss	3,452	1,712	4,055
Amortization of net actuarial loss	(2,539)	(1,263)	(1,436)
Net loss (income) recognized in OCI	913	449	2,619
Total recognized as net periodic benefit cost	$ 6,077	$ 3,485	$ 5,598

The following table presents the key assumptions used for the actuarial calculations to determine net periodic benefit cost for the SERP.

	Years Ended December 31,		
	2018	2017	2016
Discount rate	3.00%	4.00%	4.20%
Compensation increases	5.50%	5.50%	5.50%

The following table presents the components of the pension benefits reported in AOCI related to the SERP.

	December 31, 2018	December 31, 2017
Net actuarial loss	$ (11,298)	$ (10,384)
Net pension benefits reported in AOCI	$ (11,298)	$ (10,384)

The following table presents the amounts that will be amortized from AOCI into net periodic benefit cost during the year ending December 31, 2019.

	Year Ending December 31, 2019
Net actuarial loss	$ 1,386
Net amount to be amortized	$ 1,386

The net periodic benefit cost for the SERP, including the net amount to be amortized, for the year ending December 31, 2019 is projected to be approximately $3,605.

The following table presents the estimated future benefit payments reflecting scheduled benefit payments for retired participants and the estimated payments to active participants, based on the actual form of payment elected by the participant and weighting the value of the participant's benefits based on the probability of the participant retiring.

For the Years Ending December 31,	
2019	$ 5,425
2020	3,239
2021	2,542
2022	9,522
2023	1,587
2024 - 2028	5,546

Nonqualified Supplemental Executive Thrift Plan. Effective January 1, 2016, we offer the SETP, a voluntary, non-qualified, unfunded deferred compensation plan that permits certain officers and approved employees of the Bank to elect to defer certain components of their compensation. The SETP is intended to constitute a deferred compensation arrangement that complies with Section 409A of the Internal Revenue Code, as amended. The SETP provides that, subject to certain limitations, the Bank will make matching contributions to the participant's deferred contribution account each plan year. For the years ended December 31, 2018, 2017 and 2016, we contributed $70, $52 and $47, respectively, to the SETP and our liability at December 31, 2018 and 2017 was $1,127 and $660, respectively.

Directors' Deferred Compensation Plan. Effective January 1, 2016, we offer the DDCP, a voluntary, non-qualified, unfunded deferred compensation plan that permits our directors to defer all or a portion of the fees payable to them for a calendar year for their services as directors. The DDCP is intended to constitute a deferred compensation arrangement that complies with Section 409A of the Internal Revenue Code, as amended. Any duly elected and serving member of our board may participate in the DDCP. We make no matching contributions under the DDCP. Our liability under the DDCP at December 31, 2018 and 2017 was $1,079 and $967, respectively.

Note 16 - Segment Information

We report based on two operating segments:

- Traditional, which consists of credit products (including advances, letters of credit, and lines of credit), investments (including federal funds sold, securities purchased under agreements to resell, interest-bearing demand deposit accounts, and investment securities), and correspondent services and deposits; and
- Mortgage loans, which consists of mortgage loans purchased from our members through our MPP and participating interests purchased in 2012 - 2014 from the FHLBank of Topeka in mortgage loans that were originated by certain of its PFIs under the MPF Program.

These segments reflect our two primary mission asset activities and the manner in which they are managed from the perspective of development, resource allocation, product delivery, pricing, credit risk and operational administration. The segments identify the principal ways we provide services to members.

We measure the performance of each segment based upon the net interest spread of the underlying portfolio(s). Therefore, each segment's performance begins with net interest income.

Traditional net interest income is derived primarily from the difference, or spread, between the interest income earned on advances and investments and the borrowing costs related to those assets, net interest settlements related to interest-rate swaps, and related premium and discount amortization. Traditional also includes the costs related to holding deposits for members and other miscellaneous borrowings. Mortgage loan net interest income is derived primarily from the difference, or spread, between the interest income earned on mortgage loans, including the premium and discount amortization, and the borrowing costs related to those loans.

Direct other income and expense also affect each segment's results. The traditional segment includes the direct earnings impact of derivatives and hedging activities related to advances, investments and consolidated obligations as well as all other miscellaneous income and expense not associated with mortgage loans. The mortgage loans segment includes the direct earnings impact of derivatives and hedging activities as well as direct compensation, benefits and other expenses (including an allocation for indirect overhead) associated with operating the MPP and MPF Program and volume-driven costs associated with master servicing and quality control fees.

The assessments related to AHP have been allocated to each segment based upon its proportionate share of income before assessments.

The following table presents our financial performance by operating segment.

Year Ended December 31, 2018	Traditional	Mortgage Loans	Total
Net interest income	$ 220,886	$ 67,201	$ 288,087
Provision for (reversal of) credit losses	—	(231)	(231)
Other income (loss)	22,253	(1,744)	20,509
Other expenses	77,526	13,995	91,521
Income before assessments	165,613	51,693	217,306
Affordable Housing Program assessments	17,401	5,169	22,570
Net income	$ 148,212	$ 46,524	$ 194,736

Year Ended December 31, 2017	Traditional	Mortgage Loans	Total
Net interest income	$ 193,278	$ 69,725	$ 263,003
Provision for (reversal of) credit losses	—	51	51
Other income (loss)	(5,110)	(886)	(5,996)
Other expenses	69,644	12,718	82,362
Income before assessments	118,524	56,070	174,594
Affordable Housing Program assessments	12,556	5,607	18,163
Net income	$ 105,968	$ 50,463	$ 156,431

Year Ended December 31, 2016	Traditional	Mortgage Loans	Total
Net interest income	$ 144,695	$ 53,498	$ 198,193
Provision for (reversal of) credit losses	—	(45)	(45)
Other income (loss)	6,674	(1,016)	5,658
Other expenses	65,746	11,853	77,599
Income before assessments	85,623	40,674	126,297
Affordable Housing Program assessments	9,224	4,067	13,291
Net income	$ 76,399	$ 36,607	$ 113,006

We have not symmetrically allocated assets to each segment based upon financial results as it is impracticable to measure the performance of our segments from a total assets perspective. As a result, there is asymmetrical information presented in the tables above including, among other items, the allocation of depreciation without an allocation of the depreciable assets, derivatives and hedging earnings adjustments with no corresponding allocation to derivative assets, if any, and the recording of interest income with no allocation to accrued interest receivable.

The following table presents asset balances by operating segment.

By Date	Traditional	Mortgage Loans	Total
December 31, 2018	$ 54,026,721	$ 11,384,978	$ 65,411,699
December 31, 2017	51,992,565	10,356,341	62,348,906

Note 17 - Estimated Fair Values

We estimate fair value amounts by using available market and other pertinent information and the most appropriate valuation methods. Although we use our best judgment in estimating the fair values of financial instruments, there are inherent limitations in any valuation technique. Therefore, these estimated fair values may not be indicative of the amounts that would have been realized in market transactions at the reporting dates.

Certain estimates of the fair value of financial assets and liabilities are highly subjective and require judgments regarding significant factors such as the amount and timing of future cash flows, prepayment speeds, interest-rate volatility, and the discount rates that appropriately reflect market and credit risks. The use of different assumptions could have a material effect on the fair value estimates.

Fair Value Hierarchy. GAAP establishes a fair value hierarchy and requires us to maximize the use of significant observable inputs and minimize the use of significant unobservable inputs when measuring estimated fair value. The inputs are evaluated, and an overall level for the estimated fair value measurement is determined. This overall level is an indication of the extent of the market observability of the estimated fair value measurement for the asset or liability.

The fair value hierarchy prioritizes the inputs used to measure fair value into three broad levels:

Level 1 Inputs. Quoted prices (unadjusted) for identical assets or liabilities in an active market that we can access on the measurement date.

Level 2 Inputs. Inputs other than quoted prices within level 1 that are observable inputs for the asset or liability, either directly or indirectly. If the asset or liability has a specified or contractual term, a level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include (i) quoted prices for similar assets or liabilities in active markets; (ii) quoted prices for identical or similar assets or liabilities in markets that are not active; (iii) inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates and yield curves that are observable at commonly quoted intervals and implied volatilities); and (iv) inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 Inputs. Unobservable inputs for the asset or liability.

We review the fair value hierarchy classifications on a quarterly basis. Changes in the observability of the inputs may result in a reclassification of certain assets or liabilities. Such reclassifications are reported as transfers in/out at estimated fair value as of the beginning of the quarter in which the changes occur. There were no such reclassifications during the years ended December 31, 2018, 2017, or 2016.

The following tables present the carrying value and estimated fair value of each of our financial instruments. The total of the estimated fair values does not represent an estimate of our overall market value as a going concern, which would take into account, among other considerations, future business opportunities and the net profitability of assets and liabilities.

	December 31, 2018					
		Estimated Fair Value				
Financial Instruments	**Carrying Value**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Netting Adjustment** [1]
Assets:						
Cash and due from banks	$ 100,735	$ 100,735	$ 100,735	$ —	$ —	$ —
Interest-bearing deposits	1,210,705	1,210,705	1,210,039	666	—	—
Securities purchased under agreements to resell	3,212,726	3,212,728	—	3,212,728	—	—
Federal funds sold	3,085,000	3,085,000	—	3,085,000	—	—
AFS securities	7,703,596	7,703,596	—	7,703,596	—	—
HTM securities	5,673,720	5,676,145	—	5,676,145	—	—
Advances	32,727,668	32,669,145	—	32,669,145	—	—
Mortgage loans held for portfolio, net	11,384,978	11,212,978	—	11,202,984	9,994	—
Accrued interest receivable	124,611	124,611	—	124,611	—	—
Derivative assets, net	116,764	116,764	—	176,802	—	(60,038)
Grantor trust assets [2]	21,122	21,122	21,122	—	—	—
Liabilities:						
Deposits	500,440	500,440	—	500,440	—	—
Consolidated obligations:						
Discount notes	20,895,262	20,895,446	—	20,895,446	—	—
Bonds	40,265,465	40,137,791	—	40,137,791	—	—
Accrued interest payable	179,728	179,728	—	179,728	—	—
Derivative liabilities, net	21,067	21,067	—	123,662	—	(102,595)
MRCS	168,876	168,876	168,876	—	—	—

	December 31, 2017					
		Estimated Fair Value				
Financial Instruments	**Carrying Value**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Netting Adjustment** [1]
Assets:						
Cash and due from banks	$ 55,269	$ 55,269	$ 55,269	$ —	$ —	$ —
Interest-bearing deposits	660,342	660,342	659,926	416	—	—
Securities purchased under agreements to resell	2,605,460	2,605,461	—	2,605,461	—	—
Federal funds sold	1,280,000	1,280,000	—	1,280,000	—	—
AFS securities	7,128,758	7,128,758	—	6,910,224	218,534	—
HTM securities	5,897,668	5,919,299	—	5,874,413	44,886	—
Advances	34,055,064	34,001,397	—	34,001,397	—	—
Mortgage loans held for portfolio, net	10,356,341	10,426,213	—	10,413,134	13,079	—
Accrued interest receivable	105,314	105,314	—	105,314	—	—
Derivative assets, net	128,206	128,206	—	249,300	—	(121,094)
Grantor trust assets [2]	21,698	21,698	21,698	—	—	—
Liabilities:						
Deposits	564,799	564,799	—	564,799	—	—
Consolidated obligations:						
Discount notes	20,358,157	20,394,192	—	20,394,192	—	—
Bonds	37,895,653	37,998,928	—	37,998,928	—	—
Accrued interest payable	135,691	135,691	—	135,691	—	—
Derivative liabilities, net	2,718	2,718	—	51,228	—	(48,510)
MRCS	164,322	164,322	164,322	—	—	—

(1) Represents the application of the netting requirements that allow the settlement of (i) positive and negative positions and (ii) cash collateral and related accrued interest held or placed, with the same clearing agent and/or counterparty. To conform with the current presentation, variation margin of $24,954 has been allocated to individual derivative instruments as of December 31, 2017. Previously, this amount was included with netting adjustments.

(2) Included in other assets on the statement of condition.

Summary of Valuation Techniques and Significant Inputs.

Investment Securities - MBS. The estimated fair value incorporates prices from multiple third-party pricing vendors, when available. These pricing vendors use various proprietary models to price MBS. The inputs to those models are derived from various sources, including, but not limited to, benchmark yields, reported trades, dealer estimates, issuer spreads, benchmark securities, bids, offers, and other market-related data. Because many private-label RMBS do not trade on a daily basis, the pricing vendors use other available information, as applicable, such as benchmark curves, benchmarking of like securities, sector groupings and matrix pricing to determine the prices for individual securities.

We conduct reviews of the pricing vendors' processes, methodologies and control procedures to confirm and further augment our understanding of the vendors' prices for our MBS. Each pricing vendor has an established challenge process in place for all MBS valuations, which facilitates resolution of potentially erroneous prices identified by us.

Our valuation technique for estimating the fair values of MBS initially requires the establishment of a "median" price for each security. All prices that are within a specified tolerance threshold of the median price are then included in the "cluster" of prices that are averaged to compute a "default" price. All prices that are outside the threshold (i.e., outliers) are subject to further analysis (including, but not limited to, comparison to prices provided by an additional third-party valuation service, prices for similar securities, and/or non-binding dealer estimates) to determine if an outlier is a better estimate of fair value. If so, then the outlier (or the other price as appropriate) is used as the final price rather than the default price. In all cases, the final price is used to determine the estimated fair value of the security.

As of December 31, 2018, two or three prices were received for substantially all of our MBS.

Based on the lack of significant market activity and observable inputs for private-label RMBS and home equity loan ABS, the recurring fair value measurements for those securities were classified as level 3 within the fair value hierarchy as of December 31, 2017.

Investment Securities - non-MBS. The estimated fair value is determined using market-observable price quotes from third-party pricing vendors, such as the Composite Bloomberg Bond Trader screen, thus falling under the market approach.

Impaired Mortgage Loans Held for Portfolio. We record non-recurring fair value adjustments to reflect partial charge-offs on impaired mortgage loans. We estimate the fair value of these assets using a current property value obtained from a third-party.

Derivative assets/liabilities. We base the estimated fair values of derivatives with similar terms on market prices when available. However, active markets do not exist for many of our derivatives. Consequently, fair values for these instruments are generally estimated using standard valuation techniques such as discounted cash-flow analysis and comparisons to similar instruments. In limited instances, fair value estimates for derivatives are obtained from dealers and are corroborated by using a pricing model and observable market data (e.g., the LIBOR or OIS curves).

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 as follows:

Interest-rate related:

- LIBOR curve or the OIS curve to project cash flows for collateralized interest-rate swaps and the OIS curve to discount, and
- Volatility assumption - market-based expectations of future interest-rate volatility implied from current market prices for similar options.

TBAs:

- TBA securities prices - market-based prices are determined by coupon, maturity and expected term until settlement.

MDCs:

- TBA securities prices - prices are then adjusted for differences in coupon, average loan rate and seasoning.

The estimated fair values of our derivative assets and liabilities include accrued interest receivable/payable and related cash collateral, including initial and variation margin, posted to/received from counterparties. The estimated fair values of the accrued interest receivable/payable and cash collateral equal their carrying values due to their short-term nature.

We adjust the estimated fair values of our derivatives for counterparty nonperformance risk, particularly credit risk, as appropriate. We compute our nonperformance risk adjustment by using observable credit default swap spreads and estimated probability default rates applied to our exposure after considering collateral held or placed.

Grantor Trust Assets. Grantor trust assets, included as a component of other assets, are carried at estimated fair value based on quoted market prices as of the last business day of the reporting period.

Estimated Fair Value Measurements. The following tables present, by level within the fair value hierarchy, the estimated fair value of our financial assets and liabilities that are recorded at estimated fair value on a recurring or non-recurring basis on our statement of condition.

December 31, 2018	Total	Level 1	Level 2	Level 3	Netting Adjustment [1]
AFS securities:					
GSE and TVA debentures	$ 4,277,080	$ —	$ 4,277,080	$ —	$ —
GSE MBS	3,426,516	—	3,426,516	—	—
Total AFS securities	7,703,596	—	7,703,596	—	—
Derivative assets:					
Interest-rate related	116,618	—	176,656	—	(60,038)
MDCs	146	—	146	—	—
Total derivative assets, net	116,764	—	176,802	—	(60,038)
Grantor trust assets [2]	21,122	21,122	—	—	—
Total assets at recurring estimated fair value	$ 7,841,482	$ 21,122	$ 7,880,398	$ —	$ (60,038)
Derivative liabilities:					
Interest-rate related	$ 20,842	$ —	$ 123,437	$ —	$ (102,595)
Interest-rate forwards	202	—	202	—	—
MDCs	23	—	23	—	—
Total derivative liabilities, net	21,067	—	123,662	—	(102,595)
Total liabilities at recurring estimated fair value	$ 21,067	$ —	$ 123,662	$ —	$ (102,595)
Mortgage loans held for portfolio [3]	$ 1,734	$ —	$ —	$ 1,734	$ —
Total assets at non-recurring estimated fair value	$ 1,734	$ —	$ —	$ 1,734	$ —

December 31, 2017	Total	Level 1	Level 2	Level 3	Netting Adjustment [1]
AFS securities:					
GSE and TVA debentures	$ 4,403,929	$ —	$ 4,403,929	$ —	$ —
GSE MBS	2,506,295	—	2,506,295	—	—
Private-label RMBS	218,534	—	—	218,534	—
Total AFS securities	7,128,758	—	6,910,224	218,534	—
Derivative assets:					
Interest-rate related	128,096	—	249,190	—	(121,094)
Interest-rate forwards	37	—	37	—	—
MDCs	73	—	73	—	—
Total derivative assets, net	128,206	—	249,300	—	(121,094)
Grantor trust assets [2]	21,698	21,698	—	—	—
Total assets at recurring estimated fair value	$ 7,278,662	$ 21,698	$ 7,159,524	$ 218,534	$ (121,094)
Derivative liabilities:					
Interest-rate related	$ 2,669	$ —	$ 51,179	$ —	$ (48,510)
Interest-rate forwards	1	—	1	—	—
MDCs	48	—	48	—	—
Total derivative liabilities, net	2,718	—	51,228	—	(48,510)
Total liabilities at recurring estimated fair value	$ 2,718	$ —	$ 51,228	$ —	$ (48,510)
Mortgage loans held for portfolio [4]	$ 2,637	$ —	$ —	$ 2,637	$ —
Total assets at non-recurring estimated fair value	$ 2,637	$ —	$ —	$ 2,637	$ —

(1) Represents the application of the netting requirements that allow us to settle (i) positive and negative positions and (ii) cash collateral and related accrued interest held or placed, with the same clearing agent and/or counterparty. To conform with the current presentation, variation margin of $24,954 has been allocated to the individual derivative instruments as of December 31, 2017. Previously, this amount was included with netting adjustments.

(2) Included in other assets.

(3) Amounts are as of the date the fair value adjustment was recorded during the year ended December 31, 2018.

(4) Amounts are as of the date the fair value adjustment was recorded during the year ended December 31, 2017.

Level 3 Disclosures for All Assets and Liabilities that are Measured at Fair Value on a Recurring Basis. The table below presents a rollforward of our AFS private-label RMBS measured at estimated fair value on a recurring basis using level 3 significant inputs. The estimated fair values were determined using a pricing source, such as a dealer quote or comparable security price, for which the significant inputs used to determine the price were not readily observable.

AFS private-label RMBS Level 3 Rollforward	2018	2017	2016
Balance, beginning of year	$ 218,534	$ 269,119	$ 319,186
Total realized and unrealized gains (losses):			
Net realized gains from sale of AFS securities	32,407	—	—
Accretion of credit losses in interest income	1,884	6,778	9,348
Net losses on changes in fair value in other income	—	(166)	(197)
Net change in fair value not in excess of cumulative non-credit losses in OCI	2,693	29	(156)
Unrealized gains (losses) in OCI	392	2,189	(3,332)
Reclassification of non-credit portion in OCI to other income	—	166	197
Purchases, issuances, sales and settlements:			
Sales	(236,248)	—	—
Settlements	(19,662)	(59,581)	(55,927)
Balance, end of year	$ —	$ 218,534	$ 269,119
Net gains (losses) included in earnings attributable to changes in fair value relating to assets still held at end of year	$ —	$ 6,612	$ 8,291

Note 18 - Commitments and Contingencies

The following table presents our off-balance-sheet commitments at their notional amounts.

	December 31, 2018		
Type of Commitment	Expire within one year	Expire after one year	Total
Letters of credit outstanding	$ 242,891	$ 96,616	$ 339,507
Unused lines of credit [1]	989,266	—	989,266
Commitments to fund additional advances [2]	31,843	—	31,843
Commitments to fund or purchase mortgage loans, net [3]	43,753	—	43,753
Unsettled CO bonds, at par	1,150	—	1,150

(1) Maximum line of credit amount per member is $50,000.
(2) Generally for periods up to six months.
(3) Generally for periods up to 91 days.

Commitments to Extend Credit. A standby letter of credit is a financing arrangement between us and one of our members for which we charge the member a commitment fee. If we are required to make a payment for a beneficiary's draw, the payment amount is converted into a collateralized advance to the member. Substantially all of these standby letters of credit, including related commitments, range from 3 months to 20 years, although some are renewable at our option. The carrying value of guarantees (commitment fees) related to standby letters of credit is recorded in other liabilities and totaled $2,120 at December 31, 2018.

Lines of credit allow members to fund short-term cash needs (up to one year) without submitting a new application for each request for funds.

We monitor the creditworthiness of our standby letters of credit and lines of credit based on an evaluation of the financial condition of our members. In addition, commitments to extend credit are fully collateralized at the time of issuance. We have established parameters for the measurement, review, classification, and monitoring of credit risk related to these two products. Based on credit analyses performed by us as well as collateral requirements, we have not deemed it necessary to record any additional liability for these commitments. For more information, see *Note 7 - Allowance for Credit Losses*.

Commitments to Fund or Purchase Mortgage Loans. Commitments that unconditionally obligate us to fund or purchase mortgage loans are generally for periods not to exceed 91 days. Such commitments are reported as derivative assets or derivative liabilities at their estimated fair value and are reported net of participating interests sold to other FHLBanks.

Pledged Collateral. At December 31, 2018 and 2017, we had pledged cash collateral, at par, of $127,942 and $16,437, respectively, to counterparties and clearing agents. At December 31, 2018 and 2017, we had not pledged any securities as collateral.

Lease Commitments. Net rental and related costs for the years ended December 31, 2018, 2017, and 2016 totaled $521, $287, and $212, respectively. Total future minimum lease payments were $2,196 at December 31, 2018.

Legal Proceedings. We are subject to legal proceedings arising in the normal course of business. We record an accrual for a loss contingency when it is probable that a loss for which we could be liable has been incurred and the amount can be reasonably estimated. After consultation with legal counsel, management does not anticipate that the ultimate liability, if any, arising out of these proceedings could have a material effect on our financial condition, results of operations or cash flows.

In 2010, we filed a complaint asserting claims against several entities for negligent misrepresentation and violations of state and federal securities law occurring in connection with the sale of private-label RMBS to us. In 2013, 2014 and 2015, we executed confidential settlement agreements with certain defendants in this litigation, pursuant to which we have dismissed pending claims against, and provided legal releases to, certain entities with respect to all applicable securities at issue in the litigation, in consideration of our receipt of cash payments from or on behalf of those defendants. We had previously dismissed all the complaint as to the other named defendants. As a result, all proceedings in the RMBS litigation we filed have been concluded. Cash settlement payments, net of legal fees and litigation expenses, totaled $407, $530, and $60 for the years ended December 31, 2018, 2017, and 2016, respectively, and were recorded in other income.

Additional discussion of other commitments and contingencies is provided in *Note 5 - Advances; Note 6 - Mortgage Loans Held for Portfolio; Note 9 - Derivatives and Hedging Activities; Note 11 - Consolidated Obligations; Note 13 - Capital;* and *Note 17 - Estimated Fair Values*.

Note 19 - Related Party and Other Transactions

Transactions with Related Parties. We are a cooperative whose members and former members (or legal successors) own all of our outstanding capital stock. Former members (including certain non-members) are required to maintain their investment in our capital stock until their outstanding business transactions with us have matured or are paid off and their capital stock is redeemed in accordance with our capital plan and regulatory requirements. For more information, see *Note 13 - Capital*.

Under GAAP, transactions with related parties include transactions with principal owners, i.e, owners of more than 10% of the voting interests of the entity. Due to the statutory limits on members' voting rights and the number of members in our Bank, no shareholder owned more than 10 percent of the total voting interests as of and for the three-year period ended December 31, 2018. Therefore, the Bank had no transactions with principal owners for any of the periods presented.

Under GAAP, transactions with related parties also include transactions with management. Management is defined as persons who are responsible for achieving the objectives of the entity and who have the authority to establish policies and make decisions by which those objectives are to be pursued. For this purpose, management typically includes those who serve on our board of directors. The Bank provides, in the ordinary course of its business, products and services to members whose officers or directors may also serve as directors of the Bank, i.e., directors' financial institutions. However, Finance Agency regulations require that transactions with directors' financial institutions be made on the same terms as those with any other member. Therefore, all of our transactions with directors' financial institutions are subject to the same eligibility and credit criteria, as well as the same conditions, as comparable transactions with all other members.

The following table presents the aggregate outstanding balances with directors' financial institutions and their balance as a percent of the total balance on our statement of condition.

	December 31, 2018		December 31, 2017	
Balances with Directors' Financial Institutions	**Par value**	**% of Total**	**Par value**	**% of Total**
Capital stock	$ 43,315	2%	$ 40,564	2%
Advances	600,869	2%	588,108	2%

The par values at December 31, 2018 reflect changes in the composition of directors' financial institutions effective January 1, 2018, due to changes in our board membership resulting from the 2017 director election.

The following table presents transactions with directors' financial institutions, taking into account the beginning and ending dates of the directors' terms, merger activity and other changes in the composition of directors' financial institutions.

	Years Ended December 31,		
Transactions with Directors' Financial Institutions	**2018**	**2017**	**2016**
Net capital stock issuances (redemptions and repurchases)	$ 6,328	$ 3,912	$ 1,516
Net advances (repayments)	23,550	79,751	11,274
Mortgage loan purchases	40,038	33,274	38,728

Transactions with Members and Former Members. Substantially all advances are made to members, and all whole mortgage loans held for portfolio are purchased from members. We also maintain demand deposit accounts for members, primarily to facilitate settlement activities that are directly related to advances or mortgage loan purchases. Such transactions with members are entered into in the ordinary course of business. In addition, we may purchase investments in federal funds sold, securities purchased under agreements to resell, certificates of deposit, and MBS from members or their affiliates. All purchases are transacted at market prices without preference to the status of the counterparty or the issuer of the security as a member, nonmember, or affiliate thereof.

Under our AHP, we provide subsidies to members, which may be in the form of direct grants or below-market-rate advances. All AHP subsidies are made in the ordinary course of business. Under our Community Investment Program and our Community Investment Cash Advances program, we provide subsidies in the form of below-market-rate advances to members or standby letters of credit to members for community lending and economic development projects. All Community Investment Cash Advances subsidies are made in the ordinary course of business.

Transactions with Other FHLBanks. Occasionally, we loan or borrow short-term funds to/from other FHLBanks. The following table presents the loans to other FHLBanks.

	Years Ended December 31,		
Loans to other FHLBanks	**2018**	**2017**	**2016**
Disbursements	$ (400,000)	$ (100,000)	$ (300,000)
Principal repayments	400,000	100,000	300,000

There were no borrowings from other FHLBanks during the years ended December 31, 2018, 2017, or 2016. There were no loans to or borrowings from other FHLBanks outstanding at December 31, 2018 or 2017.

In December 2016, we agreed to sell a 90% participating interest in a $100 million MCC of certain newly acquired MPP loans to the FHLBank of Atlanta. Principal amounts settled in December 2016 totaled $72 million, and the remaining $18 million settled in January 2017.

Transactions with the Office of Finance. Our proportionate share of the cost of operating the Office of Finance is identified in our statement of income.

GLOSSARY OF TERMS

ABS: Asset-Backed Securities
Advance: Secured loan to members, former members or Housing Associates
AFS: Available-for-Sale
Agency: GSE and Ginnie Mae
AHP: Affordable Housing Program
AMA: Acquired Member Assets
AOCI: Accumulated Other Comprehensive Income (Loss)
Bank Act: Federal Home Loan Bank Act of 1932, as amended
bps: basis points
CDFI: Community Development Financial Institution
CE: Credit Enhancement
CFI: Community Financial Institution, an FDIC-insured depository institution with average total assets below an annually-adjusted limit established by the Director based on the Consumer Price Index
CFPB: Bureau of Consumer Financial Protection
CFTC: United States Commodity Futures Trading Commission
Clearinghouse: A United States Commodity Futures Trading Commission-registered derivatives clearing organization
CME: CME Clearing
CMO: Collateralized Mortgage Obligation
CO bond: Consolidated Obligation bond
DB Plan: Pentegra Defined Benefit Pension Plan for Financial Institutions, as amended
DC Plan: Pentegra Defined Contribution Retirement Savings Plan for Financial Institutions, as amended
DDCP: Directors' Deferred Compensation Plan
Director: Director of the Federal Housing Finance Agency
Dodd-Frank Act: Dodd-Frank Wall Street Reform and Consumer Protection Act, as amended
Exchange Act: Securities Exchange Act of 1934, as amended
Fannie Mae: Federal National Mortgage Association
FASB: Financial Accounting Standards Board
FDIC: Federal Deposit Insurance Corporation
FHA: Federal Housing Administration
FHLBank: A Federal Home Loan Bank
FHLBanks: The 11 Federal Home Loan Banks or a subset thereof
FHLBank System: The 11 Federal Home Loan Banks and the Office of Finance
FICO®: Fair Isaac Corporation, the creators of the FICO credit score
Final Membership Rule: Final Rule on FHLBank Membership issued by the Federal Housing Finance Agency effective February 19, 2016
Finance Agency: Federal Housing Finance Agency, successor to Finance Board
Finance Board: Federal Housing Finance Board, predecessor to Finance Agency
FLA: First Loss Account
FOMC: Federal Open Market Committee
Form 8-K: Current Report on Form 8-K as filed with the SEC under the Exchange Act
Form 10-K: Annual Report on Form 10-K as filed with the SEC under the Exchange Act
Form 10-Q: Quarterly Report on Form 10-Q as filed with the SEC under the Exchange Act
FRB: Federal Reserve Board
Freddie Mac: Federal Home Loan Mortgage Corporation
GAAP: Generally Accepted Accounting Principles in the United States of America
Ginnie Mae: Government National Mortgage Association
GLB Act: Gramm-Leach-Bliley Act of 1999, as amended
GSE: United States Government-Sponsored Enterprise
HERA: Housing and Economic Recovery Act of 2008, as amended
Housing Associate: Approved lender under Title II of the National Housing Act of 1934 that is either a government agency or is chartered under federal or state law with rights and powers similar to those of a corporation
HTM: Held-to-Maturity
HUD: United States Department of Housing and Urban Development
JCE Agreement: Joint Capital Enhancement Agreement, as amended, among the 11 FHLBanks
LCH: LCH.Clearnet LLC
LIBOR: London Interbank Offered Rate
LRA: Lender Risk Account

LTV: Loan-to-Value
MAP-21: Moving Ahead for Progress in the 21st Century Act, enacted on July 6, 2012
MBS: Mortgage-Backed Securities
MCC: Master Commitment Contract
MDC: Mandatory Delivery Commitment
Moody's: Moody's Investor Services
MPF: Mortgage Partnership Finance®
MPP: Mortgage Purchase Program, including Original and Advantage unless indicated otherwise
MRCS: Mandatorily Redeemable Capital Stock
MVE: Market Value of Equity
NRSRO: Nationally Recognized Statistical Rating Organization
OCC: Office of the Comptroller of the Currency
OCI: Other Comprehensive Income (Loss)
OIS: Overnight-Indexed Swap
ORERC: Other Real Estate-Related Collateral
OTTI: Other-Than-Temporary Impairment or -Temporarily Impaired (as the context indicates)
PFI: Participating Financial Institution
PMI: Primary Mortgage Insurance
REMIC: Real Estate Mortgage Investment Conduit
REO: Real Estate Owned
RMBS: Residential Mortgage-Backed Securities
S&P: Standard & Poor's Rating Service
Safety and Soundness Act: Federal Housing Enterprises Financial Safety and Soundness Act of 1992, as amended
SEC: Securities and Exchange Commission
Securities Act: Securities Act of 1933, as amended
SERP: Federal Home Loan Bank of Indianapolis 2005 Supplemental Executive Retirement Plan and/or a similar frozen plan
SETP: Federal Home Loan Bank of Indianapolis 2016 Supplemental Executive Thrift Plan, as amended
SMI: Supplemental Mortgage Insurance
SOFR: Secured Overnight Financing Rate
TBA: To Be Announced, a forward contract for the purchase or sale of MBS at a future agreed-upon date for an established price
TDR: Troubled Debt Restructuring
TVA: Tennessee Valley Authority
UPB: Unpaid Principal Balance
VaR: Value at Risk
VIE: Variable Interest Entity
WAIR: Weighted-Average Interest Rate

Supplementary Data

Supplementary unaudited financial data for each full quarter within the two years ended December 31, 2018 and 2017 are included in the tables below ($ amounts in millions).

Statement of Income	1st Quarter 2018	2nd Quarter 2018	3rd Quarter 2018	4th Quarter 2018	2018 Total
Interest income	$ 323	$ 376	$ 420	$ 446	$ 1,565
Interest expense	253	306	347	371	1,277
Net interest income	70	70	73	75	288
Provision for (reversal of) credit losses	—	—	—	—	—
Net interest income after provision for credit losses	70	70	73	75	288
Other income (loss)	6	31	(7)	(9)	21
Other expenses	22	24	23	23	92
Income before assessments	54	77	43	43	217
AHP assessments	6	8	4	4	22
Net income	$ 48	$ 69	$ 39	$ 39	$ 195

Statement of Income	1st Quarter 2017	2nd Quarter 2017	3rd Quarter 2017	4th Quarter 2017	2017 Total
Interest income	$ 210	$ 243	$ 274	$ 289	$ 1,016
Interest expense	151	179	205	219	754
Net interest income	59	64	69	70	262
Provision for (reversal of) credit losses	—	—	—	—	—
Net interest income after provision for credit losses	59	64	69	70	262
Other income (loss)	(3)	(4)	(3)	4	(6)
Other expenses	20	19	20	23	82
Income before assessments	36	41	46	51	174
AHP assessments	4	4	5	5	18
Net income	$ 32	$ 37	$ 41	$ 46	$ 156

ITEM 9A. CONTROLS AND PROCEDURES

We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*.

Evaluation of Disclosure Controls and Procedures

We are responsible for establishing and maintaining disclosure controls and procedures that are designed to ensure that information required to be disclosed by us in our reports filed under the Exchange Act is: (a) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms; and (b) accumulated and communicated to our management, including our principal executive officer, principal financial officer, and principal accounting officer, to allow timely decisions regarding required disclosures.

As of December 31, 2018, we conducted an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer (the principal executive officer), Chief Financial Officer (the principal financial officer) and Chief Accounting Officer (the principal accounting officer), of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15 of the Exchange Act. Based on that evaluation, our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer concluded that our disclosure controls and procedures were effective as of December 31, 2018.

Internal Control Over Financial Reporting

Changes in Internal Control Over Financial Reporting. There were no changes in our internal control over financial reporting, as defined in Rules 13a-15(f) and 15(d)-15(f) of the Exchange Act, that occurred during our most recently completed fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Controls. We do not expect that our disclosure controls and procedures and other internal controls will prevent all error and fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can only be reasonable assurance that any design will succeed in achieving its stated goals under all potential future conditions. Additionally, over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*.

Board of Directors

The Bank Act divides FHLBank directorships into two categories, "member" directorships and "independent" directorships. Both types of directorships are filled by a vote of the members. Elections for member directors are held on a state-by-state basis. Member directors are elected by a plurality vote of the members in their state. Independent directors are elected at-large by all the members in the FHLBank district without regard to the state. No member of management of an FHLBank may serve as a director of an FHLBank.

Under the Bank Act, member directorships must make up a majority of the board of directors' seats, while the independent directorships must comprise at least 40% of the entire board. A Finance Agency Order issued June 6, 2018 provides that we have 17 seats on our board of directors for 2019, consisting of five Indiana member directors, four Michigan member directors, and eight independent directors. The term of office for directors is four years, unless otherwise adjusted by the Director in order to achieve an appropriate staggering of terms, with approximately one-fourth of the directors' terms expiring each year. Directors may not serve more than three consecutive full terms.

Finance Agency regulations permit, but do not require, the board of directors to conduct an annual assessment of the skills and experience possessed by the board as a whole and to determine whether the capabilities of the board would be enhanced through the addition of individuals with particular skills and experience. We may identify those qualifications and inform the voting members as part of our nomination and balloting process; however, by regulation as described below, we may not exclude a member director nominee from the election ballot on the basis of those qualifications. For the 2018 director elections, our board listed in its request for nominations certain desirable candidate financial and industry experiences, but no particular qualifications beyond the eligibility criteria were required as part of the nomination, balloting and election process.

Finance Agency regulations require each FHLBank to develop, implement, and maintain policies and procedures to ensure, to the maximum extent possible in balance with financially safe and sound business practices, the consideration of minorities, women, and individuals with disabilities for employment, and consideration of minority-, women-, and disabled-owned businesses to be engaged for all business and activities. In particular, those policies and procedures shall (among other things) encourage the consideration of diversity in nominating or soliciting nominees for positions on our board of directors.

Nomination of Member Directors. The Bank Act and Finance Agency regulations require that member director nominees meet certain statutory and regulatory criteria in order to be eligible to be elected and serve as directors. To be eligible, an individual must: (i) be an officer or director of a member institution located in the state in which there is an open member director position; (ii) represent a member institution that is in compliance with the minimum capital requirements established by its regulator; and (iii) be a United States citizen. These criteria are the only eligibility criteria that member directors must meet, and we are not permitted to establish additional eligibility or qualifications criteria for member directors or nominees.

Each eligible institution may nominate representatives from member institutions in its state to serve as member directors. Only our shareholders may nominate and elect member directors. Our board of directors is not permitted to nominate or elect member directors, except to fill a vacancy for the remainder of an unexpired term or to fill a vacancy for which no nominations were received. With respect to member directors, no director, officer, employee, attorney or agent of our Bank (except in his or her personal capacity) may, directly or indirectly, support the nomination or election of a particular individual for a member directorship. Finance Agency regulations do not require member institutions to communicate the reasons for their nominations, and we have no power to require them to do so.

Nomination of Independent Directors. Independent director nominees also must meet certain statutory and regulatory eligibility criteria. Each independent director must be a United States citizen and a bona fide resident of Michigan or Indiana. Before nominating an individual for an independent directorship, other than for a public interest directorship, our board must determine that the nominee's knowledge or experience is commensurate with that needed to oversee a financial institution with a size and complexity that is comparable to that of our Bank. The Bank Act and Finance Agency regulations prohibit an independent director from serving as a director, officer, or employee of a member of the FHLBank on whose board the director sits, or of a recipient of an advance from that FHLBank, or as an officer of any FHLBank, and would also prohibit the nomination or election as an independent director of an individual serving in such capacity.

Under the Bank Act, there are two types of independent directors:

- **Public interest directors** - We are required to have at least two public interest directors. Each must have more than four years of experience in representing consumer or community interests in banking services, credit needs, housing, or consumer financial protections.
- **Other independent directors** - Independent directors must have demonstrated knowledge or experience in auditing or accounting, derivatives, financial management, organizational management, project development or risk management practices, or other expertise established by Finance Agency regulations.

Pursuant to the Bank Act and Finance Agency regulations, the board of directors, after consultation with our Affordable Housing Advisory Council, nominates candidates for the independent director positions. Individuals interested in serving as independent directors may submit an application for consideration by the Executive/Governance Committee. The application form is available on our website at www.fhlbi.com, by clicking on "Resources," "Corporate Governance" and "Board of Directors." Our members may also nominate independent director candidates. The conclusion that an independent director nominee may qualify to serve as a director is based upon the nominee's satisfaction of the regulatorily prescribed eligibility criteria listed above and verified through application and eligibility certification forms prescribed by the Finance Agency. The board then submits the slated independent director candidates to the Finance Agency for its review and comment. Once the Finance Agency has accepted candidates for the independent director positions, we hold a district-wide election for those positions.

Under Finance Agency regulations, if the board of directors nominates only one independent director candidate for each open seat, each candidate must receive at least 20% of the votes that are eligible to be cast in order to be elected. If there is more than one candidate for each open independent director seat, then such requirement does not apply.

Nominating Committee. Our board of directors does not have a nominating committee with respect to member director positions because such nominations are provided by our members. As noted, our board, after review by the Executive/Governance Committee and consultation with our Affordable Housing Advisory Council, nominates candidates for independent director positions.

2018 Member and Independent Director Elections. The Bank Act and Finance Agency regulations set forth the voting rights and processes with respect to the election of member directors and independent directors. For the election of both member directors and independent directors, each eligible institution is entitled to cast one vote for each share of stock that it was required to hold as of the record date (i.e., December 31 of the year prior to the year in which the election is held); however, the number of votes that a member institution may cast for each directorship cannot exceed the average number of shares of stock that were required to be held by all member institutions located in the applicable state on the record date.

The only matter submitted to a vote of our shareholders in 2018 was the fourth quarter election of two Michigan member directors and one Indiana member director. In 2018 the nomination of member directors was conducted electronically. Although our procedures permit voting electronically or by paper ballot, the 2018 voting by members was conducted electronically. No meeting of the members was held with regard to the election. The board of directors does not solicit proxies, nor are eligible institutions permitted to solicit or use proxies to cast their votes in an election for directors. The 2018 election was conducted in accordance with the Bank Act and Finance Agency regulations.

Board of Directors Vacancies. If a vacancy occurs on an FHLBank's board of directors, the board, by a majority vote of the remaining directors, shall elect an individual to fill the unexpired term of office of the vacant directorship. Any individual so elected must satisfy all eligibility requirements of the Bank Act and Finance Agency regulations applicable to his or her predecessor. Before an election to fill a vacant directorship occurs, the FHLBank must obtain an executed eligibility certification form from each individual being considered to fill the vacancy, and must verify each individual's eligibility. The FHLBank must also verify the qualifications of any potential independent director. Before electing an independent director, the FHLBank must deliver to the Finance Agency for review a copy of the application form of each individual being considered by the board. Promptly following an election to fill a vacancy on the board, the FHLBank must send a notice to its members and the Finance Agency providing information about the elected director, including his or her name, company affiliation, title, term expiration date and, for member directors, the voting state that the director represents.

Our directors are listed in the table below, including those who served in 2018 or serve as of March 8, 2019.

Name	Age	Director Since	Term Expiration	Independent (elected by District) or Member (elected by State)
Dan L. Moore, Chair [1]	68	1/1/2011	12/31/2022	Member (IN)
James L. Logue, III Vice Chair [1]	66	4/24/2007	12/31/2021	Independent
Jonathan P. Bradford [2]	69	4/24/2007	12/31/2020	Independent
Ronald Brown	54	1/1/2018	12/31/2021	Member (IN)
Charlotte C. Decker	55	1/1/2017	12/31/2020	Independent
Robert M. Fisher	58	1/1/2019	12/31/2022	Member (MI)
Karen F. Gregerson	58	1/1/2013	12/31/2020	Member (IN)
Michael J. Hannigan, Jr.	74	4/24/2007	12/31/2021	Independent
Jeffrey G. Jackson	48	1/1/2019	12/31/2022	Member (MI)
Carl E. Liedholm	78	1/1/2009	12/31/2020	Independent
Robert D. Long	64	4/24/2007	12/31/2019	Independent
James D. MacPhee	71	1/1/2008	12/31/2018	Member (MI)
Michael J. Manica	70	1/1/2016	12/31/2019	Member (MI)
Larry W. Myers	60	1/1/2018	12/31/2021	Member (IN)
Christine Coady Narayanan [3]	55	1/1/2008	12/31/2019	Independent
John L. Skibski	54	1/1/2008	12/31/2019	Member (MI)
Thomas R. Sullivan	68	1/1/2011	12/31/2018	Member (MI)
Larry A. Swank	76	1/1/2009	12/31/2022	Independent
Ryan M. Warner	62	1/1/2017	12/31/2020	Member (IN)

(1) Our board of directors, with input from the Executive/Governance Committee, elects a Chair and a Vice Chair to two-year terms. On November 17, 2017, our board elected Mr. MacPhee as Chair and Mr. Moore as Vice Chair for 2018 and on November 16, 2018, elected Mr. Moore as Chair and Mr. Logue as Vice Chair for 2019-2020.

(2) Public Interest Director designation, effective April 24, 2007, throughout current term.

(3) Public Interest Director designation, effective May 15, 2014, throughout current term.

Each of our directors serves on one or more committees of our board. Committee assignments are made annually, based on board consensus, with input from the President - CEO. Committee assignments take into consideration several factors, including the committees' responsibilities and needs, directors' preferences and expertise, the benefits of rotations in committee memberships, and balancing the committees' responsibilities among all directors. The following table presents the committees on which each director serves as of March 8, 2019 as well as whether the director is the chair (C), vice chair (VC), member (x), Ex-Officio member (EO), or alternate (A) of the respective committee.

Name	Executive / Governance	Finance/ Budget	Affordable Housing	Human Resources	Audit	Risk Oversight	Technology
Dan L. Moore	C	EO	EO	EO	EO	EO	EO
James L. Logue III	VC		x				x
Jonathan P. Bradford	x	x	x				
Ronald Brown		x	VC			x	
Charlotte C. Decker				x		x	VC
Robert M. Fisher				x	x		x
Karen F. Gregerson	x					VC	C
Michael J. Hannigan, Jr.	x			VC			x
Jeffrey G. Jackson			x		x		x
Carl E. Liedholm		C	x			x	
Robert D. Long				x	C		x
Michael J. Manica	x	VC				x	
Larry W. Myers	A	x			x		
Christine Coady Narayanan	x			C	x		
John L. Skibski	x				x	C	
Larry A. Swank	x	x	C				
Ryan M. Warner		x		x	VC		

The following is a summary of the background and business experience of each of our directors. Except as otherwise indicated, for at least the last five years, each director has been engaged in his or her principal occupation as described below.

Dan L. Moore is the President and CEO of Home Bank SB in Martinsville, Indiana, and has served in that position since 2006. Prior to that time, Mr. Moore served as that bank's Executive Vice President and Chief Operating Officer. Mr. Moore has also served as a director of Home Bank SB since 2000. He has been employed by Home Bank SB since 1978. Mr. Moore serves on the board of directors of Stability First, a not-for-profit organization in Martinsville, Indiana, established to address issues associated with the alleviation of poverty. He holds a bachelor of science degree from Indiana State University and a master of science degree in management from Indiana Wesleyan University.

James L. Logue III is the Chief Public Policy Officer of Cinnaire Corp., formerly Great Lakes Capital Fund, a housing finance and development company in Lansing, Michigan, and has held that position since 2018. He was appointed as Chief Strategy Officer in 2016 after having served as Chief Operating Officer of Cinnaire since 2003. Prior to that, Mr. Logue served as the Executive Director of the Michigan State Housing Development Authority beginning in 1991. Mr. Logue has over 40 years' experience in affordable housing, finance, commercial real estate and economic development matters. He served as Deputy Assistant Secretary for Multifamily Housing Programs at HUD in 1988 - 1989, and has been involved in various capacities with the issuance of housing bonds and the management of multi-billion dollar housing portfolios. Mr. Logue serves as a board member of the National Housing Trust, Washington, D.C. Mr. Logue holds a bachelor of arts degree from Kean College.

Jonathan P. Bradford is the owner and President of Development and Construction Resources, LLC in Grand Rapids, Michigan, which provides consulting services for non-profit companies engaged in affordable housing and community development activities. In addition, Mr. Bradford is Vice President of the board of the Michigan Non-Profit Housing Corporation, which owns several multi-family housing developments in Grand Rapids and Detroit, Michigan. Mr. Bradford retired in September 2015 as President and CEO of Inner City Christian Federation, in Grand Rapids, Michigan, a position he had held since 1981. Inner City Christian Federation is involved in the development of affordable housing, as well as housing education and counseling. As President and CEO of Inner City Christian Federation, Mr. Bradford developed the organization's real estate development financing system and guided the development of over 500 housing units and approximately 70,000 square feet of commercial space. Mr. Bradford holds a bachelor of arts degree from Calvin College and a master of social work degree from the University of Michigan with a concentration in housing and community development policy and planning. He is also licensed in the State of Michigan as a residential building contractor.

Ronald Brown is Senior Vice President - General Counsel and a member of the board of directors of United Fidelity Bank, F.S.B., in Evansville, Indiana, and is Senior Vice President - General Counsel of its affiliated thrift holding company, Pedcor Financial, LLC, in Carmel, Indiana. He has held those positions since 2015 and 2005, respectively. He is also a member of the boards of two other affiliated companies, Pedcor Insurance Company and Pedcor Assurance Company. Mr. Brown holds a bachelor of arts degree from the University of Southern California and a juris doctor degree from Indiana University.

Charlotte C. Decker is Chief Information Technology Officer for the UAW Retiree Medical Benefits Trust, in Detroit, Michigan, and has held that position since December 2014. Ms. Decker also served as a Senior Consultant for Data Consulting Group, an information technology consulting services company in Detroit, Michigan, from August 2014 through December 2015. Prior to that, she was Vice President - Chief Technology Officer for Auto Club Group, an insurance and financial services company in Dearborn, Michigan, from September 2008 to June 2014. In addition, she was a Director of Global Computing for General Motors Corporation in Detroit, Michigan, from 2004 to 2007. Ms. Decker holds a bachelor of science degree, a master of science degree, and a master of business administration degree, all from the University of Michigan.

Robert M. Fisher is President - CEO of Lake-Osceola State Bank in Baldwin, Michigan, and has held that position since 2018. Prior to that, Mr. Fisher served as President - Chief Operating Officer of that bank since 2005. He also serves as the Vice Chair of that bank's board of directors. Mr. Fisher is chair of the board of Baldwin Family Health Care, a community healthcare program, and also chair of the board of education for the Walkerville, Michigan Public Schools. Mr. Fisher holds a bachelor of business leadership degree from Baker College.

Karen F. Gregerson is the President and CEO of The Farmers Bank in Frankfort, Indiana, and President of The Farmers Bancorp, a bank holding company in Frankfort, Indiana, having been appointed to those positions in April 2016. She is also a director of both entities. Prior to those appointments, Ms. Gregerson was Senior Vice President and Chief Financial Officer of STAR Financial Bank in Fort Wayne, Indiana, a position she had held since 1997. Ms. Gregerson holds a bachelor of science degree from Ball State University and a master of science degree in organizational leadership from the Indiana Institute of Technology.

Michael J. Hannigan, Jr. has been employed in mortgage banking and related businesses for more than 30 years. Currently, he is the President of The Hannigan Company, LLC, a real estate consulting company in Carmel, Indiana, and has held that position since 2007 when he formed the company. From 1986 to 2006, Mr. Hannigan was the Executive Vice President and a director of The Precedent Companies, Inc., a residential real estate company. Mr. Hannigan previously served as a Senior Vice President and director of Union Federal Savings Bank. During his career, Mr. Hannigan has served as a director and founding partner of several companies engaged in residential development, home building, private water utility service, industrial development, and private capital acquisition. Mr. Hannigan is a director and member of the Executive Committee of the Indiana Builders Association, a trade association. He holds a bachelor of business administration degree from the University of Notre Dame. He has previously served as Vice Chair of our board of directors and Vice Chair of the Council of FHLBanks.

Jeffrey G. Jackson has been an officer of Michigan State University Federal Credit Union, in East Lansing, Michigan, since 1997. He currently serves as Chief Lending Officer, and was appointed to that position in July 2015. Prior to that appointment, Mr. Jackson was Senior Vice President - Business Lending and Operations during 2015 and Vice President - Payment Systems and Support Services from 2012 through 2014. Mr. Jackson also serves on the boards of directors of Child and Family Charities and the Michigan Credit Union Foundation, both located in Lansing, Michigan. Mr. Jackson maintains his CPA designation. He holds a bachelor of business administration degree from the University of Michigan, and a masters of business administration degree from Michigan State University.

Carl E. Liedholm, PhD, is a Professor of Economics at Michigan State University in East Lansing, Michigan, and has held that position since 1965. In June 2018 he was appointed Professor Emeritus. He has taught graduate and post-graduate courses and presented seminars on international finance, banking and housing matters. Mr. Liedholm has over forty years of experience in generating and analyzing financial and other performance data from enterprises in over two dozen countries. Mr. Liedholm holds a bachelor of arts degree from Pomona College and a doctoral degree from the University of Michigan. He has published numerous books and monographs on economics and related matters.

Robert D. Long retired from KPMG LLP on December 31, 2006, where he had been the Office Managing Partner in the Indianapolis, Indiana office since 1999, and had served as an Audit Partner for KPMG since 1988. As an audit partner, Mr. Long served a number of companies with public, private and cooperative ownership structures in a variety of industries, including banking, finance and insurance. Mr. Long maintains his CPA designation. Since December 2014, Mr. Long has been a member of the board, Chair of the Audit Committee and Audit Committee financial expert for Celadon Group, Inc., a transportation and logistics company. From 2010 to 2015, Mr. Long was a member of the board and Chair of the Audit Committee for Beefeaters Holding Company, Inc., a pet food company. From 2009 to 2014, Mr. Long was a member of the board and Chair of the Audit Committee for Schulman Associates Institutional Review Board, Inc., a company providing independent review services to pharmaceutical and clinical research companies. He holds a bachelor of science degree from Indiana University. The board of directors has determined that Mr. Long is an Audit Committee Financial Expert due primarily to his previous experience as an audit partner at a major public accounting firm and as the Audit Committee chair of multiple companies.

Michael J. Manica is the Executive Vice President and a director of United Community Financial Corporation, a bank holding company, and is President, CEO and director of its banking subsidiary, United Bank of Michigan, in Grand Rapids, Michigan, and has held those positions since March 2014. Before his appointment as President and CEO, Mr. Manica had served as President and Chief Operating Officer and director since 2000. His career with United Bank of Michigan began in 1980. He was previously employed at the FDIC. Mr. Manica is the immediate past Chair of the Michigan Bankers Association. He holds a bachelor of arts degree from the University of Michigan and completed the Graduate School of Banking program at the University of Wisconsin.

Larry W. Myers is the President and CEO of First Savings Financial Group, Inc., a bank holding company, and its banking subsidiary, First Savings Bank in Clarksville, Indiana, and has held those positions since 2009 and 2007, respectively. Previously he served as the Chief Operations Officer of First Savings Bank, and has served as a director of that bank since 2005. Mr. Myers has over 35 years' experience in retail banking, commercial lending and wealth management. Mr. Myers has served as Chair of the Indiana Bankers Association, and currently serves on the FHLBank Committee of the American Bankers Association. Mr. Myers holds a bachelor of science degree and a masters of business administration degree, both from the University of Kentucky. The board of directors has determined that Mr. Myers is an Audit Committee Financial Expert due primarily to his extensive experience as director, CEO, and chief operations officer of a commercial bank.

Christine Coady Narayanan is the President and CEO of Opportunity Resource Fund, a U.S. Treasury certified CDFI with offices in Lansing, Grand Rapids, and Detroit, Michigan, having served in that position since October 2004. Opportunity Resource Fund is a non-profit CDFI that provides social impact investment opportunities for individuals and corporations throughout Michigan and engages in lending for affordable housing and community development purposes. As such, Opportunity Resource Fund is licensed and regulated by the Michigan Department of Insurance and Financial Services. Ms. Narayanan has held various positions with the Opportunity Resource Fund and its predecessor organization since 1989, and served as its Executive Director from 1997 to 2004. She holds an associate degree from Lansing Community College and a bachelor of arts degree from Spring Arbor University. Ms. Narayanan is a graduate of the National Internship in Community Economic Development and Michigan Municipal League's Elected Officials Academy and has completed certification through the Indiana University Center of Philanthropy.

John L. Skibski is a member of the board of directors of Sturgis Bank & Trust Company, in Sturgis, Michigan, and was appointed to that position effective February 25, 2019. Mr. Skibski also serves as the Executive Vice President and Chief Financial Officer of MBT Financial Corp., a NASDAQ-listed bank holding company located in Monroe, Michigan, and Monroe Bank and Trust, its banking subsidiary. Mr. Skibski has held those positions since 2004, and has been a director of both companies since 2008. Mr. Skibski has over 30 years' experience in banking in various financial controls capacities. He holds a bachelor of business administration degree and a master of business administration degree from the University of Toledo. The board of directors has determined that Mr. Skibski is an Audit Committee Financial Expert due primarily to his extensive experience as Chief Financial Officer of a publicly-traded financial institution.

Larry A. Swank is Founder, CEO and Chair of Sterling Group, Inc. and affiliated companies in Mishawaka, Indiana. Mr. Swank has served as Chair and CEO of Sterling Group, Inc. since 1976, and served as its President until July 2012. The principal business of that company and its affiliates involves the acquisition, development, construction and management of multi-family housing and storage units. Mr. Swank's company manages 53 properties in 15 states. Mr. Swank has served as a director of the National Association of Home Builders since 1997 and was a member of its Executive Board from 1997 to 2012. He has served as Chair of that association's Housing Finance Committee on three separate occasions.

Ryan M. Warner is President and a director of Bippus State Bank in Huntington, Indiana. Mr. Warner has held these positions since 1987, and has been employed by Bippus State Bank since 1977. Mr. Warner is a member of the Huntington County Economic Development board of directors, having previously served as its President and Treasurer. Mr. Warner received an associate degree in accounting from International Business College, and completed the Graduate School of Banking program at the University of Wisconsin. The board of directors has determined that Mr. Warner is an Audit Committee Financial Expert due primarily to his extensive experience as President and director of a financial institution.

Audit Committee. Our board of directors has a standing Audit Committee that was comprised of the following directors as of December 31, 2018:

Robert D. Long, Chair, independent director
Ryan M. Warner, Vice Chair
Michael J. Manica
Larry W. Myers
Christine Coady Narayanan, independent director
John L. Skibski
James D. MacPhee, Ex-Officio Voting Member

Our board has determined that Mr. Long and Ms. Narayanan are "independent" under the New York Stock Exchange rules definition, and has further determined that no member director may qualify as "independent" under that definition due to the cooperative ownership structure of our Bank by its member institutions. For further discussion about the board's analysis of director independence, see *Item 13. Certain Relationships and Related Transactions, and Director Independence*.

The Bank Act requires the FHLBanks to comply with the substantive audit committee director independence rules applicable to issuers of securities registered under the Exchange Act. Those rules provide that, to be considered an independent member of an audit committee, a director may not be an affiliated person of the registrant. The term "affiliated person" means a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the registrant. The rule provides a "safe harbor," whereby a person will not be deemed an affiliated person if the person is not the beneficial owner, directly or indirectly, of more than 10% of any class of voting securities of the registrant. All of our Audit Committee member directors' institutions presently meet this safe harbor.

Audit Committee Report. Our Audit Committee operates under a written charter adopted by the board of directors that was most recently amended on March 23, 2018. The Audit Committee charter is available on our website by scrolling to the bottom of any web page on www.fhlbi.com and then selecting "Corporate Governance" in the navigation menu. In accordance with its charter, the Audit Committee assists the board in fulfilling its fiduciary responsibilities and overseeing the internal and external audit functions. The Audit Committee is responsible for evaluating the Bank's compliance with laws, regulations, policies and procedures (including the Code of Conduct), and for determining that the Bank has adequate administrative, operating and internal controls. In addition, the Audit Committee is responsible for providing reasonable assurance regarding the integrity of financial and other data used by the board, the Finance Agency, our members and the public. To fulfill these responsibilities, the Audit Committee may, in accordance with its charter, conduct or authorize investigations into any matters within the Committee's scope of responsibilities. The Audit Committee may also retain independent counsel, accountants, or others to assist in any investigation.

The Audit Committee annually reviews its charter and practices and has determined that its charter and practices are consistent with all applicable laws, regulations and policies. During 2018, the Audit Committee met 12 times and, among other matters, also:

- reviewed the scope of and overall plans for the external and internal audit programs;
- reviewed and recommended board approval of our policy with regard to the hiring of former employees of the independent registered public accounting firm;
- reviewed and approved our policy for the pre-approval of audit and permitted non-audit services by the independent registered public accounting firm;
- received reports pursuant to our policy for the submission and confidential treatment of communications from employees and others about accounting, internal controls and auditing matters; and
- reviewed the adequacy of our internal controls, including for purposes of evaluating the fair presentation of our financial statements in connection with certifications made by our principal executive officer, principal financial officer and principal accounting officer.

The Sarbanes-Oxley Act of 2002 requires that the Audit Committee establish and maintain procedures for the confidential submission of employee concerns regarding questionable accounting, internal controls or auditing matters. The Audit Committee has established procedures for the receipt, retention and treatment, on a confidential basis, of any related concerns we receive, including automated notifications from the EthicsPoint reporting system which was implemented to assist the Audit Committee in administering the anonymous complaint procedures. The Audit Committee ensures that the Bank is in compliance with all applicable rules and regulations with respect to the submission to the Audit Committee of anonymous complaints. The Audit Committee encourages employees and third-party individuals and organizations to report concerns about accounting controls, auditing matters or anything else that appears to involve financial or other wrongdoing pertaining to the Bank.

The Bank is one of 11 regional FHLBanks across the United States which, along with the Office of Finance, compose the FHLBank System. Each FHLBank operates as a separate entity with its own management, employees, and board of directors, and each is regulated by the Finance Agency. The Office of Finance has responsibility for the issuance of consolidated obligations on behalf of the FHLBanks, and for publishing combined financial reports of the FHLBanks. Accordingly, the FHLBank System has determined that it is optimal to have the same independent audit firm to coordinate and perform the separate audits of the financial statements of each FHLBank and the FHLBanks' combined financial reports. The FHLBanks and the Office of Finance cooperate in selecting and evaluating the performance of the independent auditor, but the responsibility for the appointment of and oversight of the independent auditor remains solely with the audit committee of each FHLBank and the Office of Finance.

PricewaterhouseCoopers ("PwC") has been the independent auditor for the FHLBank System and the Bank since 1990. The Audit Committee engages in thorough 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 FHLBanks and the Office of Finance. In the course of these evaluations, the Audit Committee considers, among other factors:

- 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 our independent auditor;
    - benefits associated with engaging a different firm as independent auditor; and
    - potential disruption and risks associated with changing the Bank's auditor;
- PwC's familiarity with our operations and businesses, accounting policies and practices and internal control over financial reporting;
- PwC's historical and recent performance of our audit, including feedback from Bank management as to PwC's service and quality;
- an analysis of PwC's known legal risks and significant proceedings;
- both engagement and external data relating to audit quality and performance, including recent Public Company Accounting Oversight Board 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 fees charged to other banks both within and beyond the FHLBank System and trends therein; and
- the diversity of PwC's ownership and staff assigned to the engagement.

The Audit Committee reviews and approves the amount of fees paid to PwC for audit, audit-related and other services. Audit fees represent fees for professional services provided in connection with the audit of our annual financial statements and internal control over financial reporting and reviews of our quarterly financial statements, regulatory filings, and other SEC matters. The Audit Committee has determined that PwC did not provide any non-audit services that would impair its independence and there are no other matters which cause the Committee to believe PwC is not independent. Based on its evaluation and review, the Audit Committee appointed PwC as our independent registered public accounting firm for the year ended December 31, 2018.

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 our 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 our lead audit partner pursuant to this rotation policy involves a meeting between the Chair of the Audit Committee and the candidate(s) for the role, as well as discussion by the full Audit Committee and with management.

Management has the primary responsibility for the integrity and reliability of our financial statements, accounting and financial reporting principles, and internal controls and procedures designed to assure compliance with accounting standards and applicable laws and regulations. An independent registered public accounting firm is responsible for performing an independent audit of our financial statements and of the effectiveness of internal control over financial reporting in accordance with auditing standards promulgated by the Public Company Accounting Oversight Board and standards applicable to financial audits in accordance with *Government Auditing Standards*, issued by the Comptroller General of the United States. Our internal auditors are responsible for preparing an annual audit plan and conducting internal audits under the direction of our Chief Internal Audit Officer ("CIAO"), who reports to the Audit Committee.

The Audit Committee's responsibility is to monitor and oversee these processes. The Audit Committee has certain other responsibilities with respect to the internal audit function, including facilitation of independent, direct communications between the board and our internal auditors. The Audit Committee also reviews the scope of internal audit services required, internal audit findings, and management responses. In addition, the Audit Committee is responsible for the selection, compensation, performance evaluation and independence of the CIAO, who may be removed only with the Audit Committee's approval. The Audit Committee also approves the incentive compensation plans and awards for internal audit employees; the charter for the internal audit department; and the staffing, budget, and risk-based internal audit plan.

Prior to their issuance, the Audit Committee reviews and discusses the quarterly and annual earnings releases, financial statements (including the presentation of any non-GAAP financial information) and additional disclosures under "Management's Discussion and Analysis of Financial Condition and Results of Operations" with management, our internal auditors and PwC. The Audit Committee also oversees our internal auditors' review of our policies and practices with respect to financial risk assessment, and our processes and practices with respect to enterprise risk assessment and management (although the board's Risk Oversight Committee has primary responsibility for the review of our risk assessment and risk management matters). 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 met with PwC and with our internal auditors, in each case with and without other members of management present, to discuss the results of their respective audits; their views regarding the appropriateness of management's estimates, judgments, selection of accounting policies, and systems of internal controls; and the overall quality and integrity of our financial reporting. Management represented to the Audit Committee that our financial statements were prepared in accordance with accounting principles generally accepted in the United States of America.

Based on its discussions with our management, our internal auditors and PwC, as well as its review of the representations of management and PwC's report, the Audit Committee recommended to the board, and the board has approved, the inclusion of the audited financial statements in our Annual Report on Form 10-K for the year ended December 31, 2018, for filing with the SEC.

The 2019 Audit Committee is comprised of the following directors as of March 8, 2019:

Robert D. Long, Chair, independent director
Ryan M. Warner, Vice Chair
Robert M. Fisher
Jeffrey G. Jackson
Larry W. Myers
Christine Coady Narayanan, independent director
John L. Skibski
Dan L. Moore, Ex-Officio Voting Member

Audit Committee Financial Experts.

Our board of directors has determined that Mr. Long, Mr. Myers, Mr. Skibski and Mr. Warner are Audit Committee Financial Experts under SEC rules. For information concerning these directors' qualifications to be so designated, please refer to their respective biographical summaries above in this Item 10.

Executive Officers

Our Executive Officers during the last completed fiscal year, as determined under SEC rules, are listed in the table below. Each officer serves a term of office of one calendar year or until the election and qualification of his or her successor, provided, however, that pursuant to the Bank Act, our board of directors may dismiss any officer at any time. Except as indicated, each officer has been employed in the principal occupation listed below for at least five years.

Name	Age	Position
Cindy L. Konich [1]	62	President - Chief Executive Officer ("CEO")
William D. Miller [2]	61	Executive Vice President - Chief Risk and Compliance Officer ("CRCO")
Deron J. Streitenberger [3]	51	Executive Vice President - Chief Business Operations Officer ("CBOO")
Gregory L. Teare [4]	65	Executive Vice President - Chief Financial Officer ("CFO")
Chad A. Brandt [5]	54	Senior Vice President - Treasurer
Jonathan W. Griffin [6]	48	Senior Vice President - Chief Business Development Officer
Mary M. Kleiman [7]	59	Senior Vice President - General Counsel
Gregory J. McKee [8]	45	Senior Vice President - Chief Internal Audit Officer
K. Lowell Short, Jr. [9]	62	Senior Vice President - Chief Accounting Officer ("CAO")
Kania D. Lottie [10]	37	First Vice President - Director of Human Resources and Diversity & Inclusion (Ethics Officer)

(1) Ms. Konich was appointed by our board of directors to serve as President - CEO in July 2013. Ms. Konich holds an MBA and is a CPA.

(2) Mr. Miller was promoted to Executive Vice President - Chief Risk Officer effective January 2017, after having been appointed by our board of directors as Senior Vice President - Chief Risk Officer in February 2014. In November 2018, Mr. Miller was appointed by the board to the additional position of Chief Compliance Officer. Mr. Miller was named First Vice President - Chief Capital Markets Officer in May 2013. Mr. Miller holds an MBA.

(3) Mr. Streitenberger was promoted to Executive Vice President - CBOO effective January 2019, after having been appointed by our board of directors as Senior Vice President - CBOO in November 2015. Prior to that, he was appointed as Senior Vice President - Chief Information / MPP Operations Officer, in February 2015. He was previously promoted to Senior Vice President - Chief Information Officer effective January 2015, after having been appointed by our board of directors as First Vice President - Chief Information Officer in June 2013. Mr. Streitenberger holds an MBA.

(4) Mr. Teare was promoted to Executive Vice President - CFO effective January 2017, after having been appointed by our board of directors as Senior Vice President - CFO in February 2015. He was previously appointed by our board of directors as Senior Vice President - Chief Banking Officer in September 2008. Mr. Teare holds an MBA.

(5) Mr. Brandt was appointed by our board of directors as Senior Vice President - Treasurer effective January 2016. Previously, Mr. Brandt was Vice President and Senior Manager - Liquidity and Funding at BMO Harris Bank from July 2015 to December 2015. Prior to that, he was Managing Principal of North Center Management Partners LLC from December 2014 to July 2015. Mr. Brandt also served as Vice President - Finance at Metropolitan Capital Bank & Trust and Metropolitan Capital Investment Banc, Inc. from September 2013 to November 2014. Mr. Brandt holds an MBA.

(6) Mr. Griffin was appointed Senior Vice President - Chief Business Development Officer in June 2018, after serving as Senior Vice President - Chief Marketing Officer from 2017 to 2018. Mr. Griffin was promoted by our board of directors to Senior Vice President - Chief Credit and Marketing Officer effective January 2015, after having been appointed by our board of directors as First Vice President - Chief Credit and Marketing Officer in September 2011. Mr. Griffin holds an MBA and is a CFA.

(7) Ms. Kleiman was appointed by our board of directors as Senior Vice President - General Counsel in May 2015. Before joining our Bank, Ms. Kleiman was Associate General Counsel of Anthem, Inc. from 2009 to May 2015. She holds a JD and is licensed to practice law in the State of Indiana. Effective November 8, 2018, Ms. Kleiman no longer served as an Executive Officer of our Bank, and her employment at the Bank ended as of January 4, 2019.

(8) Mr. McKee was promoted to Senior Vice President - Chief Internal Audit Officer effective January 2015, after having been appointed by our board of directors as First Vice President - Director of Internal Audit in January 2006. Mr. McKee holds an MBA and is a CPA.

(9) Mr. Short was appointed by our board of directors as Senior Vice President - CAO in August 2009. Mr. Short holds an MBA and is a CPA.

(10) Ms. Lottie was appointed by our board of directors as First Vice President - Director of Human Resources and Diversity and Inclusion in November 2018, after having been promoted to First Vice President - Director of Human Resources effective January 2018. Ms. Lottie was appointed Vice President - Director of Human Resources effective January 2016 after having served as Vice President - Director of Human Resources and Administration & Corporate Secretary since May 2015 and as Vice President - Associate General Counsel & Corporate Secretary since January 2014. Ms. Lottie also serves as one of the Bank's Ethics Officers. She holds an MBA and a JD and is licensed to practice law in the State of Indiana.

Code of Conduct

We have a Code of Conduct that is applicable to all directors, officers and employees of our Bank, including our principal executive officer, our principal financial officer, our principal accounting officer, and the members of our Affordable Housing Advisory Council. The Code of Conduct is available on our website by scrolling to the bottom of any web page on www.fhlbi.com and then selecting "Corporate Governance" in the navigation menu. Interested persons may also request a copy by contacting us, Attention: Corporate Secretary, FHLBank of Indianapolis, 8250 Woodfield Crossing Boulevard, Indianapolis, IN 46240.

Section 16(a) Beneficial Ownership Reporting Compliance

Not Applicable.

ITEM 11. EXECUTIVE COMPENSATION

We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms*.

Compensation Committee Interlocks and Insider Participation

The Human Resources Committee ("HR Committee") is a standing committee that serves as the Compensation Committee of the board of directors and is comprised solely of directors. No officers or employees of our Bank serve on the HR Committee. Further, no director serving on the HR Committee has ever been an officer of our Bank or had any other relationship that would be disclosable under Item 404 of SEC Regulation S-K.

Compensation Committee Report

The HR Committee has reviewed and discussed with Bank management the "Compensation Discussion and Analysis" that follows and, based on such review and discussions, has recommended to our board of directors that the Compensation Discussion and Analysis be included in our Form 10-K for fiscal year 2018.

As of December 31, 2018, the HR Committee was comprised of the following directors:

Christine Coady Narayanan, Chair
Michael J. Hannigan, Jr., Vice Chair
Karen F. Gregerson
James L. Logue III
Robert D. Long
Thomas R. Sullivan
Ryan M. Warner
James D. MacPhee, Ex-Officio Voting Member

The HR Committee is comprised of the following directors as of March 8, 2019:

Christine Coady Narayanan, Chair
Michael J. Hannigan, Jr., Vice Chair
Charlotte C. Decker
Robert M. Fisher
Robert D. Long
Ryan M. Warner
Dan L. Moore, Ex-Officio Voting Member

Compensation Discussion and Analysis

Overview. To provide perspective on our compensation programs and practices for our Named Executive Officers ("NEOs"), we have included certain information in this Compensation Discussion and Analysis relating to Executive Officers and employees other than the NEOs. Our NEOs for the last completed fiscal year consisted of (i) individuals who served as our principal executive officer ("PEO") during such year, (ii) individuals who served as our principal financial officer ("PFO") during such year, and (iii) the three most highly compensated officers (other than the officers who served as PEO or PFO) who were serving as Executive Officers (as defined in SEC rules) at the end of the last completed fiscal year. The following persons were our NEOs for the period covered by this Compensation Discussion and Analysis (2018).

NEO	Title
Cindy L. Konich	President - Chief Executive Officer ("CEO") - PEO
Gregory L. Teare	Executive Vice President - Chief Financial Officer ("CFO") - PFO
William D. Miller	Executive Vice President - Chief Risk and Compliance Officer ("CRCO")
K. Lowell Short, Jr.	Senior Vice President - Chief Accounting Officer ("CAO")
Deron J. Streitenberger	Executive Vice President - Chief Business Operations Officer ("CBOO")

Our executive compensation program is overseen by the Executive/Governance Committee (with respect to the President - CEO's performance and compensation) and the HR Committee (with respect to the other NEOs' compensation), and ultimately by the entire board of directors. The HR Committee meets at scheduled times throughout the year (five times in 2018) and reports its recommendations to the board. The HR Committee has the authority to obtain advice and assistance from outside legal counsel, compensation consultants, and other advisors as the HR Committee deems necessary, with all fees and expenses paid by our Bank. The Executive/Governance Committee assists the board in the governance of our Bank, including nominations of the Chair and Vice Chair of the board and its committee structures and assignments, and in overseeing the affairs of our Bank during intervals between regularly scheduled meetings of the board, as provided in our bylaws. The Executive/Governance Committee meets as needed throughout the year (seven times in 2018) and reports its recommendations to the board.

Regulation of Executive Compensation.

Bank Act and Finance Agency Executive Compensation Rule. Because we are a GSE, our executive compensation programs are subject to regulation by the Finance Agency. The Safety and Soundness Act and the Finance Agency's rule on executive compensation ("Executive Compensation Rule") provide the Director with the authority to prevent the FHLBanks from paying compensation to executive officers that is not "reasonable and comparable" to compensation for employment paid at institutions of similar size and function for similar duties and responsibilities. While the Safety and Soundness Act and the Executive Compensation Rule prohibit the Director from setting specific levels or ranges of compensation for FHLBank executive officers, the Executive Compensation Rule does authorize the Director to identify relevant factors for determining whether executive compensation is reasonable and comparable. Such factors include but are not limited to: (i) duties and responsibilities of the position; (ii) compensation factors that indicate added or diminished risks, constraints, or aids in carrying out the responsibilities of the position; and (iii) performance of the executive officer's institution, the specific executive officer, or one of the institution's significant components with respect to achievement of goals, consistency with supervisory guidance and internal rules of the entity, and compliance with applicable law and regulation. We have incorporated these factors into our development, implementation, and review of compensation policies and practices for executive officers, as described below.

Pursuant to the Executive Compensation Rule, the Finance Agency requires the FHLBanks to provide information to the Finance Agency for review and non-objection concerning all compensation actions relating to the respective FHLBanks' executive officers. This information, including studies of comparable compensation, must be provided to the Finance Agency at least 30 days in advance of any planned FHLBank action with respect to the payment of compensation to executive officers. In addition, the FHLBanks are required to provide at least 60 days' advance notice to the Finance Agency of any arrangement that provides for incentive awards to executive officers. Under the supervision of our board of directors, we provide this information to the Finance Agency as required.

Finance Agency Advisory Bulletin 2009-AB-02. Finance Agency Advisory Bulletin 2009-AB-02 sets forth certain principles for executive compensation practices to which each FHLBank and the Office of Finance should adhere in setting executive compensation. These principles consist of the following:

- executive compensation must be reasonable and comparable to that offered to executives in similar positions at other comparable financial institutions;
- executive incentive compensation should be consistent with sound risk management and preservation of the par value of the FHLBank's capital stock;
- a significant percentage of an executive's incentive-based compensation should be tied to longer-term performance and outcome indicators;
- a significant percentage of an executive's incentive-based compensation should be deferred and made contingent upon performance over several years; and
- the FHLBank's board of directors should promote accountability and transparency in the process of setting compensation.

In evaluating an FHLBank's compensation, the Director will consider the extent to which an executive's compensation is consistent with these advisory bulletin principles. We have incorporated these principles into our development, implementation, and review of compensation policies and practices for executive officers, as described below.

Joint Proposed Rule on Incentive Compensation. Further, in June 2016, six federal financial regulators, including the Finance Agency, published a proposed rule that would prohibit "covered institutions," which include the FHLBanks, from entering into incentive-based compensation arrangements that encourage inappropriate risks or that could lead to a material financial loss. This proposed rule replaces a similar proposed rule published in 2011. As applied to the FHLBanks, covered persons under the 2016 proposed rule include senior management responsible for the oversight of firm-wide activities or material business lines or control functions, as well as non-executive employees: (i) whose annual incentive compensation is at least one-third of their total annual compensation and who are among the top two percent of the highest-compensated persons in the organization; (ii) whose positions give them the authority to commit or expose 0.5 percent or more of the organization's capital; or (iii) who are otherwise identified as "significant risk-takers" by the organization or the applicable regulatory agency. Under the proposed rule, covered financial institutions would be required to comply with three key risk management principles related to the design and governance of incentive-based compensation:

- appropriate balance between risk and reward;
- effective risk management and controls; and
- effective governance.

In addition, the proposed rule would impose requirements with respect to incentive-based compensation arrangements for covered persons related to:

- mandatory deferrals of annual and "long-term" incentive-based compensation for senior executive officers and significant risk-takers of 50 percent and 40 percent, respectively, over no less than three years for annual incentive-based compensation and over one additional year for compensation awarded under a long-term incentive plan;
- risk of downward adjustment and forfeiture of awards;
- clawback of vested compensation; and
- limits on the maximum incentive-based compensation opportunity.

The proposed rule would also require boards of directors to obtain: (i) input on the effectiveness of risk measures and adjustments used to balance risk and reward in incentive-based compensation; and (ii) at least annually, from management and from the internal audit or risk management function of the organization, a written assessment of the effectiveness of the organization's incentive-based compensation program and related compliance and control processes in providing risk-taking incentives that are consistent with the organization's risk profile.

Our current compensation policies and practices address certain requirements of the proposed rule, including:

- prohibiting excessive compensation to covered persons;
- prohibiting incentive compensation that encourages inappropriate risks, which could lead to material financial loss;
- requiring mandatory deferrals of 50% of incentive compensation over three years for certain executive officers;
- requiring reports to the Finance Agency describing the structure of our incentive-based compensation arrangements for covered persons; and
- compensation design to help ensure compliance with the requirements and prohibitions of the rules.

Finance Agency Rule on Golden Parachute Payments. The Finance Agency's rule on golden parachute payments ("Golden Parachute Rule") sets forth the standards that the Finance Agency will take into consideration when limiting or prohibiting golden parachute payments by an FHLBank, the Office of Finance, Fannie Mae or Freddie Mac. The Golden Parachute Rule generally prohibits golden parachute payments except in limited circumstances with Finance Agency approval. Golden parachute payments may include compensation paid to a director, officer or employee following the termination of such person's employment by a regulated entity that is insolvent, is in conservatorship or receivership, is required by the Director to improve its financial condition, or has been assigned a composite examination rating of 4 or 5 by the Finance Agency. Golden parachute payments generally do not include payments made pursuant to a qualified pension or retirement plan, an employee welfare benefit plan, a bona fide deferred compensation plan, a nondiscriminatory severance pay plan, or payments made by reason of the death or disability of the individual. The golden parachute provisions in our benefit plans comply with the Golden Parachute Rule.

Compensation Philosophy and Objectives. In 2018, our board of directors adopted a resolution updating our statement of compensation philosophy. Pursuant to the resolution, our compensation philosophy is to provide a market-competitive compensation and benefits package that will enable us to effectively recruit, promote, retain and motivate highly qualified employees, management and leadership talent for the benefit of our Bank, its members, and other stakeholders. We desire to be competitive and forward-thinking while maintaining a prudent risk management culture. Thus, our compensation program encourages responsible growth and prudent risk-taking while delivering a competitive pay package.

Specifically, our compensation program is designed to reward:

- attainment of performance goals;
- implementation of short- and long-term business strategies;
- accomplishment of our public policy mission;
- effective and appropriate management of financial, operational, reputational, regulatory, and human resources risks;
- growth and enhancement of senior management leadership and functional competencies; and
- accomplishment of goals to maintain an efficient cooperative system of FHLBanks.

The board of directors regularly reviews these goals and the compensation alternatives available and may make changes in the program from time to time to better achieve these goals or to comply with Finance Agency directives. As a cooperative, we are not able to offer equity-based compensation, and only member institutions (or their legal successors) may own our stock. Without equity incentives to attract, reward and retain NEOs, we provide alternative compensation and benefits such as cash incentive opportunities, pension (with respect to four of the NEOs identified in this Report) and other retirement benefits (as to all NEOs). This approach generally will lead to a mix of compensation for NEOs that emphasizes base salary, provides meaningful incentive opportunities, and creates a competitive total compensation opportunity relative to the market.

Role of the Executive/Governance and HR Committees in Setting Executive Compensation. The Executive/Governance and HR Committees intend that our executive compensation program be aligned with our Bank-wide short-term and long-term business objectives and focus executives' efforts on fulfilling these objectives. The Executive/Governance Committee reviews the President - CEO's performance and researches and recommends the President - CEO's salary to the board of directors. The President - CEO determines the salaries of the other NEOs, generally after consulting with the HR Committee, as discussed below. The HR Committee recommends, for approval by the board, the percentage of salary increases that will apply to merit, promotional and equity increases for each year's budget. The benefit plans that will be offered, and any material changes to those plans from time to time, are approved by the board after review and recommendation by the HR Committee. The HR Committee also recommends the goals, payouts and qualifications for both the annual incentive awards and the deferred incentive awards for the board's review and approval.

Our Executive/Governance and HR Committees operate under written charters adopted by the board of directors and most recently reviewed by the board as of March 23, 2018 and January 25, 2019, respectively. Those charters are available on our website by scrolling to the bottom of any web page on www.fhlbi.com and then selecting "Corporate Governance" in the navigation menu.

Role of Compensation Consultants in Setting Executive Compensation. For each of the last eight years, McLagan Partners, Inc. ("McLagan"), an Aon company, was engaged by Bank management to work with the HR Committee to evaluate and update our salary and benefit benchmarks for certain positions, including the NEOs' positions, in our Bank. Many other FHLBanks engage McLagan for the same or similar compensation-related services.

The salary and benefit benchmarks we use to establish reasonable and competitive compensation for our employees are the competitor groups identified by McLagan. The competitor groups are comprised of selected firms that elected to participate in McLagan's Financial Industry Salary Survey. The firms included in the competitor groups can change year-to-year, based on changes in the composition of the McLagan survey participants, changes in financial metrics of firms that elected to participate in the survey for that year, and McLagan's analysis. The primary competitor group is comprised of the other 10 FHLBanks and a number of large regional/commercial banks and other financial companies ("Primary Competitor Group"). The benchmark jobs used from the other FHLBanks are comprised of their comparable position at our Bank (*e.g.*, CEO to CEO). The benchmark jobs used from the other regional/commercial banks include the divisional/functional heads, rather than the overall head of the bank, to account for the difference in scale of activities at a large regional bank compared to an FHLBank (*e.g.*, Head of Corporate Banking used in the benchmark, rather than a large regional bank's CEO, as the appropriate comparison to the FHLBank's CEO). While the benchmark jobs from the regional/commercial banks capture the functional responsibility of FHLBank positions, they do not capture the executive responsibility that exists at the FHLBank.

A number of other publicly-traded regional/commercial banks with assets of $10 billion to $20 billion makes up the secondary competitor group ("Secondary Competitor Group"). The benchmark jobs used from the Secondary Competitor Group include the NEOs reported in their proxy statements, which capture the executive responsibilities encompassed in the positions. The Primary and Secondary Competitor Groups are collectively referred to as "Competitor Groups" and are listed below.

The benchmark jobs selected by McLagan from the Competitor Groups collectively capture the functional and executive responsibilities of our NEO positions, represent comparable market opportunities and represent realistic employment opportunities. We establish threshold, target and maximum base and anticipated incentive pay levels based on this competitor group analysis, while actual pay levels are based on our financial performance, stability, prudent risk-taking and conservative operating philosophies, and our compensation philosophy, as discussed above.

The following institutions are in the Primary Competitor Group, as determined for 2018 compensation decisions.

AIB	Federal Reserve Bank of Minneapolis
Ally Financial Inc.	Federal Reserve Bank of New York
Associated Bank	Federal Reserve Bank of Richmond
Australia & New Zealand Banking Group	Federal Reserve Bank of San Francisco
Banco Bilbao Vizcaya Argentaria	Federal Reserve Bank of St Louis
Banco Itaú Unibanco	Fifth Third Bank
Bank Hapoalim	First Citizens Bank
Bank of America Merrill Lynch	First Republic Bank
Bank of New York Mellon	First Tennessee Bank/ First Horizon
Bank of Nova Scotia	FNB Omaha
Bank of the West	Freddie Mac
Bayerische Landesbank	GE Capital
BBVA Compass	Hancock Bank
BMO Financial Group	HSBC
BNP Paribas	Huntington Bancshares, Inc.
BOK Financial Corporation	ICBC Financial Services
Branch Banking & Trust Co.	ING
Brown Brothers Harriman	Intesa Sanpaolo
Capital One	Investors Bancorp, Inc
Charles Schwab & Co.	JP Morgan Chase
China Construction Bank	KBC Bank
CIBC World Markets	KeyCorp
CIT Group	Landesbank Baden-Wuerttemberg
Citigroup	Lloyds Banking Group
Citizens Financial Group	M&T Bank Corporation
City National Bank	Macquarie Bank
Comerica	MB Financial Bank
Commerce Bank	MUFG Bank, Ltd.
Commerzbank	MUFG Securities
Commonwealth Bank of Australia	National Australia Bank
Crédit Agricole CIB	Natixis
Credit Industriel et Commercial – N.Y.	New York Community Bank
Cullen Frost Bankers, Inc.	Nord/LB
DBS Bank	Nordea Bank
DZ Bank	Northern Trust Corporation PacWest Bancorp
East West Bancorp	People's United Bank, National Assoc PNC Bank
Fannie Mae	Popular Community Bank Rabobank
Federal Home Loan Bank of Atlanta	Regions Financial Corporation Royal Bank of Canada
Federal Home Loan Bank of Boston	Royal Bank of Scotland Group Santander Bank, NA Signature Bank - NY
Federal Home Loan Bank of Chicago	Societe Generale Standard Chartered Bank State Street Corporation Sterling National Bank
Federal Home Loan Bank of Cincinnati	Sumitomo Mitsui Banking Corporation Sumitomo Mitsui Trust Bank SunTrust Banks
Federal Home Loan Bank of Dallas	SVB Financial Group Synchrony Financial Synovus
Federal Home Loan Bank of Des Moines	TD Ameritrade TD Securities
Federal Home Loan Bank of New York	Texas Capital Bank The PrivateBank
Federal Home Loan Bank of Pittsburgh	U.S. Bancorp
Federal Home Loan Bank of San Francisco	UMB Financial Corporation Umpqua Holding Corporation UniCredit Bank AG
Federal Home Loan Bank of Topeka	Valley National Bank
Federal Reserve Bank of Atlanta	Webster Bank
Federal Reserve Bank of Boston	Wells Fargo Bank
Federal Reserve Bank of Cleveland	Westpac Banking Corporation
Federal Reserve Bank of Kansas City	Zions Bancorporation Norinchukin Bank, New York Branch

The following institutions are in the Secondary Competitor Group, as determined for 2018 compensation decisions.

Banc of California Inc.	Hilltop Holdings Inc.
BancorpSouth Bank	Home BancShares Inc.
Bank of Hawaii Corp.	Hope Bancorp, Inc.
Berkshire Hills Bancorp Inc.	International Bancshares Corp.
Cathay General Bancorp	Old National Bancorp
Chemical Financial Corp.	Simmons First National Corp.
Columbia Banking System Inc.	South State Corporation
Community Bank System Inc.	Trustmark Corp.
FCB Financial Holdings Inc.	United Bankshares Inc.
First Interstate BancSystem	United Community Banks Inc.
First Midwest Bancorp Inc.	Washington Federal Inc.
Great Western Bancorp	

Role of the Named Executive Officers in the Compensation Process. The NEOs may assist the HR Committee and the board of directors by providing data and background information to any compensation consultants engaged by management, the board or the HR Committee. The Human Resources Director assists the HR Committee and compensation consultants by gathering research on the Bank's hiring and turnover statistics, compensation trends, peer groups, cost of living, and other market data requested by the President - CEO, the HR Committee, the Finance/Budget Committee, the Audit Committee, the Executive/Governance Committee, or the board. Senior management (including the NEOs) prepares the strategic plan financial forecasts, which are then considered by the Finance/Budget Committee and by the board when establishing the goals and anticipated payout terms for the incentive compensation plan. The CRCO oversees the Enterprise Risk Management ("ERM") department's review, from a risk perspective, of the incentive compensation plan's risk-related performance goals and target achievement levels.

Compensation Risk. The HR Committee and the Executive/Governance Committee review our policies and practices of compensating our employees, including non-executive officers, and have determined that none of these policies or practices result in any risk that is reasonably likely to have a material adverse effect on our Bank. Further, based on such reviews, the HR Committee and the Executive/Governance Committee believe that our plans and programs contain features that operate to mitigate risk and reduce the likelihood of employees taking excessive risks relating to the compensation-related aspects of their duties. In addition, the material plans and programs operate within a strong governance, review and regulatory structure that serves and supports risk mitigation.

Elements of Compensation Used to Achieve Compensation Philosophy and Objectives. The total compensation mix for NEOs in 2018 consisted of:

(1) base salaries;
(2) annual and deferred incentive opportunities;
(3) retirement benefits;
(4) perquisites and other benefits; and
(5) potential payments upon termination or change in control.

The board of directors has structured the compensation programs to comply with Internal Revenue Code ("IRC") Section 409A. If an executive is entitled to nonqualified deferred compensation benefits that are subject to IRC Section 409A, and such benefits do not comply with IRC Section 409A, then the benefits are taxable in the first year they are not subject to a substantial risk of forfeiture. In such case, the executive is subject to payment of regular federal income tax, interest and an additional federal income tax of 20% of the benefit includable in income. The Key Employee Severance Agreement ("KESA") between our Bank and our President-CEO contains provisions that "gross-up" certain benefits paid thereunder in the event she should become liable for an excise tax on such benefits. Other elements of our NEOs' compensation may be adjusted to reflect the tax effects of such compensation.

Base Salaries. Unless otherwise described, the term "base salary" as used in this Item 11 refers to an individual's annual salary, before considering incentive compensation, deferred compensation, perquisites, taxes, or any other adjustments that may be elected or required. We recruit and desire to retain senior management from national markets. Consequently, the cost of living in Indiana is not a direct factor in determining base salary. Merit increases to base salaries are used, in part, to keep our NEO salary levels competitive with those in the Competitor Groups.

The President - CEO's base salary is established annually by the board after review and recommendation by the Executive/ Governance Committee. Our board has concluded that the level of scrutiny to which the base salary determination for the President - CEO is subjected is appropriate in light of the nature of the position and the extent to which she is responsible for the overall performance of our Bank. In setting the President - CEO's base salary, the Executive/Governance Committee and the board have discretion to consider a wide range of factors, including the overall performance of our Bank, the President - CEO's individual performance, her tenure, and the amount of her base salary relative to the base salaries of executives in similar positions in companies in our Competitor Groups. Although a policy or a specific formula has not been developed for such purpose, the Executive/Governance Committee and the board also consider the amount and relative percentage of the President - CEO's total compensation that is derived from her base salary. In light of the variety of factors that are considered, the Executive/Governance Committee and the board have not attempted to rank or otherwise assign relative weights to the factors they consider. Rather, the Executive/Governance Committee and the board consider all the factors as a whole, including data and recommendations from McLagan.

After an advisory consultation with the HR Committee, the base salaries for our other NEOs are set or approved annually by the President - CEO, who has discretion to consider a wide range of factors including competitive benchmark data from McLagan, each NEO's qualifications, responsibilities, assessed performance contribution, tenure, position held, amount of base salary relative to similarly-positioned executives in our Competitor Groups and our overall salary budget. Although a policy or a specific formula has not been developed for such purpose, the President - CEO also considers the amounts and relative percentages of the NEOs' total compensation that are derived from their base salaries, including data and recommendations from McLagan.

The NEOs' base salaries for 2018 were effective December 25, 2017 and are presented in the Summary Compensation Table.

In September 2017, the HR Committee recommended and the board of directors approved for the 2018 salary budget (i) merit and market-based increases averaging 3.0% of annual base salaries for all employees and (ii) promotional and equity adjustments averaging an additional 1.5% of annual base salaries. These approved amounts were incorporated into our 2018 operating budget as recommended by our Finance/Budget Committee and approved by our board of directors in November 2017. NEO base salary increases above 3% for 2018 were not taken from the pool of merit and market-based increases approved by the board for 2018.

Annual and Deferred Incentive Opportunities. Generally, as an executive's level of responsibility increases, a greater percentage of total compensation is based on our overall performance. Our incentive plan has a measurement framework that rewards achievement of specific goals consistent with our mission. As discussed below, our incentive plan is performance-based and represents a reasonable risk-return balance for our cooperative members both as users of our products and as shareholders.

The board of directors adopted an incentive compensation plan effective January 1, 2012 ("Incentive Plan"). The Incentive Plan is a cash-based plan that provides award opportunities based on achievement of performance goals. The purpose of the Incentive Plan is to attract, retain and motivate employees and to focus their efforts on a reasonable level of profitability while maintaining safety and soundness. Employees in the Internal Audit department are excluded from the Incentive Plan but are eligible to participate in a separate incentive compensation plan established by the Audit Committee. With certain exceptions, any employee hired before October 1 of a calendar year becomes a "Participant" in the Incentive Plan for that calendar year. A "Level I Participant" is the Bank's President - CEO, an EVP or a SVP, while a "Level II Participant" is any other participating employee. All NEOs identified as of each December 31 are included among the eligible Level I Participants and must execute an agreement with us containing certain non-solicitation and non-disclosure provisions.

Under the Incentive Plan, performance goals and the relative weight to be accorded to each goal are established annually by the HR Committee and approved by the board of directors for each calendar-year period ("Performance Period") and three-calendar-year period ("Deferral Performance Period"). The board also approves the "Threshold," "Target" and "Maximum" achievement levels for each performance goal to determine how much of an award may be earned. The achievement of performance goals determines the value of awards for Level I Participants (including the NEOs), which may be Annual Awards (relating to achievement of performance goals over a Performance Period) and Deferred Awards (relating to achievement of performance goals over a Deferral Performance Period), and for other Level II Participants (Annual Awards only). The board may adjust the performance goals to ensure the purposes of the Plan are served, but made no such adjustments during 2016, 2017 or 2018.

Under the Incentive Plan, the board establishes a maximum award for eligible Participants before the beginning of each Performance Period. Each award equals a percentage of the Participant's annual compensation, which is generally defined as the Participant's annual earned base salary or wages for hours worked.

With respect to the NEOs' Annual Awards and Deferred Awards, the Incentive Plan provides that 50% of an Award to a Level I Participant will become earned and vested on the last day of the Performance Period, subject to the achievement of specified Bank performance goals over such period, the attainment of a specific minimum individual performance rating for each year of the period and, subject to certain limited exceptions, active employment on the last day of such period. The remaining 50% of an award to a Level I Participant will become earned and vested on the last day of the Deferral Performance Period, subject to the same conditions during such period, and further subject to the achievement during the Deferral Performance Period of additional performance goals relating to our profitability, retained earnings, prudential management objectives and certain other conditions described below. Depending on our performance during the Deferral Performance Period, the final award (i.e., the amount of the earned and vested Deferred Award ultimately paid to the Participant) will be worth 75% at Threshold, 100% at Target or 125% at Maximum of the original amount of the Deferred Award. The level of achievement of those additional goals could thereby cause an increase or decrease to the Deferred Awards.

2018 Annual Award (Paid in 2019). The table below presents the incentive opportunity percentages of earned base salary for Level I Participants for the 2018 Performance Period.

	Total Incentive as % of Compensation			**Total Incentive Earned and Vested at Year-End**			**Total Incentive Deferred for 3 Years**		
Position	**Threshold**	**Target**	**Maximum**	**Threshold**	**Target**	**Maximum**	**Threshold**	**Target**	**Maximum**
CEO	50.0%	80.0%	100.0%	25.0%	40.0%	50.0%	25.0%	40.0%	50.0%
EVP	40.0%	60.0%	80.0%	20.0%	30.0%	40.0%	20.0%	30.0%	40.0%
SVP	35.0%	52.5%	70.0%	17.5%	26.25%	35.0%	17.5%	26.25%	35.0%

On January 19, 2018, the board of directors established Annual Award Performance Goals for 2018 for Level I Participants relating to specific mission goals for profitability, member activity, ERM, minority and women inclusion, and operational risk. The weights and specific achievement levels for each 2018 mission goal are presented below.

2018 Mission Goals	Weighted Value [1]	Weighted Value (ERM)	Performance Levels			Actual Result	Achievement Percentage (Interpolated)	Weighted Average Achievement	Weighted Average Achievement (ERM)
			Threshold	Target	Maximum				
Profitability [2]	20%	15%	422 bps	578 bps	663 bps	>target	97.65%	19.53%	14.65%
Member Activity									
A. Member Advances Growth [3]	20%	10%	0%	1.38%	3.15%	maximum	100%	20%	10%
B. Member Education and Outreach [4]	15%	15%	10 events	14 events	18 events	maximum	100%	15%	15%
C. Increase in MPP Portfolio [5]	5%	5%	Net Growth of $0	Net Growth of $635 MM	Net Growth of $800 MM	maximum	100%	5%	5%
D. CIP Advances Originated [6]	10%	5%	$50MM	$100MM	$150MM	maximum	100%	10%	5%
ERM Objectives [7]	10%	30%	Achieve One ERM Objective	Achieve Two ERM Objectives	Achieve Three ERM Objectives	maximum	100%	10%	30%
Minority and Women Inclusion - Portion of 2018 Vendor Spend with Qualifying Vendors [8]	10%	10%	12%	15%	18%	maximum	100%	10%	10%
Operational Risk Objective - End-User Computing Inventory System of Record [9]	10%	10%	After the end of the Third Quarter and on or before the end of the Fourth Quarter	After the end of the Second Quarter and on or before the end of the Third Quarter	On or before the end of the Second Quarter	maximum	100%	10%	10%
Total	100%	100%						99.53%	99.65%

(1) For all Level I Participants, excluding those in ERM.

(2) For purposes of this goal, profitability is defined as the Bank's profitability rate in excess of the Bank's cost of funds rate. Profitability is the Bank's adjusted net income reduced by the portion of net income to be added to restricted retained earnings under the JCE Agreement and increased by the Bank's accruals for incentive compensation. Adjusted net income represents GAAP Net Income adjusted: (i) for the net impact of certain current and prior period Advance prepayments and debt extinguishments, net of the related AHP assessment, (ii) to exclude mark-to-market adjustments on derivatives and certain other effects from derivatives and hedging activities, net of the related AHP assessment, and (iii) to exclude the effects from interest expense on MRCS. The Bank's profitability rate is profitability, as defined above, as a percentage of average total regulatory capital stock (B1 weighted at 100% and B2 weighted at 80% to reflect the relative weights of the Bank's dividend). This goal assumes no material change in investment authority under the Finance Agency's regulation, policy, directive, guidance, or law. The performance levels reflect a technical correction made by the board of directors on January 25, 2019 to increase the Threshold, Target, and Maximum by seven bps.

(3) Member advances growth is calculated as the growth in the average daily balance of advances outstanding to members at par. Average daily balances are used instead of point-in-time balances to eliminate point-in-time activity that may occur and to reward for the benefit of the income earned on advances balances while outstanding. Members that become non-members during 2018 and all captive insurance company members will be excluded from the calculation. Goal assumes no material change in membership eligibility under Finance Agency's regulation, policy, directive, guidance, or law.

(4) Member education and outreach events are symposia, conferences, workshops, webinars (with a maximum of four webinars towards achievement of this goal), educational events, presentations at trade conferences, and other events educating Bank members about Advances, MPP, the Bank's community investments products and activities, industry trends, and other products and services. To qualify, events must target more than one member. Status and reporting on this Goal and its attainment will be provided in writing by the officer responsible for the event, and will be confirmed by the CFO or by the CBOO.

(5) Net Growth is calculated as the increase in the size of the Bank's MPP portfolio measured as of December 31, 2017, and December 31, 2018. Net Growth is calculated: (a) excluding the effect of any allowances for loan losses on MPP balances; (b) excluding the effect of any AMA obtained from or through other Federal Home Loan Banks; (c) including both FHA and conventional loans; (d) assuming no capital requirement for MPP; and (e) assuming no material change in AMA authority under the Finance Agency's regulation, policy, directive, guidance, or law.

(6) CIP Advances are newly-originated Community Investment Cash Advances, including CIP and other qualifying Advances and CIP qualified letters of credit, provided in support of targeted projects as defined in 12 C.F.R. Part 1291 and the Bank Act.

(7) The Board has established three ERM Objectives for 2018. The first ERM Objective, Program Maturity Self-Assessment, requires ERM to perform a comprehensive, enterprise-wide self-assessment of the maturity of the Bank’s Enterprise Risk Management Program, and report on the results of the assessment to the Board. The second ERM Objective, Information Technology Assessment, requires ERM to assess the Bank’s information technology program against the Information Technology risk management framework and report on the results of the assessment to the Board. The third ERM Objective, Business Continuity, requires the Bank to operate under its business continuity / disaster recovery plan for a defined period of time, and to return back to normal operations. ERM will demonstrate its achievement of each ERM Objective by reporting on them to the Risk Committee and Risk Oversight Committee.

(8) "Qualifying Vendors" are vendors that qualify as minorities, women, individuals with disabilities, and minority-, women-, and disabled-owned businesses.

(9) Achievement of this goal requires the Bank to have designated a tool as its system of record for its end-user computing applications inventory, and to have performed an inventory of end-user computing applications using the tool. Satisfaction of this goal will be evidenced in one or more reports to the Bank's Risk Committee.

The amounts earned under the 2018 Incentive Plan for the Annual Award Performance Period are shown below and in the Non-Equity Incentive Plan Compensation table.

NEO	Base Salary	Maximum Achievement (Annual Award)	Weighted Average Achievement	Annual Award
Cindy L. Konich[1]	$ 887,614	50%	99.62%	$ 442,121
Gregory L. Teare	430,586	40%	99.53%	171,425
William D. Miller	365,898	40%	99.65%	145,847
K. Lowell Short, Jr.	325,546	35%	99.53%	113,406
Deron J. Streitenberger	340,574	35%	99.53%	118,641

(1) The weighted average achievement for Ms. Konich differs from that of Mr. Teare, Mr. Short, and Mr. Streitenberger due to interpolation.

2015 Deferred Award (Paid in 2019). Under the Incentive Plan, 50% of each Level I Participant's 2015 Award ("2015 Deferred Award") was deferred for a three-year period that ended December 31, 2018 ("2016-2018 Deferral Performance Period"). The 2015 Deferred Award became earned and vested on that date, subject to the achievement of specific Bank performance goals over the 2016-2018 Deferral Performance Period and certain other conditions. The performance goals for the 2016-2018 Deferral Performance Period Award are the same as those established for the 2015-2017 Deferral Performance Period. The following table presents the performance goals for the 2015 Deferred Award relating to our profitability, retained earnings and prudential management standards, together with actual results and specific achievement levels for each mission goal.

2016-2018 Mission Goals	Weighted Value [1]	Performance Levels			Actual Result	Achievement %	Weighted Average Achievement
		Threshold [2]	Target [2]	Maximum [2]			
Profitability [3]	35%	25 bps	50 bps	150 bps	maximum	125%	44%
Retained Earnings [4]	35%	3.5%	3.9%	4.3%	maximum	125%	44%
Prudential Standards	30%	Achieve 2 Prudential Standards	(a)	Achieve all 3 Prudential Standards	maximum	125%	37%
Maintain a regulatory capital-to-assets ratio of at least 4.16% as measured on each quarter-end in 2016 through 2018.							
Without Board pre-approval, do not purchase more than $2.5 billion of conventional AMA assets per plan year.							
Award to FHLBI members the annual AHP funding requirement in each plan year.							
Total	100%						125%

(1) For Level I Participants.

(2) Deferred Awards are subject to additional performance goals for the Deferral Performance Period. Depending on our performance during the Deferral Performance Period, the Final Award will be worth 75% at Threshold, 100% at Target or 125% at Maximum of the original amount.

(3) For purposes of this goal, profitability is defined as the Bank's profitability rate in excess of the Bank's cost of funds rate. Profitability is the Bank's adjusted net income reduced by the portion of net income to be added to restricted retained earnings under the JCE Agreement and increased by the Bank's accruals for incentive compensation. Adjusted net income represents GAAP net income adjusted: (i) for the net impact of certain current and prior period advance prepayments and debt extinguishments, net of the related AHP assessment, (ii) to exclude mark-to-market adjustments and certain other effects from derivatives and hedging activities, net of the related AHP assessment, and (iii) to exclude the effects from interest expense on MRCS. The Bank's profitability rate, as defined above, as a percentage of average total regulatory capital stock (B1weighted at 100% and B2 weighted at 80% to reflect the relative weights of the Bank's dividend). This goal assumes no material change in investment authority under the Finance Agency's regulation, policy, directive, guidance, or law. Attainment of this goal will be computed using the simple average of annual profitability measures over the three-year period.

(4) Total retained earnings divided by mortgage assets, measured at the end of each month. Calculated each month as total retained earnings divided by the sum of the carrying value of the MBS and AMA assets portfolios. The calculation will be the simple average of 36 month-end calculations.

(a) There is no target level for this goal.

Each NEO received at least the minimum required performance rating for each year of the 2016-2018 Deferral Performance Period and each was employed by the Bank on the last day of the 2016-2018 Deferral Performance Period, thereby satisfying the two remaining conditions for payment of the 2015 Deferred Award.

The following table presents the payouts to the NEOs by applying the achievement levels described above to the performance goals in the 2015 Deferred Award. These payouts are also shown in the Non-Equity Incentive Plan Compensation table.

2015 Incentive Plan - 2016-2018 Performance Period

NEO	Total Award for 2015	Percentage Deferred	Deferred Amount	Total Achievement	Deferred Award
Cindy L. Konich	$ 560,710	50%	$ 280,355	125%	$ 350,444
Gregory L. Teare	195,094	50%	97,547	125%	121,933
William D. Miller	175,260	50%	87,630	125%	109,537
K. Lowell Short, Jr.	167,788	50%	83,894	125%	104,868
Deron J. Streitenberger	168,682	50%	84,341	125%	105,426

Other Incentive Plan Provisions. The Incentive Plan provides that a termination of service of a Level I Participant during a Performance Period may result in the forfeiture of the Participant's award. However, the Incentive Plan recognizes certain exceptions to this general rule if the termination of service is (i) due to the Level I Participant's death, "Disability," or "Retirement"; (ii) for "Good Reason"; or (iii) without "Cause" due to a "Reduction in Force" (in each case as defined in the Incentive Plan). If one of these exceptions applies, a Level I Participant's Annual Award or Deferred Awards generally will be treated as earned and vested, and will be calculated using certain assumptions with respect to our achievement of applicable performance goals for the applicable Performance Period. Payment may be accelerated if the Participant dies or becomes "Disabled" while an employee of the Bank, or if the termination is without "Cause" due to a "Reduction in Force".

The Incentive Plan provides that awards may be reduced or forfeited in certain circumstances. If, during a Deferral Performance Period, we realize actual losses or other measures or aspects of performance related to the Performance Period or Deferral Performance Period that would have caused a reduction in the final award for the Performance Period or Deferral Performance Period, the remaining amount of the final award to be paid at the end of the Deferral Performance Period will be reduced to reflect this additional information. In addition, all or a portion of an award may be forfeited at the direction of the board of directors if we have failed to remediate to the satisfaction of the board an unsafe or unsound practice or condition (as identified by the Finance Agency) that is material to our financial operation and within the Level I Participant's area(s) of responsibility. Under such circumstances, the board may also direct the cessation of payments for a vested award. Further, the board may reduce or eliminate an award that is otherwise earned but not yet paid if the board finds that a serious, material safety-soundness problem or a serious, material risk management deficiency exists at our Bank, or in certain other circumstances.

Retirement Benefits. We maintain a comprehensive retirement program for our NEOs. During 2018, we provided qualified (DB Plan) and non-qualified (SERP) defined benefit plans and qualified (DC Plan) and non-qualified (SETP) defined contribution plans to certain of our NEOs. The benefits provided by these plans are components of the total compensation opportunity for NEOs. The board of directors believes these plans serve as valuable retention tools and provide significant tax deferral opportunities and resources for the participants' long-range financial planning. These plans are discussed below.

DB Plan and SERP. All employees who met the eligibility requirements and were hired before February 1, 2010 participate in the DB Plan, a tax-qualified, multiple employer defined benefit pension plan. The plan neither requires nor permits employee contributions. Participants' pension benefits vest upon completion of five years of service. Benefits under the DB Plan are based upon compensation up to the annual compensation limit established by the Internal Revenue Services ("IRS"), which was $275,000 in 2018. In addition, benefits payable to participants in the DB Plan may not exceed a maximum benefit limit established by the IRS, which in 2018 was $220,000, payable as a single life annuity at normal retirement age.

In connection with the DB Plan, the board of directors established a non-qualified plan, the SERP, in 1993 in response to federal legislation that imposes restrictions on the retirement benefits otherwise earned by certain management or highly-compensated employees. The SERP is an extension of our retirement commitment to the NEO participants and certain other employees as highly-compensated employees. The SERP was frozen effective December 31, 2004, and is now referred to as the "Frozen SERP." A separate SERP ("2005 SERP") was established effective January 1, 2005 to conform to IRC Section 409A requirements. The 2005 SERP restores the full pension benefits of NEO participants and certain other employees under the DB Plan that would otherwise be limited by IRS regulations regarding compensation, years of service or benefits payable. The DB Plan and 2005 SERP provide benefits based on a combination of a participant's length of service, age and annual compensation. In determining whether a participant is entitled to a restoration of retirement benefits, the 2005 SERP utilizes the identical benefit formula applicable to the DB Plan. Benefits payable under the 2005 SERP are reduced by (among other things) benefit amounts that would have been payable under the Frozen SERP, calculated as if the participant in the Frozen SERP had terminated employment on December 31, 2004.

Our board of directors amended the DB Plan, effective for all employees hired on or after July 1, 2008, to provide a reduced benefit. All eligible employees hired on or before June 30, 2008 (including one NEO) were grandfathered under the benefit formula and the terms of the DB Plan in effect as of June 30, 2008 ("Grandfathered DB Plan") and are eligible to continue under the Grandfathered DB Plan, subject to future plan amendments made by the board of directors. All eligible employees hired on or after July 1, 2008 but before February 1, 2010 (including two NEOs) are enrolled in the amended DB Plan ("Amended DB Plan"). Thus, as shown below in the Pension Benefits Table, as of December 31, 2018, three NEOs participate in either the Grandfathered DB Plan or the Amended DB Plan and are eligible to participate in the 2005 SERP.

During 2010, our board of directors discontinued eligibility in the Amended DB Plan for new employees. As a result, no employee hired on or after February 1, 2010 (including two NEOs) is enrolled in that plan, while participants in the Grandfathered DB Plan or Amended DB Plan as of January 31, 2010 continue to be eligible for the Grandfathered DB Plan or Amended DB Plan (and, as applicable, the 2005 SERP) and accrue benefits thereunder until termination of employment.

The following sections describe the differences in the benefits provided under these plans.

Grandfathered DB Plan. The following table shows estimated annual benefits payable upon retirement at age 65 by combining the Grandfathered DB Plan and the 2005 SERP. The estimated annual benefits are calculated in accordance with the formula currently in effect for specified years of service and compensation for individuals participating in both plans, and hired prior to July 1, 2008.

	Annual Benefits Payable at age 65 Based on Years of Benefit Service	
Sample High 3-Year Average Compensation	**30**	**35**
$1,200,000	$ 900,000	$ 1,050,000
1,300,000	975,000	1,137,500
1,400,000	1,050,000	1,225,000
1,500,000	1,125,000	1,312,500
1,600,000	1,200,000	1,400,000

- Formula: The combined Grandfathered DB Plan and SERP benefit equals 2.5% times years of benefit service times the high three-year average compensation. Benefit service begins one year after employment, and benefits are vested after five years. Benefit payments commencing before age 65 are reduced by applying an early retirement factor based on the participant's age when payments begin. The allowance payable at age 65 would be reduced by 3.0% for each year the employee is under age 65. However, if the sum of age and years of vesting service at termination of employment is at least 70 ("Rule of 70"), the retirement allowance would be reduced by 1.5% for each year the employee is under age 65. Beginning at age 66, retirees are also provided an annual retiree cost of living adjustment of 3.0% per year, which is not reflected in the table.

Amended DB Plan. The following table shows estimated annual benefits payable upon retirement at age 65 by combining the Amended DB Plan and the 2005 SERP. The estimated annual benefits are calculated in accordance with the formula currently in effect for specified years of service and compensation for individuals participating in both plans, hired on or after July 1, 2008 but before February 1, 2010.

Sample High 5-Year Average Compensation	Annual Benefits Payable at age 65 Based on Years of Benefit Service	
	15	20
$400,000	$ 90,000	$ 120,000
500,000	112,500	150,000
600,000	135,000	180,000
700,000	157,500	210,000

- Formula: The combined Amended DB Plan and 2005 SERP benefit equals 1.5% times years of benefit service times the high five-year average compensation. Benefit service begins 1 year after employment, and benefits are vested after five years. The allowance payable at age 65 would be reduced according to the actuarial equivalent based on actual age when early retirement commences. Benefit payments commencing before age 65 are reduced by applying an early retirement factor based on the participant's age when payments begin. If a participant satisfied the Rule of 70 at termination of employment, the retirement allowance would be reduced by 3.0% for each year the participant is under age 65.

The following table sets forth a comparison of the Grandfathered DB Plan and the Amended DB Plan.

DB Plan Provisions	Grandfathered DB Plan (All Employees Hired on or before June 30, 2008)	Amended DB Plan (All Employees Hired between July 1, 2008 and January 31, 2010)
Benefit Increment	2.5%	1.5%
Cost of Living Adjustment	3.0% Per Year Cumulative, Commencing at Age 66	None
Normal Form of Payment	Guaranteed 12 Year Payout	Life Annuity
Early Retirement Reduction for less than Age 65:		
(i) Rule of 70	1.5% Per Year	3.0% Per Year
(ii) Rule of 70 Not Met	3.0% Per Year	Actuarial Equivalent

With respect to all employees hired before February 1, 2010:

- Eligible compensation includes salary (before any employee contributions to tax qualified plans), short-term incentive, bonus (including Annual Awards under the Incentive Plan), and any other compensation that is reflected on the IRS Form W-2 (but not including long-term incentive payments, such as Deferred Awards under the Incentive Plan).
- Retirement benefits from the DB Plan are paid in the form of a lump sum, annuity, or a combination of the two, at the election of the retiree at the time of retirement. Any payments involving a lump sum are subject to spousal consent.
- Retirement benefits from the 2005 SERP may be paid in the form of a lump sum payment, or annual installments up to 20 years, or a combination of lump sum and annual payments. The benefits due from the 2005 SERP are paid out of a grantor trust that we have established or out of our general assets. The assets of the grantor trust are subject to the claims of our general creditors.

DC Plan and SETP. All employees, including the NEOs, who have met the eligibility requirements may participate in the DC Plan, a retirement savings plan qualified under IRC Section 401(k). The DC Plan generally provides for an immediate (after the first month of hire) fully vested employer match of 100% on the first 6% of base pay that the participant contributes.

Eligible compensation in the DC Plan is defined as base salary. A participant in the DC Plan may elect to contribute up to 50% of eligible compensation, subject to the following limits. Under IRS regulations, in 2018 an employee could contribute up to $18,500 of eligible compensation on a pre-tax basis, and an employee age 50 or over could contribute up to an additional $6,000 on a pre-tax basis. Participant contributions over that amount may be made on an after-tax basis. A total of $55,000 per year ($60,000 per year including catch-up contributions for employees age 50 or over) could have been contributed to a participant's account in 2018, including our matching contribution and the participant's pre-tax and after-tax contributions. In addition, no more than $275,000 of annual compensation could have been taken into account in computing eligible compensation in 2018. The amount deferred on a pre-tax basis will be taxed to the participant as ordinary income when distributed from the DC Plan. The plan permits participants to self-direct the investment of their DC Plan accounts into one or more investment funds. All returns are at the market rate of the respective fund(s) selected by the participant.

The DC Plan also permits a participant (in addition to making pre-tax elective deferrals) to fund a separate "Roth Elective Deferral Account" (also known as a "Roth 401(k)") with after-tax contributions. A participant may make both pre-tax and Roth 401(k) contributions, subject to the limitations described in the previous paragraph. All Bank contributions will be allocated to the participant's safe-harbor 401(k) account, subject to the maximum match amount described above. Under current IRS rules, withdrawals from a Roth 401(k) account (including investment gains) are tax-free after the participant reaches age 59 1/2 and if the withdrawal occurs at least five years after January 1 of the first year in which a contribution to the Roth 401(k) account occurs. In addition, the DC Plan permits in-plan Roth conversions, which allow participants to convert certain vested contributions into Roth contributions, similar to a Roth Individual Retirement Account conversion.

In November 2017, the board of directors approved an amendment to the DC Plan, effective January 1, 2018, to establish an employer-funded non-elective contribution ("NEC") program. This plan amendment ("NEC Amendment") provides an additional employer-funded benefit for certain DC Plan participants, including two of our NEOs, who were hired on or after February 1, 2010 and therefore do not participate in the Grandfathered DB Plan or the Amended DB Plan. Under the NEC Amendment, the Bank will make an additional NEC of 4% of base pay per year to the DC Plan account of each employee who is eligible to participate in the DC Plan and does not participate in the DB Plan. The NEC Amendment establishes a vesting schedule for NECs based on an employee's years of service at the Bank. Partial vesting begins when an eligible employee has attained at least two years of service. Eligible employees become fully vested in their NECs when they have attained five years of service. Both NEOs that participate in the NEC program are fully vested.

In November 2015, the board of directors established the SETP effective January 1, 2016. As described below, the purpose of the SETP is to permit the NEOs and certain other employees to elect to defer compensation in addition to their DC Plan deferrals. The DC Plan and SETP provide benefits based upon amounts deferred by the participant and employer matching contributions based upon the amount of the participant's deferral and compensation.

Any Bank employee who is a participant in the DC Plan is, upon approval by the board of directors, eligible to become a participant in the SETP. Each DC Plan participant who is an officer with a title of First Vice President or a higher officer level (which includes all NEOs) is automatically eligible to become a SETP participant. We intend that the SETP constitute a deferred compensation arrangement that complies with IRC Section 409A regulations. The SETP permits a participant to elect to have all or a portion of his or her base salary and/or annual incentive plan payment withheld and credited to the participant's deferral contribution account. The SETP provides that, subject to certain limitations, the Bank will contribute to the participant's account each plan year, up to the contribution that would have been made for the benefit of the participant under the DC Plan, including, if applicable, the NECs described above, as if the participant did not participate in the SETP and without regard to benefit or compensation limits imposed by the IRC. The plan permits participants to self-direct the investment of their deferred contribution account into one or more investment funds. All returns are at the market rate of the respective fund(s) selected by the participant. The benefits are paid out of an investment account established for each participant under a grantor trust that we have established as part of our general assets. The assets of the grantor trust are subject to the claims of our general creditors. The trust will be maintained such that the SETP is at all times considered unfunded and constitutes a mere promise by the Bank to make SETP benefit payments in the future. Any rights created under the SETP are unsecured contractual rights against the Bank.

The DB Plan, the 2005 SERP, the DC Plan and the SETP have all been amended and restated from time to time to comply with changes in laws and IRS regulations and to modify other benefit features.

Perquisites and Other Benefits. We offer the following additional perquisites and other benefits to all employees, including the NEOs, under the same general terms and conditions:

- medical, dental, and vision insurance (subject to employee expense sharing);
- vacation leave, which increases based upon officer title and years of service;
- life and long-term disability insurance (the PEO and the PFO are eligible for enhanced monthly benefits under our disability insurance program);
- travel and accident insurance, as well as kidnapping coverage, which include life insurance benefits;
- educational assistance;
- employee relocation assistance, where appropriate, for new hires; and
- student loan repayment assistance.

In addition, we provide as a taxable benefit to the NEOs and certain other officers spouse/guest travel to board of directors meetings and preapproved industry activities (limited to two events per year unless otherwise approved by the President - CEO, or by the Chief Internal Audit Officer in the case of the President - CEO).

Potential Payments Upon Termination or Change in Control.

Severance Pay Plan. The board of directors has adopted a Severance Pay Plan that pays each NEO, upon a qualifying termination as described below (or in the Bank's discretion on a case-by-case basis), up to a maximum 52 weeks of base pay computed at the rate of 4 weeks of severance pay for each year of service with a minimum of 8 weeks of base pay to be paid. In addition, the plan pays a lump sum amount equal to the NEO's cost to maintain health insurance coverage under the Consolidated Omnibus Budget Reconciliation Act ("COBRA") for the time period applicable under the severance pay schedule. The Severance Pay Plan may be amended or eliminated by the board at any time.

The Severance Pay Plan does not apply to NEOs who have entered into a KESA with the Bank or who are participants under the Bank's Key Employee Severance Policy ("KESP") if a qualifying event has triggered payment under the terms of the KESA or the KESP. As of the date of this Report, Ms. Konich is the only NEO with whom we have a KESA; all other NEOs are participants under the KESP. If any NEO's employment is terminated but a qualifying event under the KESA or the KESP, as applicable, has not occurred, the provisions of the Severance Pay Plan apply.

The following qualifying events will trigger an NEO's right to severance benefits under the Severance Pay Plan:

- the elimination of a job or position;
- a reduction in force;
- a substantial job modification, to the extent the incumbent NEO is no longer qualified for, or is unable to perform, the restructured job; or
- the reassignment of staff requiring the relocation by more than 75 miles of the NEO's primary residence.

In addition, the Bank has discretion under the Severance Pay Plan to provide additional pay or outplacement services to amicably resolve employment separations involving our NEOs and other employees.

The following table lists the amounts that would have been payable to the NEOs under the Severance Pay Plan if triggered as of December 31, 2018, absent a qualifying event that would result in payments under Ms. Konich's KESA or the KESP.

NEO	Months of COBRA	Cost of COBRA	Weeks of Salary	Cost of Salary	Total Severance
Cindy L. Konich	12	$ 21,060	52	$ 931,996	$ 953,056
Gregory L. Teare	11	13,530	44	386,210	399,740
William D. Miller	8	4,504	32	245,440	249,944
K. Lowell Short, Jr.	10	12,300	40	260,440	272,740
Deron J. Streitenberger	6	10,530	24	174,480	185,010

The amounts listed above do not include payments and benefits to the extent that they are provided on a nondiscriminatory basis to NEOs generally upon termination of employment. These payments and benefits include:

- accrued salary and vacation pay;
- distribution of benefits under the DB Plan; and
- distribution of plan balances under the DC Plan.

Similarly, the amounts listed above also do not include payments from the SERP or the SETP. Amounts payable from the SERP may be found in the Pension Benefits Table. Account balances for the SETP may be found in the Non-Qualified Deferred Compensation Table.

Key Employee Severance Agreement and Key Employee Severance Policy. In general, key employee severance arrangements in the form of agreements or a board-approved policy are intended to promote retention of certain officers in the event of discussions concerning a possible reorganization or change in control of the Bank, to ensure that merger or reorganization opportunities are evaluated objectively, and to provide compensation and other benefits to covered employees under certain circumstances in the event of a consolidation, change in control or reorganization of the Bank. As described in the following paragraphs, these arrangements provide for payment and, in some cases, continued and/or increased benefits if the officer's employment terminates under certain circumstances in connection with a reorganization, merger or other change in control of the Bank. If we were not in compliance with all applicable regulatory capital or regulatory leverage requirements at the time payment under the KESA or KESP becomes due, or if the payment would cause our Bank to fall below applicable regulatory requirements, the payment would be deferred until such time as we achieve compliance with such requirements. Moreover, if we were insolvent, have had a receiver or conservator appointed, or were in "troubled condition" at the time payment under an arrangement becomes due, the Finance Agency could deem such a payment to be subject to its rules limiting golden parachute payments.

Key Employee Severance Agreement. Ms. Konich's KESA was entered into during 2007. Under the terms of her agreement, Ms. Konich is entitled to a lump sum payment equal to a multiplier of her three preceding calendar years':

- base salary (less salary deferrals), bonus, and other cash compensation;
- salary deferrals and employer matching contributions under the DC Plan and SETP; and
- taxable portion of automobile allowance, if any.

Ms. Konich is entitled to a multiplier of 2.99, if she terminates for "good reason" or is terminated "without cause" during a period beginning 12 months before and ending 24 months after a reorganization. This agreement also provides that benefits payable to Ms. Konich pursuant to the SERP would be calculated as if she were three years older and had three more years of benefit service. The agreement with Ms. Konich also provides her with coverage for 36 months under our medical and dental insurance plans in effect at the time of termination (subject to her payment of the employee portion of the cost of such coverage).

We do not believe payments to Ms. Konich under the KESA would be subject to the restriction on change-in-control payments under IRC Section 280G or the excise tax applicable to excess change-in-control payments, because we are exempt from these requirements as a tax-exempt instrumentality of the United States government. If it were determined, however, that Ms. Konich is liable for such excise tax payment, the agreement provides for a "gross-up" of the benefits to cover such excise tax payment. This gross-up of approximately $3.1 million is not shown as a component of the value of the KESA in the table below.

Further, the agreement with Ms. Konich provides that she will be reimbursed for all reasonable accounting, legal, financial advisory and actuarial fees and expenses she incurs with respect to execution of the agreement or at the time of payment under the agreement. The agreement also provides that Ms. Konich will be reimbursed for all reasonable legal fees and expenses she incurs if we contest the enforceability of the KESA or the calculation of the amounts payable under the agreement, so long as she is wholly or partially successful on the merits or the parties agree to a settlement of the dispute.

If a reorganization of our Bank had triggered payments under Ms. Konich's KESA on December 31, 2018, the value of the payments for her would have been approximately as follows:

Benefit	Value
2.99 times average of the 3 prior calendar years base salary, bonuses and other cash compensation paid to the executive except for salary deferrals which are included below	$ 4,053,329
2.99 times average of the executive's salary deferrals and employer matching contributions under the DC Plan and SETP for the 3 prior calendar years	366,425
Additional amount under the SERP equal to the additional benefit calculated as if the executive were 3 years older and had 3 more years of credited service	2,326,137
Medical and dental insurance coverage for 36 months	43,992
Reimbursement of reasonable accounting, legal, financial advisory, and actuarial services [(1)]	15,000
Total value of KESA	$ 6,804,883

[(1)] The amount of $15,000 for reimbursement of reasonable accounting, legal, financial advisory, and actuarial services is an estimate and does not represent a minimum or maximum amount that could be paid.

Key Employee Severance Policy. On November 16, 2018, the board of directors re-adopted the KESP, which establishes three participation levels for covered employees: (i) Level 1 Participants, which include any Executive Vice President, (ii) Level 2 Participants, which include any Senior Vice President, and (iii) Level 3 Participants, which include any other officer designated by the HR Committee to be a Level 3 Participant from time to time. Thus, covered executives under the KESP (as of the date of filing of this report) include all NEOs other than Ms. Konich. Mr. Teare, Mr. Streitenberger and Mr. Miller are Level 1 Participants, and Mr. Short is a Level 2 Participant.

Under the KESP, if the covered employee terminates for "good reason" or is terminated without "cause," in either case within six months before or 24 months after a reorganization, the covered employee is entitled to a lump-sum payment equal to a multiple (2.0 for Level 1 Participants, 1.5 for Level 2 Participants and 1.0 for Level 3 Participants) of the average of his or her three preceding calendar years' base salary (inclusive of amounts deferred under a qualified or nonqualified plan) and gross bonus (inclusive of amounts deferred under a qualified or nonqualified plan); provided that, for any calendar year in which the covered employee received base salary for less than the entire year, the gross amount shall be annualized as if such amount had been payable for the entire calendar year. All amounts payable under the KESP are capped at an amount equal to one dollar ($1) less than the aggregate amount which would otherwise cause any such payments to be considered a “parachute payment” within the meaning of Section 280G of the IRC.

In addition, to the extent the covered employee is eligible, he or she will continue after a compensated termination to be covered by the Bank’s medical and dental insurance plans in effect immediately prior to the compensated termination, subject to the covered employee’s payment of the employee’s portion of the cost of such continued coverage. The coverage will continue for Level 1, Level 2 and Level 3 Participants for 24 months, 18 months and 12 months, respectively. In the event the covered employee is ineligible under the terms of such plans for continuing coverage or such plans shall have been modified, the Bank will provide through other sources coverage which is substantially equivalent to the coverage provided immediately prior to the compensated termination, subject to the covered employee’s payment of a comparable portion of the cost of such continued coverage as under the Bank’s medical and dental insurance plans. The KESP also provides for outplacement services for all covered employees.

Summary Compensation Table for 2018

Name and Principal Position	Year	Salary	Non-Equity Incentive Plan Compensation [1]	Change in Pension Value and Nonqualified Deferred Compensation Earnings [2]	All Other Compensation [3]	Total
Cindy L. Konich President - CEO (PEO)	2018	$887,614	$ 792,565	$ 979,000	$ 53,257	$ 2,712,436
	2017	829,530	765,447	3,980,000	49,772	5,624,749
	2016	775,242	595,086	2,996,000	46,515	4,412,843
Gregory L. Teare EVP - CFO (PFO)	2018	430,586	293,358	178,000	25,835	927,779
	2017	410,072	266,778	234,000	24,604	935,454
	2016	372,788	221,508	153,000	22,367	769,663
William D. Miller EVP - CRCO	2018	365,898	255,384	—	34,028	655,310
	2017	345,176	255,334	—	—	600,510
	2016	322,582	108,670	—	19,355	450,607
K. Lowell Short, Jr. SVP - CAO	2018	325,546	218,274	77,000	19,533	640,353
	2017	313,014	215,953	137,000	18,781	684,748
	2016	303,888	198,540	93,000	18,233	613,661
Deron J. Streitenberger SVP - CBOO	2018	340,574	224,067	—	27,500	592,141
	2017	327,470	107,451	—	16,200	451,121
	2016	314,860	106,068	—	15,900	436,828

(1) The Non-Equity Incentive Plan Compensation table below presents the components of the "Non-Equity Incentive Plan Compensation" column and the dates that these amounts were paid.

(2) These amounts represent a change in pension value under the Grandfathered DB Plan, Amended DB Plan and the SERP, as applicable. The change in pension values are determined by calculating the present values of pension benefits accrued through the beginning and ending plan valuation dates. The calculations incorporate various assumptions and changes in compensation, age and service, and utilize discount interest rates based on market interest rates. Therefore, changes in market interest rates can have a significant impact on the change in pension value. No portion of this change in pension value is realizable until a qualifying event occurs, such as retirement, and therefore, no portion of this change in pension value has been paid or made available to any of the NEOs. No NEO received preferential or above-market earnings on deferred compensation.

(3) The All Other Compensation table below presents the components of the "All Other Compensation" column.

Non-Equity Incentive Plan Compensation - 2018

Name	Year	Annual Award		Deferred Award		Total Non-Equity Incentive Plan Compensation
		Amounts Earned	Date Paid	Amounts Earned [1]	Date Paid	
Cindy L. Konich	2018	$ 442,121	3/1/2019	$ 350,444	3/1/2019	$ 792,565
	2017	388,842	2/23/2018	376,605	2/23/2018	765,447
	2016	373,085	3/3/2017	222,001	3/3/2017	595,086
Gregory L. Teare	2018	171,425	3/1/2019	121,933	3/1/2019	293,358
	2017	153,777	2/23/2018	113,001	2/23/2018	266,778
	2016	125,583	3/3/2017	95,925	3/3/2017	221,508
William D. Miller [2]	2018	145,847	3/1/2019	109,537	3/1/2019	255,384
	2017	132,893	2/23/2018	122,441	2/23/2018	255,334
	2016	108,670	3/3/2017	(a)	(a)	108,670
K. Lowell Short, Jr. [3]	2018	113,406	N/A	104,868	N/A	218,274
	2017	102,708	N/A	113,245	N/A	215,953
	2016	102,372	3/3/2017	96,168	3/3/2017	198,540
Deron J. Streitenberger	2018	118,641	3/1/2019	105,426	3/1/2019	224,067
	2017	107,451	2/23/2018	(b)	(b)	107,451
	2016	106,068	3/3/2017	(a)	(a)	106,068

(1) Amounts earned in 2018, 2017, and 2016 represent the 2015, 2014, and 2013 Deferred Awards, respectively.
(2) Mr. Miller elected to defer 10% of his 2016 Annual Award pursuant to the SETP. The amounts not deferred were paid on the date indicated.
(3) Mr. Short elected to defer 100% of his 2018 and 2017 Annual Awards, 20% of his 2016 Annual Award and 100% of his 2015 and 2014 Deferred Awards pursuant to the terms of the SETP. The amounts not deferred for 2016 were paid on the date indicated.
(a) Mr. Miller and Mr. Streitenberger were not Level I participants in the Incentive Plan when the 2013 Deferred Awards were made.
(b) Mr. Streitenberger was not a Level I participant in the Incentive Plan when the 2014 Deferred Awards were made.

All Other Compensation - 2018

Name	Year	Bank Contribution to DC Plan [1]	Total All Other Compensation
Cindy L. Konich	2018	$ 53,257	$ 53,257
	2017	49,772	49,772
	2016	46,515	46,515
Gregory L. Teare	2018	25,835	25,835
	2017	24,604	24,604
	2016	22,367	22,367
William D. Miller	2018	34,028	34,028
	2017	—	—
	2016	19,355	19,355
K. Lowell Short, Jr.	2018	19,533	19,533
	2017	18,781	18,781
	2016	18,233	18,233
Deron J. Streitenberger	2018	27,500	27,500
	2017	16,200	16,200
	2016	15,900	15,900

(1) Includes the Bank's contributions to the NEC program and the SETP, as appropriate.

There were no other perquisites or benefits that are available to the NEOs that are not available to all other employees and that are valued at greater than $10,000, either individually or in the aggregate.

Grants of Plan-Based Awards Table for 2018

			Estimated Future Payouts Under Non-Equity Incentive Plans		
Name	**Plan Name**	**Grant Date**	**Threshold** [1] [2]	**Target**	**Maximum**
Cindy L. Konich	Incentive Plan - Annual	1/19/2018	$ 11,095	$ 355,046	$ 443,807
	Incentive Plan - Deferred	1/19/2018	331,291	441,721	552,151
Gregory L. Teare	Incentive Plan - Annual	1/19/2018	4,306	129,176	172,234
	Incentive Plan - Deferred	1/19/2018	128,569	171,425	214,281
William D. Miller	Incentive Plan - Annual	1/19/2018	3,659	109,769	146,359
	Incentive Plan - Deferred	1/19/2018	109,385	145,847	182,309
K. Lowell Short, Jr.	Incentive Plan - Annual	1/19/2018	2,849	85,456	113,941
	Incentive Plan - Deferred	1/19/2018	85,054	113,406	141,757
Deron J. Streitenberger	Incentive Plan - Annual	1/19/2018	2,980	89,401	119,201
	Incentive Plan - Deferred	1/19/2018	88,980	118,641	148,301

(1) The Incentive Plan - Annual threshold payout is the amount expected to be paid when meeting the threshold for the smallest weighted of the eight components of the 2018 Annual Award Performance Period Goals. If the threshold for the smallest weighted of the eight components was achieved, but the threshold for all of the other components was not reached, the payout would be 2.50% of the maximum Annual Award for each of the NEOs (1.25% x earned base salary for Ms. Konich, 1.00% x earned base salary for Mr. Teare and Mr. Miller, and 0.88% x earned base salary for Mr. Short and Mr. Streitenberger). There was no guaranteed payout under the 2018 Annual Award provisions of the Incentive Plan. Therefore, the minimum that could be paid out under this plan is $0 for each NEO. The Non-Equity Incentive Plan Compensation - 2018 table previously presented shows the amounts actually earned and paid under the 2018 Annual Award provisions of the Incentive Plan.

(2) The Incentive Plan - Deferred threshold payout is based upon the amount earned under the Incentive Plan - Annual and is further dependent on attaining the threshold over the three-year deferral period (2019-2021). The threshold is the amount expected to be paid when meeting the threshold for achievement under the Deferred Award provisions of the Incentive Plan over the three-year period. Depending on our performance during the Deferral Performance Period, the Final Award will be worth 75% at Threshold, 100% at Target or 125% at Maximum of the original amount of the Deferred Award (from the 2018 Incentive Plan - Annual Award Performance Period table previously presented). There is no guaranteed payout under the Deferred Award provisions of the Incentive Plan. Therefore, the minimum that could be paid out to an NEO under this plan is $0.

Pension Benefits Table for 2018

Name [1]	**Plan Name**	**Number of Years of Credited Service** [2]	**Present Value of Accumulated Benefits**	**Payments During Last Fiscal Year**
Cindy L. Konich	DB Plan	34	$ 2,557,000	$ —
	SERP	34	15,208,000	—
Gregory L. Teare [3]	DB Plan	16	683,000	—
	SERP	10	449,000	—
K. Lowell Short, Jr.	DB Plan	8	408,000	—
	SERP	8	201,000	—

(1) Mr. Miller and Mr. Streitenberger are not participants in the DB Plan or the SERP.

(2) For each of the NEOs, the years of credited service have been rounded to the nearest whole year.

(3) Mr. Teare earned six years of credited service in the DB Plan as an employee of the Federal Home Loan Bank of Seattle.

Pension values are determined by calculating the present values of pension benefits accrued through the plan valuation dates. The calculations incorporate various assumptions and changes in compensation, age and service, and utilize discount interest rates based on market interest rates. The present value of the accumulated benefits is based upon a retirement age of 65, using the RP-2014 white collar worker annuitant tables (with Scale MP-2018), a discount rate of 4.22% for the DB Plan, and a discount rate of 3.64% for the SERP for 2018, compared to 3.60% and 3.00%, respectively, for 2017. The discount rates for the DB Plan and the SERP are based on the Financial Times Stock Exchange ("FTSE") Group Pension Liability Index and the FTSE Group Pension Discount Curve, respectively, both of which are determined by yields on high-quality corporate bonds at the valuation dates.

Non-Qualified Deferred Compensation

Name	Executive Contributions in Last FY (2018) [1]	Bank Contributions in Last FY (2018) [2]	Aggregate Earnings in Last FY (2018) [3]	Aggregate Withdrawals / Distributions	Aggregate Balance at Last FYE (12/31/2018) [4]
Cindy L. Konich	$ 53,257	$ 36,757	$ (15,290)	$ —	$ 260,264
Gregory L. Teare	34,447	9,335	(1,644)	—	105,193
William D. Miller	18,295	9,258	(5,150)	—	76,719
K. Lowell Short, Jr.	226,857	3,033	(1,240)	—	339,606

(1) The contributions by Ms. Konich, Mr. Teare, and Mr. Miller are included in the "Salary" reported in the Summary Compensation Table for 2018. Of the contributions by Mr. Short, $10,904 are included in the "Salary" reported in the Summary Compensation Table for 2018. The remaining $215,953 of contributions by Mr. Short reflect the amounts deferred related to the 2017 Annual Award and the 2014 Deferred Award that are reported as "Non-Equity Incentive Plan Compensation" in the Summary Compensation Table for 2017. The amounts in this column do not reflect amounts an NEO may have elected to defer related to the 2018 Annual Award or the 2015 Deferred Award paid on March 1, 2019.

(2) The amounts in this column are included as a component of "All Other Compensation" in the Summary Compensation Table.

(3) The amounts reported in this column are not reported in the Summary Compensation Table because these amounts are not above market or preferential.

(4) The amounts reported in this column have been reported in the Summary Compensation Table either in 2018 or prior years, with the exception of aggregate earnings.

The SETP is described in more detail above in "Retirement Benefits - DC Plan and SETP." Participants in the SETP elect the timing of distribution of their benefits; provided, however, that a participant is permitted to withdraw all or a portion of the amount in his or her account, in a single lump sum, if the participant has experienced an unforeseeable emergency (as defined by the SETP and determined by an administrative committee appointed by our board) or in certain other, limited circumstances. None of the NEOs made a withdrawal or received a distribution from the SETP during 2018.

Principal Executive Officer Pay Ratio Disclosure

Our President - CEO is our PEO. As described below, for the year ended December 31, 2018, we determined the ratio of the total compensation, as determined in the Summary Compensation Table ("Total Compensation"), of our PEO to the Total Compensation of the Bank's median employee.

Total Compensation includes, among other components, amounts attributable to changes in pension value under the Bank's Grandfathered DB Plan, Amended DB Plan and the SERP, as applicable. Such change in pension value represents the difference between the present value of pension benefits accrued through the beginning valuation date and the present value of pension benefits accrued through the ending valuation date. The present value calculations incorporate many assumptions and utilize discount rates based on market interest rates. Additionally, the change in pension value varies considerably among employees based upon their tenure at the Bank, their annual compensation and several other factors. Finally, no portion of this change in pension value has been paid or made available to the PEO or median employee; in fact, no portion is realizable until a qualifying event occurs, such as retirement.

For 2018, the Total Compensation of the PEO was $2,712,436. As of December 31, 2018, our PEO had 34 years of credited service under the Grandfathered DB Plan and SERP. Her Total Compensation therefore includes the change in the present value of her pension benefits, which amounted to $979,000, and constituted 36% of her reported 2018 Total Compensation. Excluding the 2018 change in pension value, the PEO's Total Compensation was $1,733,436.

We determined that, during 2018, there were no changes in our employee population or employee compensation arrangements that we believe would result in a significant change to our pay ratio disclosure. Therefore, as permitted by SEC rules, we are using the same median employee that we identified for our 2017 calculations.

We identified the median employee by first determining the total of salary, wages, bonuses (if any) and incentive awards (collectively, "cash compensation") for each of the full-time and part-time employees of our Bank on the last pay date of 2017 and annualizing the cash compensation of those who were not employed by the Bank for all of 2017. We then ranked the 2017 annual cash compensation for all such employees from lowest to highest, excluding the PEO.

There were two employees at the median based on cash compensation, but neither participates in a pension plan. We therefore selected as the median employee the individual who participates in the same plan as our PEO (the Grandfathered DB Plan), and whose 2017 annual cash compensation was closest to that of the actual median employees. We made no other material assumptions or adjustments in identifying the median employee. This approach ensures that the median employee's Total Compensation, like the PEO's Total Compensation, includes a change in pension value and thereby provides an appropriate comparison. We then calculated the median employee's Total Compensation in the same manner that we calculated Total Compensation for the PEO.

The median employee’s Total Compensation for 2018 consisted entirely of cash compensation of $120,150. Despite having ten years of credited service in the DB Plan, the pension value decreased for the median employee, and, accordingly, is not included in the calculation of Total Compensation. As a result, the ratio of the PEO’s Total Compensation to that of the median employee was 23:1. Excluding the 2018 change in pension value from the PEO's Total Compensation, the ratio was 14:1.

Director Compensation

Finance Agency regulations provide that each FHLBank may pay its directors reasonable compensation for the time required of them and their necessary expenses in the performance of their duties, as determined by a compensation policy to be adopted annually by the FHLBank's board of directors. The Director annually reviews the compensation and expenses of FHLBank directors and has the authority to determine that the compensation and/or expenses paid to directors are not reasonable. In such case, the Director could order the FHLBank to refrain from making any further payments; however, such an order would only be applied prospectively and would not affect any compensation earned but unpaid or expenses incurred but not yet reimbursed.

2018 Compensation. In September 2017, after considering McLagan market data research and a director fee comparison among the FHLBanks, the board of directors adopted a director compensation and expense reimbursement policy for 2018 ("2018 Policy"). Under the 2018 Policy, each director had an opportunity to earn an annual fee (divided into quarterly payments), subject to the combined fee limit shown below. The fees are intended to reflect the time required of directors in the performance of official Bank and board business, measured principally by meeting attendance thresholds and participation at board and committee meetings and secondarily by performance of other duties, which include:

- preparing for board and committee meetings;
- chairing meetings as appropriate;
- reviewing materials sent to directors on a periodic basis;
- attending other related events such as management conferences, FHLBank System meetings, director training and new director orientation; and
- fulfilling the responsibilities of directors.

Additional compensation is paid for serving as chair or vice chair of the board of directors or as chair of a board committee. Because we are a cooperative and only member institutions may own our stock, no director may receive equity-based compensation. The 2018 Policy provides that director fees were to be paid at the end of each quarter.

The 2018 Policy authorizes a reduction of a director’s fourth quarterly payment if a majority of disinterested directors determines that such director’s performance, ethical conduct or attendance is significantly deficient. No such reductions occurred for 2018.

The following table summarizes the annual fee limits of the 2018 Policy as approved by the board of directors.

Position	Annual Fee Limit [1]
Chair	$ 135,000 [a]
Vice Chair	115,000
Audit Committee Chair	115,000
Finance/Budget Committee Chair	110,000
Human Resources Committee Chair	110,000
Technology Committee Chair	110,000
Affordable Housing Committee Chair	110,000
Risk Oversight Committee Chair	110,000
All other directors	100,000

[1] It has been the board of directors' practice not to appoint any director as more than one Committee Chair.

[a] For 2018, the Chair of our board of directors also serves as Chair of the Executive/Governance Committee and, like the other Committee Chairs, is eligible to receive $10,000 for serving as a Committee Chair. This amount is included in the Combined Annual Fee Limit.

Director Compensation Table for 2018

Name	Fees Earned or Paid-in Cash	Total [1]
Jonathan P. Bradford	$ 100,000	$ 100,000
Charlotte C. Decker	100,000	100,000
Matthew P. Forrester	100,000	100,000
Karen F. Gregerson	110,000	110,000
Michael J. Hannigan, Jr.	100,000	100,000
Carl E. Liedholm	110,000	110,000
James L. Logue III	100,000	100,000
Robert D. Long	115,000	115,000
James D. MacPhee	135,000	135,000
Michael J. Manica	100,000	100,000
Dan L. Moore	115,000	115,000
Christine Coady Narayanan	100,000	100,000
Jeffrey A. Poxon	110,000	110,000
John L. Skibski	110,000	110,000
Thomas R. Sullivan	100,000	100,000
Larry A. Swank	110,000	110,000
Ryan M. Warner	100,000	100,000

[1] The amounts listed in this table do not reflect any reduction for 2018 compensation deferred by a director under the DDCP described below, or earnings on such deferred compensation. Eight directors elected to defer all or a portion of their 2018 compensation pursuant to the DDCP.

We provide various travel, accident, and kidnapping insurance coverages for all of our directors, officers and employees. These policies provide a life insurance benefit in the event of death within the scope of the policy. Our total annual premium for these coverages for all directors, officers and employees was $6,883 for 2018.

We also reimburse directors or directly pay for reasonable travel and related expenses in accordance with the director compensation and travel reimbursement policy. Total travel and related meeting expenses reimbursed to or paid for directors, together with other meeting expenses, was $218,569 for the year ended December 31, 2018

Directors' Deferred Compensation Plan. In 2015, we established the DDCP, effective January 1, 2016. The DDCP permits members of our board of directors to elect to defer all or a portion of the fees payable to them for a calendar year for their services as directors. We intend that the DDCP constitute a deferred compensation arrangement that complies with Section 409A of the IRC, as amended. Any duly elected and serving member of our board may become a participant in the DDCP.

All contributions credited to a participant's account will be invested in an irrevocable grantor trust ("Trust") established to provide for the Plan's benefits. The DDCP is administered by an administrative committee appointed by our board, currently the HR Committee. The Trust will be maintained such that the DDCP at all times for purposes of the Employee Retirement Income Security Act of 1974 will be unfunded and constitutes a mere promise by the Bank to make DDCP benefit payments in the future. Any rights created under the DDCP are unsecured contractual rights against the Bank. The Bank establishes an investment account for each participant under the Trust, which at all times remains an asset of the Bank, subject to claims of the Bank's general creditors. The DDCP permits participants to allocate their investment account among investment options established by the HR Committee or the board. No above-market or preferential earnings are paid on any balances under the DDCP. In general, a participant may elect to have his or her deferred compensation paid in a single lump sum payment, in annual installment payments over a period of two to five years, or in a combination of both such methods.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth the beneficial ownership of our Class B common stock as of February 28, 2019, by each shareholder that beneficially owned more than 5% of the outstanding shares. Each shareholder named (with its parent holding company) has sole voting and investment power over the shares beneficially owned.

Name and Address of Shareholder	Number of Shares Owned	% Outstanding Shares
Flagstar Bank, FSB - 5151 Corporate Drive, Troy, MI	3,025,028	14.2%
The Lincoln National Life Insurance Company - 1300 S Clinton Street, Fort Wayne, IN	1,488,500	7.0%
Jackson National Life Insurance Company - 1 Corporate Way, Lansing, MI	1,253,921	5.9%
Chemical Bank - 333 W. Fort Street, Detroit, MI	1,235,865	5.8%
Total	7,003,314	32.9%

The majority of our directors are officers and/or directors of our financial institution members. The following table sets forth the financial institution members that have one of its officers and/or directors serving on our board of directors as of February 28, 2019.

Name of Member	Director Name	Number of Shares Owned by Member	% of Outstanding Shares
United Fidelity Bank, FSB	Ronald Brown	54,182	0.25%
Lake-Osceola State Bank	Robert M. Fisher	10,325	0.05%
The Farmers Bank	Karen F. Gregerson	17,325	0.08%
Michigan State University Federal Credit Union	Jeffrey G. Jackson	130,500	0.61%
United Bank of Michigan	Michael J. Manica	39,600	0.19%
Home Bank SB	Dan L. Moore	20,526	0.10%
First Savings Bank	Larry W. Myers	86,764	0.41%
Monroe Bank & Trust	John L. Skibski	41,482	0.20%
Sturgis Bank & Trust Company	John L. Skibski	33,926	0.15%
The Bippus State Bank	Ryan M. Warner	7,875	0.04%
Total		442,505	2.08%

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

We use acronyms and terms throughout this Item that are defined herein or in the *Glossary of Terms.*

Related Parties

We are a cooperative institution and owning shares of our Class B stock is generally a prerequisite to transacting business with us. As such, we are wholly-owned by financial institutions that are also our customers (with the exception of shares held by former members, or their legal successors, in the process of redemption). In addition, our directors may serve as officers and/or directors of our members, and we conduct our advances and AMA business almost exclusively with our members. Therefore, in the normal course of business, we extend credit to and purchase mortgage loans from members with officers or directors who may serve as our directors. However, such transactions are on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with persons not related to our Bank (i.e., other members), and that do not involve more than the normal risk of collectability or present other unfavorable terms.

Also, in the normal course of business, some of our member directors and independent directors are officers of entities that may directly or indirectly participate in our AHP. All AHP transactions, however, including those involving (i) a member (or its affiliate) that owns more than 5% of the Bank's capital stock, (ii) a member with an officer or director who is a director of our Bank, or (iii) an entity with an officer, director or general partner who serves as a director of our Bank (and that has a direct or indirect interest in the AHP transaction), are subject to the same eligibility and other program criteria and requirements and the same Finance Agency regulations governing AHP operations.

We do not extend credit to or conduct other business transactions with our directors, executive officers or any of our other officers or employees. Executive officers may obtain loans under certain employee benefit plans but only on the same terms and conditions as are applicable to all employees who participate in such plans.

Related Transactions

We have a Code of Conduct that requires all directors, officers and employees to disclose any related party interests through ownership or family relationship. These disclosures are reviewed by our ethics officers and, where appropriate, our board of directors to determine the potential for a conflict of interest. In the event of a conflict, appropriate action is taken, which may include: recusal of a director from the discussion and vote on a transaction in which the director has a related interest; removal of an employee from a project with a related party vendor; disqualification of related vendors from transacting business with us; or requiring directors, officers or employees to divest their ownership interest in a related party. The Corporate Secretary and ethics officers maintain records of all related party disclosures, and there have been no transactions involving our directors, officers or employees that would be required to be disclosed herein.

Director Independence

General. As of the date of this Form 10-K, we have 17 directors: pursuant to the Bank Act, nine were elected or re-elected as member directors by our member institutions and eight were elected or re-elected as "independent directors" by our member institutions. None of our directors are "inside" directors, that is, none of our directors are employees or officers of our Bank. Further, our directors are prohibited from personally owning stock in our Bank. Each of the nine member directors, however, is a senior officer or director of an institution that is our member and is encouraged to engage in transactions with us on a regular basis.

Our board of directors is required to evaluate and report on the independence of our directors under two distinct director independence standards. First, Finance Agency regulations establish independence criteria for directors who serve as members of our Audit Committee. Second, SEC rules require that our board of directors applies the independence criteria of a national securities exchange or automated quotation system in assessing the independence of our directors.

Finance Agency Regulations Regarding Independence. The Finance Agency 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 our Bank or our management that would interfere with the exercise of his or her independent judgment. Relationships considered to be disqualifying by our board of directors are: employment with us at any time during the last five years; acceptance of compensation from us other than for service as a director; serving as a consultant, advisor, promoter, underwriter or legal counsel for our Bank at any time within the last five years; and being an immediate family member of an individual who is or who has been an Executive Officer within the past five years. Our board of directors assesses the independence of each director under the Finance Agency's independence standards, regardless of whether he or she serves on the Audit Committee. As of the date of this Form 10-K, each of our directors is "independent" under these criteria relating to disqualifying relationships.

SEC Rules Regarding Independence. SEC rules require our board of directors to adopt a standard of independence with which to evaluate our directors. Pursuant thereto, our board adopted the independence standards of the New York Stock Exchange ("NYSE") to determine which of our directors are "independent," which members of our Audit Committee are not "independent," and whether our Audit Committee's financial expert is "independent."

As noted above, some of our directors who are "independent" (as defined in and for purposes of the Bank Act) are employed by companies that may from time to time have (or seek to have) limited business relationships with our Bank due to those companies' participation in projects funded in part through our AHP. None of those companies, however, has, or within the past three most recently completed fiscal years had a relationship with us that resulted in payments to, or receipts from, the Bank in excess of the limits set forth in the NYSE independence standards. Moreover, any business relationship between those directors' respective companies and the Bank is established and conducted on the same terms and conditions provided to similarly-situated third parties. After applying the NYSE independence standards, our board determined that, as of the date of this Form 10-K, our eight directors (Mses. Decker and Narayanan and Messrs. Bradford, Hannigan, Liedholm, Logue, Long and Swank) who are "independent" directors, as defined in and for purposes of the Bank Act, are also independent under the NYSE standards.

Based upon the fact that each member director is a senior officer or director of an institution that is a member of our Bank (and thus the member is an equity holder in our Bank), that each such institution routinely engages in transactions with us (which may include advances, MPP and AHP transactions), and that such transactions occur frequently and are encouraged in the ordinary course of our business and our member institutions' respective businesses, our board of directors concluded for the present time that none of the member directors meet the independence criteria under the NYSE independence standards. It is possible that, under a strict reading of the NYSE objective criteria for independence (particularly the criterion regarding the amount of business conducted with our Bank by the director's institution), a member director could meet the independence standard on a particular day. However, because the amount of business conducted by a member director's institution may change frequently, and because we generally desire to increase the amount of business we conduct with each member institution, we believe it is inappropriate to draw distinctions among the member directors based upon the amount of business conducted with our Bank by any director's institution at a specific time.

Our board of directors has a standing Audit Committee comprised of eight directors (including the ex-officio member), six of whom are member directors and two of whom are "independent" directors (according to Bank Act director classifications established by HERA). For the reasons noted above, our board of directors determined that none of the current member directors on our Audit Committee are "independent" under the NYSE standards for audit committee members. However, our board of directors determined that the independent director who serves as Chair of the Audit Committee and is one of the Bank's Audit Committee Financial Experts under SEC rules, due primarily to his previous experience as an audit partner at a major public accounting firm, is "independent" under the NYSE independence standards for Audit Committee members.

SEC Rule Regarding Audit Committee Independence. The Exchange Act, as amended by HERA, requires the FHLBanks to comply with the substantive Audit Committee director independence rules applicable to issuers of securities pursuant to the rules of the Exchange Act. Those rules provide that, to be considered an independent member of an Audit Committee, the director may not be an affiliated person of the Exchange Act registrant. The term "affiliated person" means a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the registrant. The rule provides a "safe harbor," whereby a person will not be deemed an affiliated person if the person is not the beneficial owner, directly or indirectly, of more than 10% of any class of voting securities of the registrant. All of our Audit Committee member directors' institutions presently meet this safe harbor.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The following table sets forth the aggregate fees billed for the years ended December 31, 2018 and 2017 by our independent registered public accounting firm, PricewaterhouseCoopers LLP ($ amounts in thousands).

	2018	2017
Audit fees	$ 755	$ 753
Audit-related fees	56	41
Tax fees	—	—
All other fees	3	1
Total fees	$ 814	$ 795

Audit fees were incurred for professional services rendered for the audits of our financial statements. Audit-related fees were incurred for certain FHLBank System assurance and related services, as well as fees related to PwC's participation at FHLBank conferences. All other fees were incurred for non-audit services for an annual license for PwC's disclosure software and other advisory services rendered.

We are exempt from all federal, state, and local taxation, except employment and real estate taxes. Therefore, no fees were paid for tax services during the years presented.

Our Audit Committee has adopted Independent Accountant Pre-approval Policies and Procedures ("Pre-approval Policy"). In accordance with the Pre-approval Policy and applicable law, 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 by our independent registered public accounting firm and pre-approves audit services, audit-related services, tax services and non-audit services, as applicable. Pre-approvals are valid until the end of the next calendar year, unless the Audit Committee specifically provides otherwise.

Under the Pre-approval Policy, the Audit Committee may delegate pre-approval authority to one or more of its members subject to a pre-approval fee limit. The Audit Committee has designated the Committee Chair as the member to whom such authority is delegated. Pre-approved actions by the Committee Chair as designee are reported to the Audit Committee at its next scheduled meeting. New services that have not been pre-approved by the Audit Committee that are in excess of the pre-approval fee level established by the Audit Committee must be presented to the entire Audit Committee for pre-approval.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

The exhibits to this Annual Report on Form 10-K are listed below.

EXHIBIT INDEX

Exhibit Number	Description
3.1*	Organization Certificate of the Federal Home Loan Bank of Indianapolis, incorporated by reference to our Registration Statement on Form 10 (Commission File No. 000-51404) filed on February 14, 2006
3.2*	Bylaws of the Federal Home Loan Bank of Indianapolis, as amended effective February 18, 2016, incorporated by reference to Exhibit 3.2 of our Annual Report on Form 10-K (Commission File No. 000-51404) filed on March 11, 2016
4*	Capital Plan of the Federal Home Loan Bank of Indianapolis, effective September 5, 2011, incorporated by reference to Exhibit 99.1 of our Current Report on Form 8-K (Commission File No. 000-51404) filed on August 5, 2011
10.1*+	Form of Key Employee Severance Agreement for Executive Officers, incorporated by reference to Exhibit 99.1 of our Current Report on Form 8-K, (Commission File No. 000-51404) filed on November 20, 2007
10.2*	Federal Home Loan Banks Amended and Restated P&I Funding and Contingency Plan Agreement, incorporated by reference to Exhibit 10.3 of our Annual Report on Form 10-K (Commission File No. 000-51404) filed on March 10, 2017

Exhibit Number	Description
10.3*	Joint Capital Enhancement Agreement dated August 5, 2011, incorporated by reference to Exhibit 99.1 of our Current Report on Form 8-K (Commission File No. 000-51404) filed on August 5, 2011
10.4*+	2016 Supplemental Executive Thrift Plan, effective January 1, 2016, adopted on November 20, 2015, as amended by the First Amendment, effective January 1, 2018, adopted on January 19, 2018, incorporated by reference to Exhibit 10.7 of our Annual Report on Form 10-K (Commission File No. 000-51404) filed on March 9, 2018
10.5*+	Directors' Compensation and Expense Reimbursement Policy, effective January 1, 2018, incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K (Commission File No. 000-51404) filed on September 28, 2017
10.6+	Key Employee Severance Policy, effective March 9, 2017, as amended on November 16, 2018
10.7*+	Federal Home Loan Bank of Indianapolis Incentive Plan, effective January 1, 2012, as updated on January 19, 2018, effective as of January 1, 2018, incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K (Commission File No. 000-51404) filed on February 7, 2018
10.8*+	Separation and Release Agreement between the Federal Home Loan Bank of Indianapolis and Mary M. Kleiman, incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K (Commission File No. 000-51404) filed on January 29, 2019
10.9*+	Transition and Release Agreement between the Federal Home Loan Bank of Indianapolis and Mary M. Kleiman, incorporated by reference to Exhibit 10.2 of our Current Report on Form 8-K (Commission File No. 000-51404) filed on January 29, 2019
10.10+	Federal Home Loan Bank of Indianapolis Incentive Plan, effective January 1, 2012, as updated on January 25, 2019, effective as of January 1, 2019
24	Power of Attorney - Annual Report on Form 10-K for Fiscal 2018, dated as of January 25, 2019
31.1	Certification of the President - Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of the Executive Vice President - Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.3	Certification of the Senior Vice President - Chief Accounting Officer pursuant to Section 302 of the Sarbanes - Oxley Act of 2002
32	Certification of the President - Chief Executive Officer, Executive Vice President - Chief Financial Officer, and Senior Vice President - Chief Accounting Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

* These documents are incorporated by reference.

+ Management contract or compensatory plan or arrangement.

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 INDIANAPOLIS

/s/ CINDY L. KONICH
Cindy L. Konich
President - Chief Executive Officer
(Principal Executive Officer)
Date: March 8, 2019

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 below:

Signature	Title	Date
/s/ CINDY L. KONICH **Cindy L. Konich** **(Principal Executive Officer)**	President - Chief Executive Officer	March 8, 2019
/s/ GREGORY L. TEARE **Gregory L. Teare** **(Principal Financial Officer)**	Executive Vice President - Chief Financial Officer	March 8, 2019
/s/ K. LOWELL SHORT, JR. **K. Lowell Short, Jr.** **(Principal Accounting Officer)**	Senior Vice President - Chief Accounting Officer	March 8, 2019
/s/ DAN L. MOORE* **Dan L. Moore**	Chair of the board of directors	March 8, 2019
/s/ JAMES L. LOGUE III* **James L. Logue III**	Vice Chair of the board of directors	March 8, 2019
/s/ JONATHAN P. BRADFORD* **Jonathan P. Bradford**	Director	March 8, 2019
/s/ RONALD BROWN* **Ronald Brown**	Director	March 8, 2019
/s/ CHARLOTTE C. DECKER* **Charlotte C. Decker**	Director	March 8, 2019
/s/ ROBERT M. FISHER* **Robert M. Fisher**	Director	March 8, 2019
/s/ KAREN F. GREGERSON* **Karen F. Gregerson**	Director	March 8, 2019

Signature	Title	Date
/s/ MICHAEL J. HANNIGAN, JR.* **Michael J. Hannigan, Jr.**	Director	March 8, 2019
/s/ JEFFREY G. JACKSON* **Jeffrey G. Jackson**	Director	March 8, 2019
/s/ CARL E. LIEDHOLM* **Carl E. Liedholm**	Director	March 8, 2019
/s/ ROBERT D. LONG* **Robert D. Long**	Director	March 8, 2019
/s/ MICHAEL J. MANICA* **Michael J. Manica**	Director	March 8, 2019
/s/ LARRY W. MYERS* **Larry W. Myers**	Director	March 8, 2019
/s/ CHRISTINE COADY NARAYANAN* **Christine Coady Narayanan**	Director	March 8, 2019
/s/ JOHN L. SKIBSKI* **John L. Skibski**	Director	March 8, 2019
/s/ LARRY A. SWANK* **Larry A. Swank**	Director	March 8, 2019
/s/ RYAN M. WARNER* **Ryan M. Warner**	Director	March 8, 2019

* By: /s/ K. LOWELL SHORT, JR.
K. Lowell Short, Jr., Attorney-In-Fact

Exhibit 10.6
Approved by the Board of Directors
November 16, 2018

KEY EMPLOYEE
SEVERANCE POLICY

1. Purpose of Policy. The Federal Home Loan Bank of Indianapolis recognizes the valuable services that Covered Employees (as defined below) will provide and desires to be assured that the Covered Employees will continue their active participation in the business of the Bank. The Covered Employees desire assurance that, in the event of any consolidation, change in control or reorganization of the Bank, they will continue to have the responsibility and status each has earned, either with the Bank or with a successor to the Bank.

2. Definitions.

"Bank" shall mean the Federal Home Loan Bank of Indianapolis and any other entity within the definition of "Bank" in Section 7(a).

"Cause" shall mean (a) the continued failure of the Covered Employee to perform his duties with the Bank (other than any such failure resulting from Disability), after a demand for performance, pursuant to a resolution of the Bank's Board of Directors, is delivered to the Covered Employee by the Chair of the Board of Directors of the Bank, which specifically identifies the manner in which the Covered Employee has not performed his duties, (b) the personal dishonesty, incompetence, willful misconduct, breach of fiduciary duty involving personal profit, intentional failure to perform stated duties, or willful violation of any law, rule or regulation (other than routine traffic violations or similar offenses); or (c) the removal of the Covered Employee by the Bank at the direction of the Federal Housing Finance Agency, or by the Federal Housing Finance Agency, or by or at the direction of any successor to the Federal Housing Finance Agency, pursuant to 12 U.S.C. §§ 4615, 4616, 4617 or 4636a, or any statutory provisions subsequently enacted that grant removal authority to such agency, or any rules or regulations issued thereunder.

"Compensated Termination" shall have the meaning set forth in Section 3(a).

"Covered Employees" shall mean each of the Bank's Executive Vice Presidents and Senior Vice Presidents, including without limitation the Bank's Chief Internal Audit Officer and Chief Risk Officer, and such other employees as designated from time to time by the Human Resources Committee of the Board of Directors. This Policy does not apply to the Bank's President-Chief Executive Officer. Covered Employees shall be allocated into three (3) groups, Level 1 Participants, Level 2 Participants, and Level 3 Participants, each as described below.

"Disability" shall mean, as a result of the Covered Employee's incapacity due to physical or mental illness, the Covered Employee shall have been absent from his duties with the Bank for an aggregate of twelve (12) out of fifteen (15) consecutive months and, within thirty (30) days after a Notice of Termination is thereafter given by the Bank to the Covered Employee, the Covered Employee shall not have returned to the full-time performance of the Covered Employee's duties.

"Good Reason" shall mean any of the following:

(a) during the period (i) beginning with the earliest to occur of the following three dates, as applicable: (A) six (6) months prior to the execution of a definitive agreement regarding a Reorganization of the Bank or (B) if a Reorganization has been mandated by federal statute, rule, regulation or directive, six (6) months prior to the effective date of such Reorganization or (C) six (6) months prior to the adoption of a plan or proposal for the liquidation or dissolution of the Bank, and (ii) ending twenty-four (24) months after the effective date of such Reorganization,

(i) a material change in the Covered Employee's status, position, job title or principal duties and responsibilities as a key employee of the Bank which does not represent a promotion from the Covered Employee's status and position as in effect as of the date hereof ("Position"), or

(ii) the assignment to the Covered Employee of any duties or responsibilities (or removal of any duties or responsibilities), which assignment or removal is materially inconsistent with such Position, or

(iii) any removal of the Covered Employee from such Position (including, without limitation, all demotions and harassing assignments), except in connection with the termination of the Covered Employee's employment for Cause or Disability, or as a result of the Covered Employee's death;

(b) within twenty-four (24) months after the effective date of a Reorganization of the Bank, (i) a reduction by the Bank in the Covered Employee's base salary as in effect immediately prior to such Reorganization, or (ii) the Bank's (or its successor's) failure to increase (within twelve (12) months of the Covered Employee's last increase in base salary) the Covered Employee's base salary after a Reorganization of the Bank in an amount which is not less than fifty percent (50%) of the average percentage increase in base salary for all officers of the Bank effected in the preceding twelve (12) months;

(c) within twenty-four (24) months after the effective date of a Reorganization of the Bank, (i) any failure by the Bank to continue in effect any plan or arrangement, including, without limitation, benefit and incentive plans, in which the Covered Employee is participating immediately prior to such Reorganization (hereinafter referred to as "Plans"), unless such Plans have been replaced with similar benefits that are not materially less than the Covered Employee's benefits under such Plans, or (ii) the taking of any action by the Bank which would adversely affect the Covered Employee's participation in or materially reduce the Covered Employee's benefits under any such Plan or in or under fringe benefits enjoyed by the Covered Employee immediately prior to the time of such Reorganization of the Bank;

(d) any material breach by the Bank of any provisions of this Policy or any other agreement with the Covered Employee; or

(e) any failure by the Bank or its successors and assigns to obtain the assumption of this Policy by any successor or assign of the Bank.

"Level 1 Participant" shall mean each of the Bank's Executive Vice Presidents.

"Level 2 Participant" shall mean each of the Bank's Senior Vice Presidents.

"Level 3 Participant" shall mean each other officer of the Bank, other than an Executive Vice President or a Senior Vice President, whom the Human Resources Committee designates to be a Level 3 Participant from time to time.

"Notice of Termination" shall mean a written notice which shall indicate those specific termination provisions in this Policy upon which the Bank or the Covered Employee, as the case may be, has relied for such termination and which sets forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Covered Employee's employment under the provision so indicated.

"Payment Determination Date" shall have the meaning set forth in Section 3(b).

"Reorganization" of the Bank shall mean the occurrence at any time of any of the following events:

(a) The Bank is merged or consolidated with or reorganized into or with another bank or other entity, or another bank or other entity is merged or consolidated into the Bank;

(b) The Bank sells or transfers all, or substantially all of its business and/or assets to another bank or other entity;

(c) More than fifty percent (50%) of the total market value or total voting power of all ownership interests in the Bank is acquired, within any twelve (12) month period, by one person or entity or by more than one person or entity acting as a group; or

(d) The liquidation or dissolution of the Bank.

Provided that the term "Reorganization" shall not include any Reorganization that is mandated by federal statute, rule, regulation, or directive, including 12 U.S.C. § 1421, *et seq*., as amended, and 12 U.S.C. § 4501 *et seq*., as amended, and which the Director of the Federal Housing Finance Agency (or successor agency) has determined should not be a basis for making payment under this Policy, by reason of the capital condition of the Bank or because of unsafe or unsound acts, practices, or condition ascertained in the course of the Agency's supervision of the Bank or because any of the conditions identified in 12 U.S.C. § 4617(a)(3) are met with respect to the Bank (which conditions do not result solely from the mandated reorganization itself, or from action that the Agency has required the Bank to take under 12 U.S.C. § 1431(d)).

"Retirement" shall mean the planned and voluntary termination by the Covered Employee of his or her employment on or after reaching the earliest retirement age permitted by the Bank's qualified retirement plans.

3. <u>Compensated Termination.</u>

(a) <u>Compensated Termination</u>. If the Covered Employee incurs a Compensated Termination while the Covered Employee is employed by the Bank or within twenty-four (24) months after the effective date of a Reorganization of the Bank (whether the Covered Employee is then employed by the Bank or a successor to the Bank as a result of such Reorganization), the Covered Employee shall be entitled to the benefits provided in Section 5. For purposes of this Policy, a "Compensated Termination" means termination of the Covered Employee's employment under either of the following circumstances:

(i) By the Covered Employee for Good Reason; or

(ii) By the Bank, or by its successor in a Reorganization, without Cause at any time during the period (1) beginning with the earliest to occur of the following three dates, as applicable (A) six (6) months prior to the execution of a definitive agreement regarding a Reorganization, or (B) if a Reorganization has been mandated by federal statute, rule, regulation or directive, six (6) months prior to the effective date of such Reorganization, or (C) six (6) months prior to the adoption of a plan or proposal for the liquidation or dissolution of the Bank, and (2) ending twenty-four (24) months after the effective date of such Reorganization.

(b) Payment Determination Date. "Payment Determination Date," for purposes of determining when a payment resulting from a Compensated Termination must be made pursuant to Section 4(a), shall mean the effective date of the termination of the Covered Employee's employment with the Bank if such termination is a "Compensated Termination."

(c) Non-Compensated Termination. For the avoidance of doubt, none of the following events shall result in any payment to the Covered Employee for a Compensated Termination under Section 5(a):

(i) The termination of employment by the Covered Employee without Good Reason;

(ii) The termination of the Covered Employee's employment for Cause by the Bank or its successor in a Reorganization;

(iii) The termination of the Covered Employee's employment Without Cause by the Bank or its successor in a Reorganization, (1) prior to the date which is the earliest to occur of the following three dates, as applicable: (A) six (6) months prior to the execution of a definitive agreement regarding a Reorganization of the Bank or (B) if a Reorganization has been mandated by federal statute, rule, regulation or directive, six (6) months prior to the effective date of such Reorganization or (C) six (6) months prior to the adoption of a plan or proposal for the liquidation or dissolution of the Bank, or (2) more than twenty-four (24) months after the effective date of a Reorganization;

(iv) The termination of the Covered Employee's employment by the Bank or its successor in a Reorganization for Disability;

(v) The death of the Covered Employee; or

(vi) The Retirement of the Covered Employee, if the Covered Employee has delivered written notice to the Bank, before the commencement of the time period described in Section 3(c)(iii), of his or her intention to retire.

4. Termination of Employment.

(a) Termination by the Bank. The Bank may terminate the employment of the Covered Employee as follows:

(i) For Cause upon the adoption of a resolution by the affirmative vote of not less than a majority of the entire membership of the Bank's Board of Directors at

a meeting of the Board (after reasonable notice to the Covered Employee and an opportunity for the Covered Employee, together with counsel, to be heard by the Board), finding that in the good faith opinion of the Board the Covered Employee was guilty of conduct set forth in the definition of "Cause" in Section 2 and specifying the particulars thereof in detail. A vote of the Board is not required if the Covered Employee is removed for cause by the Bank at the direction of the Federal Housing Finance Agency, or by the Federal Housing Finance Agency, or by or at the direction of any successor to the Federal Housing Finance Agency, pursuant to 12 U.S.C. §§ 4615, 4616, 4617 or 4636a, or any statutory provisions subsequently enacted that grant removal authority to such agency, or any rules or regulations issued thereunder.;

(ii) Without Cause;

(iii) Upon the Disability of the Covered Employee; and

(iv) Upon the death of the Covered Employee.

(b) Termination by Covered Employee. The Covered Employee may terminate his or her employment with the Bank as follows:

(i) For Good Reason;

(ii) Without Good Reason; or

(iii) Upon the Covered Employee's Retirement, in which case the Covered Employee shall be entitled to all benefits under any retirement plan of the Bank and other plans to which the Covered Employee is a party.

(c) Preservation of Compensated Termination. The provisions of Sections 4(a) and 4(b) are included in this Policy for clarification of the rights of termination of the employment relationship between the Bank and the Covered Employee, but such provisions shall not prejudice the Covered Employee's right to receive payments or benefits required to be provided to the Covered Employee if any such termination is a "Compensated Termination."

(d) Notice of Termination.

(i) Any termination by the Bank for Disability or Cause shall be communicated by a Notice of Termination; provided, however, that the failure by the Bank to give notice in such circumstances shall not constitute a Compensated Termination.

(ii) Any termination of employment by the Covered Employee for Good Reason will be a Compensated Termination only if the Covered Employee gives Notice of Termination to the Bank therefore within ninety (90) days of the event or occurrence which constitutes "Good Reason," provided, further, that, if the Covered Employee gives such Notice of Termination to the Bank in a timely manner, the Covered Employee shall not be deemed to have waived any of his or her rights hereunder in the event he or she remains in the employment of the Bank while he or she and the Bank engage in good faith discussions to resolve any event or occurrence which constitutes "Good Reason." The Bank

has a thirty (30) day period following receipt of notice during which it may remedy the condition and not be required to pay the amount.

(iii) Any termination by the Bank without Cause or by the Covered Employee without Good Reason shall be communicated to the other party in accordance with the general notice provisions of this Policy.

5. <u>Payment for Compensated Termination.</u>

(a) In the event of a Compensated Termination, the Bank shall pay or provide the Covered Employee with an amount equal to the following:

(i) With respect to Level 1 Participants, two (2) times the average of the three (3) preceding calendar years' gross base salary (inclusive of amounts deferred under a qualified or nonqualified plan sponsored by the Bank) and gross bonuses (inclusive of any amounts deferred under a qualified or nonqualified plan sponsored by the Bank) paid to the Covered Employee during such years (provided that for any calendar year in which the Covered Employee received base salary for less than the entire calendar year, the gross amount shall be annualized as if such amount had been payable for the entire calendar year).

(ii) With respect to Level 2 Participants, one and one-half (1.5) times the average of the three (3) preceding calendar years' gross base salary (inclusive of amounts deferred under a qualified or nonqualified plan sponsored by the Bank) and gross bonuses (inclusive of any amounts deferred under a qualified or nonqualified plan sponsored by the Bank) paid to the Covered Employee during such years (provided that for any calendar year in which the Covered Employee received base salary for less than the entire calendar year, the gross amount shall be annualized as if such amount had been payable for the entire calendar year).

(iii) With respect to Level 3 Participants, one (1) times the average of the three (3) preceding calendar years' gross base salary (inclusive of amounts deferred under a qualified or nonqualified plan sponsored by the Bank) and gross bonuses (inclusive of any amounts deferred under a qualified or nonqualified plan sponsored by the Bank) paid to the Covered Employee during such years (provided that for any calendar year in which the Covered Employee received base salary for less than the entire calendar year, the gross amount shall be annualized as if such amount had been payable for the entire calendar year).

The Bank shall distribute such amount in a lump sum in cash within twenty (20) days of the Payment Determination Date.

(b) Notwithstanding Section 5(a), if the Bank is not in compliance with any applicable regulatory capital or regulatory leverage requirement or if the payment would cause the Bank to fall below applicable regulatory requirements, such payment shall be deferred until such time as the Bank achieves compliance with its regulatory requirement.

(c) To the extent the Covered Employee is eligible, he or she shall continue after a Compensated Termination to be covered by the Bank's medical and dental insurance plans in effect

immediately prior to the Compensated Termination, subject to the Covered Employee's payment of the employee's portion of the cost of such coverage. This continuing medical and dental insurance shall continue for Level 1 Participants for twenty-four (24) months, for Level 2 Participants for eighteen (18) months, and for Level 3 Participants for twelve (12) months. In the event the Covered Employee is ineligible under the terms of such plans to continue to be so covered or such plans shall have been modified, the Bank shall provide through other sources coverage which is substantially equivalent to the coverage provided immediately prior to the Compensated Termination, subject to the Covered Employee's payment of a comparable portion of the cost of such coverage as under the Bank's medical and dental insurance plans. If during this time period the Covered Employee should enter into employment providing for comparable medical and dental insurance coverage, his or her participation in the medical and dental plans provided by the Bank shall cease.

(d) The Bank will provide outplacement services for the Covered Employee after a Compensated Termination, at the Bank's cost.

(e) The Covered Employee shall be responsible for the payment of all federal, state and local income taxes which may be due with respect to any payments made to the Covered Employee pursuant to this Policy.

(f) If the severance and other benefits provided for in this Agreement or otherwise payable to the Covered Employee (i) constitute "parachute payments" within the meaning of Section 280G of the Internal Revenue Code of 1986, as amended (the "Code") and (ii) but for this provision, would be subject to the excise tax imposed by Section 4999 of the Code, then such severance and other benefits shall be collectively subject to an overall maximum limit. The payment limit shall be one dollar ($1) less than the aggregate amount which would otherwise cause any such payments to be considered a "parachute payment" within the meaning of Section 280G of the Code. Unless the Bank and the Covered Employee otherwise agree in writing, any determination required under this provision shall be made in writing by the Bank's independent public accountants (the "Accountants"), whose determination shall be conclusive and binding upon the Covered Employee and the Bank for all purposes. For purposes of making the calculations required by this provision, the Accountants may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Bank and the Covered Employee shall furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make a determination under this provision. The Bank shall bear all costs the Accountants may reasonably incur in connection with any calculations contemplated by this provision. Accordingly, to the extent that such severance and other benefits would be considered a "parachute payment," or are "deferred compensation" within the meaning of Section 409A of the Code, the severance and other benefits will be reduced pro rata until the remaining severance and other benefits shall be reduced or eliminated in the following order until the remaining severance and other benefits payable hereunder are collectively within the maximum described in this Subsection:

(i) first, any cash payments to the Covered Employee;

(ii) second, any change of control termination payments to the Covered Employee not described herein; and

(iii) third, any forgiveness of indebtedness of the Covered Employee to the Bank.

Each Covered Employee expressly and irrevocably waives any and all rights to receive any severance and other payments which exceed the maximum limit described in this Subsection.

6. No Obligation to Seek Further Employment; No Effect on Other Contractual Rights.

(a) The Covered Employee shall not be required to seek other employment, nor shall any payment made under this Policy be reduced by any compensation received from other employment.

(b) The provisions of this Policy, and any payment provided for hereunder, shall not reduce any amounts otherwise payable, or in any way diminish the Covered Employee's existing rights, or rights which would accrue solely as a result of the passage of time, under any Plan, except to the extent set forth in Section 6(c).

(c) The following rules clarify the interaction of this Policy with the Bank's Severance Pay Plan ("SPP").

(i) If a Covered Employee becomes eligible to receive benefits under this Policy (*e.g.*, if the Covered Employee experiences a Compensated Termination), the Covered Employee shall be entitled to receive benefits under this Policy and not under the SPP, regardless of whether the Covered Employee would otherwise be eligible for benefits under the SPP.

(ii) If a Covered Employee becomes eligible for benefits under the SPP, but does not become eligible to receive benefits under this Policy, the Covered Employee shall be entitled to receive benefits under the SPP.

(iii) Notwithstanding subsection 6(c)(ii), if (A) a Covered Employee receives benefits under the SPP, and (B) the Covered Employee subsequently becomes eligible to receive benefits under this Policy, then the Covered Employee shall be entitled to receive the benefits contemplated by this Policy, but the total benefits received by the Covered Employee on account of both the SPP and this Policy may not exceed those contemplated by this Policy alone. Therefore, if the Covered Employee is entitled to receive any benefits under this Policy, such benefits shall be automatically reduced by the amount of benefits the Covered Employee received pursuant to the SPP.

7. **Successor to the Bank.**

(a) This Policy is binding upon the successors and assigns of the Bank. The Bank and its successors and assigns will require any successor or assign (whether direct or indirect, in a Reorganization, by operation of law, or otherwise) to all or substantially all of the business and/or assets of the Bank, to enter into a written agreement in form and substance satisfactory to the Covered Employee. In the written agreement, the successor and its assigns will expressly, absolutely and unconditionally assume and agree to perform this Policy in the same manner and to the same extent that the Bank would be required to perform it if no such succession or assignment had taken place. In such event, the Bank agrees that it shall pay or shall cause such employer to pay any amounts owed to the Covered Employee pursuant to Section 5.

As used in this Policy, "Bank" shall mean the Bank as hereinbefore defined and any successor or assign to its business and/or assets as aforesaid which executes and delivers the agreement provided for in this Section or which otherwise becomes bound by all the terms and provisions of this Policy

by operation of law. If at any time during the term of this Policy the Covered Employee is employed by any corporation a majority of the voting securities of which is then owned by the Bank, the term "Bank" shall include such employer. Whether or not another entity becomes the successor or assign of the Bank under this Policy, the maximum amount which the Covered Employee may receive from all sources under this Policy in a Compensated Termination shall be the amounts set forth in Section 5.

(b) This Policy shall inure to the benefit of and be enforceable by the Covered Employee's personal and legal representatives, executors, administrators, successors, heirs, distributees, and legatees. If the Covered Employee should die while any amounts are still payable to him hereunder, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Policy to the beneficiary designated by notice in writing executed by the Covered Employee and filed with the Bank, or failing such designation, to the Covered Employee's estate.

8. **Late Payment of Benefits.** Any payment made later than the time provided for in Section 5(a) for whatever reason, including, without limitation, the reasons set forth in Section 5(b), shall include interest at the Bank's cost of funds plus five percent (5%), which shall begin to accrue on the tenth (10th) day following the Covered Employee's Payment Determination Date.

9. **Employment Rights.** This Policy shall not confer upon the Covered Employee any right to continue in the employ of the Bank and shall not in any way affect the right of the Bank to dismiss or otherwise terminate the Covered Employee's employment at any time and for any reason with or without cause. This Policy is not intended (a) to be an employment agreement or (b) to define all aspects of the employment relationship between the Bank and the Covered Employee including, but not limited to applicable employment or benefit policies of the Bank. To the extent there is any conflict between the terms hereof and the terms of any employment or benefit policies of the Bank, the terms of this Policy shall control. Any payments or benefits to which the Covered Employee may be entitled under Section 5 will not constitute wages for work performed by the Covered Employee.

10. **Tax Withholding.** The Bank will withhold from any amounts payable to Covered Employee under this Policy to satisfy all applicable federal, state, local or other withholding taxes. All amounts payable under Section 5(a) are considered "wages" to be reported on Form W-2. The normal withholding rules for wages apply. The Bank will also withhold any excise taxes owed under Code Section 4999.

11. **Notice.** For purposes of this Policy, notices and all other communications provided for in the Policy shall be in writing and shall be deemed to have been duly given when delivered by hand, delivered by a nationally-recognized overnight courier service, or mailed by United States registered mail, return receipt requested, postage prepaid, as follows:

If to the Bank:

Federal Home Loan Bank of Indianapolis
8250 Woodfield Crossing Boulevard
Indianapolis, Indiana 46240
Attention: Chairman of the Board of Directors
With a copy to the President

If to the Covered Employee:

At the address on file with the Bank's Human Resources department

or such other address as either party may have furnished to the other in writing in accordance herewith. Any notice shall be effective upon receipt.

12. Legal Fees and Expenses. The Bank shall pay all reasonable legal fees and expenses which the Covered Employee may incur as a result of the Bank's contesting the validity or enforceability of this Policy or the calculation of amounts payable hereunder so long as the Covered Employee is wholly or partially successful on the merits or the parties agree to a settlement of the dispute.

13. Term. This Policy is effective upon its approval by the Board of Directors. The Human Resources Committee will review this Policy, recommend any changes, and recommend Board approval at least once per calendar year. If the Human Resources Committee does not act to approve, amend, or terminate this Policy in a calendar year, this Policy shall automatically renew for an additional 3 year period.

14. Arbitration.

(a) Disputes regarding this Policy are subject to the Federal Home Loan Bank of Indianapolis Agreement to Arbitrate by and between the Bank and the Covered Employee ("Arbitration Agreement"). No cancellation, replacement or modification to the arbitration procedures under the Arbitration Agreement shall be effective unless agreed to in writing by both the Bank and the Covered Employee. In the event of any conflict between the provisions of this Policy and the Arbitration Agreement, the provisions of this Policy shall control.

(b) If within thirty (30) days after any Notice of Termination is given, the party receiving such Notice of Termination notifies the other party that a dispute exists concerning the Termination, the parties shall promptly proceed to arbitration as provided in Section 14(a). Notwithstanding the pendency of any such dispute, the Bank shall continue to pay the Covered Employee his or her base salary and provide such other compensation and benefits, all as in effect immediately prior to the Notice of Termination. If it is determined that the Covered Employee is not entitled to any compensation under Section 5, the Covered Employee shall return all cash amounts to the Bank promptly following the date of resolution by arbitration, with interest thereon commencing as of the date of the resolution of the dispute by arbitration at the prime rate of interest as published by the *Wall Street Journal* from time to time. Any cash amounts paid to the Covered Employee pending the resolution of the dispute by arbitration shall offset any amounts determined to be due to the Covered Employee under Section 5.

15. Miscellaneous.

(a) No Waiver. No waiver by either party hereto at any time of any breach by the other party hereto of, or compliance with, any condition or provision of this Policy to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time.

(b) Entire Policy. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not set forth expressly in this Policy.

(c) Governing Law. This Policy shall be governed by and construed in accordance with the laws of the State of Indiana (excluding conflicts of laws principles), except to the extent such law is preempted by the laws of the United States.

(d) Headings. Section or paragraph headings contained herein are for convenience of reference only and are not to be considered a part of this Policy.

(e) Validity. The invalidity or unenforceability of any provisions of this Policy shall not affect the validity or enforceability of any other provision of this Policy, which shall remain in full force and effect.

(f) Rescission of Prior Agreements. This Policy shall rescind and be in full replacement of any prior "Key Employee Severance Agreement" entered into between the Covered Employee and the Bank.

(g) Administration. This Policy shall be administered by the Director of Human Resources. Interpretations and decisions by the Bank's Director of Human Resources regarding the application of this Policy, made in the Bank's sole discretion, shall be final, provided the interpretations and decisions are consistent with the Bank's authority under applicable federal and state law.

(h) No Discrimination. This Policy will be applied on a non-discriminatory basis without regard to race, color, religion, national origin, sex, age, sexual orientation, handicap, gender identity, genetic information, veteran's status, parental status, pregnancy status, citizenship status, or mental or physical disability, and without regard to whether the employee has made charges, testified, assisted or participated in enforcement proceedings based on an otherwise unlawful employment practice, in accordance with federal law.

Exhibit 10.10

Board Approved
January 25, 2019

Federal Home Loan Bank of Indianapolis

Incentive Plan

(As Amended and Updated January, 2019)

ESTABLISHMENT OF ANNUAL AND LONG-TERM 2019 - 2022
INCENTIVE PLAN GOALS FOR THE
FEDERAL HOME LOAN BANK OF INDIANAPOLIS
INCENTIVE PLAN

Pursuant to resolutions adopted by the Board of Directors of the Federal Home Loan Bank of Indianapolis (the "Bank"), the undersigned hereby execute the Federal Home Loan Bank of Indianapolis Incentive Plan, effective as of January 1, 2012, and setting forth goals effective as of January 1, 2019, on behalf of the Bank, in the form attached hereto.

Dated this 25th day of January, 2019.

FEDERAL HOME LOAN BANK OF INDIANAPOLIS

By: /s/ Dan L. Moore
Dan L. Moore, Chairman

By: /s/ James L. Logue III
James L. Logue III, Vice Chairman

ATTEST:

By: /s/ Matthew R. St. Louis
Matthew St. Louis, Corporate Secretary

FEDERAL HOME LOAN BANK OF INDIANAPOLIS
INCENTIVE PLAN

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ARTICLE I

INTRODUCTION

Section 1.1 Purpose. The purpose of the Federal Home Loan Bank of Indianapolis Incentive Plan (the "Plan") is to attract, retain and motivate employees of the Federal Home Loan Bank of Indianapolis (the "Bank") and to focus their efforts on continued improvement in the profitability of the Bank while maintaining the Bank's safety and soundness. The Plan is a cash-based incentive plan that provides award opportunities based on achievement of performance goals.

Section 1.2 Effective Date. The "Effective Date" of the Plan is January 1, 2012.

Section 1.3 Administration. The Plan will be administered by an administrative committee (the "Committee") appointed by the Bank's Board of Directors (the "Board"), which initially will be the Human Resources Committee of the Board. Notwithstanding the foregoing, the term Committee shall also refer to the Executive Governance Committee of the Board who will administer the Plan with respect to the Bank's Chief Executive Officer. The Committee, from time to time, may adopt any rules and procedures it deems necessary or desirable for the proper and efficient administration of the Plan that are consistent with the terms of the Plan. Any notice or document required to be given or filed with the Committee will be properly given or filed if delivered to or mailed by registered mail, postage paid, to the General Counsel, Federal Home Loan Bank of Indianapolis, 8250 Woodfield Crossing Boulevard, Indianapolis, Indiana 46240.

Section 1.4 Supplements. The provisions of the Plan may be modified by supplements to the Plan with Board approval. The terms and provisions of each supplement are a part of the Plan and supersede any other provisions of the Plan to the extent necessary to update or eliminate any inconsistencies between the supplement and any other Plan provisions. Any substantive supplement to the Plan shall be submitted to the FHFA for non-objection after full review prior to implementation.

Section 1.5 Definitions. The following terms are defined in the Plan in the following Sections:

Term	Plan Sections
Annual Award	3.3(a), 3.4(a)
Award	3.1
Bank	1.1
Board	1.3
Cause	3.6(d)(i)
Committee	1.3
Compensation	3.1
Deferral Performance Period	3.1(a)
Deferred Award	3.3(b)
Disability	3.6(d)(ii)
Discretionary Award	3.1(d)
Effective Date	1.2
Extraordinary Occurrences	3.1(e)
FHFA	3.6(d)(i)
Final Award	3.1(e)
Good Reason	3.6(d)(iii)
Level I Participant	3.1(c)
Level II Participant	3.1(c)
Maximum	3.2(b)(iii)
Non-Solicitation Agreement	2.1
Participant	2.1
Performance Goals	3.2
Performance Period	3.1(a)
Plan	1.1
Position	3.6(d)(iii)(A)
Reduction in Force	3.6(d)(iv)
Reorganization	3.7(b)
Retirement	3.6(d)(v)
Termination of Service	3.6(d)(vi)
Target	3.2(b)(ii)
Threshold	3.2(b)(i)

ARTICLE II

ELIGIBILITY AND PARTICIPATION

Section 2.1 Eligibility. Any employee of the Bank, hired before October 1st of the calendar year, will become a "Participant" in the Plan for that calendar year, provided the employee is not classified as a "temporary," an "intern," "contract" or "temporary agency" employee, and does not participate in the Federal Home Loan Bank of Indianapolis Internal Audit Incentive Plan. Level I Participants, as defined in subsection 3.1(c), must have an executed agreement on file with the Bank containing non-solicitation and non-disclosure provisions in a form similar to the form provided in Appendix III to the Plan ("Non-Solicitation Agreement").

Section 2.2 Participation. A designated employee or otherwise eligible employee will become a Participant as of the later of the Effective Date, the employee's date of hire, or the date on or after the Effective Date the employee satisfies the automatic eligibility provisions described in Section 2.1. Any Participant may be removed as an active Participant by the Board effective as of any date.

ARTICLE III

AWARDS AND EXTRAORDINARY OCCURRENCE ADDITIONS/REDUCTIONS

Section 3.1 Awards. At the beginning of each Performance Period (and at such other times as it may designate as to Discretionary Awards), the Board will make an "Award" to eligible Participants. As described in this Article, Awards may be Annual Awards (as defined in subsection 3.3(a)), Deferred Awards (as defined in subsection 3.3(b)), or Discretionary Awards (as defined in subsection 3.1(d)). Each Award (other than Discretionary Awards) will be equal to a percentage of the Participant's annual Compensation, as described in the applicable Appendices for Level I Participants and Level II Participants, multiplied by the achievement level of the applicable Performance Goals (as defined in Section 3.2). "Compensation" means the Participant's annual earned base salary or wages for hours worked, including overtime, and hours paid under the Bank's paid-time-off policies, as applicable, but in any case excluding any bonus, incentive compensation, deferred compensation payments, lump sum payouts for accrued but unused vacation time, or long-term disability insurance payments paid for the current or a prior year. In the event a Participant receives a raise during a calendar year, the Participant's Compensation for the year will reflect the actual wages paid to the Participant for the year.

(a) Performance Periods. A "Performance Period" is the one-calendar year period over which an Annual Award can be earned and vested pursuant to subsections 3.3(a) and 3.4(a). A "Deferral Performance Period" is the three-calendar year period over which a Deferred Award can be earned and vested pursuant to subsection 3.3(b). A Deferral Performance Period begins on the January 1st immediately following the Performance Period to which such Deferred Award applies.

(b) Award Notification. Participants will be notified of an Annual Award, a Deferred Award or Discretionary Award by the Bank by posting the Performance Goals and other necessary terms and conditions applicable to the Annual Award, Deferred Award or Discretionary Award on SharePoint on the Bank's intranet.

(c) Award Levels. Participants will receive varying Awards for each Performance Period based on their position with the Bank, as set out in the applicable Appendix. A "Level I Participant" is the Bank's President and Chief Executive Officer, Executive Vice President or Senior Vice President of the Bank or any other individual designated as a Level I Participant by the Board. A "Level II Participant" is any participating employee who is not a Level I Participant. If a Participant receives a new position within the Bank which position changes the Participant's Award eligibility, level, or opportunity, each of the Awards for which Participant is or was eligible during the calendar year will be prorated to reflect the portion of the calendar year during which the Participant was eligible for each such Award, level, or opportunity.

(d) Discretionary Award. The President may recommend to the Board that additional discretionary Awards (each, a "Discretionary Award") be made to one or more Level II Participants to address external market considerations, recruiting needs, special projects and extraordinary individual or team efforts. The aggregate pool of funds available for all

Discretionary Awards to Level II Participants in a calendar year will be determined by the Board and will not exceed 20 percent of the sum of all Final Awards of any kind paid to Level I Participants during such year.

The following hypothetical example illustrates how the aggregate pool of funds for Discretionary Awards in a year is determined and awarded:

In year 5, all of the Level I Participants receive: (i) total Annual Awards attributable to year 4 of $700,000, and (ii) total Deferred Awards attributable to year 1 of $600,000. In year 5, the sum of all Final Awards paid to Level I Participants is $1,300,000. Therefore, at any time during year 5, the President may recommend payment of Discretionary Awards to Level II Participants, the sum of which cannot exceed $260,000. The Board may authorize the payment of up to $260,000 for Discretionary Awards. The President may allocate the Discretionary Awards to one or more Level II Participants in her or his discretion, up to the maximum amount authorized by the Board (and in any event less than or equal to $260,000 in total). Payment must be made during year 5.

(e) Final Award and Extraordinary Occurrences. The "Final Award" is the amount of an earned and vested Annual Award, Deferred Award, or Discretionary Award, as adjusted based upon the level at which the Performance Goals have been achieved, that is ultimately paid to a Participant under the Plan. The amount of a Final Award may be increased or decreased at the Board's discretion to account for performance that is not captured in the Performance Goals. The Board, in its discretion, may also consider Extraordinary Occurrences when assessing performance results and determining Final Awards. "Extraordinary Occurrences" mean those events that, in the opinion and discretion of the Board, are outside the significant influence of the Participant or the Bank and are likely to have a significant unanticipated effect, whether positive or negative, on the Bank's operating and/or financial results. Examples of Extraordinary Occurrences include, but are not limited to, change in law, regulation, or regulatory policy, or systemic macroeconomic events outside of management's control.

Section 3.2 Performance Goals. "Performance Goals" are the performance factors established by the Board for each Performance Period and Deferral Performance Period, as set forth in the applicable Appendices to the Plan, which are taken into consideration in determining the value of an Annual Award or Deferred Award. The Board may, for any reason or for an Extraordinary Occurrence, adjust the Performance Goals for a Performance Period or Deferral Performance Period to ensure the purposes of the Plan are served. Any such adjustment to Performance Goals shall be submitted to the FHFA for review prior to implementation.

(a) Establishment of Performance Goals. Performance Goals for Performance Periods, Deferral Performance Periods commencing on and after January 1, 2012, will be communicated to Participants via SharePoint on the Bank's intranet after they have been established by the Board.

(b) Achievement Level. Three achievement levels will be defined for each Performance Goal in determining how much of an Award is earned.

i. Threshold. The "Threshold" achievement level is the minimum achievement level accepted for a Performance Goal.

ii. Target. The "Target" achievement level is the planned achievement level for a Performance Goal.

iii. Maximum. The "Maximum" achievement level is achievement that substantially exceeds the Target achievement level.

The Bank will measure the achievement level for each Performance Goal on a uniform basis, and may assign different values for achievement levels depending on the Participant's position. The relative weights assigned to achievement levels and to Performance Goals will be set forth in the applicable Appendix.

(c) Interpolation. Achievement levels that discreetly fall in between Threshold-, Target-, and Maximum, will be interpolated, unless otherwise described in a Performance Goal.

(d) Considerations in Establishing Performance Goals. In determining appropriate Performance Goals and the relative weight accorded each Performance Goal, the Committee must:

i. Balance risk and financial results in a manner that does not encourage Participants to expose the Bank to imprudent risks;

ii. Make such determination in a manner designed to ensure that Participants' overall compensation is balanced and not excessive in amount and that the Annual Awards and Deferred Awards are consistent with the Bank's policies and procedures regarding such compensation arrangements; and

iii. Monitor the success of the Performance Goals 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 appropriately reflect risk.

Section 3.3 Earning and Vesting of Awards for Level I Participants.

(a) Earning and Vesting of Annual Awards. Fifty percent of an Award to a Level I Participant will become earned and vested on the last day of the Performance Period, provided the following requirements are met (an "Annual Award"):

i. At least one of the applicable Performance Goals for the Performance Period are satisfied at or above the Threshold level;

ii. The Participant received (or, in the case of a Termination of Service described in Section 3.6(b) or Section 3.6(c) or a Reorganization described in Section 3.7, the President-CEO determines that the Participant would have received) an overall weighted performance rating for the Performance Period of 2.5 or greater on a scale of 1-5 (with 5 being the highest rating), or equivalent measure; and

iii. The Participant is actively employed on the last day of the Performance Period, unless otherwise provided in Section 3.6 or Section 3.7.

(b) Earning and Vesting of Deferred Awards. The remaining 50 percent of an Award to a Level I Participant will become earned and vested on the last day of the Deferral Performance Period, provided the following requirements are met (a "Deferred Award"):

i. At least one of the applicable Performance Goals for the Deferral Performance Period are satisfied at or above the Threshold level;

ii. The Participant received (or, in the case of a Termination of Service described in Section 3.6(b) or Section 3.6(c) or a Reorganization described in Section 3.7, the President-CEO determines that the Participant would have received) an average overall weighted performance rating for each year of the Deferral Performance Period of 2.5 or greater on a scale of 1-5 (with 5 being the highest rating), or equivalent measure; and

iii. The Participant is actively employed on the last day of the Deferral Performance Period, unless otherwise provided in Section 3.6 or Section 3.7.

(c) Calculation of Awards. The value of Awards to Level I Participants will be calculated in accordance with the applicable Appendix to the Plan.

Section 3.4 Earning and Vesting of Awards for Level II Participants.

(a) Earning and Vesting of Awards. An Award to a Level II Participant will become earned and vested on the last day of the Performance Period provided the following requirements are met (also an "Annual Award"):

i. At least one of the applicable Performance Goals for the Performance Period are satisfied at or above the Threshold level;

ii. The Participant received (or, in the case of a Termination of Service described in Section 3.6(b) or Section 3.6(c), the President-CEO determines that the Participant would have received) an overall weighted performance rating for the Performance Period of 2.5 or greater on a scale of 1-5 (with 5 being the highest rating), or equivalent measure; and

iii. The Participant is actively employed on the last day of the Performance Period, unless otherwise provided in Section 3.6.

(b) Calculation of Awards. The value of Awards to Level II Participants will be calculated in accordance with the applicable Appendix to the Plan.

Section 3.5 Reserved.

Section 3.6 Effect of Termination of Service.

(a) In General. If a Level I Participant incurs a Termination of Service for any reason other than a reason set forth in subsection 3.6(b), 3.6(c), or Section 3.7, the Level I Participant's Award will be forfeited, effective as of the date of such Termination of Service.

If a Level II Participant incurs a Termination of Service for any reason other than a reason set forth in subsection 3.6(b) or 3.6(c), the Level II Participant's Award will be forfeited effective as of the date of such Termination of Service.

(b) Termination Due to Death, Disability, or by the Bank without Cause due to a Reduction in Force.

i. Notwithstanding the provisions of Section 3.3 and subsection 3.6(a), if a Level I Participant incurs a Termination of Service due to death or Disability or by the Bank without Cause due to a Reduction in Force, then the Participant's Deferred Awards (including, without limitation, the Deferred Award attributable to the calendar year in which the Termination of Service occurs) will be treated as earned and vested based on the assumption the Bank would have achieved the applicable Performance Goals at the Target achievement level for the Deferral Performance Period(s).

ii. Notwithstanding the provisions of Section 3.3 and subsection 3.6(a), if a Level I Participant incurs a Termination of Service due to death or Disability or by the Bank without Cause due to a Reduction in Force, any Annual Award which has not been earned and vested will be treated as earned and vested based on the

assumption the Bank would have achieved the Performance Goals at the Target achievement level for the Performance Period.

iii. Notwithstanding the provisions of Section 3.4 and subsection 3.6(a), if a Level II Participant incurs a Termination of Service during a Performance Period due to death, Disability, or by the Bank without Cause due to a Reduction in Force, an Annual Award will be treated as earned and vested based on the assumption the Bank would have achieved the Performance Goals at the Target achievement level for the Performance Period.

(c) Termination Due to Other Events.

i. Termination of Service for Good Reason. Notwithstanding the provisions of Section 3.3 and subsection 3.6(a), if a Level I Participant incurs a Termination of Service due to Good Reason, an Annual Award or Deferred Award (including, without limitation, the Deferred Award attributable to the calendar year in which the Termination of Service occurs), as the case may be, will be treated as earned and vested to the extent the Performance Goals for the Performance Period and/or Deferral Performance Period(s) are satisfied.

ii. Termination of Service due to Retirement.

(A) Notwithstanding the provisions of Section 3.3 and subsection 3.6(a), if a Level I Participant incurs a Termination of Service due to Retirement, any Annual Award which has not been earned and vested will be treated as earned and vested to the extent the Performance Goals for the Performance Period are satisfied.

(B) Notwithstanding the provisions of Section 3.3 and subsection 3.6(a), if a Level I Participant incurs a Termination of Service due to Retirement, any Deferred Award (including, without limitation, the Deferred Award attributable to the calendar year in which the Termination of Service occurs) will be treated as earned and vested to the extent the Performance Goals for each applicable Deferral Performance Period are satisfied.

iii. Notwithstanding the provisions of Section 3.4 and subsection 3.6(a), if a Level II Participant incurs a Termination of Service during a Performance Period due to Retirement, an Annual Award will be treated as earned and vested to the extent the Performance Goals for the Performance Period are satisfied.

(d) Definitions.

i. "Cause" means (A) continued failure of a Participant to perform his or her duties with the Bank (other than any such failure resulting from Disability), after a written demand for performance is delivered to the Participant, which specifically identifies the manner in which the Participant has not performed his or her duties, (B) personal dishonesty, incompetence, willful misconduct, breach of fiduciary duty involving personal profit, intentional failure or omission to perform stated duties, or willful violation of any law, rule or regulation (other than routine traffic violations or similar offenses), or (C) removal of the Participant for cause by the Federal Housing Finance Agency ("FHFA") or at the direction of the FHFA pursuant to 12 U.S.C. 1422b(a)(2), or by any successor agency to the FHFA pursuant to a similar statute.

ii. "Disability" means, as a result of the Participant's incapacity due to physical or mental illness, the Participant has been absent from his or her duties with the Bank for an aggregate of 12 out of 15 consecutive months and, within 30 days after a written notice of termination is thereafter given by the Bank to the Participant, the Participant does not return to the full-time performance of the Participant's duties.

iii. "Good Reason" means a Termination of Service by a Level I Participant under any of the following circumstances:

(A) a material change in the Participant's status, position, job title or principal duties and responsibilities as a key employee of the Bank which does not represent a promotion from the Participant's status and position immediately prior to the change ("Position");

(B) the assignment to the Participant of any duties or responsibilities (or removal of any duties or responsibilities), which assignment or removal is materially inconsistent with such Position;

(C) any removal of the Participant from such Position (including, without limitation, all demotions and harassing assignments), except in connection with the termination of the Participant's employment for Cause or Disability, or as a result of the Participant's death;

(D) any material breach by the Bank of any provisions of this Plan or any other agreement with the Participant; or

(E) any failure by the Bank or its successors and assigns to obtain the assumption of this Plan by any successor or assign of the Bank.

iv. "Reduction in Force" means an involuntary Termination of Service of a Participant by the Bank in connection with a financial decision by the Board to reduce the number of Bank employees, not due to the Participant's performance, and not due to a Reorganization.

v. "Retirement" means the Participant's planned and voluntary termination of employment after the Participant has delivered timely advance written notice of intent to retire to the Bank and has either: (A) attained age 60 with five "Years of Service," or (B) attained the "Rule of 85," which means the Participant has attained a combined age and Years of Service that mathematically is equal to or exceeds the number 85. A "Year of Service" will be calculated in the same manner as under the Pentegra Defined Benefit Pension Plan for Financial Institutions. Advance written notice will be deemed timely given if it is given at least four weeks in advance, as to Vice Presidents, First Vice Presidents, Senior Vice Presidents, Executive Vice Presidents, and the Chief Executive Officer, and at least two weeks in advance, as to all other employees.

vi. "Termination of Service" means the occurrence of any act or event or any failure to act, that actually or effectively causes or results in a Participant ceasing, for whatever reason, to be an employee of the Bank, including, but not limited to, death, Disability, Retirement, termination of the Participant's employment by the Bank (whether for Cause or otherwise), termination by the Participant of his or her employment with the Bank for Good Reason and voluntary resignation or termination by the Participant of his or her employment.

Section 3.7 Effect of Reorganization. The following provision applies to Level I Participants only.

(a) Notwithstanding the provisions of Sections 3.3 and 3.6, if a Reorganization of the Bank occurs, then any portion of an Annual Award or Deferred Award (including, without limitation, the Deferred Award attributable to the calendar year in which the Termination of Service occurs) which has not otherwise become earned and vested as of the date of the Reorganization will be treated as 100 percent earned and vested effective as of the date of the Reorganization. The amount of the Awards will be equal to the greater of: (i) the amount determined based on the assumption that the Bank would have achieved the Performance Goals at the Target achievement level for the Performance Period and Deferral Performance Period; or (ii) the amount determined based on the assumption that the Bank would have achieved the Performance Goals at the achievement level for the Performance Period and the Deferral Performance Period that the Bank had actually achieved as of the date of the Reorganization.

(b) "Reorganization" of the Bank will mean the occurrence at any time of any of the following events:

i. The Bank is merged or consolidated with or reorganized into or with another bank or other entity, or another bank or other entity is merged or consolidated into the Bank;

ii. The Bank sells or transfers all, or substantially all of its business and/or assets to another bank or other entity;

iii. More than 50 percent of the total market value or total voting power of all ownership interests in the Bank is acquired, within any 12-month period, by one person or entity or by more than one person or entity acting as a group; or

iv. The liquidation or dissolution of the Bank.

The term "Reorganization" shall not include any Reorganization that is mandated by federal statute, rule, regulation, or directive, including 12 U.S.C. § 1421, et seq., as amended, and 12 U.S.C. § 4501 et seq., as amended, and which the Director of the FHFA (or successor agency) has determined should not be a basis for accelerating vesting under this Plan, by reason of the capital condition of the Bank or because of unsafe or unsound acts, practices, or condition ascertained in the course of the Agency's supervision of the Bank or because any of the conditions identified in 12 U.S.C. § 4617(a)(3) are met with respect to the Bank (which conditions do not result solely from the mandated reorganization itself, or from action that the Agency has required the Bank to take under 12 U.S.C. § 1431(d)).

Section 3.8 Payment of Awards.

(a) Payments Related to Termination of Service. The following provisions apply to Final Awards payable as a result of a Termination of Service.

i. In the event of a Termination of Service due to (a) a termination by the Bank without Cause due to a Reduction in Force, (b) death, or (c) Disability, 100 percent of a Final Award will be paid in a single sum within 75 days of the date of Termination of Service. Notwithstanding the foregoing, in the event of a Reduction in Force, a Participant must execute the severance agreement offered by the Bank in order to be eligible to receive payment.

ii. In the event of a Termination of Service due to Retirement or a termination by a Level I Participant for Good Reason, payment of a Final Award will be made in a single sum within 75 days following the end of the Performance Period or Deferral Performance Period, as applicable.

(b) Payments Not Related to a Termination of Service. Final Awards which become vested for reasons other than a Termination of Service will be paid in a single sum within 75 days following the end of the Performance Period or Deferral Performance Period, as applicable. Notwithstanding the foregoing, Discretionary Awards granted pursuant to Section 3.1(d) may be awarded and paid at any time during the year that funds are available for such Discretionary Awards.

(c) Notwithstanding the foregoing provisions of this Section, Final Awards will be paid upon approval by the Board and after review of the calculations by the Bank's Internal Audit department. However, in the event of a Reorganization, payment of a Final Award will be made in a single sum on the date on which the Reorganization occurs.

Section 3.9 Reduction or Forfeiture of Awards.

(a) If during the Deferral Performance Period actual losses or other measures or aspects of performance related to the Performance Period or Deferral Performance Period are realized which would have caused a reduction in amount of the Final Award calculated for the Performance Period or Deferral Performance Period, then the remaining amount of the Final Award to be paid at the end of the Deferral Performance Period will be reduced to reflect this additional information.

(b) Notwithstanding any other provision of the Plan, if a Participant violates a Non-Solicitation Agreement, all of his unpaid vested and unvested Awards will be forfeited effective as of the date the Board determines such violation has occurred and gives written notice to the Participant of such determination. Any future payments for a vested Award will cease and the Bank will have no further obligation to make such payments.

(c) Notwithstanding any other provision of the Plan, if during the most recent examination of the Bank by the FHFA, the FHFA identified an unsafe or unsound practice or condition that is material to the financial operation of the Bank within the Participant's area(s) of responsibility and such unsafe or unsound practice or condition is not subsequently remediated to the satisfaction of the Board as determined by the Board after reviewing the findings or input from the FHFA, then all (or a portion) of a Participant's vested and unvested Awards will be forfeited as determined by the Board and directed to the participant in writing. Any future payments for a vested Award will, if directed by the Board, cease and the Bank will have no further obligation to make such payments.

(d) By resolution, the Board may reduce or eliminate an Award that is otherwise earned under this Plan but not yet paid, if the Board finds that a serious, material safety-soundness problem, or a serious, material risk-management deficiency exists at the Bank, or if: (i) operational errors or omissions result in material revisions to: (A) the financial results, (B) information submitted to the FHFA, or (C) data used to determine incentive payouts; (ii) submission of material information to the SEC, Office of Finance, and/or FHFA is significantly past due, or (iii) the Bank fails to make sufficient progress, as determined by the Board, in the timely remediation of significant examination, monitoring and other supervisory findings.

ARTICLE IV

ADMINISTRATION

Section 4.1 Appointment of the Committee. The Committee, or a duly authorized officer or officers of the Bank empowered by the Committee to act on its behalf under sub-section 4.2(d), will be responsible for administering the Plan, and the Committee will be charged with the full power and the responsibility for administering the Plan in all its details; provided that the power to determine eligibility pursuant to Article II is reserved to the Board.

Section 4.2 Powers and Responsibilities of the Committee. The Committee will have all powers necessary to administer the Plan, including the power to construe and interpret the Plan document; to decide all questions relating to an individual's eligibility to participate in the Plan; to determine the amount, manner and timing of any distribution of benefits under the Plan; to resolve any claim for benefits in accordance with Article V, and to appoint or employ advisors, including legal counsel, to render advice with respect to any of the Committee's responsibilities under the Plan. Any construction, interpretation, or application of the Plan by the Committee will be final, conclusive and binding.

(a) Records and Reports. The Committee will be responsible for maintaining sufficient records to determine each Participant's eligibility to participate in the Plan.

(b) Rules and Decisions. The Committee may adopt such rules as it deems necessary, desirable, or appropriate in the administration of the Plan. All rules and decisions of the Committee will be applied uniformly and consistently to all Participants in similar circumstances. When making a determination or calculation, the Committee will be entitled to rely upon information furnished by a Participant, the Bank or the legal counsel of the Bank.

(c) Application for Benefits. The Committee may require a Participant to complete and file with it an application for a benefit, and to furnish all pertinent information requested by it. The Committee may rely upon all such information so furnished to it, including the Participant's current mailing address.

(d) Delegation. The Committee hereby delegates, authorizes, and directs the President-CEO to perform administrative responsibilities on its behalf under the Plan. The Committee may also authorize one or more additional officers or employees of the Bank to perform administrative responsibilities on its behalf under the Plan. All duly authorized officers and employees of the Bank will have all powers necessary to carry out the administrative duties delegated to such persons by the Committee.

Section 4.3 Income and Employment Tax Withholding. The Bank will withhold from payments to Participants of their Awards, to the extent required by law, all applicable federal, state, city and local taxes.

Section 4.4 Plan Expenses. The expenses incurred for the administration and maintenance of the Plan will be paid by the Bank.

ARTICLE V

BENEFIT CLAIMS

If the Committee requires a Participant to file a claim to receive his or her benefit under the Plan, or if he or she wishes to apply for a benefit, the claim must be made in writing and filed with the Committee. If a claim is denied, the Committee will furnish the claimant with written notice of its decision. A claimant may request a full and fair review of the denial of a claim for benefits by filing a written request with the Committee.

ARTICLE VI

AMENDMENT AND TERMINATION OF THE PLAN

Section 6.1 Amendment of the Plan. The Bank, acting through the Board, may amend the Plan at any time in its sole discretion. Notwithstanding the foregoing, the Bank may not amend the Plan to reduce a Participant's Award as determined on the day preceding the effective date of the amendment or to otherwise retroactively impair or adversely affect the rights of a Participant. Any substantive amendment to the Plan shall be submitted to the FHFA for review prior to implementation.

Section 6.2 Termination of the Plan. The Bank, acting through the Board, may terminate the Plan at any time in its sole discretion. Absent an amendment to the contrary, Plan benefits that were earned and vested prior to the termination will be paid at the times and in the manner provided for by the Plan at the time of the termination.

ARTICLE VII

MISCELLANEOUS

Section 7.1 Governing Law. Except to the extent superseded by laws of the United States, the laws of Indiana will be controlling in all matters relating to the Plan without regard to the choice of law principles therein. The Plan and all Awards are intended to comply, and will be construed by the Bank in a manner in which they are exempt from or comply with the applicable provisions of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"). To the extent there is any conflict between a provision of the Plan or an Award and a provision of Code Section 409A, the applicable provision of Code Section 409A will control.

Section 7.2 Headings and Gender. The headings and subheadings in the Plan have been inserted for convenience of reference only and will not affect the construction of the Plan provisions. In any necessary construction, the masculine will include the feminine and the singular the plural, and vice versa. All calculations of events that last a portion of a calendar year or are to be determined pro rata as to a calendar year will be determined by the actual number of days the condition or event existed and assuming a 365-day year.

Section 7.3 Spendthrift Clause. No benefit or interest available under the Plan will be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, encumbrance or attachment by creditors of a Participant, either voluntarily or involuntarily. Notwithstanding the foregoing, a Participant may, by completing and signing a written beneficiary designation form which is delivered to and accepted by the Bank, designate a beneficiary to receive any payment and/or exercise any rights with respect to outstanding Awards upon the Participant's death. If at the time of the Participant's death there is not on file a fully effective beneficiary designation form, or if the designated beneficiary did not survive the Participant, the person or persons surviving at the time of the Participant's death in the first of the following classes of beneficiaries in which there is a survivor, shall have the right to receive any payment and/or exercise any rights with respect to outstanding Awards:

(a) Participant's surviving spouse.

(b) Participant's surviving domestic partner.

(c) Equally to the Participant's children, except that if any of the Participant's children predecease the Participant but leave descendants surviving, such descendants shall take by right of representation the share their parent would have taken if living.

(d) Participant's estate.

If a person in the class surviving dies before receiving any payment and/or exercising any rights with respect to outstanding Awards (or the person's share of any payment and/or rights in case of more than one person in the class), that person's right to receive any payment and/or exercise any rights with respect to outstanding Awards will lapse and the determination of who will be entitled to receive any payment and/or exercise any rights with respect to outstanding Awards will be determined as if that person predeceased the Participant.

For purposes of this Section 7.3, the following terms have the meanings assigned to them below:

(e) The term "spouse" means: (i) a person of the opposite gender from the Participant who is legally married to the Participant at the relevant time under the laws of the state in which they reside and who meets applicable requirements for being treated as a spouse for purposes of federal law; or (ii) a person of the same gender as the Participant who at the relevant time either (1) is recognized as being legally married to the Participant under federal law or the laws of the state or country in which the relationship was created, or (2) is a person who has joined with the Participant in a civil union that is recognized as creating some or all of the rights of marriage under the laws of the state or country in which the relationship was created.

(f) The term "domestic partner" means a person who is not the spouse of the Participant as defined in subsection (a) above, but who at the relevant time is the Participant's significant other (together referred to as "partners") with whom the Participant lives and shares financial responsibility. A domestic partner may be the same gender or opposite gender. A person will not be considered a domestic partner unless the Participant and/or domestic partner provides sufficient evidence to the Bank that all of the following requirements are satisfied:

i. Both partners are at least 18 years of age.

ii. Neither partner is married to another person under either statutory or common law, neither has another spouse, and neither is a member of another domestic partnership or has been a member of another domestic partnership within the prior 6 months.

iii. The partners have shared the same residence for at least 6 months, and continue to do so.

iv. The partners are not blood relatives.

v. Each of the partners is the other's sole life partner, and intend to remain so indefinitely.

vi. The partners are jointly responsible for each other's financial welfare and are able to prove at least three of the following situations to demonstrate such financial interdependence:

(A) Common ownership of real property or a common leasehold interest in property;

(B) Joint checking account;

(C) Joint credit cards;

(D) Designation of one another as primary beneficiary for life insurance or retirement benefits, or primary beneficiary designation under partner's will;

(E) Joint ownership of a motor vehicle; or

(F) Designation of partner under power of attorney.

Section 7.4 Counterparts. This Plan may be executed in any number of counterparts, each one constituting but one and the same instrument, and may be sufficiently evidenced by any one counterpart.

Section 7.5 No Enlargement of Employment Rights. Nothing contained in the Plan may be construed as a contract of employment between the Bank and any person, nor may the Plan be deemed to give any person the right to be retained in the employ of the Bank or limit the right of the Bank to employ or discharge any person with or without cause.

Section 7.6 Limitations on Liability. The individual members of the Board will, in accordance with the Bank's by-laws, be indemnified and held harmless by the Bank with respect to any alleged breach of responsibilities performed or to be performed hereunder. In addition, notwithstanding any other provision of the Plan, neither the Bank nor any individual acting as an employee or agent of the Bank will be liable to a Participant for any claim, loss, liability or expense incurred in connection with the Plan, except when the same has been affirmatively determined by a court order or by the affirmative and binding determination of an arbitrator, to be due to the gross negligence or willful misconduct of that person.

Section 7.7 Incapacity of Participant. If any person entitled to receive a distribution under the Plan is physically or mentally incapable of personally receiving and giving a valid receipt for any payment due (unless a prior claim for the distribution has been made by a duly qualified guardian or other legal representative), then, unless and until a claim for the distribution has been made by a duly appointed guardian or other legal representative of the person, the Committee may provide for the distribution to be made to any other individual or institution then contributing toward or providing for the care and maintenance of the person. Any payment made for the benefit of the person under this Section will be a payment for the account of such person and a complete discharge of any liability of the Bank and the Plan.

Section 7.8 Evidence. Evidence required of anyone under the Plan may be by certificate, affidavit, document or other information which the person relying on the evidence considers pertinent and reliable, and signed, made or presented by the proper party or parties.

Section 7.9 Action by Bank. Any action required of or permitted by the Bank under the Plan will be by resolution of the Board or by a person or persons authorized by resolution of the Board.

Section 7.10 Severability. In the event any provisions of the Plan are held to be illegal or invalid for any reason, the illegality or invalidity will not affect the remaining parts of the Plan, and the Plan will be construed and endorsed as if the illegal or invalid provisions had never been contained in the Plan.

Section 7.11 Information to be Furnished by a Participant. A Participant, or any other person entitled to benefits under the Plan, must furnish the Committee with any and all documents, evidence, data or other information the Committee considers necessary or desirable for the purpose of administering the Plan. Benefit payments under the Plan are conditioned on a Participant (or other person who is entitled to benefits) furnishing full, true and complete data, evidence or other information to the Committee, and on the prompt execution of any document reasonably related to the administration of the Plan requested by the Committee.

Section 7.12 Attorneys' Fees. If any action is commenced to enforce the provisions of the Plan, payment of attorneys' fees will be governed by the terms set forth in the mandatory "Agreement to Arbitrate" entered into between the Bank and the Participant.

Section 7.13 Binding on Successors. The Plan will be binding upon and inure to the benefit of the Bank and its successors and assigns, and the successors, assigns, designees and estates of a Participant. The Plan will also be binding upon and inure to the benefit of any successor organization succeeding to substantially all of the assets and business of the Bank, but nothing in the Plan will preclude the Bank from merging or consolidating into or with, or transferring all or substantially all of its assets to, another organization which assumes the Plan and all obligations of the Bank hereunder. The Bank agrees that it will make appropriate provision for the preservation of a Participant's rights under the Plan in any agreement or plan which it may enter into to effect any merger, consolidation, reorganization or transfer of assets. Upon such a merger, consolidation, reorganization or transfer of assets and assumption of Plan obligations of the Bank, the term "Bank" will refer to such other organization and the Plan will continue in full force and effect.

2019 PERFORMANCE GOALS AS APPROVED BY THE BOARD OF DIRECTORS:

Pursuant to Section 3.2 of the Federal Home Loan Bank of Indianapolis ("Bank") Incentive Plan, effective as of January 1, 2012, and as amended (the "Plan"), the following Appendices were adopted by the Board of Directors (the "Board") of the Bank on November 16, 2018, and amended on January 25, 2019, after consideration and review by the Human Resources Committee of the Board. These Appendices to the Plan are effective as of January 1, 2019. All capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Plan.

APPENDIX I

2019 PERFORMANCE PERIOD AWARDS FOR LEVEL II PARTICIPANTS
Federal Home Loan Bank of Indianapolis

A. Incentive Opportunities for Level II Participants

Annual Awards payable to Level II Participants are calculated by multiplying (a) the Compensation (as defined in Section 3.1 of the Federal Home Loan Bank of Indianapolis Incentive Plan) available to the Participant, by (b) the percentages as set forth below, and by (c) the sum of the applicable weighted values of the achievement level for all Performance Goals.

	TOTAL INCENTIVE AS % OF COMPENSATION
Position	**Maximum Percentage of**
1st VP	30%
Member Outreach[1]	40%
VP	25%
AVP	15%
Other Employees	10%

[1] The "Member Outreach" group includes the Marketing Director, Member Research & Strategies Director, Senior Account Directors, Senior Account Managers, Account Managers, Business Development Analysts, Member Research & Strategies Analysts, MPP Business Development Managers, and all persons performing similar functions to any of the foregoing, but excludes individuals who provide administrative support for the foregoing.

B. 2019 Performance Goals

Performance Goal achievement will be determined for all Level II Participants based on the following values for the different achievement levels:

PERCENTAGE VALUE FOR ACHIEVEMENT OF PERFORMANCE GOALS		
Threshold	**Target**	**Maximum**
50%	75%	100%

The Bank's Performance Goals are as follows:

MISSION GOALS	WEIGHTED VALUE Bank [1]	ERM	Sales [2]	THRESHOLD	TARGET	MAXIMUM
1. PROFITABILITY [3]	20%	15%	20%	469 (bp)	541 (bp)	641 (bp)
2. MEMBER ACTIVITY						
A. Member Advances Growth [4]	20%	10%	20%	0%	2.6%	4.0%
B. Member Education and Outreach [5]	15%	15%	20%	15 events	20 events	25 events
C. PFI Concentration [6]	5%	5%	15%	Top 5 MPP sellers will account for 65% or less of total purchases	Top 5 MPP sellers will account for 60% or less of total purchases	Top 5 sellers will account for 57.50% or less of total purchases
D. CIP Advances Originated [7]	10%	5%	15%	$50 MM	$100 MM	$200 MM
3. ERM OBJECTIVES [8]	10%	30%	-%	Achieve 1 ERM Objective	Achieve 2 ERM Objectives	Achieve 3 ERM Objectives
4. MINORITY AND WOMEN INCLUSION						
A. Presence (Inclusion Goal) Establishment of a bankwide Employee Resource Group (ERG)	5%	5%	5%	Framework to create an ERG	Identification of an ERG to be established within the bank	Launch of an ERG
B. Performance (Diversity Goal) Portion of 2019 Vendor Spend with Qualifying Vendors [9]	5%	5%	5%	15% Diverse Spend	17% Diverse Spend	19% Diverse Spend
5. ENHANCEMENT OF COMPLIANCE RISK MANAGEMENT PROGRAM [10]	10%	10%	0%	After the end of the Third Quarter 2019 and on or before the end of Fourth Quarter 2019	After the end of the Second Quarter 2019 and on or before the end of Third Quarter 2019	On or before the end of Second Quarter 2019

(1) For all Level II Participants, excluding those addressed in the ERM and Sales columns, and excluding those in the Internal Audit department. "ERM" means the Bank's Enterprise Risk Management department.

(2) Applies to individuals included in the "Member Outreach" group above. Administrative support staff for individuals in the Member Outreach group are included in the Bank column for weighted value determination.

(3) For purposes of this goal, profitability is defined as the Bank's profitability rate in excess of the Bank's cost of funds rate. Profitability is the Bank's adjusted net income reduced by the portion of net income to be added to restricted retained earnings under the Joint Capital Enhancement Agreement dated August 5, 2011, as amended, by and among the Federal Home Loan Banks and increased by the Bank's accruals for incentive compensation net of the AHP assessment. Adjusted net income represents GAAP Net Income adjusted: (i) for the net impact of certain current and prior period Advance prepayments and debt extinguishments, net of the AHP assessment, (ii) to exclude mark-to-market adjustments on derivatives and certain other effects from derivatives and hedging activities, net of the AHP assessment, and (iii) to exclude the effects from interest expense on mandatorily redeemable capital stock. The Bank's profitability rate is profitability, as defined above, as a percentage of average total regulatory capital stock (B1 weighted at 100% and B2 weighted at 80% to reflect the relative weights of the Bank's dividend). Assumes no material change in investment authority under the FHFA's regulation, policy, directive, guidance, or law.

(4) Member advances growth is calculated as the growth in the average daily balance of advances outstanding to members at par. Average daily balances are used instead of point-in-time balances to eliminate point-in-time activity that may occur and to reward for the benefit of the income earned on advances balances while outstanding. Members that become non-members during 2019, Flagstar Bank and all captive insurance company members will be excluded from the calculation. Goal assumes no material change in membership eligibility under FHFA's regulation, policy, directive, guidance or law.

(5) Member education and outreach events are symposia, conferences, workshops, webinars (with a maximum of 2 webinars per agenda topic toward achievement of this goal), educational events, presentations at trade conferences, presentation to member Boards of Directors or Committees thereof, and other events educating Bank members about Advances, MPP, the Bank's community investment products and activities, industry trends, and other products and services. To qualify, events must target more than 1 member, with the exception of presentations to individual member Boards or committees thereof. Status and reporting on this Goal and its attainment will be provided in

writing by the officer responsible for the event, and will be confirmed by the CFO or by the Chief Business Operations Officer.

(6) Top 5 MPP sellers in 2019 total purchase volume concentration will be equal to the concentration of the top 5 advance users (it is understood that the top 5 sellers for MPP may not be the same as the top 5 advance users).

(7) "CIP" means Community Investment Program. "CIP Advances" are newly-originated Community Investment Cash Advances, including CIP and other qualifying Advances and CIP qualified letters of credit, provided in support of targeted projects as defined in 12 C.F.R. Part 1291 and the Federal Home Loan Bank Act.

(8) The Board has established 3 ERM Objectives for 2019:

ERM Objective 1 - Systemic Risk Analysis - The Systemic Risk Analysis is comprised of two parts. In part 1, ERM is to prepare a comprehensive retrospective analysis of the 2007-2009 Financial Crisis and report the results of the analysis to the Board. In part 2, ERM is to prepare a prospective analysis of the "Systemic Risk Exposure" of the FHLBank System.

ERM Objective 2 - Managing 21st Century Political Risk Analysis - Prepare an analysis of the Bank's political risk exposure using a framework adopted from the book entitled Political Risk: How Businesses and Organizations can Anticipate Insecurity. (Authors: Condoleezza Rice, Professor of Economy, Stanford University and Senior Fellow and the Hoover Institution. Amy Zegart, Senior Fellow at Stanford University's Center for International Security and Cooperation and Senior Fellow at the Hoover Institution).

ERM Objective 3 - Mortgage Analysis Board Training - Provide the Board of Directors with a training session on mortgage valuation, funding, hedging, and portfolio management. Training will cover: Nominal Spread, Option Adjusted Spread, and Option Cost; Statistical Distribution of Option Adjusted Spread; Mortgage prepayment S-Curve basics; Non-path dependent options versus path-dependent options; Monte Carlo Simulation of Interest Rates; Portfolio Funding Hedging Optimization; Mortgage Value-at-Risk (400 Scenarios 1979 to Present); Long-term Risk Profile - Value at Risk; Short-term Risk - 12 Month Rolling Interest Income.

(9) "Qualifying Vendors" are vendors that qualify as minorities, women, individuals with disabilities, and minority-, women-, and disabled-owned businesses.

(10) Achievement of this goal requires the Bank to have developed a compliance risk management policy, program, and framework to outline management and staff responsibility which includes the utilization of the Bank's eGRC application, Archer, to monitor compliance risk findings through the Issue Management module. Satisfaction of this goal will be evidenced in one or more reports to the Bank's Risk Committee, utilizing the timelines noted in the Goals table shown above to determine performance results for purposes of this plan.

C. Hypothetical Example Calculations

Assume that the Bank achieved the following on its Performance Goals for year 1:

MISSION GOALS	WEIGHTED VALUE			Achievement	Achievement Percentage Value	Bank Result	ERM Result	Sales Result
	Bank	ERM	Sales					
1. Performance Goal 1	25%	25%	20%	Target	75%	18.75%	18.75%	15.00%
2. Performance Goal 2	50%	45%	65%	Threshold	50%	25%	22.50%	32.50%
3. Performance Goal 3	10%	10%	3%	Over Maximum	100%	10%	10.00%	3.00%
4. Performance Goal 4	10%	10%	10%	Below Threshold	-%	-%	-%	-%
5. Performance Goal 5	5%	10%	2%	50% between Target and Maximum	87.5%	4.375%	8.75%	1.75%
					Total:	*58.125%*	*60%*	*52.25%*

A Vice President is eligible to receive an Annual Award of up to a maximum of 25% of his or her Compensation. Depending on the Vice President's business unit, the Annual Award will be equal to the following proportion of the Vice President's Compensation (rounded to 2 decimal places):

Bank Vice President	ERM Vice President	Sales Vice President (in Member Outreach group)
25%*58.13%=14.53%	25%*60%=15.00%	40%*52.25%=20.09%

Assuming the Vice President's Compensation is $80,000, his or her Annual Award will equal the following, depending on the Vice President's business unit:

Bank Vice President	ERM Vice President	Sales Vice President (in Member Outreach group)
$80,000*14.53%=$11,624	$80,000*15.00%=$12,000	$80,000*20.09%=$16,072

APPENDIX II

2019 PERFORMANCE PERIOD AWARDS FOR LEVEL I PARTICIPANTS
Federal Home Loan Bank of Indianapolis

A. Incentive Opportunities for Level I Participants

Annual Awards payable to Level I Participants are calculated by multiplying (a) the Compensation (as defined in Section 3.1 of the Federal Home Loan Bank of Indianapolis Incentive Plan) available to the Participant, by (b) the percentages as set forth below, and by (c) the sum of the applicable weighted values of the achievement level for all Performance Goals.

Position	TOTAL INCENTIVE AS % OF COMPENSATION	INCENTIVE AS % OF COMPENSATION, EARNED & VESTED AT YEAR-END	INCENTIVE AS % OF COMPENSATION, DEFERRED FOR 3 YEARS
CEO	100%	50%	50%
EVP	80%	40%	40%
SVP	70%	35%	35%

Deferred Awards are subject to additional Performance Goals during the Deferral Performance Period, as described in Section C below.

B. 2019 Performance Goals for Level I Participants

Performance Goal achievement will be determined for Level I Participants based on the following values for the different achievement levels:

PERCENTAGE VALUE FOR ACHIEVEMENT OF PERFORMANCE GOALS			
Position	Threshold	Target	Maximum
CEO	50%	80%	100%
EVP	50%	75%	100%
SVP	50%	75%	100%

The Mission Goals, Weighted Values, Thresholds, Targets, Maximums, and notes set forth in Appendix I.B. above shall also apply to Level I Participants, and are incorporated herein by this reference. For purposes of this Appendix II.B., "Bank" shall refer to Level I Participants other than those in ERM and Internal Audit, and "ERM" shall refer to Level I Participants in ERM. No Level I Participant qualifies for "Sales."

C. 2020 - 2022 Performance Goals for Level I Participants

Deferred Awards are subject to additional Performance Goals during the Deferral Award Performance Period. The achievement levels for Deferral Performance Period Performance Goals for all Level I Participants are:

DEFERRAL PERFORMANCE PERIOD		
PERFORMANCE GOAL PERCENTAGE VALUES		
Threshold	Target	Maximum
75%	100%	125%

The Bank's Deferral Performance Period Performance Goals are:

MISSION GOALS	WEIGHTED VALUE		THRESHOLD	TARGET	MAXIMUM
	Bank [1]	ERM			
1. PROFITABILITY [2]	35%	35%	25 bp	50 bp	150 bp
2. RETAINED EARNINGS [3]	35%	35%	3.5%	3.9%	4.3%
3. PRUDENTIAL	30%	30%	Achieve 1 Prudential Standard	0	Achieve 2 Prudential Standards
A. Maintain a regulatory capital-to-assets ratio of at least 4.16% as measured on each quarter-end in 2020 through 2022.					
B. Award to FHLBI members the annual AHP Competitive funding requirement in each plan year.					

(1) For Level I Participants other than those in ERM and Internal Audit.

(2) For purposes of this goal, profitability is defined as the Bank's profitability rate in excess of the Bank's cost of funds rate. Profitability is the Bank's adjusted net income reduced by the portion of net income to be added to restricted retained earnings under the Joint Capital Enhancement Agreement dated August 5, 2011, as amended, by and among the Federal Home Loan Banks and increased by the Bank's accruals for incentive compensation. Adjusted net income represents GAAP Net Income adjusted: (i) for the net impact of certain current and prior period Advance prepayments and debt extinguishments, net of the AHP assessment, (ii) to exclude mark-to-market adjustments on derivatives and certain other effects from derivatives and hedging activities, net of the AHP assessment, and (iii) to exclude the effects from interest expense on mandatorily redeemable capital stock. The Bank's profitability rate is profitability, as defined above, as a percentage of average total regulatory capital stock (B1 weighted at 100% and B2 weighted at 80% to reflect the relative weights of the Bank's dividend). Assumes no material change in investment authority under the FHFA's regulation, policy, directive, guidance, or law. Attainment of this goal will be computed using the simple average of annual profitability measures over the three-year period.

(3) Total Retained Earnings divided by the sum of the carrying value of the MBS and AMA assets portfolios, measured at the end of each month. The calculation will be the simple average of 36 month-end calculations.

D. Hypothetical Example Calculations

Assume that the Bank achieved the following on its Performance Goals for year 1 (calculated using weighting for Senior Vice Presidents):

MISSION GOALS	WEIGHTED VALUE		Achievement	Achievement Percentage Value	Bank Result	ERM Result
	Bank	ERM				
1. Performance Goal 1	25%	25%	Target	75%	18.75%	18.75%
2. Performance Goal 2	50%	45%	Threshold	50%	25%	22.5%
3. Performance Goal 3	10%	10%	Over Maximum	100%	10%	10%
4. Performance Goal 4	10%	10%	Below Threshold	-%	-%	-%
5. Performance Goal 5	5%	10%	50% between Target and Maximum	87.5%	4.375%	8.75%
				Total:	*58.125%*	*60.00%*

A Senior Vice President is eligible to receive an Annual Award of up to a maximum of 70% of his or her Compensation. Depending on the Senior Vice President's business unit, the Annual Award will be equal to the following proportion of the Senior Vice President's Compensation (rounded to 2 decimal places):

Bank Senior Vice President	ERM Senior Vice President
70%*58.13%=40.69%	70%*60%=42%

Assuming the Senior Vice President's Compensation is $200,000, his or her total incentive will equal the following, depending on the Senior Vice President's business unit:

Bank Senior Vice President	ERM Senior Vice President
$200,000*40.69%=$81,380	$200,000*42%=$84,000

50% of this amount will be paid after year 1 as an Annual Award, and the other 50% will be deferred until after the Deferral Performance Period.

	Bank Senior Vice President	ERM Senior Vice President
Annual Award	$81,380*50%=$40,690	$84,000*50%=$42,000

Assume the Bank achieved the following Performance Goals during the Deferral Award Performance Period:

MISSION GOALS	WEIGHTED VALUE		Achievement	Achievement Percentage Value	Bank Result	ERM Result
	Bank	ERM				
1. Goal 1	35%	35%	Target	100%	35%	35%
2. Goal 2	35%	35%	Maximum	125%	43.75%	43.75%
3. Goal 3	30%	30%	50% between Threshold and Target	87.5%	26.25%	26.25%
				Total:	*105%*	*105%*

After the Deferral Performance Period, the Senior Vice President would receive the following as a Deferred Award, depending on the Senior Vice President's business unit:

	Bank Senior Vice President	ERM Senior Vice President
Deferred Award	$40,690*105%=$42,724.50	$42,000*105%=$44,100

APPENDIX III

FORM OF NON-SOLICITATION AND NON-DISCLOSURE AGREEMENT

This Agreement is entered into as of the ____ day of _____, 201_, by and between the FEDERAL HOME LOAN BANK OF INDIANAPOLIS, a corporation organized under the laws of the United States (the "Bank") and _____ (the "Executive").

WHEREAS, the Bank sponsors the Federal Home Loan Bank of Indianapolis Incentive Plan (the "Plan"); and

WHEREAS, as a condition of participation in the Plan, the Bank requires that the Executive agree to the terms and conditions found within this Agreement;

NOW, THEREFORE, in consideration of the premises and of the mutual promises and agreements contained herein and other good and valuable consideration, the receipt, legal adequacy and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Non-Disclosure; Return of Confidential Information and Other Property.

(a) Access to Confidential Information. The Executive understands, acknowledges and agrees that during the course of his or her employment with the Bank he or she has gained or will gain information regarding, knowledge of, and familiarity with, the Confidential Information of the Bank (as defined in subsection (c)) that would cause irreparable damage and harm to the Bank if it was disclosed. The Executive understands, acknowledges and agrees that the Confidential Information has substantial economic value because it is not known or readily ascertainable by proper means by others who could obtain economic value from it. The Executive also acknowledges and agrees that the Bank uses reasonable means to maintain the secrecy and confidentiality of the Confidential Information.

(b) Non-Disclosure. At all times while the Executive is employed by the Bank, and at all times thereafter, the Executive will not (i) directly or indirectly disclose, provide or discuss any Confidential Information with or to any Person (as defined in subsection (d)) other than those directors, officers, employees, representatives and agents of the Bank who need to know such Confidential Information for a proper corporate purpose, and (ii) directly or indirectly use any Confidential Information (A) to compete against the Bank, or (B) for the Executive's own benefit, or for the benefit of any Person other than the Bank.

(c) Confidential Information Defined. For purposes of this Agreement, the term "Confidential Information" means any and all:

(i) materials, records, data, documents, lists, writings and information (in each case, whether in writing, printed, verbal, electronic, computerized or otherwise) (A) relating or referring in any manner to the business, operations, affairs, financial condition, results of operation, cash flow, assets, liabilities, sales, revenues, income, estimates, projections, policies, strategies, techniques, methods, products, developments, suppliers, regulators, members, relationships and/or customers of the Bank that are confidential, proprietary or not otherwise publicly available, in any

event not without a breach of this Agreement, or (B) that the Bank has deemed confidential, proprietary, nonpublic or not otherwise publicly available without breaching this Agreement;

(ii) trade secrets of the Bank, as defined in Indiana Code Section 24-2-3-2, as amended, or any successor statute; and

(iii) any and all copies, summaries, analyses and extracts which relate or refer to or reflect any of the items set forth in (i) or (ii) above. The Executive agrees that all Confidential Information is confidential and is and at all times will remain the property of the Bank.

(d) Person Defined. For purposes of this Agreement, the term "Person" will mean any natural person, proprietorship, partnership, corporation, limited liability company, bank, organization, firm, business, joint venture, association, trust or other entity and any government agency, body or authority.

(e) Return of Confidential Information and Other Property. The Executive covenants and agrees:

(i) to keep all Confidential Information subject to the Bank's custody and control and to promptly return to the Bank all Confidential Information that is still in the Executive's possession or control at the termination of the Executive's employment with the Bank; and

(ii) promptly upon termination of the Executive's employment with the Bank, to return to the Bank, at the Bank's principal office, all vehicles, equipment, computers, credit cards and other property of the Bank and to cease using any of the foregoing.

(f) Exceptions from Confidentiality Obligations. Section 1 shall not be deemed to prevent the Executive from making disclosures required by applicable regulation, law, agency order, or court order, to the extent the Executive provides reasonable written notice of such disclosure requirement to the Bank prior to such disclosure, to the extent such prior notice is not prohibited, to permit the Bank to contest the disclosure of such information.

2. Non-Disparagement. The Executive agrees to not communicate disparaging remarks to third parties about the Bank, its directors, officers or employees. Likewise, the Bank agrees not to disparage the Executive or his or her skills or job performance to third parties. However, nothing in this paragraph shall prohibit the Bank or the Executive from testifying truthfully under oath.

3. Non-Solicitation and No-Hire. The Executive hereby understands, acknowledges and agrees that, by virtue of his or her position with the Bank, the Executive has and will have advantageous familiarity and personal contacts with the employees of the Bank and has and will have advantageous familiarity with the business, operations and affairs of the Bank. In addition, the Executive understands, acknowledges and agrees that the business of the Bank is highly competitive. Accordingly, at all times while the Executive is employed by the Bank and for a twelve-month period following Termination of Service, the Executive will not, directly or indirectly, or individually or together with any other Person, as owner, shareholder, investor, member, partner, proprietor, principal, director, officer, Executive, manager,

agent, representative, independent contractor, consultant or otherwise induce, request or attempt to influence any Bank employee who was employed by the Bank during the twelve-month period prior to Termination of Service, to terminate his or her employment with the Bank. In addition, the Executive agrees that for a period of twelve months following the Executive's Termination of Service, Executive will not hire any Bank employee who was employed by the Bank during the twelve-month period prior to the Executive's Termination of Service.

4. **Periods of Noncompliance and Reasonableness of Periods**. The restrictions and covenants contained in Section 3 will not run during all periods of noncompliance and will apply during the Term of this Agreement and for the full periods specified in Section 3. The Bank and the Executive understand, acknowledge and agree that the restrictions and covenants contained in Section 3 are reasonable in view of the nature of the business in which the Bank is engaged, the Executive's position with the Bank and the Executive's advantageous knowledge and familiarity with, the Bank's employees, business, operations, affairs and customers.

The Bank's obligation to pay an award to the Executive pursuant to the Federal Home Loan Bank of Indianapolis Incentive Plan will immediately terminate in the event the Executive breaches any of the provisions of Section 1 or 3 and all outstanding awards will be forfeited. Notwithstanding the foregoing:

(a) the Executive's covenants set forth in Sections 1 or 3 will continue in full force and effect and be binding upon the Executive;
(b) the Bank will be entitled to the remedies specified in Section 6; and
(c) the Bank will be entitled to its damages, costs and expenses (including, without limitation, reasonable attorneys' fees and expenses) resulting from or relating to the successful prosecution of the Executive's breach of any of the provisions of Section 1 or 3.

5. **Survival of Certain Provisions**. Upon any termination of the Executive's employment with the Bank, the Executive and the Bank hereby expressly agree that the provisions of Sections 1, 3, 4 and 6 will continue to be in full force and effect and binding upon the Executive and the Bank in accordance with the applicable respective provisions of such Sections.

6. **Remedies**. The Executive agrees that the Bank will suffer irreparable damage and injury and will not have an adequate remedy at law in the event of any actual, threatened or attempted breach by the Executive of any provision of Section 1 or 3. Accordingly, in the event of a threatened, attempted or actual breach by the Executive of any provision of Section 1 or 3, in addition to all other remedies to which the Bank is entitled at law, in equity or otherwise, the Bank may be entitled to a temporary restraining order and a permanent injunction or a decree of specific performance of any provision of Section 1 or 3. The foregoing remedies will not be deemed to be the exclusive rights or remedies of the Bank for any breach of or noncompliance with this Agreement by the Executive but will be in addition to all other rights and remedies available to the Bank at law, in equity or otherwise.

7. **Severability**. In case any one or more of the provisions (or any portion thereof) contained herein will, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability will not affect any other provision of this Agreement, but this Agreement will be construed as if such invalid, illegal or unenforceable provision or provisions (or portion thereof) had never been contained herein. If any provision of this Agreement will be determined by a court of competent jurisdiction to be unenforceable because of the provision's scope, duration or other factor, then such provision will be considered divisible and the court making such determination will have the power to reduce or limit (but not increase or make greater) such scope, duration or other factor or to reform (but

not increase or make greater) such provision to make it enforceable to the maximum extent permitted by law, and such provision will then be enforceable against the appropriate party hereto in its reformed, reduced or limited form; provided, however, that a provision will be enforceable in its reformed, reduced or limited form only in the particular jurisdiction in which a court of competent jurisdiction makes such determination.

8. **Entire Agreement**. This Agreement sets forth the entire understanding of the parties hereto with respect to its subject matter, merges and supersedes all prior and contemporaneous understandings with respect to its subject matter, and may not be waived or modified, in whole or in part, except in writing signed by each of the parties hereto. No waiver of any provision of this Agreement in any instance will be deemed to be a waiver of the same or any other provision in any other instance. The recitals set forth above are incorporated herein by this reference.

9. **Effect and Modification**. No statement or promise, except as set forth herein, has been made with respect to the subject matter of this Agreement. No modification or amendment will be effective unless in writing and signed by the Executive and an officer of the Bank (other than the Executive).

10. **Non-Waiver**. The Bank's or the Executive's failure or refusal to enforce all or any part of, or the Bank's or the Executive's waiver of any breach of this Agreement, will not be a waiver of the Bank's or the Executive's continuing or subsequent rights under this Agreement, nor will such failure or refusal or waiver have any effect on the subsequent enforceability of this Agreement.

11. **Non-Assignability**. This Agreement contemplates that the Executive will personally provide the services described herein, and accordingly, the Executive may not assign the Executive's rights or obligations hereunder, whether by operation of law or otherwise, in whole or in part, without the prior written consent of the Bank.

12. **Notice**. Any notice, request, instruction or other document to be given hereunder to any party will be in writing and delivered by hand, telegram, registered or certified United States mail return receipt requested, or other form of receipted delivery, with all expenses of delivery prepaid, as follows:

If to the Executive: _____
_____
_____
_____

If to the Bank: Federal Home Loan Bank of Indianapolis
c/o General Counsel
8250 Woodfield Crossing Boulevard
Indianapolis, IN 46240

13. **Governing Law**. This Agreement is being delivered in and will be governed by the laws of the State of Indiana without regard to the choice of law principles thereof. Any dispute regarding this Agreement will be brought in any Indiana state or federal court having jurisdiction in the matter and located in Marion County, Indiana, and the Executive expressly consents to the jurisdiction of such courts.

14. **Prior Agreements**. The Executive represents and warrants to the Bank that the Executive is not a party to or otherwise bound by any agreement that would restrict in any way the performance by

the Executive of the Executive's duties, services and obligations under this Agreement, that the Executive has disclosed to the Bank all employment type agreements to which the Executive has been bound, including without limitation employment agreements, consulting agreements, non-compete agreements or covenants, confidentiality or non-disclosure agreements or covenants, and intellectual property assignment agreements, and that the Bank will not have any liability to any third party arising out of the Executive entering into this Agreement or performing hereunder.

15. **Effect of Headings**. The descriptive headings of the Sections and, where applicable, subsections, of this Agreement are inserted for convenience and identification only and do not constitute a part of this Agreement for purposes of interpretation.

16. **Counterparts**. This Agreement may be executed in two or more counterparts, each of which will be deemed an original, but all of which collectively will constitute one and the same instrument.

17. **Miscellaneous**. Capitalized terms not otherwise defined herein shall have the meanings ascribed to them in the Plan.

IN WITNESS WHEREOF, the Bank, by its officer thereunder duly authorized, and the Executive, have caused this Non-Competition, Non-Solicitation and Non-Disclosure Agreement to be executed as of the day and year first above written.

FEDERAL HOME LOAN BANK OF INDIANAPOLIS	**EXECUTIVE**
By: _____	_____
Its: _____	
By: _____	
Its: _____	

EXHIBIT 24

POWER OF ATTORNEY
ANNUAL REPORT ON FORM 10-K FOR FISCAL 2018

KNOW ALL PERSONS BY THESE PRESENTS that each of the undersigned Directors of the Federal Home Loan Bank of Indianapolis (the "Company") hereby constitutes and appoints Cindy L. Konich (Principal Executive Officer), Gregory L. Teare (Principal Financial Officer) and Kenneth L. Short (Principal Accounting Officer), or any of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and revocation, to execute any and all instruments that said attorneys-in-fact and agents, or any of them, may deem necessary or advisable or may be required to enable the Company to comply with the Securities Exchange Act of 1934, as amended (the "1934 Act"), and any rules, regulations or requirements of the Securities and Exchange Commission (the "Commission") in respect thereof, in connection with the filing under the 1934 Act of the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (the "2018 Annual Report"), including specifically, but without limiting the generality of the foregoing, power and authority to sign the name of each of the undersigned in the capacity of Director of the Company to the 2018 Annual Report to be filed with the Commission and to any instruments or documents filed as part of or in connection with the 2018 Annual Report, including any amendments or supplements thereto; and granting unto each of said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as the undersigned might or could do in person, and each of the undersigned hereby ratifies and confirms all that said attorneys-in-fact and agents, or any of them, shall do or cause to be done by virtue hereof.

This power of attorney will be governed by and construed in accordance with the laws of the State of Indiana. This power of attorney will remain in effect until revoked in writing by a resolution of the Company's Board of Directors. The execution of this power of attorney is not intended to, and does not, revoke any prior powers of attorney.

IN WITNESS WHEREOF, each of the undersigned has subscribed these presents this 25th day of January, 2019.

FEDERAL HOME LOAN BANK OF INDIANAPOLIS

/s/ DAN L. MOORE
Dan L. Moore, Chair

/s/ JAMES L. LOGUE III
James L. Logue III, Vice Chair

/s/ JONATHAN P. BRADFORD
Jonathan P. Bradford

/s/ RONALD BROWN
Ronald Brown

/s/ CHARLOTTE C. DECKER
Charlotte C. Decker

/s/ ROBERT M. FISHER
Robert M. Fisher

/s/ KAREN F. GREGERSON
Karen F. Gregerson

/s/ MICHAEL J. HANNIGAN, JR.
Michael J. Hannigan, Jr.

/s/ JEFFREY G. JACKSON
Jeffrey G. Jackson

/s/ CARL E. LIEDHOLM
Carl E. Liedholm

/s/ ROBERT D. LONG
Robert D. Long

/s/ MICHAEL J. MANICA
Michael J. Manica

/s/ LARRY W. MYERS
Larry W. Myers

/s/ CHRISTINE COADY NARAYANAN
Christine Coady Narayanan

/s/ JOHN L. SKIBSKI
John L. Skibski

/s/ LARRY A. SWANK
Larry A. Swank

/s/ RYAN M. WARNER
Ryan M. Warner

Exhibit 31.1

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Cindy L. Konich, certify that:

1. I have reviewed this annual report on Form 10-K of the Federal Home Loan Bank of Indianapolis;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 8, 2019

By: /s/ CINDY L. KONICH

Name: Cindy L. Konich

Title: President - Chief Executive Officer

Exhibit 31.2

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Gregory L. Teare, certify that:

1. I have reviewed this annual report on Form 10-K of the Federal Home Loan Bank of Indianapolis;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 8, 2019

By: /s/ GREGORY L. TEARE

Name: Gregory L. Teare

Title: Executive Vice President - Chief Financial Officer

Exhibit 31.3

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, K. Lowell Short, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of the Federal Home Loan Bank of Indianapolis;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 8, 2019

By: /s/ K. LOWELL SHORT, JR.

Name: K. Lowell Short, Jr.

Title: Senior Vice President - Chief Accounting Officer

Exhibit 32

SECTION 1350 CERTIFICATIONS

In connection with the annual report of the Federal Home Loan Bank of Indianapolis ("Bank") on Form 10-K for the period ended December 31, 2018, as filed with the Securities and Exchange Commission on the date hereof ("Report"), each of the undersigned officers certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Bank.

By: /s/ CINDY L. KONICH
Cindy L. Konich
President - Chief Executive Officer
March 8, 2019

By: /s/ GREGORY L. TEARE
Gregory L. Teare
Executive Vice President - Chief Financial Officer
March 8, 2019

By: /s/ K. LOWELL SHORT, JR.
K. Lowell Short, Jr.
Senior Vice President - Chief Accounting Officer
March 8, 2019