

INFORMATION MEMORANDUM

Federal Home Loan Banks

Consolidated Bonds and Consolidated Discount Notes (with maturities of one day or longer)



The terms “we,” “us” and “our” as used throughout this Information Memorandum mean the Federal Home Loan Banks (the “FHLBanks”), acting by and through the Office of Finance, a joint office of the FHLBanks (together with its successors and assigns, the “Office of Finance”).

We may offer consolidated bonds (the “Bonds”) and consolidated discount notes (the “Discount Notes” and, together with the Bonds, the “Securities”) pursuant to this Information Memorandum (as defined herein) and, in the case of the Bonds, a Pricing Supplement or an Offering Notice (each, a “Supplement”) that will contain the specific terms of, and pricing details for, each particular issue (sometimes referred to as “series”) of Bonds. The Securities will constitute joint and several unsecured general obligations of the FHLBanks. No person other than the FHLBanks will have any obligations or liability with respect to the Securities.

The Securities will be denominated in U.S. dollars or as may otherwise be specified by us at the time of issue in the applicable Supplement (the “Specified Currencies”). There is no specific limit on the aggregate principal amount of Securities that we may issue. The Securities will have maturities of one day or longer from the date of their original issuance. The Bonds will bear interest as set forth in the applicable Supplement. Principal payments on the Bonds may be made periodically or only at maturity. Any index or formula used to determine the principal or interest payable on the Bonds will be set forth in the applicable Supplement. The Bonds may be subject to redemption at the option of the FHLBanks or pursuant to one or more indices or formulae set forth in the applicable Supplement, and the Bonds may be subject to redemption at the option of the registered holders of the Bonds. Certain Bonds may be separated into (i) each future interest payment due on or prior to maturity or, if the Bonds are subject to redemption or principal repayment prior to maturity, the first date on which the Bonds are subject to redemption or repayment (in either case, the “Cut-off Date”) (each, an “Interest Component”) and (ii) the principal payment plus any interest payments due after the Cut-off Date (the “Principal Component”).

The Securities will be purchased for resale by Dealers (as defined in this Information Memorandum) acting as principal, whether individually or in a syndicate, or placed by Dealers acting on an agency basis. The Securities may also be sold directly by us to investors to the extent permitted by applicable law or directive in the relevant jurisdiction. Additional Securities may be issued as part of an existing issue of Securities.

Unless otherwise specified by us (in the applicable Supplement in the case of Bonds), the Securities will not be listed on any securities exchange or quotation system.

The Securities will be (i) U.S. dollar denominated Securities issued in book-entry form and cleared and settled through the book-entry system of the Federal Reserve Banks (including the Fedwire[®] Securities Service (or any successor thereto) of the Federal Reserve Banks) (the “Fed Book-Entry System”), or (ii) Bonds issued in definitive registered form or in global registered form and cleared and settled through the clearing systems operated by The Depository Trust Company (“DTC”), Euroclear Bank SA/NV, as operator of the Euroclear System (“Euroclear”), Clearstream Banking S.A. (“Clearstream”) or such other or additional clearing systems as specified in the applicable Supplement. All Discount Notes will be issued on the Fed Book-Entry System. See “FORM OF THE SECURITIES” and “CLEARANCE AND SETTLEMENT.”

You should read this Information Memorandum in conjunction with any applicable Supplement and with the Financial Reports (as defined in this Information Memorandum) incorporated by reference into this Information Memorandum. See “AVAILABILITY OF INFORMATION AND INCORPORATION BY REFERENCE.”

The Securities may not be suitable investments for all investors. The Securities are intended for purchase only by investors capable of understanding the risks associated with an investment in the Securities. You should not purchase any Securities unless you understand and are able to bear the price, market, liquidity, structure,

redemption and other risks associated with an investment in the Securities. You should consult your own financial and legal advisors about the risks associated with an investment in the Securities, the appropriate tools to analyze that investment, and the suitability of that investment in your particular circumstances. See “CERTAIN INVESTMENT CONSIDERATIONS” beginning on page 8 for a discussion of certain risks that should be considered in connection with an investment in the Securities.

The Securities are not required to be registered under the U.S. Securities Act of 1933, as amended. Accordingly, no registration statement with respect to the Securities has been filed with the U.S. Securities and Exchange Commission (the “SEC”). Neither the SEC nor any state securities commission has approved or disapproved of the Securities or passed upon the accuracy or adequacy of this Information Memorandum. Any representation to the contrary is a criminal offense in the United States.

THE SECURITIES ARE NOT OBLIGATIONS OF THE UNITED STATES AND ARE NOT GUARANTEED BY THE UNITED STATES.

The date of this Information Memorandum is September 30, 2019.

References to “this Information Memorandum” mean this document, any amendments or supplements (other than Supplements) to this Information Memorandum and any documents incorporated by reference into this document, except, and to the extent, that any such document is superseded or modified by any subsequent amendment or supplement to, or document incorporated by reference into, this Information Memorandum.

This Information Memorandum relates to the Securities and not to any other securities of the FHLBanks that have been or will be issued by or on behalf of the FHLBanks. This Information Memorandum may only be used for the purposes for which it has been published.

Neither this Information Memorandum nor any applicable Supplement describes all the risks of an investment in Securities denominated in, or the payment of principal of or interest on which is related to the value of, a foreign currency or a currency unit, Securities with interest or principal determined by reference to one or more interest rates, exchange rates or other indices or formulae, or Securities that include redemption features, caps, floors or other rights or options. There is no assurance that a secondary market for any of the Securities will develop or that, if it develops, it will continue. Any secondary market for a particular issue of Bonds may be adversely affected by the partial redemption of that issue of Bonds or the separation of Bonds into Interest Components and Principal Components. Consequently, you may not be able to sell your Securities readily or at prices that will enable you to realize a desired return. See “PLAN OF DISTRIBUTION” and “CERTAIN INVESTMENT CONSIDERATIONS.”

None of the Office of Finance, any of the FHLBanks or any of the Dealers has authorized any person to give any information or to make any representation not contained in this Information Memorandum or any applicable Supplement, and any information or representation not contained in this Information Memorandum or in the applicable Supplement must not be relied on as having been authorized by or on behalf of the Office of Finance, any of the FHLBanks or any of the Dealers. The delivery of this Information Memorandum or the applicable Supplement at any time does not imply that the information contained in this Information Memorandum or the applicable Supplement, as the case may be, is correct at any time subsequent to their respective dates or, if later, the dates of the documents incorporated by reference into this Information Memorandum.

Neither this Information Memorandum nor any Supplement constitutes an offer of, or an invitation by or on behalf of, the Office of Finance, the FHLBanks or the Dealers to subscribe for or purchase any of the Securities. The distribution of this Information Memorandum or any part hereof and any Supplement and the offer, sale and delivery of any of the Securities may be restricted by law in certain jurisdictions. Persons into whose possession this Information Memorandum or any Supplement comes are required by the Office of Finance, the FHLBanks and the Dealers to inform themselves about and to observe any such restrictions. See “PLAN OF DISTRIBUTION.”

Notice to Prospective Investors in the European Economic Area

Neither this Information Memorandum nor any Supplement is a prospectus for the purposes of the European Union’s Regulation (EU) 2017/1129 (the “Prospectus Regulation”).

PROHIBITION OF SALES TO EEA RETAIL INVESTORS — The Securities are not intended to, and should not, be offered, sold or otherwise made available to any retail investor in the European Economic Area (the “EEA”). For these purposes, a “retail investor” means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); or (ii) a customer within the meaning of Directive (EU) 2016/97 (the “Insurance Distribution Directive”), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in the Prospectus Regulation (a “Qualified Investor”).

Consequently, no key information document required by Regulation (EU) No 1286/2014, as amended (the “PRIIPs Regulation”), for offering or selling the Securities or otherwise making them available to retail investors in the EEA has been prepared and, therefore, offering or selling the Securities or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

This Information Memorandum and any applicable Supplement have been prepared on the basis that any offer of Securities in any member state of the EEA will only be made to a Qualified Investor. Accordingly, any person making or intending to make an offer in that member state of Securities that are the subject of an offering contemplated in this

Information Memorandum and any applicable Supplement may only do so with respect to Qualified Investors. Neither we nor any of the Dealers has authorized, nor do we or any of them authorize, the making of any offer of Securities other than to Qualified Investors.

MiFID II product governance / target market – Any applicable Supplement in respect of any Securities may include a legend entitled “MiFID II Product Governance” that will outline the target market assessment in respect of the Securities and which channels for distribution of the Securities are appropriate. Any person subsequently offering, selling or recommending the Securities (a “distributor”) should take into consideration the target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Securities (by either adopting or refining the target market assessment) and determining appropriate distribution channels. Any relevant Dealer will make a determination in relation to each issue of Securities about whether, for the purpose of the MiFID Product Governance rules under EU Delegated Directive 2017/593 (the “MiFID Product Governance Rules”), such Dealer subscribing for any Securities is a manufacturer in respect of such Securities, but otherwise neither the Dealers nor any of their respective affiliates will be a manufacturer for the purpose of the MiFID Product Governance Rules. We make no representation or warranty as to any manufacturer’s or distributor’s compliance with the MiFID Product Governance Rules.

Notice to Prospective Investors in the United Kingdom

The communication of this Information Memorandum, any applicable Supplement and any other document or materials relating to any Securities offered hereby is not being made, and such documents and/or materials have not been approved, by an authorized person for the purposes of section 21 of the United Kingdom’s Financial Services and Markets Act 2000, as amended (the “FSMA”). Accordingly, such documents and/or materials are not being distributed to, and must not be passed on to, the general public in the United Kingdom. The communication of such documents and/or materials as a financial promotion is only being made to those persons in the United Kingdom that have professional experience in matters relating to investments and that fall within the definition of investment professionals (as defined in Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the “Financial Promotion Order”), or that fall within Article 49(2)(a) to (d) of the Financial Promotion Order, or that are any other persons to whom it may otherwise lawfully be made under the Financial Promotion Order (all such persons together being referred to as “relevant persons”). In the United Kingdom, the Securities offered hereby are only available to, and any investment or investment activity to which this Information Memorandum and any applicable Supplement relate will be engaged in only with, relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this Information Memorandum or any applicable Supplement or any of their contents or any information incorporated therein by reference.

In connection with any issue of Securities, any Dealer or Dealers (if any), including one(s) disclosed as stabilizing manager(s) (or persons acting on behalf of any stabilizing manager(s)) in the applicable Supplement, may over-allot or effect transactions that stabilize or maintain the market price of the Securities of such issue at a level that might not otherwise prevail. However, there is no assurance that any Dealer, including the stabilizing manager(s) (or persons acting on behalf of any stabilizing manager(s)), will undertake stabilization action. In addition, such stabilization, if commenced, may be discontinued without notice at any time.

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AVAILABILITY OF INFORMATION AND INCORPORATION BY REFERENCE

Availability of Information

The Office of Finance publishes annually a combined financial report of the FHLBanks (the “Annual Combined Financial Report”) that describes, on a combined basis, the annual financial results of the FHLBanks and contains financial and other information about the FHLBanks and the Federal Home Loan Bank System (the “FHLBank System”), including relevant audited combined annual financial statements of the FHLBanks. The Office of Finance also publishes quarterly combined financial reports of the FHLBanks (each, a “Quarterly Combined Financial Report” and, together with the Annual Combined Financial Report, the “Financial Reports”) that describe, on a combined basis, the quarterly financial results of the FHLBanks and contain financial and other information about the FHLBanks and the FHLBank System, including relevant unaudited combined quarterly financial statements of the FHLBanks.

Upon request to the Office of Finance by phone at (703) 467-3600, the FHLBanks will provide, without charge, copies of the Financial Reports incorporated by reference into this Information Memorandum. Those Financial Reports are also available on the web site of the Office of Finance at www.fhllb-of.com.

We will prepare, in respect of each particular issue of Bonds, a Supplement that will contain the terms of, and pricing details for, that issue of Bonds and such other information as we consider necessary or appropriate. You should read each applicable Supplement together with this Information Memorandum. You may obtain copies of the applicable Supplement for an issue of Bonds from the applicable Dealers for that issue of Bonds. A form of Pricing Supplement has been included as Exhibit A to this Information Memorandum and a form of Offering Notice has been included as Exhibit B to this Information Memorandum. The applicable Supplement for an issue of Bonds may differ from the form of Pricing Supplement or Offering Notice, as the case may be, included in this Information Memorandum. No Pricing Supplement or Offering Notice will be prepared for the Discount Notes.

Each of the FHLBanks provides information on its operations from time to time. In particular, each FHLBank prepares individual financial reports containing financial information relating to its financial condition and results of operations. Some of this information is made available on the respective web sites of the FHLBanks. Additional information and news about the FHLBanks (including information about the status of the Financial Reports) may be released by us. The web site of the Office of Finance is located at www.fhllb-of.com. This site also contains links to the web site of each individual FHLBank, which are provided solely as a matter of convenience. The contents of the web site of an individual FHLBank are not intended to be part of the web site of any other FHLBank or the Office of Finance.

Each FHLBank is subject to certain reporting requirements of the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”), and must file or furnish certain periodic reports and other information with the SEC. Each FHLBank prepares an annual financial report that is filed on Form 10-K, quarterly financial reports that are filed on Form 10-Q, and current reports that are filed or furnished on Form 8-K. The SEC maintains a web site at www.sec.gov that contains the periodic reports and other information filed or furnished by the FHLBanks with the SEC.

Unless otherwise specified by us (in the applicable Supplement in the case of Bonds), the Securities will not be listed on any securities exchange or quotation system. In the event any issue of Bonds is listed on the Euro MTF Market of the Luxembourg Stock Exchange, the Financial Reports, the Uniform Fiscal Agency Agreement, effective as of July 20, 2006 (as amended, supplemented or superseded from time to time, the “Fed Fiscal Agency Agreement”), between us and the Federal Reserve Bank of New York, as fiscal agent (the “U.S. Fiscal Agent”), the Global Agency Agreement, dated as of July 1, 1994 (as amended, supplemented or superseded from time to time, the “Global Agency Agreement”), between us and Citibank, N.A., London Branch, as Global Agent (and as successor to Morgan Guaranty Trust Company of New York, London Branch), or any successor or replacement global agent (the “Global Agent”), and any applicable Supplement for that issue of Bonds listed on the Euro MTF Market of the Luxembourg Stock

Exchange will be available free of charge, so long as any of those Bonds are outstanding, at the office of the listing agent in Luxembourg, which currently is as follows:

Banque Internationale à Luxembourg SA
69, Route d'Esch
L-2953 Luxembourg

The Legal Entity Identifier (“LEI”) of the Office of Finance, as agent for the FHLBanks, is 2549001DPIFGXC1TOL40, which is provided solely as a matter of convenience. Each of the FHLBanks also has its own LEI.

We are providing all of the web site addresses and the identification of available information above solely as a matter of convenience. These web site addresses (and any other web site addresses that we may refer to in this Information Memorandum) are not intended to be active links and their contents and the other available information are not a part of this Information Memorandum and are not intended to be incorporated by reference into this Information Memorandum. In addition, use of such web sites is subject to the terms and conditions described on the web sites.

Incorporation by Reference

We incorporate by reference into this Information Memorandum the most recent Annual Combined Financial Report, any subsequent Quarterly Combined Financial Reports, and any supplement to those reports specified by the Office of Finance as such. We may also incorporate by reference into this Information Memorandum any other document (including any press release), to the extent (but only to the extent) expressly specified by the Office of Finance as being so incorporated. The Financial Reports are published, and any other documents incorporated by reference into this Information Memorandum are expected to be published, on the web site of the Office of Finance at www.fhlf-of.com.

Any statements contained in this Information Memorandum or in a document incorporated by reference into this Information Memorandum shall be deemed to be modified or superseded for purposes of this Information Memorandum to the extent that a statement contained in this Information Memorandum or any other subsequently published document that is incorporated by reference into this Information Memorandum modifies or supersedes such statement. Any statement or document so modified or superseded shall not be deemed, except as so modified or superseded, to constitute part of this Information Memorandum. You should assume that the information appearing in this Information Memorandum is accurate only as of the date of this Information Memorandum and that information appearing in any documents incorporated by reference into this Information Memorandum is accurate only as of the respective dates of those documents. The business, financial condition and results of operations of the FHLBanks, individually or on a combined basis, may have changed since the date of this Information Memorandum or the respective dates of those documents incorporated by reference.

SUMMARY

The following Summary does not purport to be complete and is qualified in its entirety by the information in the remainder of this Information Memorandum (including any amendment or supplement hereto) and, in relation to the terms and conditions of any particular issue of Bonds, the applicable Supplement. You should refer to the remainder of this Information Memorandum (including any amendment or supplement hereto) and to any applicable Supplement for further information. With respect to any particular issue of Bonds, the description will be supplemented, modified or superseded, in whole or in part, by the applicable Supplement or by another amendment or supplement to this Information Memorandum. Unless otherwise specified, capitalized terms used but not defined in this Summary shall have the same meaning as those defined or used in “FORM OF THE SECURITIES” and/or “DESCRIPTION OF THE SECURITIES”.

Issuer The FHLBanks, acting by and through the Office of Finance.

Status of Securities The Securities will constitute the joint and several obligations of the FHLBanks ranking *pari passu*, without any preference among themselves, with all other unsecured and unsubordinated obligations of the FHLBanks. No person other than the FHLBanks will have any obligations or liability with respect to the Securities.

THE SECURITIES ARE NOT OBLIGATIONS OF THE UNITED STATES AND ARE NOT GUARANTEED BY THE UNITED STATES.

U.S. Fiscal Agent Federal Reserve Bank of New York.

Global Agent Citibank, N.A., London Branch (or any successor thereto or replacement thereof).

Specified Currencies Securities may be denominated in, and the principal of and interest on Securities may be paid in, U.S. dollars and other currencies or currency units that we determine. Government or monetary authorities may require that debt securities denominated in certain currencies or currency units have certain denominations or have minimum or maximum maturities.

Amount There is no specific limit on the aggregate principal amount of Securities that we may issue.

Maturities Unless otherwise specified in the applicable Supplement, Securities may be issued with maturities of one day or longer from the date of original issuance, or such minimum or maximum maturity as may be allowed or required from time to time by the relevant regulatory authority or any laws or regulations applicable to the relevant Specified Currency. Each Bond will mature on its Maturity Date as specified in the applicable Supplement, unless redeemed prior to the Maturity Date. Discount Notes may be issued with maturities of 365/366 days or less. The principal amount payable on a Security’s Maturity Date will either be a specified amount or an amount determined by reference to one or more interest rates, exchange rates or other indices or

	formulae, in each case as specified in this Information Memorandum or in the applicable Supplement.
Issue Price	Securities may be issued at their stated principal amounts (such a sale being at “par”) or at a discount or premium to par.
Method of Issue	Securities will be purchased for resale by Dealers acting as principal, whether individually or in a syndicate, or placed by Dealers acting on an agency basis. Securities may also be sold directly by us to investors to the extent permitted by applicable law or directive in the relevant jurisdiction. Additional Securities may be issued as part of an existing issue of Securities.
Types of Securities	The following are some of the types of Securities that we may offer.
Discount Notes	Discount Notes: <ul style="list-style-type: none"> • have maturities of 365/366 days or less; • are generally sold at a discount to their stated principal amounts, but may also be sold at par or at a premium to their stated principal amounts; and • are paid only on their Maturity Dates at 100% of their stated principal amounts.
Fixed Rate Bonds	Bonds that bear interest at a fixed rate or rates as specified in the applicable Supplement.
Variable Rate Bonds	Bonds that bear interest at a variable rate determined by reference to one or more interest rates, exchange rates or other indices or formulae: <ul style="list-style-type: none"> • plus or minus a Spread, if any; or • multiplied by a Multiplier, if any; or • both, <p>in each case as specified in the applicable Supplement.</p> <p>The interest rate on a Variable Rate Bond may vary in the same direction as changes in the applicable index or indices or in the opposite direction of those changes. Variable Rate Bonds may have Maximum Interest Rates, Minimum Interest Rates or both.</p>
Zero Coupon Bonds	Bonds that do not bear interest and may be issued at a discount to the amount payable on their Maturity Dates.
Amortizing Bonds	Bonds on which there are periodic payments of principal in amounts, on dates and at redemption prices all as specified in the applicable Supplement.

Step Rate Bonds	Bonds that bear interest at specified fixed or variable rates for specified periods as specified in the applicable Supplement.
Conversion Bonds	Bonds that bear interest at a fixed rate for one or more Interest Periods and at a variable rate for one or more other Interest Periods or Bonds that bear interest at a rate that the FHLBanks may elect to convert from a fixed rate to a variable rate or from a variable rate to a fixed rate.
Indexed Bonds	Bonds, including Amortizing Bonds, on which the principal or interest (or both) payable is determined with reference to: <ul style="list-style-type: none"> • the price or prices of specified stock indices; • the exchange rate of one or more currencies or currency units (including swap indices between currencies or currency units) relative to one or more other currencies or currency units; • other prices, indices or exchange rates; or • any other manner described in the applicable Supplement.
Range Bonds	Bonds that accrue interest during a particular Interest Period at a fixed or variable rate if a specific index is within a specified range during a designated period of time or at a particular point in time.
Redemption	Unless otherwise specified in the applicable Supplement, Bonds will not be subject to redemption prior to maturity. Bonds may be subject to redemption, in whole or in part, prior to maturity at the option of the FHLBanks and/or the registered holders or by reference to one or more interest rates, exchange rates or other indices or formulae on such dates, in such amounts and at such redemption prices as specified in the applicable Supplement.
No Acceleration Rights	The Securities will not contain any provisions permitting the acceleration of their maturity on the occurrence of any default or other event.
Tax Status	For United States federal income and estate tax purposes the Securities will be treated as debt obligations issued by United States corporations.
Form of Securities	Each issue of Securities will be issued in accordance with the Fed Fiscal Agency Agreement (such Securities being referred to as “Fed Book-Entry Securities”) or issued in accordance with the Global Agency Agreement (such Securities being referred to as “Registered Bonds”). Restrictions on forms of

	<p>Securities may apply in certain jurisdictions. Securities will not be issued in bearer form. See “FORM OF THE SECURITIES.”</p>
Eligibility for Stripping	<p>The applicable Supplement will indicate whether Bonds issued in accordance with the Fed Fiscal Agency Agreement (the “Fed Book-Entry Bonds”) will be eligible to be separated (“stripped”) into their separate Interest Components and Principal Components (each, a “Component” and such Bonds being referred to as “Eligible Bonds”) on the Fed Book-Entry System.</p>
Fed Book-Entry Securities	<p>Securities that are U.S. dollar denominated Securities issued in book-entry form and cleared and settled through the Fed Book-Entry System in accordance with the Fed Fiscal Agency Agreement.</p>
Registered Bonds	<p>Bonds issued in definitive registered form or in global registered form in accordance with the Global Agency Agreement and cleared and settled through the clearing systems operated by DTC, Euroclear, Clearstream or such other or additional clearing systems as specified in the applicable Supplement.</p>
Calculation Agent	<p>Unless otherwise specified in the applicable Supplement, the Office of Finance acts as Calculation Agent for both Fixed Rate Bonds and Variable Rate Bonds, who may delegate that function to another person or entity without notice to or consent of any holder of Securities. See “DESCRIPTION OF THE SECURITIES.”</p>
Denominations	<p>Bonds will be issued in minimum denominations and additional increments as specified in the applicable Supplement (except that Bonds, in any case, will be issued with minimum denominations and additional increments as may be allowed or required from time to time by the relevant regulatory authority or any laws or regulations applicable to the relevant Specified Currency). Discount Notes will be issued in minimum principal amounts at maturity of \$100,000 and in additional increments of \$1,000.</p>
Listing	<p>Unless otherwise specified by us (in the applicable Supplement in the case of Bonds), the Securities will not be listed on any securities exchange or quotation system.</p>
Governing Law	<p>The Securities will be governed by, and construed in accordance with, the federal laws of the United States. Insofar as there may be no applicable precedent under the federal laws of the United States, and insofar as the application of the laws of the State of New York would not frustrate the purposes of the Federal Home Loan Bank Act, as amended (12 U.S.C. §1421 <i>et. seq.</i>) (the “FHLBank Act”) or the Securities, the laws of the State of New York (without regard to conflict of law</p>

principles) shall be deemed to reflect the federal laws of the United States.

Selling Restrictions.....

There may be restrictions on the offering, sale and delivery of the Securities and the distribution of offering materials relating to the Securities. See “PLAN OF DISTRIBUTION.”

Clearance and Settlement.....

Depending on the terms of an issue of Securities and where they are offered, the Securities may clear and settle through one or more of the following:

- the Fed Book-Entry System;
- DTC;
- Euroclear;
- Clearstream; or
- any other designated clearing systems.

Unless specified in the applicable Supplement, Securities denominated and payable in U.S. dollars will clear and settle through the Fed Book-Entry System, if distributed within the United States, and through Euroclear and Clearstream, if distributed outside the United States. Unless otherwise specified in the applicable supplement, Bonds denominated and payable in a Specified Currency other than U.S. dollars will clear and settle through DTC, if distributed within the United States, and through Euroclear and Clearstream and, in certain cases, DTC, if distributed outside the United States. Bonds may also clear and settle through other or additional clearing systems as specified in the applicable Supplement.

CERTAIN INVESTMENT CONSIDERATIONS

Before investing in any of the Securities being offered by this Information Memorandum, you should carefully read and consider each of the investment considerations that we have described in this section, along with the risk factors relating to the business, financial condition, results of operations and prospects of the FHLBanks described in the Financial Reports incorporated by reference into this Information Memorandum, as well as all other information contained in and incorporated by reference into this Information Memorandum and contained in any applicable Supplement. The following section, the Financial Reports and these other information referred to above, however, do not describe all of the risks associated with an investment in the Securities. As a prospective investor, you should consult your own financial and legal advisors about the risks associated with an investment in the Securities, the appropriate tools to analyze the investment and the suitability of the investment in your particular circumstances. Words and expressions defined or used in “FORM OF THE SECURITIES” and/or “DESCRIPTION OF THE SECURITIES” will have the same meaning in this section.

If you are not a sophisticated investor with sufficient knowledge and experience in financial and business matters, you should not invest in the Securities.

You should have sufficient knowledge and experience in financial and business matters to evaluate the Securities, the merits and risks of investing in the Securities and the information contained in and incorporated by reference into this Information Memorandum applicable to the Securities. In addition, you should have sufficient knowledge to evaluate the effect the Securities that you purchase may have on your overall investment portfolio. You should not purchase any Securities unless you understand and have sufficient financial resources to bear the price, market, liquidity, structure, redemption and other risks associated with those Securities.

You should not purchase any Securities without sufficient experience and financial resources, relative to the potential risks, to manage investing in the Securities. Before purchasing any Securities, you should thoroughly understand the terms of those Securities, be familiar with the behavior of the relevant financial markets, and consider the possible effect that changes in economic, interest rate and other factors may have on your investment and your ability to bear the associated risks under a variety of scenarios. You should have knowledge of, and access to, appropriate analytical tools to analyze quantitatively the effect (or value) of any and all redemption, cap, floor, or other terms of a particular issue of Bonds, and the resulting effect upon the value of and return on the Bonds. Certain Securities are more complex and involve greater risks.

You should consider any legal restrictions that may apply to your investment in the Securities. Some investors are restricted from investments in securities of the type being offered by means of this Information Memorandum.

We strongly urge you to consult with a legal advisor to determine whether and to what extent the Securities constitute legal investments for you and whether and to what extent the Securities that you may purchase can be used as collateral for various types of borrowings. If you are a financial institution, you should consult your legal advisors or regulators to determine the appropriate treatment of the Securities that you may purchase under any applicable risk-based capital or similar rules.

If your investment activities are subject to legal investment laws and regulations or to review or regulation by certain authorities, you may be subject to restrictions on investments in certain types of debt securities, which may include some or all of the Securities. You should review and consider those restrictions before investing in the Securities. In addition, if you are subject to the regulatory jurisdiction of any government agency, you should review and consider the applicability of rules, regulations, guidelines and policy statements adopted by your regulators prior to investing in or pledging the Securities that you may purchase. These restrictions may change from time to time after you have acquired the Securities.

Certain Securities involve significant risks not associated with other investments.

Some of the Securities we may offer, including, but not limited to, Variable Rate Bonds, Amortizing Bonds, Step Rate Bonds, Conversion Bonds, Indexed Bonds and Range Bonds, may involve greater risks than conventional fixed-rate debt securities. These Bonds may have principal or interest payments that are determined, either directly or

inversely, by reference to one or more interest rates, exchange rates or other indices or formulae. These risks include the possibility that, among other things:

- the applicable index or indices may change significantly;
- changes in the applicable index or indices may not correlate with changes in interest rates or currencies generally or with changes in other indices;
- changes in the applicable index or indices will be magnified or diminished if the principal or interest formula contains a Spread or Multiplier;
- the applicable index or indices may be subject to a maximum or minimum interest rate or exchange rate or other limitations;
- the timing of changes in an applicable index or indices, or in the applicable Spread or Multiplier, may affect your actual yield, even if the average level is consistent with your expectations;
- two or more indices or formulae that you may expect to move in tandem or in some other relationship to each other may unexpectedly converge, diverge or otherwise not move as expected;
- currency devaluations may occur or monetary authorities may impose or modify currency exchange controls;
- the resulting interest rate may be less than the interest rate payable on conventional fixed-rate debt securities we issued for a similar term and, in some cases, may be as low as zero;
- you may receive repayments of principal at times other than you expect and the weighted average life of the Bonds that you purchase could be different than that expected by you;
- you may not receive interest payments or may receive substantially reduced interest payments for extended periods of time;
- you may lose all or a substantial portion of the principal (whether payable at maturity, upon redemption or repayment or otherwise);
- the value of Bonds with complex formulae or other terms may be volatile; and
- an index may become unavailable or be replaced by a substitute or successor index, or the underlying methodology of calculating the index may change.

These risks may depend on a number of interrelated factors over which we have no control, including financial, economic, regulatory and political developments. In the past, certain interest rates, exchange rates and other indices have been highly volatile. This volatility may continue in the future. Past fluctuations or relative stability in any particular interest rate, exchange rate or other rate or index do not necessarily indicate the fluctuations that may occur, or the level of stability that may exist, in the future. You should have knowledge of, and access to, appropriate analytical tools to evaluate quantitatively the effect (or value) of the particular terms of the Securities you are considering purchasing and the resulting effect upon the value of and return on those Securities.

In addition, some Bonds may be redeemed before their stated maturity at a time when reinvestment opportunities at a similar or higher rate may not be available to you. Any redemption right that the FHLBanks have may also adversely affect your ability to sell your Bonds when they are subject to redemption or as the optional redemption date or period approaches. To the extent any issue of Bonds is redeemed in part, that redemption may adversely affect the liquidity of the remaining Bonds of that issue.

Exchange rate risks and exchange controls may affect the timing or amount of interest and principal paid on the Securities.

As described in this Information Memorandum, certain Securities may be denominated or payable in one or more of a number of currencies. For investors whose financial activities are denominated principally in a currency (the “Investor’s Currency”) other than the Specified Currency, or where principal of or interest on the Securities is payable by reference to a Specified Currency index other than an index relating to the Investor’s Currency, an investment in the Securities entails significant risks that are not associated with a similar investment in a security denominated in that Investor’s Currency. These risks include, without limitation, the possibility of significant changes in the rate of exchange between the Specified Currency and the Investor’s Currency and the possibility of the imposition or modification of exchange controls by the country of the Specified Currency or the Investor’s Currency. These risks generally depend on economic and political events over which we have no control. In recent years, exchange rates have been highly volatile and this volatility may continue in the future. Fluctuations in any particular exchange rate that have occurred in the past are not necessarily indicative, however, of fluctuations that may occur in the future. If the value of the Investor’s Currency appreciates relative to the value of the applicable Specified Currency, the value of the payments on the Securities, the yield on the Securities, the value of payments on the Securities and the market value of the Securities all would decrease in terms of the Investor’s Currency. Depreciation in the value of the Investor’s Currency relative to the value of the Specified Currency would have the opposite effect. In addition, depending on the specific terms of a Bond denominated in, or the payment of which is related to the value of, one or more foreign currencies, changes in exchange rates relating to any of the currencies involved may result in a decrease in that Bond’s effective yield and, in certain circumstances, could result in a loss of all or a substantial portion of the principal of that Bond to the investor.

Exchange controls imposed by governmental authorities could affect exchange rates as well as the availability of a Specified Currency at the time of payment of principal of, or premium, if any, or interest on, any Securities payable in that Specified Currency. Even if there are no actual exchange controls, it is possible that the Specified Currency for any particular Securities may not be available when payments on those Securities are due.

Various factors could adversely affect the trading value and return of the Securities.

While Dealers have agreed to use reasonable efforts to support a secondary market in the Securities that they offer, they could limit or discontinue their secondary market activities at any time. Consequently:

- a secondary market for any of the Securities may not develop, particularly for those Securities that are especially sensitive to interest rate or market risks or are structured to meet the investment requirements of limited categories of investors; or
- if a secondary market develops, it may not be maintained or provide liquidity at all times.

As a result, you may not be able to sell the Securities that you own readily or at prices comparable to similar instruments with a developed secondary market. If you are seeking to purchase or sell very small or very large amounts of the Securities, you may not be able to do so at prices comparable to those available to other investors.

The market values of the Securities likely will fluctuate over time, perhaps significantly. These fluctuations could cause significant losses to your investment in the Securities, especially if you dispose of the Securities that you own prior to their respective maturities. The market prices of Securities issued at either a substantial discount (such as Zero Coupon Bonds) or a substantial premium (such as Securities with significantly above-market interest rates) from their principal amount will tend to fluctuate more in relation to general changes in interest rates than do the prices of instruments with comparable maturities that are not issued at a discount or premium.

A number of factors may affect any secondary market for, and the market value of, an issue of Securities, including, but not limited to:

- the creditworthiness of the FHLBank System and the FHLBanks as well as market perceptions thereof that may result from actual or potential business, financial, legislative, regulatory or other developments;

- the value, complexity and volatility of any applicable index and whether any applicable Spread is subject to change;
- the method of calculating principal or interest payments on the Securities;
- the remaining term to maturity of the Securities;
- any redemption or repayment features of the Securities;
- the outstanding amount of the Securities;
- the amount of other securities linked to any applicable index;
- the amount of Securities being sold in any secondary market from time to time;
- the stability of U.S. and non-U.S. currencies;
- any legal restrictions or tax treatment that limits demand for the Securities;
- the availability of, and demand for, comparable securities, including comparable U.S. Treasury or federal agency securities;
- our ability to convert the interest rate on the Securities from a fixed rate to a floating rate or from a floating rate to a fixed rate pursuant to their terms;
- the stripping of certain Securities into Interest Components and Principal Components;
- fluctuations in the spread of the Securities to comparable U.S. Treasury securities or other benchmarks; and
- the level, direction and volatility of market interest rates generally.

You should not purchase any Securities unless you understand and can bear the risks that you may not be able to resell them readily, that their value will fluctuate over time and that these fluctuations may be significant and cause substantial losses to you. Illiquidity may have a severely adverse effect on the market values of the Securities. The risks of limited liquidity and price volatility are generally greater for Securities that are:

- especially sensitive to interest rate, currency or market risks;
- designed for specific investment objectives or strategies;
- structured to meet the investment requirements of limited categories of investors; or
- not held until maturity.

Our ability to convert Conversion Bonds from a fixed rate to a floating rate, or from a floating rate to a fixed rate, may adversely affect your investment return on those Bonds.

Some Conversion Bonds may give the FHLBanks the ability to convert the Bonds from a fixed rate to a floating rate, or from a floating rate to a fixed rate, at the FHLBanks' option, subject to certain conditions. The FHLBanks' ability to convert the interest rate will affect the secondary market and the market value of the Bonds since the FHLBanks may convert the rate when it is likely to lower their overall cost of borrowing and reduce your investment return on the Bonds. If the FHLBanks convert the Bonds from a fixed rate to a floating rate, the Spread above or below the applicable index, if any, may be less favorable than the prevailing spreads on conventional Variable Rate Bonds tied to the same index. In addition, the new floating rate at any time may be lower than the rates on other Variable Rate Bonds. If the FHLBanks convert the Bonds from a floating rate to a fixed rate, the new fixed rate may be lower than the prevailing rates on other Fixed Rate Bonds.

The market for Eligible Bonds may be less liquid.

Some issues of Securities will be Eligible Bonds, which are eligible to be stripped into Interest Components and Principal Components. The secondary market, if any, for the Components may be more limited and have less liquidity than the secondary market for Securities of the same issue that have not been stripped. The liquidity of Eligible Bonds also may be reduced if a significant portion of those Eligible Bonds are stripped. See “DESCRIPTION OF THE SECURITIES — Eligibility for Stripping” for more information on stripping.

Credit ratings are only indicative of a rating agency’s evaluation of the likelihood of timely payment of the principal of or interest on the Securities.

Any credit rating assigned to the Securities only reflects a particular rating agency’s evaluation of the probability that the FHLBanks will default on the Securities. However, a credit rating does not reflect the potential effect of all risks associated with an investment in the Securities, including, without limitation, the price, market, liquidity, structure, redemption and other risks associated with the Securities. A security rating is not a recommendation to buy, sell or hold securities, it may be subject to revision or withdrawal at any time by the assigning rating organization, and each rating should be evaluated independent of any other rating.

Rating agencies may from time to time change a rating or outlook or issue negative reports. Investors should not take the historical or current ratings of the FHLBanks and their Securities as an indication of future ratings for the FHLBanks and their Securities. As the FHLBanks are jointly and severally liable for the Securities, negative developments at any FHLBank may affect these credit ratings or result in the issuance of a negative report regardless of the financial condition and results of operations of the other FHLBanks. In addition, because of the FHLBanks’ status as government-sponsored enterprises (“GSEs”), the credit ratings of the FHLBank System, the FHLBanks and the Securities are directly influenced by the sovereign credit rating of the United States. For example, downgrades to the U.S. sovereign credit rating or outlook may occur if the U.S. Government fails to adequately address, based on the credit rating agencies’ criteria, its fiscal budget deficit or statutory debt limits. As a result, if the U.S. sovereign credit ratings or outlook were downgraded, similar downgrades in the credit ratings or outlook of the FHLBanks and the Securities would most likely occur, even though the Securities are not obligations of, or guaranteed by, the United States.

Judgments in U.S. courts relating to an action based on the Securities may be granted only in U.S. dollars.

Courts in the United States generally would grant judgment relating to an action based on the Securities only in U.S. dollars, and the date used to determine the rate of conversion of foreign currencies into U.S. dollars will depend on various factors, including which court rendered judgment. For example, the Judiciary Law of the State of New York provides that a New York State court would be required to enter judgment in the Specified Currency, and that judgment would then presently be converted into U.S. dollars at the rate of exchange prevailing on the date judgment was rendered.

The Financial Conduct Authority will no longer persuade or compel banks to submit rates for the calculation of LIBOR after 2021 and the value of LIBOR-based Bonds may be adversely affected.

In July 2017, the United Kingdom’s Financial Conduct Authority (the “FCA”), which regulates LIBOR, announced that it will no longer persuade or compel banks to submit rates for the calculation of LIBOR after 2021. The FCA’s announcement indicates that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. It is impossible to predict whether and to what extent banks will continue to provide LIBOR submissions to the LIBOR administrator, whether LIBOR rates will cease to be published or supported before or after 2021, or whether any additional reforms to LIBOR may be enacted in the United Kingdom or elsewhere. In addition, it is impossible to predict the effect that the FCA’s announcement or any discontinuance or modification will have on any LIBOR rate or your investment in LIBOR-based Bonds.

Uncertainty as to the nature of potential changes to LIBOR, alternative reference rates that may replace LIBOR, or other reforms may adversely affect the trading market for LIBOR-based Bonds. In addition, any changes announced by the FCA, the ICE Benchmark Administration Limited (the current LIBOR administrator) or any other successor governance or oversight body, or future changes adopted by those bodies in the method pursuant to which LIBOR rates are determined, may result in a sudden or prolonged increase or decrease in reported LIBOR rates. In the United

States, efforts to identify a set of alternative reference interest rates include proposals from the Alternative Reference Rates Committee (the “ARRC”) convened by the Board of Governors of the Federal Reserve System (the “Federal Reserve Board”) and the Federal Reserve Bank of New York. The ARRC has proposed the Secured Overnight Financing Rate (“SOFR”) as its recommended alternative to U.S. dollar LIBOR. At this time, it is not possible to predict the effect of any of these changes, any establishment of alternative reference rates or any other reforms to LIBOR that may be enacted in the United Kingdom, the United States or elsewhere. Reform of, or the replacement or disappearance of, LIBOR and proposed regulation of LIBOR and other “benchmarks” may adversely affect the value and return of LIBOR-based Bonds.

Furthermore, there is no assurance that LIBOR will continue to be accepted or used by the markets generally or by any issuers, investors or counterparties at any time (even if LIBOR continues to be available). For instance, in September 2019, the Federal Housing Finance Agency (the “FHFA”) issued a supervisory letter to the FHLBanks and the Office of Finance relating to their planning for the expected LIBOR phase-out. Under the supervisory letter, with limited exceptions, the FHLBanks should, by December 31, 2019, stop purchasing investments that reference LIBOR and mature after December 31, 2021 and should, by March 31, 2020, no longer enter into new financial assets, liabilities and derivatives that reference LIBOR and mature after December 31, 2021 for all product types other than investments. To the extent the use of LIBOR by us or by the markets generally declines significantly or ceases at any time (whether due to regulatory or supervisory expectations, prudent risk management, lack of investor acceptance or otherwise), the liquidity of LIBOR-based Bonds may be materially adversely affected. If that occurs, investors in LIBOR-based Bonds may not be able to sell those Bonds at all or may not be able to sell those Bonds at prices that will provide them with a yield comparable to similar investments that have a liquid secondary market, and may consequently suffer from increased pricing volatility and market risk. In addition, if the use of LIBOR in the derivatives market declines significantly or ceases at any time, the opportunity to hedge exposure to the interest rate on LIBOR-based Bonds through swaps, futures, options or other listed or over-the-counter derivative instruments linked to LIBOR may be materially limited or unavailable.

The Reference Rate on LIBOR-based Bonds will be determined as described in the sections entitled “DESCRIPTION OF THE SECURITIES — Determination of Reference Rate” and “Exhibit C — Selected Reference Rates — (ii) LIBOR” in this Information Memorandum. If the Calculation Agent determines that a Benchmark Transition Event and its related Benchmark Replacement Date (each as defined in the section entitled “Exhibit C — Selected Reference Rates — (ii) LIBOR”) have occurred with respect to LIBOR, then a Benchmark Replacement (as defined in the section entitled “Exhibit C — Selected Reference Rates — (ii) LIBOR”) will be selected by the Calculation Agent in accordance with the benchmark transition provisions described in the section entitled “Exhibit C — Selected Reference Rates — (ii) LIBOR”. The Benchmark Replacements specified in Exhibit C include Term SOFR (as defined in the section entitled “Exhibit C — Selected Reference Rates — (ii) LIBOR”), a forward-looking term rate that will be based on SOFR. Term SOFR is currently being developed under the sponsorship of the Federal Reserve Bank of New York, and there is no assurance that the development of Term SOFR will be completed. If a Benchmark Transition Event and its related Benchmark Replacement Date occur with respect to LIBOR and, at that time, a form of Term SOFR has not been selected or recommended by the Relevant Governmental Body (as defined in the section entitled “Exhibit C — Selected Reference Rates — (ii) LIBOR”), then the next-available Benchmark Replacement under the benchmark transition provisions will be used to determine the amount of interest payable on LIBOR-based Bonds for the next applicable interest period and all subsequent interest periods (unless a Benchmark Transition Event and its related Benchmark Replacement Date occur with respect to that next-available Benchmark Replacement).

The selection of a Benchmark Replacement, and any decisions, determinations or elections made by the Calculation Agent (or, to the extent the Calculation Agent fails to make those decisions, determinations or elections as required, by us) in connection with implementing a Benchmark Replacement with respect to LIBOR-based Bonds in accordance with these benchmark transition provisions may result in interest rates and/or payments that are higher or lower than, or that do not otherwise correlate over time with, the interest rates and/or payments that would have been associated with those LIBOR-based Bonds if LIBOR continued to be available, which may adversely affect the value of and return on those LIBOR-based Bonds. Furthermore, to the extent the Office of Finance acts as the Calculation Agent or if we otherwise make decisions, determinations or elections in connection with implementing a Benchmark Replacement, the exercise of any discretion by the Office of Finance or us in connection with this implementation may present a potential conflict of interest.

Neither the Office of Finance nor any of the FHLBanks has any control over the determination, calculation or publication of SOFR.

The calculation of principal or interest payments due on the Securities may be determined by reference to SOFR. SOFR is published by the Federal Reserve Bank of New York and is intended to be a broad measure of the cost of borrowing cash overnight collateralized by U.S. Treasury securities. The Federal Reserve Bank of New York reports that SOFR includes all trades in the Broad General Collateral Rate, plus bilateral U.S. Treasury repurchase agreement transactions cleared through the delivery-versus-payment service offered by the Fixed Income Clearing Corporation (the “FICC”), a subsidiary of the Depository Trust and Clearing Corporation (“DTCC”). SOFR is filtered by the Federal Reserve Bank of New York to remove a portion of the foregoing transactions considered to be “specials”.

The Federal Reserve Bank of New York reports that SOFR is calculated as a volume-weighted median of transaction-level tri-party repo data collected from The Bank of New York Mellon as well as General Collateral Finance repurchase agreement transaction data and data on bilateral U.S. Treasury repurchase transactions cleared through the FICC’s delivery-versus-payment service. The Federal Reserve Bank of New York has noted that it obtains information from DTCC Solutions LLC, an affiliate of DTCC. The Federal Reserve Bank of New York has also noted on its publication page for SOFR that use of SOFR is subject to important limitations and disclaimers, including that the Federal Reserve Bank of New York may alter the methods of calculation, publication schedule, rate revision practices or availability of SOFR at any time without notice.

As SOFR is published by the Federal Reserve Bank of New York based on data received from other sources, neither the Office of Finance nor any of the FHLBanks has any control over its determination, calculation or publication. There can be no guarantee that SOFR will not be discontinued or fundamentally altered in a manner that is materially adverse to the interests of investors in SOFR-based Bonds. If the manner in which SOFR is calculated is changed, that change may result in a reduction of the amount of interest payable on SOFR-based Bonds and the trading prices of those Bonds. If the rate at which interest accrues on SOFR-based Bonds on any day declines to zero or becomes negative, no interest will be payable in respect of that day.

SOFR is a relatively new market index and may pose unique risks as compared to more established market indices.

The Federal Reserve Bank of New York began to publish SOFR in April 2018. The Federal Reserve Bank of New York has also published historical indicative SOFR going back to 2014. Investors should not rely on any historical changes or trends in SOFR as an indicator of future changes in SOFR. In addition, since SOFR is a relatively new market index, SOFR-based Bonds will likely have no established trading market when issued, and an established trading market may never develop or, if developed, may not be liquid. Market terms for debt securities indexed to SOFR, such as the spread over the index and the accrual, calculation and payment of interest, may evolve over time, and the value of and return on SOFR-based Bonds may be lower than those of later-issued or other SOFR-indexed debt securities as a result. Similarly, if SOFR does not prove to be widely used in securities like SOFR-based Bonds that we may offer, the trading price of SOFR-based Bonds may be lower than those of Bonds linked to indices that are more widely used. Investors in SOFR-based Bonds may not be able to sell those Bonds at all or may not be able to sell those Bonds at prices that will provide them with a yield comparable to similar investments that have a developed secondary market, and may consequently suffer from increased pricing volatility and market risk. In addition, since SOFR is a relatively new market index, the opportunity to hedge exposure to the interest rate on SOFR-based Bonds through swaps, futures, options or other listed or over-the-counter derivative instruments linked to SOFR may be limited as compared to an investment in securities bearing an interest rate tied to a different market index.

The substitution of a Reference Rate may adversely affect the value of the Bonds that are based on that Reference Rate.

In addition to the risks and uncertainties relating to LIBOR and SOFR discussed above, the substitution of any other Reference Rate may also adversely affect the value of the Bonds that are based on that Reference Rate.

As contemplated under “DESCRIPTION OF THE SECURITIES — Determination of Reference Rate,” the Calculation Agent has the ability to designate a substitute or successor Reference Rate in certain circumstances. In particular, if the Calculation Agent determines that a Reference Rate (other than LIBOR and SOFR) has been

discontinued, is no longer being published or is no longer recognized, then the Calculation Agent, in its sole discretion, may designate a substitute or successor Reference Rate, taking into account general comparability to the original Reference Rate and any other adjustments or factors as the Calculation Agent deems appropriate. If the Calculation Agent determines a substitute or successor Reference Rate in accordance with the foregoing, the Calculation Agent, in its sole discretion, may also determine the Business Day Convention, the definition of Business Day, the Reference Rate Date and the Determination Date to be used and any other relevant methodology for calculating the substitute or successor Reference Rate, including any adjustment factor needed to make that substitute or successor Reference Rate comparable to the original Reference Rate, in a manner that is consistent with industry accepted practices for that substitute or successor Reference Rate.

If the Calculation Agent makes a determination to change a Reference Rate to a substitute or successor Reference Rate on any Bonds in accordance with the foregoing, there is no assurance that the characteristics of the substitute or successor Reference Rate will be similar to the original Reference Rate or that the substitute or successor Reference Rate will produce the economic equivalent of the original Reference Rate. This may result in interest rates and/or payments that are higher or lower than, or that do not otherwise correlate over time with, the interest rates and/or payments that would have been associated with those Bonds if the original Reference Rate continued to be available, which may adversely affect the value of and return on those Bonds. Furthermore, to the extent the Office of Finance acts as the Calculation Agent, the exercise of any discretion by the Office of Finance in connection with the designation of a substitute or successor Reference Rate may present a potential conflict of interest.

FORM OF THE SECURITIES

Words and expressions defined or used in “DESCRIPTION OF THE SECURITIES” will have the same meaning in this section.

The Bonds will be issued as Fed Book-Entry Bonds, in accordance with the Fed Fiscal Agency Agreement, or as Registered Bonds, in accordance with the Global Agency Agreement. All Discount Notes will be issued and maintained only on the Fed Book-Entry System under the Fed Fiscal Agency Agreement (the Discount Notes together with the Fed Book-Entry Bonds being referred to herein as “Fed Book-Entry Securities”).

Fed Book-Entry Securities

All Fed Book-Entry Securities must be denominated in U.S. dollars, issued in book-entry form and cleared and settled in the United States through the Federal Reserve Banks. The Securities will not be exchangeable for definitive securities. The U.S. Fiscal Agent will maintain book-entry accounts with respect to the Fed Book-Entry Securities and make payments, on our behalf, of interest on and principal of the Securities on the applicable payment dates by crediting the accounts of Holding Institutions (as defined below) at the Federal Reserve Banks. These Fed Book-Entry Securities will be held by the Holding Institutions designated by the applicable Dealers unless an investor arranges for the transfer of its Fed Book-Entry Securities to another Holding Institution. Certain Holding Institutions may hold Fed Book-Entry Securities as depositaries for Euroclear and Clearstream. See “CLEARANCE AND SETTLEMENT.” A “Holding Institution” is a depository or other designated institution that has an appropriate book-entry securities account with a Federal Reserve Bank.

Registered Bonds

We may issue Registered Bonds in definitive registered form (“Definitive Registered Bonds”) or in global registered form (“Registered Global Bonds”) through the clearing systems operated by DTC, Euroclear, Clearstream or such other or additional clearing systems as specified in the applicable Supplement. Registered Global Bonds may be denominated in any Specified Currency and may clear and settle in the United States through DTC (such a Registered Global Bond being referred to as a “DTC Global Bond”) or outside the United States through Euroclear, Clearstream or such other clearing system as specified in the applicable Supplement.

Registered Bonds of an issue that we intend to sell in primary distribution to investors in the United States, and not denominated in U.S. dollars, will, unless otherwise specified in the applicable Supplement, initially be represented by one or more Registered Global Bonds deposited on its or their Issue Date (as defined below) with Citibank, N.A., London Branch, acting through its relevant office, or any successor or replacement custodian (the “Custodian”), as custodian for, and registered in the name of a nominee of, DTC.

Registered Bonds of an issue that we intend to sell in primary distribution to investors outside the United States will, unless otherwise specified in the applicable Supplement, initially be represented by one or more Registered Global Bonds deposited on its or their Issue Date with the Custodian as depository for, and registered in the name of a nominee of, Euroclear and Clearstream or such other clearing system as specified in the applicable Supplement.

Registered Bonds of an issue that we intend to sell in primary distribution to investors both within the United States and outside the United States, and not denominated in U.S. dollars, will, unless otherwise specified in the applicable Supplement, initially be represented by one or more Registered Global Bonds. A DTC Global Bond in respect of sales of Bonds within the United States will be deposited on its Issue Date with the Custodian as custodian for, and registered in the name of a nominee of, DTC. The same or one or more other Registered Global Bonds in respect of sales of Bonds outside the United States will be deposited on its or their Issue Date with the Custodian as depository for, and registered in the name of a nominee of, either DTC or Euroclear and Clearstream, or such other clearing system as specified in the applicable Supplement.

We may initially issue Registered Bonds in the form of Definitive Registered Bonds if so specified in the applicable Supplement. Definitive Registered Bonds will otherwise only be available in the case of Registered Bonds initially issued as Registered Global Bonds (other than Bonds in certain Specified Currencies), in certain circumstances as described below.

Unless otherwise specified in the applicable Supplement, interests in a Registered Global Bond may be exchanged for Definitive Registered Bonds only if the exchange is permitted by applicable law and in the following circumstances:

- in the case of a DTC Global Bond, DTC notifies us that it is no longer willing or able to act as a depository with respect to the DTC Global Bond, or ceases to be a “clearing agency” registered under the Exchange Act, and we cannot find a successor within 90 calendar days after we receive that notice;
- in the case of any other Registered Global Bond held through another depository, if the clearing system or systems through which it is cleared and settled is or are closed for business for 14 consecutive calendar days (other than by reason of holidays, statutory or otherwise) or is or are permanently closed;
- a registered holder has initiated a judicial proceeding to enforce its rights under the Registered Global Bonds in court and counsel has advised that registered holder that it is necessary for that registered holder to have a Definitive Registered Bond; or
- upon the request, and at the expense, of a registered holder, we, in our sole discretion, may elect to issue Definitive Registered Bonds.

In any of the above circumstances, we will cause sufficient Definitive Registered Bonds to be executed and delivered as soon as practicable (and in any event within 45 calendar days of our receiving notice of the occurrence of those circumstances) to the Registrar for completion, authentication and delivery to the relevant registered holders. A person having an interest in a Registered Global Bond must provide the Registrar with a written order containing instructions and such other information as we and the Registrar may require to complete, execute and deliver those Definitive Registered Bonds.

DTC has advised us that it will take any action permitted to be taken by a registered holder of Registered Bonds (including, without limitation, the presentation of DTC Global Bonds for exchange as described above) only at the direction of one or more participants in whose account with DTC interests in DTC Global Bonds are credited and only in respect of that portion of the aggregate principal amount of the relevant DTC Global Bonds as to which such participant or participants has or have given direction. However, in the circumstances as described above, DTC will surrender the relevant DTC Global Bonds in exchange for Definitive Registered Bonds.

Bonds not in global form or not deposited with DTC will not be eligible for clearing or settlement through DTC.

DESCRIPTION OF THE SECURITIES

The following description of the terms and conditions of the Securities will apply to the Securities unless otherwise specified in this Information Memorandum, in an amendment or supplement to this Information Memorandum, or in any applicable Supplement related to an issue of Bonds. With respect to any particular issue of Securities, or type or category of Securities, the description will be supplemented, modified or superseded, in whole or in part, by an amendment or supplement to this Information Memorandum or by the applicable Supplement. The following description of the terms and conditions of the Securities is not complete. If you invest in any Securities, you should carefully read any applicable Supplement relating to that issue of Securities (or, in the case of Discount Notes, the applicable pricing terms), together with this Information Memorandum and any amendment or supplement to this Information Memorandum.

General

THE SECURITIES ARE NOT OBLIGATIONS OF THE UNITED STATES AND ARE NOT GUARANTEED BY THE UNITED STATES.

We may issue either Bonds or Discount Notes. The Securities, which will be issued pursuant to the FHLBank Act and the regulations promulgated under the FHLBank Act, will be the joint and several unsecured general obligations of the FHLBanks. The Securities will not limit other indebtedness that the FHLBanks may incur, and the Securities will not contain any financial or similar restrictions on the FHLBanks or any restrictions on the FHLBanks' ability to secure other indebtedness. Under the FHLBank Act, the FHLBanks may incur other indebtedness, such as secured joint and several obligations of the FHLBanks, unsecured joint and several obligations of the FHLBanks, and obligations of individual FHLBanks (subject to the authorization of the FHFA, as applicable). In addition:

- the Securities will not be issued under an indenture, and no trustee is provided for with respect to the Securities; and
- the Securities will not contain any provisions permitting the acceleration of their maturity on the occurrence of any default or other event.

Any matters concerning accounts on the books of the Federal Reserve Banks are governed by the operating circulars of the Federal Reserve Banks or other agreements with the Federal Reserve Banks. Any matters concerning Fed Book-Entry Securities on the Fed Book-Entry System will be governed by operating circulars of the Federal Reserve Banks, the regulations contained in Subpart D of 12 C.F.R. Part 1270, as amended, modified, supplemented or superseded from time to time (the "Fed Book-Entry Regulations"), and the regulations now or hereafter prescribed by the United States Department of the Treasury that apply to the conduct of similar transactions involving United States securities or that otherwise apply to Fed Book-Entry Securities. These matters will not be affected by any inconsistent provisions of any depository or organized exchange. These regulations and operating circulars may be amended, modified, supplemented, superseded, eliminated or otherwise altered without the consent of any Holding Institution or any beneficial owner of Fed Book-Entry Securities.

We will issue Registered Bonds in accordance with the Global Agency Agreement. The Global Agency Agreement includes forms of Definitive Registered Bonds and Registered Global Bonds. You may inspect copies of the Global Agency Agreement at the specified offices of the Calculation Agent, the Exchange Agent, the Registrar and the Transfer Agents (each as defined below) and the Global Agent. The Global Agency Agreement permits the appointment of other agents and their successors, including a calculation agent, an exchange agent (the "Exchange Agent"), one or more transfer agents (together, the "Transfer Agents") and a registrar (the "Registrar"). The Global Agent, the Calculation Agent, the Exchange Agent, the Registrar, the Transfer Agents and the U.S. Fiscal Agent are together referred to as the "Agents." The registered holders of Bonds are deemed to have notice of all of the provisions of the Global Agency Agreement applicable to them. Unless otherwise specified in the applicable Supplement, the Office of Finance acts as Calculation Agent for Registered Bonds issued in accordance with the Global Agency Agreement, who may delegate that function to another person or entity without notice to or consent of any holder of Securities. The Calculation Agent may not resign its duties without a successor having been appointed.

Form, Denomination, Title and Currency of Securities

Form and Denomination

We will issue Bonds in the form of either Fed Book-Entry Bonds or Registered Bonds and in the aggregate principal amount (the “Aggregate Principal Amount” or “Aggregate Original Principal Amount”) and minimum denominations and additional increments (“Authorized Denominations”) specified in the applicable Supplement (except that Bonds, in any case, will be issued with minimum denominations and additional increments as may be allowed or required from time to time by the relevant regulatory authority or any laws or regulations applicable to the relevant Specified Currency). If no form is specified in the applicable Supplement with respect to any issue of Bonds, those Bonds will be Fed Book-Entry Securities. We will issue all Discount Notes as Fed Book-Entry Securities and in minimum principal amounts at maturity of \$100,000 and in additional increments of \$1,000.

A certificate will be issued to each holder of Definitive Registered Bonds in respect of its registered holding or holdings. Each Definitive Registered Bond will be numbered serially with an identifying number, which will be recorded in the Register (as defined below) that will be kept by the Registrar. Registered Global Bonds may be held in book-entry form in the systems maintained by DTC, Euroclear, Clearstream or such other or additional clearing systems as specified in the applicable Supplement.

Title

We may deem and treat the registered owner, in respect of any Registered Bond, as the owner of that Bond for all purposes whatsoever notwithstanding any notice to the contrary. We and the Federal Reserve Banks may treat the Holding Institution (as defined below) as the absolute owner of the Fed Book-Entry Securities for the purposes of making payments and for all other purposes. Fed Book-Entry Securities may be held of record only by entities eligible to maintain book-entry accounts with the Federal Reserve Banks. These entities of record are referred to as “Holding Institutions.” A Holding Institution that is not the beneficial owner of the relevant Fed Book-Entry Securities, and each financial intermediary in the chain to the beneficial owner of those Fed Book-Entry Securities, has the responsibility of establishing and maintaining accounts for their respective customers. The rights of that beneficial owner may be exercised only through the Holding Institution of those Fed Book-Entry Securities. We and the Federal Reserve Banks will have no direct obligation to a beneficial owner of any Fed Book-Entry Securities that is not also the Holding Institution of those Fed Book-Entry Securities. The Federal Reserve Banks will act only upon the instructions of their Holding Institutions in recording transfers of the Fed Book-Entry Securities.

Specified Currency

The Specified Currency of any Bonds, and, if different, the currency of any interest payment (“Specified Interest Payment Currency”) and/or principal payment (“Specified Principal Payment Currency”) on the Bonds, are as specified in the applicable Supplement. If no Specified Currency is specified in the applicable Supplement with respect to any issue of Bonds, the Specified Currency will be U.S. dollars. The Specified Currency of any Discount Notes is U.S. dollars.

Transfers

Transfer of Fed Book-Entry Securities

Fed Book-Entry Securities may be transferred between Holding Institutions in accordance with the operating circulars of the Federal Reserve Banks and the Fed Book-Entry Regulations.

Transfer of Definitive Registered Bonds

A Definitive Registered Bond may be transferred in whole or in part at the office of the Registrar or any Transfer Agent by delivery of that Definitive Registered Bond with the form of transfer duly endorsed by the registered holder (or accompanied by a written instrument of transfer in form and substance satisfactory to us, the Registrar or any Transfer Agent and duly executed by the registered holder), together with any other documentation or information that may be reasonably requested by us, the Registrar or any Transfer Agent, in each case subject to such reasonable regulations as we may from time to time agree upon with the Registrar and/or any Transfer Agent. In the case of a

transfer of only part of a Registered Bond, we will issue to the transferor a new Registered Bond in respect of the balance not transferred. Each new Registered Bond to be issued upon transfer of a Registered Bond will be mailed to the address specified in the form of transfer at the risk of the holder entitled to the new Registered Bond in accordance with the customary procedures of the Registrar or any Transfer Agent.

Transfer of Registered Global Bonds

Interests in a Registered Global Bond deposited with DTC, Euroclear, Clearstream or such other or additional clearing systems as specified in the applicable Supplement will be transferable in accordance with the rules and procedures established from time to time for that purpose by DTC, Euroclear, Clearstream or such other or additional clearing systems as specified in the applicable Supplement, as the case may be.

Service Charge

Except in the case of a Registered Bond that is lost, mutilated or stolen, registrations of transfer will be effected without charge by or on behalf of us or the applicable Agent. We may require payment of a sum from the transferee sufficient to cover any applicable stamp tax or other governmental charge that may be imposed in connection with any registration or transfer.

Closed Periods

No registered holder may require the registration of transfer of a Registered Bond (i) during the period of 15 calendar days ending on the due date for any payment of principal of that Bond, (ii) during the period of notice specified in the applicable Supplement for any Bond that may be redeemed by us at the option of the FHLBanks in accordance with the applicable Supplement, or (iii) after any Bond has been called for redemption in whole or in part.

Register

The Registrar will maintain the names and addresses of holders of Registered Bonds, the Bond numbers and other details with respect to the issuance, transfer and exchange of Registered Bonds on a definitive record (the “Register”).

Status

The Securities constitute the joint and several obligations of the FHLBanks ranking *pari passu*, without any preference among themselves, with all other unsecured and unsubordinated obligations of the FHLBanks. No person other than the FHLBanks will have any obligations or liability with respect to the Securities.

THE SECURITIES ARE NOT OBLIGATIONS OF THE UNITED STATES AND ARE NOT GUARANTEED BY THE UNITED STATES.

Types of Bonds

Unless otherwise specified, all words and expressions capitalized in this subsection, but not previously defined or defined in this section, are defined in the subsection entitled “Definitions” below. One or more of the following provisions apply to each Bond, as specified in the applicable Supplement. There are three general types of Bonds referred to below: Fixed Rate Bonds, Variable Rate Bonds and Zero Coupon Bonds. A particular issue of Bonds may contain features from one of these types of Bonds during a specified period of time and contain features from another type of these Bonds during a different specified period of time, in each case as specified in the applicable Supplement.

Fixed Rate Bonds

Interest Rate and Accrual. Interest payable on Fixed Rate Bonds (as defined in “SUMMARY”) will accrue during each Interest Period at the Fixed Interest Rate. Interest accruing on a Fixed Rate Bond will be payable in arrears on each Interest Payment Date and on the Maturity Date or Redemption Date, as applicable, as specified in the applicable Supplement. See “Payments — *Fed Book-Entry Securities — Delay in Payment*” and “Payments — *Registered Bonds — Delay in Payment.*”

Calculation of Interest Amount. The amount of interest on a Fixed Rate Bond will be calculated by the Calculation Agent by multiplying the Calculation Amount by the applicable Fixed Interest Rate and multiplying the product by the applicable Day Count Convention or by any other method specified in the applicable Supplement. We will ensure that, as long as any Fixed Rate Bond remains outstanding, there will always be a Calculation Agent for that Bond. The Calculation Agent may not resign its duties without a successor having been appointed. Unless otherwise specified in the applicable Supplement, the Office of Finance acts as Calculation Agent for Fixed Rate Bonds, who may delegate that function to another person or entity without notice to or consent of any holder of Securities. The determination of the Interest Amount by the Calculation Agent will, in the absence of manifest error, be final and binding upon all parties. See “DESCRIPTION OF THE SECURITIES — Corrections”.

Types of Fixed Rate Bonds. Fixed Rate Bonds include Amortizing Bonds, Step Rate Bonds, Conversion Bonds, Indexed Bonds and Range Bonds.

Variable Rate Bonds

Interest Rate and Accrual. Interest payable on Variable Rate Bonds (as defined in “SUMMARY”) will accrue during each Interest Period at the Rate of Interest or as otherwise specified in the applicable Supplement. Interest accruing on a Variable Rate Bond will be payable in arrears on each Interest Payment Date and on the Maturity Date or Redemption Date, as applicable, as specified in the applicable Supplement. The interest rate on a Variable Rate Bond may vary in the same direction as changes in the applicable Reference Rate or in the opposite direction of those changes. Variable Rate Bonds may have Minimum Interest Rates, Maximum Interest Rates, a Spread, a Multiplier or a combination of these features. See “Payments — Fed Book-Entry Securities — Delay in Payment” and “Payments — Registered Bonds — Delay in Payment.”

Types of Variable Rate Bonds. Variable Rate Bonds include Amortizing Bonds, Step Rate Bonds, Conversion Bonds, Indexed Bonds and Range Bonds.

Rounding. Unless otherwise specified in the applicable Supplement, the Calculation Agent will, if necessary, round all values input into formulas for the Rate of Interest and intermediate calculations expressed as a percentage to five decimal places and any Rate of Interest expressed as a percentage to three decimal places.

Calculation of Interest Amounts. Subject to Minimum Interest Rates and/or Maximum Interest Rates, if any, the Interest Amount on a Variable Rate Bond will be calculated by the Calculation Agent by multiplying the Calculation Amount by the Rate of Interest and then multiplying the product by the applicable Day Count Convention. The determination of the Interest Amount by the Calculation Agent will, in the absence of manifest error, be final and binding upon all parties. See “DESCRIPTION OF THE SECURITIES — Corrections”.

Notification of Rate of Interest Amount. The Calculation Agent will cause the Rate of Interest, the Interest Amount and the Interest Payment Date for each Interest Period to be provided to, as appropriate, us, the Agents and, if the applicable Bonds are listed on one or more stock exchanges, to each stock exchange as soon as practicable after their determination but in no event later than two Relevant Business Days after the date of their determination. The Calculation Agent will also cause the Interest Amount and the Interest Payment Date for each Interest Period to be provided to registered holders as soon as practicable after their determination but in no event later than the seventh calendar day after their determination. The Interest Amount and the Interest Payment Date so published may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without notice in the event of an extension or shortening of the Interest Period.

Calculation Agent. We will ensure that, as long as any Variable Rate Bond remains outstanding, there will always be a Calculation Agent for that Bond. The Calculation Agent may not resign its duties without a successor having been appointed. Unless otherwise specified in the applicable Supplement, the Office of Finance acts as Calculation Agent for Variable Rate Bonds, who may delegate that function to another person or entity without notice to or consent of any holder of Securities.

Zero Coupon Bonds

Zero Coupon Bonds (as defined in “SUMMARY”) will not bear interest and may be issued at a price that is less than the amount payable on the Maturity Date.

Discount Notes

Discount Notes will be offered on a continuous basis, will have maturities of 365/366 days or less and will be paid only on their Maturity Dates at 100% of their principal amounts. Discount Notes will be issued, and must be maintained and transferred on the Fed Book-Entry System, in minimum principal amounts at maturity of \$100,000 and in additional increments of \$1,000. See “Payments — *Fed Book-Entry Securities — Delay in Payment.*”

Discount Notes will generally be sold on a discounted basis, but may also be sold on a premium basis or at par. The purchase price of a Discount Note sold at par will be equal to the principal amount of the Discount Note. The purchase price of a Discount Note sold on a discounted basis will be the difference between the principal amount of the Discount Note and the amount derived from the following formula:

$$\frac{\text{Principal Amount of Discount Note} \times \text{Percentage of Discount}}{360 \text{ Days}} \times \frac{\text{Number of Days from Issue Date to Maturity}}{\text{Date of Discount Note}}$$

The purchase price of a Discount Note sold at a premium will be equal to the principal amount of the Discount Note plus the amount derived from the following formula:

$$\frac{\text{Principal Amount of Discount Note} \times \text{Percentage of Premium}}{360 \text{ Days}} \times \frac{\text{Number of Days from Issue Date to Maturity}}{\text{Date of Discount Note}}$$

We will generally not offer a Discount Note having a Maturity Date that is not expected to be a Business Day. Notwithstanding the foregoing, to the extent the scheduled Maturity Date for a Discount Note would otherwise fall on a day that is not a Business Day, then the Maturity Date for the Discount Note will be, and the principal amount of the Discount Note will be paid on, the first following day that is a Business Day, with the same force and effect as if that payment were made on the scheduled Maturity Date, and no interest will accrue on the Discount Note as a result. See also “Payments — *Fed Book-Entry Securities — Delay in Payment.*”

The Maturity Dates of Discount Notes are established on a regular basis by us, and the purchase prices are determined both by us and at auction. Information with respect to available maturities and current prices can be obtained from the Dealers through which we offer Discount Notes. See “PLAN OF DISTRIBUTION.”

Definitions

As used under the heading “DESCRIPTION OF THE SECURITIES”:

“Business Day”, as used without any modifier in any Supplement or otherwise in connection with a Security, means any day other than (a) a Saturday, (b) a Sunday or (c) a day on which banking institutions in New York City are authorized or required by law or executive order to close.

“Business Day Convention” means the convention for adjusting any Interest Payment Date, Redemption Date or Maturity Date if that date would otherwise fall on a day that is not a Relevant Business Day. The adjustment will be made as follows:

(A) if the “Following Business Day Convention” is specified in the applicable Supplement, then the relevant Interest Payment Date, Redemption Date or Maturity Date will be the first following day that is a Relevant Business Day and interest and principal, as applicable, will be paid with the same force and effect as if made on the relevant Interest Payment Date, Redemption Date or Maturity Date and no additional interest will accrue for that Interest Period;

(B) if the “Modified Following Business Day Convention” is specified in the applicable Supplement, then the relevant Interest Payment Date, Redemption Date or Maturity Date will be the first following day that is a Relevant

Business Day unless that day falls in the next calendar month, in which case that date will be the first preceding day that is a Relevant Business Day;

(C) if the “Preceding Business Day Convention” is specified in the applicable Supplement, then the relevant Interest Payment Date, Redemption Date or Maturity Date will be the first preceding day that is a Relevant Business Day; or

(D) based on another Business Day Convention as may be specified in the applicable Supplement.

If no Business Day Convention is specified, then the Following Business Day Convention will apply.

“Calculation Amount” means the amount specified as such on any Bond or, if no such amount is so specified, the aggregate amount of principal outstanding of that Bond.

“Conversion Bonds” are Bonds that bear interest at a Fixed Interest Rate for one or more Interest Periods and at a variable Rate of Interest for one or more other Interest Periods or Bonds that bear interest at an Interest Rate that the FHLBanks may elect to convert from a Fixed Interest Rate to a variable Rate of Interest or from a variable Rate of Interest to a Fixed Interest Rate. The method of determining the Interest Rate with respect to Conversion Bonds will be described in the applicable Supplement.

“Day Count Convention” means the Fixed Rate Day Count Fraction, the Variable Rate Day Count Fraction, or any other day count convention or conventions for calculating interest as specified in the applicable Supplement.

“Determination Date” means, in respect of any Interest Period, that number of Relevant Business Days (if any) or other days specified in the applicable Supplement prior to each Reset Date or such other dates as set forth in the applicable Supplement.

“Fixed Interest Rate” means that rate or those rates per annum specified in the applicable Supplement on a Fixed Rate Bond for the specified Interest Period.

“Fixed Rate Day Count Fraction” is, unless otherwise specified in the applicable Supplement, the fraction the numerator of which is the number of days in the Interest Period based on a year of 12 months of 30 days each (and, in the case of an incomplete month, the number of days elapsed) and the denominator of which is 360.

“FRN Convention” means, in respect of Interest Payment Dates, Redemption Dates or Maturity Dates on a Bond, that the Interest Payment Date, Redemption Date or Maturity Date, as applicable, will be each day that numerically corresponds to the Issue Date of the Bond or such other date as may be specified on the Bond or, as the case may be, the preceding Interest Payment Date, Redemption Date or Maturity Date in the calendar month which is the specified Interest Period specified on the Bond after the calendar month in which that Issue Date or such other date or, as the case may be, the preceding Interest Payment Date, Redemption Date or Maturity Date occurred; provided that:

(A) if there is no such numerically corresponding day in the calendar month in which an Interest Payment Date, Redemption Date or Maturity Date should occur, the relevant Interest Payment Date, Redemption Date or Maturity Date will be the last day which is a Relevant Business Day in that calendar month;

(B) if an Interest Payment Date, Redemption Date or Maturity Date would otherwise fall on a day that is not a Relevant Business Day, the relevant Interest Payment Date, Redemption Date or Maturity Date will be the first following day that is a Relevant Business Day unless that day falls in the next calendar month, in which case it will be the first preceding day that is a Relevant Business Day; and

(C) if that Issue Date or such other date or the preceding Interest Payment Date, Redemption Date or Maturity Date occurred on the last day in a calendar month that was a Relevant Business Day, all subsequent Interest Payment Dates, Redemption Dates or Maturity Dates will be the last day that is a Relevant Business Day in the calendar month that is the specified Interest Period after the calendar month in which that Issue Date or such other date or, as the case may be, the preceding Interest Payment Date, Redemption Date or Maturity Date occurred.

“Indexed Bonds” means Bonds on which the principal or interest (or both) payable is determined with reference to the following, as described in the applicable Supplement:

- the price or prices of specified stock indices;
- the exchange rate of one or more currencies or currency units (including swap indices between currencies or currency units) relative to one or more other currencies or currency units;
- other prices, indices or exchange rates; or
- any other manner described in the applicable Supplement.

Information as to the method for determining the timing and amount of principal and interest, if any, payable with respect to Indexed Bonds will be described in the applicable Supplement.

“Interest Commencement Date” means the Issue Date or such other date as may be specified in the applicable Supplement; provided, however, that, in the case of an issuance of an additional tranche of an issue of Bonds, the Interest Commencement Date will be the most recent date that interest was paid on that issue of Bonds or, if no interest has yet been paid, the Issue Date for the initial issuance within that issue of Bonds, or in any case such other date as may be specified in the Supplement applicable to such additional tranche.

“Interest Payment Date” means each date specified in the applicable Supplement for the payment of interest, in each case as adjusted by the Business Day Convention or FRN Convention specified in the applicable Supplement.

“Interest Period” means the period beginning on, and including, the most recent Interest Payment Date (or if no interest has been paid or made available for payment in respect of an issue of Bonds, from and including the Interest Commencement Date) to, but excluding, the next succeeding Interest Payment Date, Redemption Date or Maturity Date, as the case may be.

“Interest Rate” means the rate of interest payable on a Bond for any applicable Interest Period, including a Fixed Interest Rate or a Rate of Interest.

“Issue Date” means the date of issuance of a Security, which is the date specified as such in the applicable Supplement in the case of a Bond.

“London Banking Day” means a day (other than a Saturday or a Sunday) on which banks and foreign exchange markets are open for business in London.

“Maturity Date” means the date of maturity of a Security, which is the date specified as such in the applicable Supplement in the case of a Bond.

“Maximum Interest Rate” means the maximum interest rate limitation, or “cap,” on the rate at which interest may accrue during any Interest Period.

“Minimum Interest Rate” means the minimum interest rate limitation, or “floor,” on the rate at which interest may accrue during any Interest Period.

“Multiplier” means Spread Multiplier.

“New York Banking Day” means a day (other than a Saturday or a Sunday) on which banks and foreign exchange markets are open for business in New York City.

“Percentage of Discount” means the applicable discount to a Discount Note expressed as a decimal.

“Percentage of Premium” means the applicable premium on a Discount Note expressed as a decimal.

“Primary Source Page” means, with respect to any applicable Reference Rate, the information source or its replacement or successor information source (or, if no replacement or successor information source is available, a

different information source as selected by the Calculation Agent) for that Reference Rate as described in Exhibit C to this Information Memorandum and/or specified in the applicable Supplement.

“Principal Payment Date(s)” means the Maturity Date or, if applicable, any earlier Redemption Date(s) or date(s) of principal repayment of an issue of Bonds with respect to the principal of those Bonds as specified in the applicable Supplement.

“Range Bonds” means Bonds that accrue interest during a particular Interest Period at a Fixed Interest Rate or a variable Rate of Interest if a specific index is within a specified range during a designated period of time or at a particular point in time. Range Bonds may not bear interest if the specified index is outside the specified range. The method for determining the interest payable with respect to Range Bonds will be described in the applicable Supplement.

“Rate Cut Off Date” means, in respect of any Interest Period, that number of Relevant Business Days or other days prior to each Interest Payment Date (or prior to any applicable Principal Payment Date) as specified in the applicable Supplement or such other dates as set forth in the applicable Supplement.

“Rate of Interest” means a variable rate determined by reference to the Reference Rate (i) plus or minus a Spread, if any, or (ii) multiplied by a Multiplier, if any, or (iii) applying both (i) and (ii), in each case as specified in the applicable Supplement.

“Redemption Date” means each date when early redemption may occur as specified in the applicable Supplement.

“Reference Rate” means one or more interest rates, exchange rates or other indices to be determined as described under the heading “DESCRIPTION OF THE SECURITIES — Determination of Reference Rate” and in Exhibit C to this Information Memorandum or as otherwise specified in the applicable Supplement.

“Reference Rate Date” means Reset Dates or Redemption Dates or both as specified in the applicable Supplement.

“Relevant Banking Center(s)” means the banking center(s) specified in the applicable Supplement and, if no banking center is specified in the applicable Supplement and the context does not indicate otherwise, New York City.

“Relevant Banking Day” means a day (other than a Saturday or a Sunday) on which banks and foreign exchange markets are open for business in the Relevant Banking Center(s).

“Relevant Business Day” means:

(A) a day (other than a Saturday or a Sunday) on which banks and foreign exchange markets are open for business in the Relevant Financial Center(s); and

(B) in the case of a Bond the payments on which are made in Euro, a day on which the Trans-European Automated Real Time Gross Settlement Express Transfer System (or any successor thereto) is operating.

“Relevant Financial Center(s)” means the financial center(s) specified in the applicable Supplement and, if no financial center is specified in the applicable Supplement and the context does not indicate otherwise, New York City.

“Relevant Term” means, with respect to a Reference Rate, the period of time specified in the applicable Supplement.

“Reset Date” means each date specified in the applicable Supplement on which the Reference Rate determined on or with respect to the applicable Determination Date is first applied.

“Reset Period” means the period beginning on and including the most recent Reset Date to but excluding the next succeeding Reset Date.

“Secondary Source Page” means, with respect to any applicable Reference Rate, the information source or its replacement or successor information source (or, if no replacement or successor information source is available, a different information source as selected by the Calculation Agent) for that Reference Rate as described in Exhibit C to this Information Memorandum and/or specified in the applicable Supplement.

“Spread” means a constant or variable amount (which may be expressed as a percentage, in basis points (each representing one one-hundredth of a percent) or otherwise) to be added to or subtracted from the Reference Rate, as specified in the applicable Supplement.

“Spread Multiplier” means a constant or variable number by which the relevant Reference Rate and/or Spread, as applicable, as specified in the applicable Supplement, will be multiplied.

“Step Rate Bonds” means Bonds that may bear interest at a specified Fixed Interest Rate or variable Rate of Interest for specified periods as specified in the applicable Supplement. The applicable Supplement will specify the interest rate per annum, or the method of determination of the interest rate per annum, payable on Step Rate Bonds for the respective Interest Periods.

“Variable Rate Day Count Fraction” is, unless otherwise specified in the applicable Supplement, the fraction the numerator of which is the actual number of days in the relevant Interest Period and the denominator of which is 360 (or 365 or 366, if specified in the applicable Supplement), rounding, if necessary, the resultant figure to the nearest unit of the relevant currency (half of that unit being rounded upwards).

Maturity, Redemption and Purchase of Securities

Maturity

Each Security will mature on its Maturity Date unless redeemed prior to its Maturity Date. The principal amount payable on the Maturity Date of a Bond will be a fixed amount equal to 100% of the amount of principal outstanding on that Bond, a specified amount above or below that outstanding principal amount, or any amount determined by reference to one or more interest rates, exchange rates or other indices or formulae, or otherwise, in each case as specified in the applicable Supplement. Discount Notes will be paid only on their Maturity Dates at 100% of their principal amounts.

Purchases

The FHLBanks may, without notice and from time to time, purchase or otherwise acquire Securities at any price or prices in the open market or otherwise. Securities so purchased or otherwise acquired may be held, resold, refinanced or retired.

Redemption

Unless otherwise specified in the applicable Supplement, Bonds will not be subject to redemption prior to their Maturity Date.

Early Redemption of Zero Coupon Bonds

The amount payable in respect of any Zero Coupon Bond upon redemption of that Zero Coupon Bond will be the Amortized Face Amount (calculated as provided below) of that Zero Coupon Bond. See “*Redemption at the Option of the FHLBanks*” and “*Redemption at the Option of a Registered Holder*” below.

Subject to the provisions described in the paragraph below, the “Amortized Face Amount” of any Zero Coupon Bond will be the product of (i) the reference price specified in the applicable Supplement for the relevant Redemption Date (the “Reference Price”), (ii) the Aggregate Principal Amount of that Zero Coupon Bond payable on the Maturity Date, and (iii) the percentage of the Aggregate Principal Amount of that Zero Coupon Bond issue to be redeemed on that Redemption Date.

Where the specified calculation is to be made for a period of less than one year, it will be calculated using the applicable Fixed Rate Day Count Fraction.

If the amount payable in respect of any Zero Coupon Bond that is redeemed at the option of the FHLBanks or of a registered holder as described below is not paid when due, the amount due and payable in respect of that Zero Coupon Bond will be the Amortized Face Amount (calculated as provided above in this subsection) of that Zero Coupon Bond, and the date on which payment is actually made on the Bond will be the “Relevant Date”. The calculation of the Amortized Face Amount in accordance with this paragraph will continue to be made (before and, to the extent permitted by applicable law, after judgment) until the Relevant Date unless the Relevant Date falls on or after the Maturity Date. If the Relevant Date falls on or after the Maturity Date, the amount due and payable will be the principal amount of that Zero Coupon Bond payable on the Maturity Date together with any interest that may accrue from the Maturity Date to the Relevant Date at the rate per annum equal to the percentage (the “Amortization Yield”) specified in the applicable Supplement.

Redemption of Bonds According to Formula

If specified in the applicable Supplement, an issue of Bonds may be redeemed prior to maturity in a manner provided for in the applicable Supplement and dependent upon the value of one or more Reference Rates, such Reference Rate for each Redemption Date to be determined on or with respect to the corresponding Determination Date (or determined on or with respect to such other date(s) or in any other manner as specified in the applicable Supplement). The Reference Rate will be one or more of the interest rates, exchange rates or other indices specified in Exhibit C to this Information Memorandum or such other interest rate, exchange rate or other index or indices specified in, or determined in a manner described in, the applicable Supplement. The principal amount payable on a Redemption Date for those Bonds will be an amount specified in, or determined in a manner described in, the applicable Supplement, together with accrued and unpaid interest to, but excluding, the Redemption Date.

Redemption at the Option of the FHLBanks

If specified in the applicable Supplement, an issue of Bonds will be subject to redemption at the option of the FHLBanks, in whole (and in certain circumstances in part), on one or more specified dates, at any time on or after a specified date or during one or more specified periods of time. The principal amount payable on a Redemption Date for Bonds subject to redemption will be an amount specified in, or determined in a manner described in, the applicable Supplement, together with accrued and unpaid interest to, but excluding, the Redemption Date. In order for us to redeem an issue of Bonds, we are required to give notice of our intention to redeem those Bonds to the registered holder of those Bonds in the manner described in the applicable Supplement. However, failure to give any notice, or any defect in that notice, will not affect the validity of any proceedings for the redemption of Bonds. See “DESCRIPTION OF THE SECURITIES — Maturity, Redemption and Purchase of Securities — *Partial Redemption*” below.

Redemption at the Option of a Registered Holder

If specified in the applicable Supplement, an issue of Bonds will be subject to redemption at the option of the registered holder of that Bond, on the date or dates specified in the applicable Supplement (which will, in the case of a Variable Rate Bond, be an Interest Payment Date) at the price specified in the applicable Supplement, together with accrued and unpaid interest to, but excluding, the Redemption Date. We may elect to give notice to the registered holder of a Bond that is subject to redemption at the option of the registered holder, not more than the number of days nor less than the number of days specified in the applicable Supplement prior to such date or dates, of the period for the exercise of that option.

In the case of a Registered Bond, unless otherwise specified in the applicable Supplement, to exercise that option the registered holder must deposit with the Registrar or any Transfer Agent at its specified offices (i) that Bond and (ii) a duly completed notice of redemption (“Redemption Notice”) in the form obtainable from any Agent, in each case not more than the number of days nor less than the number of days specified in the applicable Supplement prior to the date fixed for redemption. Unless otherwise specified in the applicable Supplement, no Bond (or Redemption Notice) so deposited may be withdrawn without our prior consent and the prior consent of the Global Agent. In the case of a Fed Book-Entry Bond, if the beneficial owner wishes to exercise that option, the beneficial owner must give notice to us through the applicable Holding Institution.

Cancellation

Unless otherwise specified by us, all Bonds redeemed will be cancelled and may not be resold or reissued.

Amortizing Bonds

Unless previously redeemed, each Bond that provides for a specific amount to be redeemed on each Redemption Date (“Installment Amounts”) will be partially redeemed on each Redemption Date by the Installment Amount specified in the applicable Supplement, and the outstanding principal amount of that Bond will be reduced by the Installment Amount for all purposes. Amortizing Bonds may be Fixed Rate Bonds or Variable Rate Bonds as specified in the applicable Supplement.

Partial Redemption

In the case of a partial redemption of Bonds other than Fed Book-Entry Bonds, the notice to registered holders will also contain the serial or other identifying numbers of the Bonds to be redeemed. These Bonds will be selected for redemption in the manner and place as the Global Agent may approve, including pro rata if requested by the FHLBanks, subject to compliance with any applicable laws and stock exchange requirements. In the case of a partial redemption of Fed Book-Entry Bonds or other pro rata redemption, each such Bond will be redeemed in the amount of its pro rata share of the aggregate amount of that partial redemption and afterward will be treated as being outstanding as to its unredeemed balance.

For Fed Book-Entry Bonds, the aggregate amount of a redemption payment will be derived by multiplying the difference between the Current Factor in effect prior to that redemption with respect to the particular issue of Bonds and the new Current Factor in effect following that redemption by the original principal amount of the Bonds of that issue. The “Current Factor” is a number that represents the percentage of the aggregate original principal amount of the Bonds of a particular issue that is then outstanding. The outstanding principal amount of any such Bond at any time will be equal to the original principal amount of that Bond multiplied by the then Current Factor. Until the first redemption, the Current Factor for any particular issue of Bonds will be 1.000000000. The Calculation Agent will round the Current Factor to nine decimal places.

Payments

Fed Book-Entry Securities

Payments of Principal and Interest

The U.S. Fiscal Agent, on our behalf, will make payments of principal of and interest on Fed Book-Entry Securities by crediting the Holding Institutions’ accounts at the Federal Reserve Banks. The “Fed Book-Entry Record Date” for the purpose of payment of principal of or interest on the Fed Book-Entry Securities will be as of the close of business of the U.S. Fiscal Agent on the day preceding the due date for payment, or otherwise in accordance with the operating circulars of the Federal Reserve Banks and the Fed Book-Entry Regulations. If any such day is not a day on which the U.S. Fiscal Agent is open for business, the Fed Book-Entry Record Date will be on the next preceding day that the U.S. Fiscal Agent is open for business. The Holding Institutions and each other financial intermediary holding the Fed Book-Entry Securities either directly or indirectly on behalf of the beneficial owners will have the responsibility of remitting payments for the accounts of their customers.

Delay in Payment

Notwithstanding anything to the contrary in this Information Memorandum or any applicable Supplement, a holder of Fed Book-Entry Securities will not be entitled to any interest or other payment for any delay in the payment of any principal or interest in respect of those Fed Book-Entry Securities after the due date for that principal or interest payment, if that due date is a day on which the U.S. Fiscal Agent is not open for business (including, for the avoidance of doubt, a day on which any of the Fed Book-Entry System, the Fedwire[®] Funds Service (or any successor thereto) of the Federal Reserve Banks or other systems or services of the Federal Reserve Banks relating thereto is unavailable to us, in whole or in part, for any reason), and the holder will not be entitled to that principal or interest payment until the next day on which the U.S. Fiscal Agent is open for business (for the avoidance of doubt, with the Fed Book-Entry

System, the Fedwire® Funds Service (or any successor thereto) of the Federal Reserve Banks and other systems and services of the Federal Reserve Banks relating thereto being available to us), with a payment on that next day having the same force and effect as if that payment were made on its original due date.

No interest on the principal of any Fed Book-Entry Securities will accrue on or after the Principal Payment Date with respect to the principal repayable on that date, unless payment of principal is improperly withheld or refused, in which event interest, if applicable, will continue to accrue until the principal and interest is paid in full (provided that, with respect to Zero Coupon Bonds, if payment of principal is improperly withheld or refused on or after the Maturity Date, interest will accrue from the Maturity Date to the Relevant Date (i.e., the date on which payment of principal is actually made) at the rate per annum equal to the Amortization Yield specified in the applicable Supplement).

Registered Bonds

Payments of Principal and Interest

The Global Agent, on our behalf, will make principal and interest payments for Registered Bonds to the person shown on the Register at the close of business on the fifteenth day before the due date for payment on those Bonds (the “Record Date”). The Global Agent will make these payments (1) by transfer to an account in the currency maintained by the payee with a bank in the Relevant Financial Center of that currency, or (2) as may otherwise be specified in the applicable Supplement, subject in each case to the conditions described below in the paragraph entitled “*Payment Initiation.*” Payments of principal will only be made against surrender of the relevant Registered Bond at the specified office of any Transfer Agent. The registered holder should notify the Global Agent before a Record Date of the details of the account to receive that registered holder’s payments.

Payments by Check

A registered holder may elect to receive, or if it fails to nominate an account to receive transfers a registered holder will receive, its payments of principal or interest by check drawn on the relevant bank as described in the paragraph above. Payments by check will be mailed by the Global Agent, on our behalf, to the registered holder (or to the first named of joint holders) at its address appearing in the Register maintained by the Registrar.

Payment Initiation

Where payment is to be made by transfer to an account properly nominated by a registered holder, payment instructions (for value on the due date, or if the due date is not a Relevant Business Day, for value on the first following day which is a Relevant Business Day) will be initiated. Where payment is to be made by check, the check will be mailed on the last day on which the Global Agent is open for business preceding the due date for payment. In the case of any payment of principal where the relevant Registered Bond has not yet been surrendered at the specified office of any Transfer Agent, payment will occur on a day that the Global Agent is open for business and the relevant Registered Bond is so surrendered.

Payments Through The Depository Trust Company

Registered Bonds, if so specified on their face, will be issued in the form of one or more certificates registered in the name of, or the name of a nominee for, DTC, which will be the registered holder of those Registered Bonds. Payments of principal and interest in respect of Registered Bonds denominated in U.S. dollars will be made in accordance with the preceding paragraphs.

Payments of principal and interest in respect of Registered Bonds denominated in a currency other than U.S. dollars will be made by the Global Agent in the relevant currency in accordance with the following provisions. The amounts in that currency payable by the Global Agent to DTC with respect to Registered Bonds held through DTC will be received by the Exchange Agent, which will make payments in that currency by wire transfer of same day funds to the account or accounts designated by the DTC participants entitled to receive the relevant payment. In order for the DTC participants to receive payments in a Specified Payment Currency other than U.S. dollars, they must notify DTC prior to 5:00 p.m. New York City time on the third day on which banks are open for business in New York City following the applicable record date in the case of interest, and the twelfth calendar day prior to the payment date for the payment of principal. The Exchange Agent, after converting amounts in that currency into U.S. dollars

as necessary to make payments in U.S. dollars, will deliver U.S. dollar amounts in same day funds to DTC for payment through its settlement system to DTC participants entitled to receive the relevant payment that have not elected to receive payments in that currency. The Global Agency Agreement sets out the manner in which those conversions are to be made.

Delay in Payment

A holder will not be entitled to any interest or other payment (A) for any delay after the due date in receiving the amount due if the due date is not a Relevant Business Day, (B) if the holder is late in surrendering its Registered Bond (if required to do so), (C) if its Registered Bond cannot be surrendered to a Transfer Agent that is open for business on the day of surrender or (D) if a check mailed in accordance with this section arrives after the due date for payment.

No interest on the principal of any Registered Bond will accrue on or after the Principal Payment Date with respect to the principal repayable on that date, unless payment of principal is improperly withheld or refused, in which event interest, if applicable, will continue to accrue until the principal and interest is paid in full (provided that, with respect to Zero Coupon Bonds, if payment of principal is improperly withheld or refused on or after the Maturity Date, interest will accrue from the Maturity Date to the Relevant Date (i.e., the date on which payment of principal is actually made) at the rate per annum equal to the Amortization Yield specified in the applicable Supplement).

Payments Subject to Law

All payments are subject to any applicable laws and regulations.

Appointment of Agents

We reserve the right at any time to vary the terms of or terminate the appointment of the Registrar, the Calculation Agent or any Transfer Agent, to appoint another Registrar or Calculation Agent and to appoint additional or other Transfer Agents; provided that we will at all times maintain (i) for Fed Book-Entry Securities, a U.S. Fiscal Agent, (ii) a Global Agent, (iii) for Registered Bonds (to the extent any Registered Bonds are outstanding), a Registrar and Transfer Agent, including a Transfer Agent having a specified office in a European city which, so long as Bonds are listed on the Luxembourg Stock Exchange, will be Luxembourg and (iv) a Calculation Agent. We also reserve the right to appoint or reappoint the Office of Finance as the Calculation Agent.

Notice of any such change or any change of any specified office will be given to the relevant holders as described in the paragraphs below entitled "Notices."

Currency of Payment

All payments in respect of a Bond will be made in the Specified Currency or, in the case of a Variable Rate Bond, the Specified Interest Payment Currency and/or the Specified Principal Payment Currency specified in the applicable Supplement for that Bond. If no Specified Currency is specified in the applicable Supplement with respect to any issue of Bonds, the Specified Currency will be U.S. dollars. All payments in respect of Discount Notes will be made in U.S. dollars.

Additional Amounts

If any withholding or other tax, including without limitation stamp tax, is imposed by any jurisdiction on any payment made by us (or any Agent or any other person potentially required to withhold) with respect to any Securities, we (or such Agent or such other person) will deduct the amount, if any, required to be withheld from that payment and we will have no obligation to pay to the holder any additional interest or other amounts in consequence thereof or to redeem or repay the Securities before their scheduled maturity.

Corrections

If a principal or interest payment error occurs, we may correct it by adjusting payments to be made on later Interest Payment Dates or Principal Payment Dates (as appropriate) or in any other manner that we consider appropriate. Without limiting the generality of the foregoing, all value inputs into indexing formulae, intermediate calculations, numbers resulting from any calculations, interest rates, interest factors, accrued interest factors, principal amounts or

components used to determine principal or interest payable on an issue of Securities are subject to correction within 30 days from the applicable Interest Payment Date or Principal Payment Date. The source of a corrected value input must be the same page, screen, display, press release or other source from which the previously-used value input was to be obtained. A correction might result in an adjustment to an amount paid to a holder of the Securities.

Example. Assume that the applicable Supplement for a Variable Rate Bond specifies CMT as the index for determining the Rate of Interest payable on the Bond. If CMT for a Reference Rate Date is obtained from the Reuters Screen FEDCMT Page in accordance with Exhibit C, the rate may be superseded only by a corrected rate for that Reset Date obtained from the Reuters Screen FEDCMT Page. The corrected rate would be used to determine the Rate of Interest payable in respect of the Variable Rate Bond as of the applicable Interest Payment Date or Principal Payment Date.

Replacement of Bonds

If any Registered Bond is lost, stolen, mutilated, defaced or destroyed, it may be replaced at the specified office of the Transfer Agent subject to applicable stock exchange requirements. Replacement of any Registered Bond will only be made (1) upon payment by the claimant of costs incurred in connection with that replacement and (2) on such terms as to evidence, security, indemnity and otherwise as we, the Global Agent or any other Agent may require. Mutilated or defaced Registered Bonds must be surrendered before replacements will be issued.

Additional Bonds

We may issue additional Bonds with the same terms as previously issued Bonds (other than the Issue Date, the Interest Commencement Date, the offering price and other underwriting terms, which may vary) from time to time, without notice to or the consent of any holder, so as to form a single issue with outstanding Bonds. We reserve the right to reopen an issue of Bonds one or more times and an issue of Bonds may be reopened at any time when the reopening is consistent with the FHLBanks' funding needs and overall market conditions. The evaluation of these criteria and the decision whether to reopen Bond issues are in our sole discretion, and there can be no assurance that an issue of Bonds will be reopened or increased. Furthermore, we may elect to issue another issue of Bonds with identical terms rather than reopen an issue of Bonds.

Notwithstanding anything to the contrary in this Information Memorandum, to the extent we reopen an issue of Bonds that were initially issued pursuant to an information memorandum, offering circular or other offering document (as applicable) in effect prior to the date of this Information Memorandum (the "Initial Offering Document") and issue additional Bonds of that issue pursuant to this Information Memorandum, such additional Bonds shall have the same terms as the previously issued Bonds of that issue (other than the Issue Date, the Interest Commencement Date, the offering price and other underwriting terms, which may vary), in each case as reflected in the Initial Offering Document and the Supplement applicable to the initial issuance.

Agents

In acting under the Fed Fiscal Agency Agreement and the Global Agency Agreement, the respective Agent acts solely as agent of the FHLBanks and does not assume any obligation or relationship of agency or trust for or with any holder.

Notices

Notices to holders of Fed Book-Entry Securities will be broadcast to each Holding Institution through the communication system of the Federal Reserve Banks. Notice by broadcast will be considered given on the date of broadcast or, if broadcasted more than once, on the date of first broadcast. Instead of notice by broadcast, we may give notices to holders of Fed Book-Entry Securities in any reasonable manner that we determine. Notice by another manner will be considered given on the date of dissemination or, if disseminated more than once, on the date of first dissemination.

Notices to holders of Registered Bonds will be mailed to them by the Registrar at their respective addresses in the Register. In the case of any Bonds listed on a stock exchange, notice will be given in a manner complying with the rules of that stock exchange. Any such notice will be deemed to have been given on the later of the date of

publication, if any, and the fourth weekday (being a day other than a Saturday or a Sunday) after the date of mailing. For so long as any of the Bonds are listed on the official list of the Luxembourg Stock Exchange and traded on the Euro MTF Market of the Luxembourg Stock Exchange and the rules of the Luxembourg Stock Exchange so require, a notice will also be published in a leading newspaper having general circulation in Luxembourg (which is expected to be the “*Luxembourg Wort*”) or, alternatively, on the web site of the Luxembourg Stock Exchange (www.bourse.lu or any successor web site). If published more than once, notices will be deemed to have been given on the date of the first publication in the applicable newspaper or on the applicable web site as provided above.

Failure to give notice or a defect in a notice to one holder will not affect the validity of notice to other holders.

Governing Law

The Securities will be governed by, and construed in accordance with, the federal laws of the United States. Insofar as there may be no applicable precedent under the federal laws of the United States, and insofar as the application of the laws of the State of New York would not frustrate the purposes of the FHLBank Act or the Securities, the laws of the State of New York (without regard to conflict of law principles) shall be deemed to reflect the federal laws of the United States.

Modification and Amendment

The terms of an issue of Securities may be modified, amended or supplemented, without the consent of any holder of any such Security:

- for the purpose of curing any ambiguity, or curing, correcting or supplementing any defective terms or, with respect to matters or questions arising with respect to such issue of Securities, making any other provision that is not inconsistent with the provisions of the terms;
- for the purpose of conforming terms of the Securities to, or curing any ambiguity or discrepancy resulting from any changes in, (i) the Fed Book-Entry Regulations or the Fed Fiscal Agency Agreement or any regulation or document that the Fed Book-Entry Regulations or the Fed Fiscal Agency Agreement make applicable to book-entry securities of the FHLBanks, or (ii) the Global Agency Agreement;
- for the purpose of increasing the amount of such issue of Securities; or
- in any manner that we may determine will not adversely affect in any material respect the interests of the holders of such issue of Securities at the time of such modification, amendment or supplement (including without limitation the designation of a different person or entity to serve as the Calculation Agent or any other Agent with respect to any Securities).

In addition, with the written consent of the registered holders of at least a majority of the aggregate then outstanding principal amount of an issue of Securities (which may include Securities owned by an FHLBank), we may from time to time and at any time modify, amend or supplement the terms of an issue of Securities for the purpose of adding any provisions to or changing in any manner or eliminating any provisions of those Securities or of modifying in any manner the rights of the holders; provided, however, that no modification, amendment or supplement may, without the written consent of the registered holder of the principal amount of that Security:

- change the Maturity Date of, or the due date of any installment of interest on, that Security;
- materially modify the redemption provisions, if any, relating to the redemption price of, or any redemption date or period for, that Security;
- reduce the principal amount of, or materially modify the rate of interest or the calculation of the rate of interest on, that Security; or
- reduce the percentage of the then outstanding principal amount of the issue of Securities of which that Security forms a part, the consent of the registered holders of which is necessary to modify, amend or supplement the related terms.

The registered holders need not approve the particular form of any proposed modification, amendment or supplement, so long as their consent approves the substance of the change.

Any instrument given by or on behalf of any registered holder of a Security in connection with any consent to any such modification, amendment or supplement may not be revoked by the registered holder once given and, once accepted by us, will be conclusive and binding on all subsequent registered holders of that Security. Any modification, amendment or supplement of the terms of Securities will be conclusive and binding on all registered holders of the Securities subject to that modification, amendment or supplement, whether or not they have given such consent.

Determination of Reference Rate

General

The Reference Rate will be adjusted on each Reset Date. For each Reset Date, the Reference Rate will be determined on or with respect to the corresponding Determination Date, subject to the Rate Cut Off Date, if any. Unless otherwise provided in Exhibit C to this Information Memorandum, in the applicable Supplement or in the other provisions under this section “— Determination of Reference Rate,” the Reference Rate for a Saturday, a Sunday or a day for which that Reference Rate is not available will be the Reference Rate applied to the immediately preceding day for which that Reference Rate is available. Unless otherwise provided in Exhibit C to this Information Memorandum or in the applicable Supplement, the Reference Rate for a given Reset Date will apply to each day (including without limitation Saturday, Sunday and other days that are not Business Days or that are not Relevant Business Days) in the applicable Reset Period. The Reference Rate will be one or more of the interest rates specified in Exhibit C to this Information Memorandum or such other exchange rate, interest rate or other index or indices specified in, or determined in the manner described in, the applicable Supplement.

Source Pages or Other Sources for Reference Rates

If the Reference Rate does not appear on the Primary Source Page, if any, on or with respect to the applicable Determination Date, the Reference Rate for the applicable Reset Date will be the rate appearing on the Secondary Source Page, if any, indicated in, or determined in the manner described in, Exhibit C to this Information Memorandum or in the applicable Supplement.

If the Reset Date does not appear on the Primary Source Page or the Secondary Source Page, if any, or the Primary Source Page and the Secondary Source Page, if any, are unavailable on or with respect to the applicable Determination Date, the Reference Rate for the applicable Reset Date will be as described in Exhibit C to this Information Memorandum or in the applicable Supplement (the “Back-Up Source” or “Back-Up Source Page”).

Unless otherwise provided in Exhibit C to this Information Memorandum or in the applicable Supplement, a reference to any display page, other published source, information vendor or provider specified in Exhibit C to this Information Memorandum or in any applicable Supplement that, as determined by the Calculation Agent, has become unavailable for purposes of the determination of the Reference Rate at any time shall be deemed to refer to:

(i) the substitute or successor display page, other published source, information vendor or provider that has been officially designated by the sponsor of the original page or source; or

(ii) if the sponsor has not officially designated a substitute or successor display page, other published source, information vendor or provider (as the case may be), the substitute or successor display page, other published source, information vendor or provider, if any, designated by the relevant information vendor or provider (if different from the sponsor); or

(iii) if the sponsor or the relevant information vendor or provider (if different from the sponsor) has not officially designated a substitute or successor display page, other published source, information vendor or provider (as the case may be), the appropriate substitute or successor display page, other published source, information vendor or provider selected by the Calculation Agent in its sole discretion.

Designation of Certain Substitute or Successor Reference Rates

Notwithstanding any other provision in this section “— Determination of Reference Rate” or in Exhibit C to this Information Memorandum and unless otherwise provided in the applicable Supplement, if the Calculation Agent determines that a Reference Rate (other than LIBOR and SOFR) has been discontinued, is no longer being published or is no longer recognized, then the Calculation Agent, in its sole discretion, may designate a substitute or successor Reference Rate, taking into account general comparability to the original Reference Rate and any other adjustments or factors as the Calculation Agent deems appropriate. If the Calculation Agent determines a substitute or successor Reference Rate in accordance with the foregoing, the Calculation Agent, in its sole discretion, may also determine the Business Day Convention, the definition of Business Day, the Reference Rate Date and the Determination Date to be used and any other relevant methodology for calculating the substitute or successor Reference Rate, including any adjustment factor needed to make that substitute or successor Reference Rate comparable to the original Reference Rate, in a manner that is consistent with industry accepted practices for that substitute or successor Reference Rate. For the avoidance of doubt, the foregoing provisions in this paragraph shall not apply to LIBOR or SOFR, for which any substitute or successor Reference Rate shall be determined as provided in Exhibit C to this Information Memorandum or, as the case may be, in the applicable Supplement.

Rate Cut Off Date

If the determination of the Reference Rate requires a Rate Cut Off Date, then, unless otherwise provided in Exhibit C to this Information Memorandum or in the applicable Supplement, the last Reference Rate actually determined and applied to a Reference Rate Date on or prior to the Rate Cut Off Date will be applied to each day from the Rate Cut Off Date through the end of the Interest Period.

Eligibility for Stripping

We may designate certain issues of Fed Book-Entry Bonds as Eligible Bonds, which are eligible to be stripped into their separate Interest Components and Principal Components on the Fed Book-Entry System. Each Component will receive a CUSIP number.

We may designate an issue of Eligible Bonds as eligible to be stripped into Components either at the time of original issuance or at any other time during the period in which Bonds may be stripped. We are under no obligation, however, to designate any issue of Fed Book-Entry Bonds as Eligible Bonds. In addition, Bonds that we designate as Eligible Bonds may not ever be stripped into Components.

For an Eligible Bond to be stripped into Components, the principal amount of the Eligible Bond must be in an amount that, based on the stated interest rate of the Eligible Bond, will produce an interest payment of \$1,000 or an integral multiple thereof on each Interest Payment Date for that Fed Book-Entry Bond as specified in the applicable Supplement or another minimum amount authorized by the U.S. Fiscal Agent. The minimum principal amount required to strip an Eligible Bond currently may be obtained by calling the Office of Finance at (703) 467-3600. The minimum principal amount required to strip a Fed Book-Entry Bond that is eligible to be stripped upon original issuance and the minimum amount of each Component generally will be disclosed in the applicable Supplement.

In some cases, certain Interest Components of two or more issues of Fed Book-Entry Bonds may be due on the same day. These Interest Components may have the same or different CUSIP numbers. We currently expect that most Interest Components due on the same day (regardless of Fed Book-Entry Bond issue) will have the same CUSIP number. However, we may designate Interest Components from an issue of Fed Book-Entry Bonds to receive CUSIP numbers different than the CUSIP number of Interest Components due on the same day from one or more other issues of Fed Book-Entry Bonds. We also may designate at any time that any or all Interest Components of issues of Fed Book-Entry Bonds originally issued on or after a specified time will have CUSIP numbers different than Interest Components of issues of Fed Book-Entry Bonds originally issued prior to that time.

A registered holder of an Eligible Bond currently may request that an Eligible Bond be separated into its Components at any time from the date it becomes eligible to be stripped until the Cut-off Date. The registered holder must make a request for separation to the U.S. Fiscal Agent and comply with any requirements and procedures, including payment of applicable fees, if any, of the U.S. Fiscal Agent in effect at that time.

The Components may be maintained and transferred on the Fed Book-Entry System as integral multiples of \$1,000 as specified in the applicable Supplement or in such manner as permitted by the U.S. Fiscal Agent and us. Payments on Components will be made in U.S. dollars on the applicable payment dates, subject to the applicable Business Day Convention or FRN Convention, by credit of the payment amount to the Federal Reserve Bank account of each Holding Institution whose name appears in the Fed Book-Entry System as the entity to whose securities account those Components have been credited (“Component Holders”).

If any modification, amendment or supplement of the terms of an issue of Fed Book-Entry Bonds requires any consent of registered holders, the consent with respect to Fed Book-Entry Bonds that have been stripped is to be provided by the Component Holders of Principal Components, and the Component Holders of Interest Components will have no right to give or withhold such consent; provided, however, that a Component Holder of an Interest Component will have the right to give or withhold consent to any such modification, amendment or supplement which would change the due date of the installment of interest relating to that Interest Component or would result in the material modification of the rate of interest represented by that Interest Component. See “DESCRIPTION OF THE SECURITIES — Modification and Amendment.”

Currently, at the request of a Component Holder holding a Principal Component and all applicable unmatured Interest Components and on the Component Holder’s payment of a fee (presently the U.S. Fiscal Agent’s fee applicable to book-entry securities transfers), the U.S. Fiscal Agent will restore (“reconstitute”) the Principal Components of a stripped Fed Book-Entry Bond and the applicable unmatured Interest Components (all in appropriate amounts) to that Fed Book-Entry Bond in fully constituted form. Generally, for purposes of reconstituting a Fed Book-Entry Bond, the Principal Component of an issue of Fed Book-Entry Bonds may be combined with either Interest Components of that issue or Interest Components, if any, from other issues of Fed Book-Entry Bonds that have the same CUSIP numbers as the unmatured Interest Components of that issue. Component Holders wishing to reconstitute Components into a Fed Book-Entry Bond also must comply with all applicable requirements and procedures of the U.S. Fiscal Agent relating to the stripping and reconstitution of securities.

The information provided above regarding stripping and reconstituting Fed Book-Entry Bonds is based on our understanding of the manner in which the U.S. Fiscal Agent currently strips and reconstitutes eligible securities on the Fed Book-Entry System. The U.S. Fiscal Agent may cease stripping or reconstituting Eligible Bonds or may change the manner in which this is done or the requirements, procedures or charges for doing so at any time without notice to or the consent of any holder of Fed Book-Entry Bonds, including any Component Holder.

THE FEDERAL HOME LOAN BANK SYSTEM

The FHLBanks are GSEs, federally-chartered but privately capitalized and independently managed, and are instrumentalities of the United States organized under the authority of the FHLBank Act. The FHLBanks together with the Office of Finance, which is a joint office of the FHLBanks established to facilitate the issuance and servicing of debt instruments of the FHLBanks, known as consolidated obligations (including the Securities), and to prepare the Financial Reports of the FHLBanks, comprise the FHLBank System. The FHLBanks and the Office of Finance operate under the supervisory and regulatory framework of the FHFA, an independent agency in the executive branch of the U.S. Government.

Created by Congress in 1932, the FHLBanks' mission is to provide to their members and housing associates financial products and services that assist and enhance those institutions' financing of housing and community lending. The FHLBanks serve the public by providing a readily available, competitively-priced source of funds to FHLBank members through secured loans known as advances. These funds may be used for residential mortgages, community investments, and other services for housing and community development. In addition, the FHLBanks may provide members and housing associates with a means of enhancing liquidity by purchasing home mortgage loans through mortgage programs developed for their members. Members can also borrow from an FHLBank to fund low-income housing, thereby helping the members satisfy their regulatory requirements under the Community Reinvestment Act. Finally, the FHLBanks may offer their members a variety of other products and services, such as correspondent banking, which includes security safekeeping, wire transfers and settlements; cash management; letters of credit; and derivative intermediation.

A more complete description of the FHLBanks and their businesses is contained in the Financial Reports. See "AVAILABILITY OF INFORMATION AND INCORPORATION BY REFERENCE."

USE OF PROCEEDS

The net proceeds from the sale of Securities will be used by the FHLBanks to make credit available to their members and housing associates pursuant to the FHLBank Act, to retire outstanding debt securities of the FHLBanks, to increase the working capital of the FHLBanks or for general corporate purposes, including investments, as permitted by law.

CLEARANCE AND SETTLEMENT

Introduction

The Bonds may be held through one or more domestic and international clearing systems, principally the book-entry securities systems operated by the Federal Reserve Banks and DTC in the United States and Euroclear and Clearstream in Europe. The Discount Notes will be denominated in U.S. dollars and clear and settle through the Fed Book-Entry System. We expect that, unless specified in the applicable Supplement:

- An issue of Bonds denominated in U.S. dollars and distributed both inside and outside the United States will clear and settle, inside the United States, through the Fed Book-Entry System, or as otherwise specified in the applicable Supplement, and outside the United States, through the clearing systems operated by Euroclear and Clearstream.
- An issue of Bonds not denominated in U.S. dollars and distributed both inside and outside the United States will clear and settle through the clearing systems operated by DTC, Euroclear and Clearstream.
- An issue of Bonds, irrespective of currency, that is intended to be distributed solely outside the United States will clear and settle through Euroclear and Clearstream, and in certain cases, DTC.
- Bonds may also clear and settle through other or additional clearing systems, as specified in the applicable Supplement.

Electronic securities and payment transfer, processing, depositary and custodial links have been established among the Fed Book-Entry System, DTC, Euroclear, Clearstream and others, either directly or indirectly through custodians and depositaries, which enable Securities to be issued, held and transferred among the clearing systems across these links. Special procedures have been established among these clearing systems, allowing clearance and settlement of certain Securities traded across borders in the secondary market. Cross-market transfers of Bonds denominated in certain currencies and issued in global form may be cleared and settled using these procedures on a delivery against payment basis. Cross-market transfers of Bonds in other than global form may be cleared and settled in accordance with other procedures established among the Global Agent and the clearing systems concerned for this purpose.

The relationship between us and the holder of a Registered Bond or a Fed Book-Entry Bond is governed by the terms and conditions of that Bond (and, in the case of a Fed Book-Entry Bond, the Fed Book-Entry Regulations and other applicable laws and regulations). The holder of a Registered Global Bond will be one or more clearing systems. The beneficial interests in Bonds held by a clearing system will be in book-entry form in the applicable clearing system. Each clearing system has its own separate operating procedures and arrangements with participants or account holders that govern the relationship between them and the applicable clearing system and to which neither the Office of Finance nor any of the FHLBanks is or will be a party. We will not impose fees payable by any registered holder with respect to any Bonds held by one or more clearing systems; however, holders of beneficial interests in Bonds may incur fees payable in respect of the maintenance and operation of the book-entry accounts in which Bonds are held.

The Federal Reserve Bank of New York is the U.S. fiscal and paying agent for U.S. dollar denominated Bonds intended to be distributed in the United States and held through the Fed Book-Entry System. Citibank, N.A., London Branch is currently the Global Agent for Bonds held through DTC and for Bonds held through Euroclear, Clearstream, and such other or additional clearing systems as may be specified in the applicable Supplement.

We have obtained the information in this section about the clearing systems from sources that we believe to be accurate, and we assume no responsibility for the accuracy of this information.

The Clearing Systems

The Fed Book-Entry System

The Fed Book-Entry System provides book-entry holding and settlement for all U.S. dollar denominated securities issued by the U.S. Government, certain of its agencies and instrumentalities (including the FHLBanks) and certain international organizations of which the United States is a member. Holding Institutions may use the Fed Book-Entry System to hold and transfer Fed Book-Entry Securities.

DTC

DTC is a limited-purpose trust company organized under the laws of the State of New York and is a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code and a “clearing agency” registered pursuant to the provisions of Section 17A of the Exchange Act. DTC holds securities for DTC participants and facilitates the clearance and settlement of transactions between DTC participants through electronic book-entry changes in accounts of DTC participants.

Euroclear

Euroclear was created in 1968 and is operated by Euroclear Bank SA/NV, as operator of the Euroclear system. All Euroclear securities clearance and cash accounts are with Euroclear Bank SA/NV. Euroclear holds securities for participating organizations and facilitates multi-currency clearance and settlement of securities transactions between its and Clearstream’s accountholders through electronic book-entry changes in accounts of its accountholders. They are governed by the Terms and Conditions Governing Use of Euroclear and the related Operating Procedures of the Euroclear System, and applicable Belgian law. Euroclear Bank SA/NV acts only on behalf of Euroclear participants and has no record of, or relationship with, persons holding through Euroclear participants.

Clearstream

Clearstream is incorporated under the laws of Luxembourg as a limited company. Clearstream holds securities for its participating organizations and facilitates multi-currency clearance and settlement of securities transactions between its and Euroclear’s accountholders through electronic book-entry changes in accounts of its accountholders. A participant’s overall contractual relations with Clearstream are governed by the General Terms and Conditions, related operating rules and procedures and applicable Luxembourg law. Clearstream acts only on behalf of its participants and has no record of, or relationship with, persons holding through its participants.

Other Clearing Systems

Any other clearing system that is used for the distribution of an issue of Bonds will be described in the applicable Supplement, together with the clearance and settlement procedures for such clearing system.

Clearance and Settlement Procedures — Primary Distribution

Distribution of Bonds will be through one or more of the clearing systems described above or any other clearing system specified in the applicable Supplement. Payment for Bonds will be on a delivery versus payment basis or free delivery basis, as more fully described in the applicable Supplement, and if not so described will be on a delivery versus payment basis.

We and the applicable Dealer(s) will agree that either global clearance and settlement procedures or specific clearance and settlement procedures should be available for any issue of Bonds, as specified in the applicable Supplement. The customary clearance and settlement procedures are described under the specific clearance and settlement procedures below.

Unless otherwise agreed to between us and the Global Agent, Citibank, N.A., London Branch, acting through its relevant office, will act as the initial custodian or depository for all Bonds in global form.

Specific Clearance and Settlement — Federal Reserve Banks

The aggregate holdings of Fed Book-Entry Securities of each Holding Institution will be reflected in the book-entry account of that Holding Institution with its Federal Reserve Bank. The Fed Book-Entry Securities may be held of record only by Holding Institutions. A Holding Institution may or may not be the beneficial owner of a Security. Beneficial owners will ordinarily hold the Securities through one or more financial intermediaries, such as banks, brokerage firms and securities clearing organizations. Each Holding Institution, and each other intermediate holder in the chain to the ultimate beneficial owner, will have the responsibility of establishing and maintaining accounts for its customers having interests in Fed Book-Entry Securities.

The Federal Reserve Banks will be responsible only for maintaining the book-entry securities accounts of Holding Institutions in the Fed Book-Entry System, effecting transfers of book-entry securities in the Fed Book-Entry System and ensuring that payments from the FHLBanks, through the U.S. Fiscal Agent, are credited to the appropriate Holding Institutions. With respect to Fed Book-Entry Securities, the Federal Reserve Banks will act only on the instructions of Holding Institutions for which they maintain those Fed Book-Entry Securities.

Specific Clearance and Settlement — DTC

Registered Bonds that are to be cleared and settled through DTC will be represented by one or more DTC Global Bonds that will be deposited with Cede & Co., as nominee for DTC (or such other nominee selected by DTC). DTC participants acting on behalf of investors holding Registered Bonds through DTC will follow the delivery practices applicable to securities eligible for DTC's Same-Day Funds Settlement System (or any successor thereto). Registered Bonds will be credited to DTC participants' securities accounts following confirmation of receipt of payment to us on the applicable Issue Date.

Specific Clearance and Settlement — Euroclear and Clearstream

Registered Bonds that are to be cleared and settled through Euroclear and Clearstream will be represented by one or more Registered Global Bonds registered in the name of a nominee, who will be located in Europe, of the Euroclear and Clearstream depositories. Investors holding Registered Bonds through Euroclear and Clearstream will follow the settlement procedures applicable to conventional eurobonds. Registered Bonds will be credited to Euroclear and Clearstream participants' securities clearance accounts either on the applicable Issue Date or on the settlement day following the applicable Issue Date against payment in same-day funds (for value on the applicable Issue Date).

Clearance and Settlement Procedures — Secondary Market Transfers

Transfers of Registered Bonds

Transfers of interests in a Registered Bond in global form within the various clearing systems that may be clearing and settling interests will be made in accordance with the usual rules and operating procedures of the applicable clearing system and the nature of the transfer. Further details concerning these rules and procedures may be set forth in the applicable Supplement.

As DTC can only act on behalf of participants, who in turn act on behalf of indirect participants, the ability of a person having an interest in a DTC Global Bond to pledge that interest to persons or entities that do not participate in DTC, or otherwise take actions in respect of that interest, may be affected by the lack of a definitive security in respect of that interest.

Transfers of Fed Book-Entry Securities

Transfers of Fed Book-Entry Securities can only take place in book-entry form on the Fed Book-Entry System. These transfers will occur between Holding Institutions made in accordance with the operating circulars of the Federal Reserve Banks and the Fed Book-Entry Regulations. Certain Holding Institutions may hold Fed Book-Entry Securities as depositories for Euroclear and Clearstream, enabling the Fed Book-Entry Securities to be held and transferred in accordance with secondary market trading.

General

For issues of Securities that are cleared and settled through more than one system, time zone differences may result in the securities account of an investor in one system being credited during the settlement processing day immediately following the settlement date of the other system and the cash account being credited for value on the settlement date but only being available as of the day following the settlement date.

Although DTC, Euroclear and Clearstream have established procedures to facilitate transfers of beneficial interests in Bonds in global form among participants and accountholders of DTC, Euroclear and Clearstream, they are under no obligation to perform or continue to perform these procedures, and these procedures may be modified or discontinued at any time. We, the FHLBanks, the Global Agent, the U.S. Fiscal Agent or any other Agent will not have any responsibility for the performance by DTC, Euroclear, Clearstream or the Fed Book-Entry System (other than the U.S. Fiscal Agent with respect to the Fed Book-Entry System) or their respective direct or indirect participants or accountholders of their respective obligations under the rules and procedures governing their operations.

TAX MATTERS

The following is a summary of the taxation of the Securities and of certain anticipated United States federal income, withholding and estate tax consequences resulting from the ownership of the Securities. This summary does not cover all of the possible tax consequences relating to the ownership of the Securities and the receipt of interest thereon, and it is not intended as tax advice to any person. This summary is based on the United States federal income, withholding and estate tax laws as currently in effect and as currently interpreted and does not include any description of the tax laws of any non-U.S. government that may apply. It addresses only holders who hold the Securities as capital assets, and does not address special classes of holders, such as:

- dealers in securities or currencies;
- banks or other financial institutions;
- tax-exempt entities;
- life insurance companies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that purchase or sell Securities as part of a wash sale for tax purposes;
- persons holding Securities as a hedge against interest rate or currency risks or as a position in a “straddle” or conversion transaction;
- holders whose functional currency is not the U.S. dollar;
- regulated investment companies;
- partnerships or other pass-through entities;
- certain former citizens or residents of the United States; or
- accrual method taxpayers subject to special tax accounting rules as a result of their use of financial statements.

This summary is included for general information only and may not be applicable depending on a holder's particular situation. Prospective purchasers of Securities should consult their own tax advisors concerning the application of the United States federal income, withholding and estate tax laws, as well as the possible application of the tax laws of any other jurisdiction to their particular situation.

Prospective purchasers of Bonds with variable maturities, Bonds providing for principal or interest payments that are contingent for United States federal income tax purposes, Bonds subject to early redemption or Bonds providing for a maximum interest rate should consult the applicable Supplement for any special United States federal income, withholding and estate tax considerations with respect to such Bonds.

As used herein, the term “U.S. Holder” means a beneficial owner of a Security that is (for purposes of United States federal income tax) (i) an individual citizen or resident of the United States, (ii) a corporation (or an entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any State, or any political subdivision thereof, (iii) an estate the income of which is subject to United States federal income taxation regardless of its source, or (iv) a trust if a court within the United States is able to exercise primary supervision over the administration of the trust, and one or more United States persons have the authority to control all substantial decisions of the trust or if the trust has validly made an election to be treated as a United States person under applicable Treasury regulations.

As used herein, the term “Non-U.S. Holder” means a beneficial owner of a Security that is neither a U.S. Holder nor a partnership for U.S. federal income tax purposes.

This summary is based on the Internal Revenue Code of 1986, as amended (the “Code”), its legislative history, existing and proposed regulations under the Code, published rulings and court decisions, all as currently in effect. These laws are subject to change, possibly on a retroactive basis.

If a partnership holds a Security, the tax treatment of the partner generally will depend upon the status of the partner and the activities of the partnership. Partners of partnerships holding Securities should consult their tax advisors regarding U.S. federal tax consequences of the purchase, ownership and disposition of the Securities.

State and Local Taxation

Under the FHLBank Act, the interest on the Securities is exempt from state, county, municipal, and other local income taxes in the United States. This statute has been construed as not exempting the Securities and interest thereon from nondiscriminatory franchise taxes or other non-property taxes in lieu thereof imposed on corporations.

United States Federal Taxation of the Securities

The interest on the Securities (including original issue discount, if any) generally will be subject to taxation, including United States federal income and estate taxation. However, non-U.S. Holders may be entitled to certain exemptions from such taxes, as discussed below under “United States Federal Income Taxation — *Non-U.S. Holders.*”

United States Federal Income Taxation

U.S. Holders

Treatment of Stated Interest. Payments of interest on a Security generally will be taxable to a U.S. Holder as ordinary interest income at the time such payments are accrued or are received, in accordance with the U.S. Holder’s regular method of tax accounting.

If an interest payment is denominated in or determined by reference to a currency other than the U.S. dollar (a “foreign currency”), then the amount of income recognized by a cash basis U.S. Holder will be the U.S. dollar value of the interest payment, based on the “spot” exchange rate in effect on the date of the receipt, regardless of whether the payment is in fact converted into U.S. dollars, and the U.S. dollar value will be the U.S. Holder’s tax basis in the foreign currency. Accrual basis U.S. Holders may determine the amount of income recognized with respect to such interest payments in accordance with either of two methods, in either case regardless of whether the payments are in fact converted into U.S. dollars. Under the first method, the amount of income recognized will be based on the average exchange rate in effect during the interest accrual period (or, with respect to an accrual period that spans two taxable years, the portion of the period within the taxable year).

Under the second method, an accrual basis U.S. Holder may elect to translate interest income into U.S. dollars at the exchange rate in effect on the last day of the accrual period (or, in the case of an accrual period that spans two taxable years, at the exchange rate in effect on the last day of the portion of the period within the taxable year). Additionally, if a payment of interest is actually received within five business days of the last day of the accrual period or taxable year, an electing accrual basis U.S. Holder may instead translate such accrued interest into U.S. dollars at the exchange rate in effect on the day of actual receipt. Any election to use the second method will apply to all debt instruments held by the U.S. Holder at the beginning of the first taxable year to which the election applies or thereafter acquired by such U.S. Holder, and will be irrevocable without the consent of the Internal Revenue Service (“IRS”).

Upon receipt of an interest payment (including a payment attributable to accrued but unpaid interest upon the sale or retirement of a Security) denominated in or determined by reference to a foreign currency, an accrual basis U.S. Holder will recognize ordinary income or loss measured by the difference between such average exchange rate and the exchange rate in effect on the date of receipt.

Securities Issued at a Premium. If a U.S. Holder purchases a Security for an amount that is greater than the amount payable at maturity (or earlier call date, if applicable), then that U.S. Holder will be considered to have purchased such a Security with “amortizable bond premium” equal in amount to such excess, and may elect, in accordance with the applicable provisions of section 171 of the Code, to amortize that premium as an offset to the interest payments on the Security using a constant yield method over the remaining term of the Security (or until the earlier call date). Any amortization of premium will reduce the basis of the Security pursuant to section 1016(a)(5) of the Code.

For Securities purchased at a premium, the premium amount may be amortized to offset interest income only as a U.S. Holder takes the qualified stated interest into account under the U.S. Holder’s regular accounting method. In the case of Securities that provide for alternative payment schedules, generally, bond premium is calculated by assuming that both the issuer and the U.S. Holder will exercise or not exercise options in a manner that maximizes the U.S. Holder’s yield. If a U.S. Holder elects to amortize bond premium for a specific taxable year, that election would

apply to all the U.S. Holder's debt instruments held on or after the first day of that taxable year. If a U.S. Holder purchases a Security at a premium, and that Security does not pay interest, the amount of that premium may not be amortized under section 171 of the Code. In that case, the U.S. Holder holding that Security will be entitled to deduct that premium under section 171 at the time the instrument is sold, retired or otherwise disposed of. If a U.S. Holder purchases a Security at a premium, and the amount of that premium exceeds the amount of interest payable on that Security, the U.S. Holder may elect under section 171 of the Code to amortize an amount of that premium equal to the amount of interest payable as an offset to that interest and, upon sale, retirement or other disposition of the Security, any unamortized premium may be deducted at that time. U.S. Holders should consult their own tax advisors as to the calculation of premium, if any, and the maturity date or earlier call date, as applicable, for determining and amortizing the premium.

Original Issue Discount. A Security with a term greater than one year may be issued with original issue discount for United States federal income tax purposes (i.e., a discount security). Generally, original issue discount will arise if the stated redemption price at maturity (generally, the payments to be made under the Security other than payments of qualified stated interest) of a Security exceeds its issue price by at least 0.25% of the stated redemption price at maturity multiplied by the number of complete years to maturity or if a Security has certain interest payment characteristics (e.g., interest holidays, interest payable in debt of the issuer, stepped interest rates, or interest rates based upon multiple indices). The issue price of Securities that are issued for cash will be the first price at which a substantial amount of the Securities in the issue are sold for money (for this purpose, sales to bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents, or wholesalers are ignored). "Qualified stated interest" generally is stated interest that is unconditionally payable in cash or property (other than a debt instrument of the issuer) at least annually at a single fixed rate (appropriately taking into account the length of the intervals of the payments) with certain exceptions for lower rates paid during some periods. If a Security is issued with original issue discount, a U.S. Holder of the Security will be required to include original issue discount amounts in gross income for United States federal income tax purposes on an accrual basis using the constant yield to maturity method and, as a result, a U.S. Holder may be required to include these amounts in income in advance of receipt of the cash payments to which the amounts are attributable. Any amounts included in income as original issue discount with respect to a Security will increase a U.S. Holder's adjusted tax basis in the Security.

Computation of Original Issue Discount. The amount of original issue discount includible in income by a U.S. Holder of a Security having original issue discount is the sum of the daily portions of original issue discount with respect to the Security for each day during the taxable year or portion of the taxable year in which the U.S. Holder holds the Security. Generally, the daily portion is determined by allocating to each day in any accrual period a pro rata portion of the original issue discount allocable to that accrual period. Accrual periods with respect to a Security may be of any length selected by the U.S. Holder and may vary in length over the term of the Security as long as (1) no accrual period is longer than one year and (2) each scheduled payment of interest or principal on the Security occurs on either the final day or the first day of an accrual period.

The amount of original issue discount allocable to an accrual period equals the excess, if any, of:

- the product of the Security's adjusted issue price at the beginning of the accrual period and the Security's yield to maturity (determined on the basis of compounding at the close of each accrual period and properly adjusted for the length of the accrual period) *over*
- the sum of the payments of qualified stated interest on the Security allocable to the accrual period.

The "adjusted issue price" of a Security at the beginning of any accrual period (determined without regard to the amortization of any acquisition or bond premium, as discussed above) is (a) the sum of the issue price of the Security and the accrued original issue discount for each prior accrual period less (b) any prior payments on the Security that were not qualified stated interest payments.

Treasury regulations provide special rules for Securities that provide for one or more alternative payment schedules applicable upon the occurrence of a contingency or contingencies, including optional redemption. Securities which may be redeemed in whole or in part prior to their stated maturity will be treated as having a maturity date for United States federal income tax purposes on the earlier redemption date if this redemption would result in a lower yield to maturity in the case of a redemption at the issuer's option or a higher yield to maturity in the case of a redemption at the holder's option. Notice will be given in the applicable Supplement when we determine that a

particular Security will be deemed to have a maturity date for United States federal income tax purposes prior to its stated maturity. Investors intending to purchase Securities with such features should consult their own tax advisors, since the original issue discount consequences will depend, in part, on the particular terms and features of those Securities.

Market Discount. If a U.S. Holder purchases a Security, other than a discount Security, for an amount that is less than its issue price or, in the case of a discount Security, for an amount that is less than its adjusted issue price as of the purchase date, i.e., revised issue price, the amount of the difference will be treated as “market discount” for United States federal income tax purposes, unless the difference is less than a specified *de minimis* amount. Under the market discount rules of the Code, a U.S. Holder will be required to treat any partial principal payment on or any gain on the sale, exchange, retirement or other taxable disposition of a Security as ordinary income to the extent that any market discount has accrued with respect to the Security and was not previously included in income by the U.S. Holder (pursuant to an election by the U.S. Holder to include any market discount in income as it accrues) at the time of such disposition. Market discount is accrued on a straight-line basis unless the U.S. Holder elects to accrue market discount under a constant yield method. If the Security is disposed of in a nontaxable transaction (other than a nonrecognition transaction described in section 1276(c) of the Code), a U.S. Holder will include any accrued market discount in ordinary income (generally, as interest) as if the U.S. Holder had sold the Security at its then fair market value. In addition, the U.S. Holder may be required to defer, until the maturity of the Security or its earlier disposition in a taxable transaction, deductions for all or a portion of the interest expense on any indebtedness incurred or maintained to purchase or carry the Security, unless the U.S. Holder elects to include market discount in income currently as it accrues. If an election were made to include market discount in income currently as it accrues, that election would apply to all debt instruments with market discount acquired by the U.S. Holder on or after the first day of the first taxable year to which the election applies and may not be revoked without the consent of the IRS.

Short-Term Securities (Including Discount Notes). Securities that have a fixed maturity of one year or less (i.e., short-term Securities) generally will be deemed to have been issued with original issue discount equal to the excess of (i) the short-term Security’s principal amount plus all interest payable on the Security, over (ii) the Security’s issue price. In general, an individual or other cash method U.S. Holder is not required to accrue original issue discount on a short-term Security unless the holder elects to do so. If no election is made, any gain recognized by the U.S. Holder on a taxable disposition (including the maturity) of a short-term Security will be ordinary income to the extent of the original issue discount accrued on a straight-line basis, or upon election on a constant yield method (based on daily compounding) through the date of sale or maturity, and a portion of the deductions otherwise allowable to the U.S. Holder for interest on borrowings allocable to a short-term Security will be deferred until a corresponding amount of income is realized. U.S. Holders who report income for United States federal income tax purposes under the accrual method, and certain other holders, including banks and dealers in securities, are required to accrue original issue discount on a short-term Security (unless the holder elects to accrue “acquisition discount” in lieu of original issue discount on such Security). “Acquisition discount” is the excess of the remaining stated redemption price at maturity of the short-term Security over the holder’s tax basis in the short-term Security at the time of the acquisition. Acquisition discount will be treated as accruing ratably or, at the election of the holder, under a constant yield method based on daily compounding.

Purchase, Sale and Retirement of the Securities. Except as discussed above, upon the sale, exchange or retirement of a Security, a U.S. Holder generally will recognize taxable capital gain or loss equal to the difference between the amount realized on the sale, exchange or retirement of the Security and the U.S. Holder’s adjusted tax basis in the Security; provided, however, that to the extent any gain represents accrued original issue discount not previously included in gross income or accrued interest, such gain would be treated as ordinary income. A U.S. Holder’s adjusted tax basis in a Security generally will equal the U.S. Holder’s initial investment in the Security increased by any original issue discount included in income (and accrued market discount, if any, if the U.S. Holder has elected to include market discount in income) and decreased by the amount of any payments made with respect to the Securities, other than payments of qualified stated interest, and the amount of any amortizable bond premium offset against qualified stated interest with respect to the Security. Except as described above, the gain or loss generally will be long term capital gain or loss if the Security is held for more than one year. Long term capital gain recognized by individuals is currently subject to reduced rates of taxation. The deductibility of capital losses against ordinary income is currently subject to certain restrictions.

Gain or loss recognized by a U.S. Holder on the sale or retirement of a Security that is attributable to changes in exchange rates will be treated as ordinary income or loss. However, exchange gain or loss is taken into account only to the extent of total gain or loss realized on the transaction.

Tax Consequences of Stripping a Bond. The original U.S. Holder of a Bond is taxed on income from a Bond as if the ability to “strip” the Bond did not exist, unless and until (i) the Bond is stripped and (ii) the U.S. Holder disposes of some or all of the resulting Components. The mere exchange of a Bond for Interest Components and Principal Components, absent the disposition of some or all of those Components, should not be treated as a taxable event. If a U.S. Holder exchanges a Bond for Interest Components and Principal Components, and disposes of all of the Components, the U.S. Holder effectively is treated as if it had disposed of the Bond. If that U.S. Holder disposes of less than all the Components resulting from the stripping transaction, that U.S. Holder will be required to:

- include as income all interest and market discount accrued on the Bond not previously included as income;
- increase its basis in the Bond by the same amount;
- allocate its adjusted basis in the Bond among the Components in proportion to the respective fair market values of those Components; and
- recognize gain or loss with respect to each Component disposed of equal to the difference between the amount realized and the basis allocated to that Component.

It is not clear how a U.S. Holder should determine relative fair market values for this purpose and any such U.S. Holder should consult its tax advisor in these circumstances.

Any gain or loss on the disposition of a Principal Component will be capital gain or loss. Although it is unclear, it would appear that any gain or loss from the disposition of an Interest Component also would be capital gain or loss.

A U.S. Holder of a Bond who disposes of less than all of the Components of a Bond after a stripping transaction will be taxed on each retained Component as if that U.S. Holder had purchased the retained Component in the secondary market for an amount equal to the basis allocated to that Component.

Exchange of Amounts in Foreign Currency. Foreign currency received as interest on a Security or on the sale or retirement of a Security will have a tax basis equal to its U.S. dollar value at the time such interest is received or at the time of such sale or retirement. Foreign currency that is purchased will generally have a tax basis equal to the U.S. dollar value of such foreign currency on the date of purchase. Any gain or loss recognized on a sale or other disposition of a foreign currency (including its use to purchase Securities or upon exchange for U.S. dollars) will be ordinary income or loss.

Medicare Tax. A U.S. Holder that is an individual or estate, or a trust that does not fall into a special class of trusts that is exempt from such tax, will be subject to a 3.8% Medicare tax on the lesser of (1) the U.S. Holder’s “net investment income” for the relevant taxable year and (2) the excess of the U.S. Holder’s modified adjusted gross income for the taxable year over a certain threshold (which in the case of individuals will be between \$125,000 and \$250,000, depending on the individual’s circumstances). A U.S. Holder’s net investment income will generally include its interest income and its net gains from the disposition of Securities, unless such interest income or net gains are derived in the ordinary course of the conduct of a trade or business (other than a trade or business that consists of certain passive or trading activities). If you are a U.S. Holder that is an individual, estate or trust, you are urged to consult your tax advisors regarding the applicability of the Medicare tax to your income and gains in respect of your investment in any Securities.

Non-U.S. Holders

The following is a general discussion of certain United States federal income, withholding and estate tax consequences resulting from the beneficial ownership of Securities by a Non-U.S. Holder.

Subject to the discussions below concerning backup withholding and FATCA (as defined below), a Non-U.S. Holder will not be subject to United States federal income tax (at graduated rates) or withholding tax (generally at a rate of 30%) on payments of principal, premium, if any, or interest (including original issue discount, if any) on a Security, unless income from the Security is effectively connected with the conduct by the Non-U.S. Holder of a trade or business within the United States (or, in the case of an applicable tax treaty, is attributable to the Non-U.S. Holder's "permanent establishment" or "fixed base" within the United States), or unless the Non-U.S. Holder does not qualify for the "portfolio interest exemption." Generally, a Non-U.S. Holder will qualify for the portfolio interest exemption if it meets certain certification requirements and is not:

- a shareholder owning actually or constructively stock representing 10% or more of the vote of any of the FHLBanks;
- a controlled foreign corporation related directly or indirectly to any of the FHLBanks; or
- a bank receiving such interest in the manner described in section 881(c)(3)(A) of the Code.

The certification requirement referred to above will be fulfilled if the beneficial owner of a Security certifies on IRS Form W-8BEN or Form W-8BEN-E or other successor form, under penalties of perjury, that it is not a United States person and provides its name and address, and

- the beneficial owner files IRS Form W-8BEN or Form W-8BEN-E or other successor form with the United States payor (i.e., the withholding agent);
- in the case of a Security held on behalf of the beneficial owner by a securities clearing organization, bank, or other financial institution holding customers' securities in the ordinary course of its trade or business, the financial institution files with the withholding agent a statement that it has received the IRS Form W-8BEN or Form W-8BEN-E or other successor form from the holder and furnishes the withholding agent with a copy thereof; or
- in the case of a Security held on behalf of the beneficial owner by a foreign securities clearing organization, bank, or other financial institution, the financial institution files IRS Form W-8IMY and has entered into an agreement with the IRS to be treated as a qualified intermediary.

For purposes of the certification requirements, the beneficial owners of payments on a Security are those persons that, under United States tax principles, are the taxpayers with respect to such payments, rather than persons such as nominees or agents legally entitled to such payments.

With respect to Securities held by a foreign partnership, unless the foreign partnership has entered into a withholding agreement with the IRS, the foreign partnership will generally be required to provide an IRS Form W-8IMY or other successor form and to associate with such form an appropriate certification or other appropriate documentation from each partner. With respect to a Security held by a United States partnership, payments on the Security are treated as payments to a United States payee, even if the partnership has one or more foreign partners.

Prospective investors, including foreign partnerships and their partners, should consult their own tax advisors regarding possible additional reporting requirements.

If a Non-U.S. Holder is engaged in a trade or business in the United States, and if premium or interest (including original issue discount) on the Security is effectively connected with the conduct of that trade or business (or, in the case of an applicable tax treaty, is attributable to the Non-U.S. Holder's "permanent establishment" or "fixed base" within the United States), the Non-U.S. Holder, although exempt from the withholding tax discussed in the preceding paragraphs, will generally be subject to regular United States income tax on interest (including original issue discount) and on any gain realized on the sale, exchange or disposition of a Security in the same manner as if the Non-U.S. Holder were a U.S. Holder (without regard to the Medicare tax). See "United States Federal Income Taxation — U.S. Holders" above. In lieu of the Form W-8BEN or Form W-8BEN-E described above, the Non-U.S. Holder will be required to provide to the withholding agent a properly executed IRS Form W-8ECI to claim an exemption from the withholding tax discussed in the preceding paragraphs. In addition, if the Non-U.S. Holder is a foreign corporation,

it may be subject to a 30% branch profits tax for the taxable year, subject to certain adjustments. For purposes of the branch profits tax, interest (including original issue discount) or any gain recognized on the sale, exchange or other disposition of a Security will be included in the effectively connected earnings and profits of the Non-U.S. Holder if the interest or gain, as the case may be, is effectively connected with the conduct by the Non-U.S. Holder of a trade or business in the United States.

Each holder of a Security should be aware that if it does not properly provide the required IRS form, or if the IRS form (or, if permissible, a copy of such form) is not properly transmitted to and received by the withholding agent, interest on the Security may be subject to United States withholding tax and the holder (including the beneficial owner) will not be entitled to any additional amounts from the FHLBanks. Such tax, however, may in certain circumstances be allowed as a refund or as a credit against such holder's United States federal income tax. The foregoing does not deal with all aspects of federal income tax withholding that may be relevant to Non-U.S. Holders of the Securities. Investors are advised to consult their own tax advisors for specific advice concerning the ownership and disposition of Securities.

Sale, Exchange, or Redemption of Securities. Subject to the discussions below concerning backup withholding and FATCA, a Non-U.S. Holder will generally not be subject to United States federal income withholding tax on any gain realized on the sale, exchange or redemption of a Security unless the gain is effectively connected with the beneficial owner's trade or business in the United States or, in the case of an individual, the holder is present in the United States for 183 days or more in the taxable year in which the sale, exchange or redemption occurs and certain other conditions are met.

Information Reporting on Interest. Interest on a Security that is beneficially owned by a Non-U.S. Holder will be reported annually on IRS Form 1042-S, which must be filed by the withholding agent with the IRS and furnished to such beneficial owner.

Estate Tax. A Security owned by an individual who at the time of death is not a citizen or resident of the United States will not be subject to United States federal estate tax as a result of such individual's death if (i) the individual did not actually or constructively own 10% or more of the total combined voting power of the stock of any of the FHLBanks, (ii) none of the interest on the Security is contingent interest described in section 871(h)(4) of the Code and (iii) the income on the Security would not have been effectively connected with a U.S. trade or business of the individual.

Treasury Regulations Requiring Disclosure of Reportable Transactions

Treasury regulations require United States taxpayers to report certain transactions that give rise to a loss in excess of certain thresholds (a "Reportable Transaction"). Under these regulations, if the Securities are denominated in a foreign currency, a U.S. Holder (or a Non-U.S. Holder that holds the Securities in connection with a United States trade or business) that recognizes a loss with respect to the Securities that is characterized as an ordinary loss due to changes in currency exchange rates (under any of the rules discussed above) would be required to report the loss on IRS Form 8886 (Reportable Transaction Statement) if the loss exceeds the thresholds set forth in the regulations. For individuals and trusts, this loss threshold is \$50,000 in any single taxable year. For other types of taxpayers and other types of losses, the thresholds are higher. You should consult with your tax advisor regarding any tax filing and reporting obligations that may apply in connection with acquiring, owning and disposing of Securities.

Backup Withholding and General Information Reporting

In the case of non-corporate U.S. Holders, general information reporting requirements will apply to payments of principal and interest made on a Security and the proceeds of the sale of a Security within the United States, and "backup withholding" will apply to such payments if the holder fails to provide an accurate taxpayer identification number in the manner required to report all interest and dividends required to be shown on its federal income tax returns, or if the holder is notified by the IRS that it has failed to report all interest or dividends required to be shown, on its federal income tax returns. The backup withholding rate is currently 24%. A U.S. Holder that is a beneficial owner of a Security can obtain complete exemption from backup withholding by providing a properly completed IRS Form W-9 (Request for Taxpayer Identification Number and Certification).

Under current Treasury regulations, backup withholding and information reporting will not apply to payments of interest made by the FHLBanks or any of their agents (in their capacity as such) to a Non-U.S. Holder if such holder has provided the required certification that it is not a United States person (as set forth under “United States Federal Income Taxation — *Non-U.S. Holders*” above), or has otherwise established an exemption (provided that neither the FHLBanks nor their agents have actual knowledge that the holder is a United States person or that the conditions of an exemption are not in fact satisfied).

Payments of the proceeds from the sale of a Security by a Non-U.S. Holder made to or through a foreign office of a broker will not be subject to information reporting or backup withholding. However, information reporting (but not backup withholding) may apply to those payments if the broker is one of the following:

- a United States person;
- a controlled foreign corporation for United States tax purposes;
- a foreign person 50% or more of whose gross income from all sources for the three-year period ending with the close of its taxable year preceding the payment was effectively connected with a United States trade or business; or
- a foreign partnership with certain connections to the United States.

Payment of the proceeds from a sale of a Security to or through the United States office of a broker is subject to information reporting and backup withholding unless the holder or beneficial owner certifies as to its taxpayer identification number or otherwise establishes an exemption from information reporting and backup withholding.

Backup withholding is not a separate tax and is allowed as a refund or as a credit against the holder’s United States federal income tax; provided that the necessary information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act

The Foreign Account Tax Compliance Act (“FATCA”) generally imposes a 30% U.S. withholding tax on “withholdable payments” (i.e., certain U.S.-source payments, including interest (and original issue discount), dividends, other fixed or determinable annual or periodical gain, profits and income, and on the gross proceeds from a disposition of property of a type which can produce U.S.-source interest or dividends) made to certain foreign financial institutions (and certain of their affiliates) unless the payee foreign financial institution agrees (or is required), among other things, to disclose the identity of any U.S. individual with an account at the institution (or the relevant affiliate) and to annually report certain information about such account. FATCA also requires withholding agents making withholdable payments to certain foreign entities that do not disclose the name, address and taxpayer identification number of any substantial U.S. owners (or do not certify that they do not have any substantial U.S. owners) to withhold tax at a rate of 30%. Under certain circumstances, a holder may be eligible for refunds or credits of such taxes.

Pursuant to final and temporary Treasury regulations and other IRS guidance, FATCA will not apply to gross proceeds on a sale or disposition of relevant financial instruments. If any amount of, or in respect of, U.S. withholding tax were to be deducted or withheld from payments on the Securities as a result of a failure by an investor (or by an institution through which an investor holds the Securities) to comply with FATCA, neither the FHLBanks nor any paying agent nor any other person would, pursuant to the terms of the Securities, be required to pay additional amounts with respect to any Securities as a result of the deduction or withholding of that tax. Foreign financial institutions and non-financial foreign entities located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Investors should consult their own tax advisors about the application of FATCA, in particular if they may be classified as financial institutions (or if they hold their Securities through a non-U.S. entity) under the FATCA rules.

The United States federal income, withholding and estate tax summary discussion set forth above is included for general information only and may not be applicable depending upon a holder’s particular situation. Prospective holders should consult their own tax advisors with respect to the tax consequences to

them of the ownership and disposition of the Securities, including the tax consequences under United States tax laws and state, local, foreign and other tax laws and the possible effects of changes in such laws.

CURRENCY CONVERSIONS

Payments for Securities

Investors will be required to pay for Securities in the Specified Currency. The Specified Currency for all Discount Notes is U.S. dollars. Each Dealer may, under certain terms and conditions, arrange for the conversion of the Investor's Currency into the Specified Currency to enable investors to pay for the Bonds in the Specified Currency. We will not be involved in any manner in, and will have no responsibility for, any conversion. Each conversion will be made by the relevant Dealer on such terms and subject to such conditions, limitations and charges as that Dealer may from time to time establish in accordance with its regular foreign exchange practices, and subject to any applicable laws and regulations. All costs of conversion will be borne by those investors in the Bonds.

Payments on Bonds

We will pay principal and interest payments on Bonds in the Specified Currency, Specified Principal Payment Currency or Specified Interest Payment Currency (the "Specified Payment Currency") as specified in the applicable Supplement. If no Specified Currency is specified in the applicable Supplement with respect to any issue of Bonds, the Specified Currency will be U.S. dollars. Currently, there are limited facilities in the United States for the conversion of U.S. dollars into foreign currencies and vice versa. In addition, most banks in the United States do not currently offer non-U.S. dollar denominated checking or savings account facilities in the United States.

Investors holding beneficial interests in a DTC Global Bond denominated in a Specified Currency other than U.S. dollars through DTC participants ("DTC Bondholders") will receive payments in U.S. dollars, unless they elect to receive payments in the Specified Payment Currency. Except as provided below, in the event that a DTC Bondholder has not made that election, payments to that DTC Bondholder will be converted to U.S. dollars by the Exchange Agent. The U.S. dollar amount in respect of any payment received by a DTC Bondholder not electing payment in the Specified Payment Currency will be based on the Exchange Agent's bid quotation as of 11:00 a.m., London time, on the second day on which banks are open for business in London and New York City preceding the applicable payment date, for the purchase of U.S. dollars with the Specified Payment Currency for settlement on that payment date of the aggregate amount of the Specified Payment Currency payable to all DTC Bondholders receiving U.S. dollar payments. If such bid quotation is not available, the Exchange Agent will obtain a bid quotation from a leading foreign exchange bank in London or New York City selected by the Exchange Agent for such purchase. If no such bids are available, payment of the aggregate amount due to all DTC Bondholders on the payment date will be made in the Specified Payment Currency. All costs of any conversion into U.S. dollars will be borne by the applicable DTC Bondholder by deduction from those payments. We will not be involved in any manner in, and will have no responsibility for, the conversion of the Specified Payment Currency for DTC Global Bonds into U.S. dollars.

A DTC Bondholder may elect to receive payment of the principal of, or interest with respect to, the Bonds in the Specified Payment Currency by notifying DTC of its election and wire transfer instructions prior to 5:00 p.m., New York City time, on the third day on which banks are open for business in New York City (for purposes of this section, a "New York Business Day") following the applicable record date in the case of interest, and the twelfth calendar day prior to the payment date for the payment of principal. That election will be made by the DTC participant holding its interest in a DTC Global Bond and any election in respect of that payment will be irrevocable. A DTC participant must notify the DTC Bondholder through which it is holding its interest in a DTC Global Bond of such election and wire transfer instructions prior to 5:00 p.m., New York City time, on the first New York Business Day following the applicable record date. DTC will notify the Exchange Agent of such election and wire transfer instructions and of the amount of the Specified Payment Currency to be converted into U.S. dollars, prior to 5:00 p.m., New York City time, on the fifth New York Business Day following the applicable record date in the case of interest and the tenth calendar day prior to the payment date for the payment of principal. If complete instructions are received by the DTC participant and forwarded by the DTC participant to DTC, and by DTC to the Exchange Agent, on or prior to those dates, the DTC Bondholder will receive payment in the Specified Payment Currency outside DTC. In all other cases, only U.S. dollar payments will be made by the Exchange Agent. Payments in the Specified Payment Currency outside DTC will be made by wire transfer of same day funds in accordance with the applicable wire transfer instructions for value on the relevant payment date.

We understand that Euroclear and Clearstream, unless specifically requested not to do so by a participant prior to the 15th day preceding the applicable interest payment date or principal payment date, will elect to receive all

payments of principal and interest on DTC Global Bonds held through them in the applicable Specified Payment Currency if it is other than U.S. dollars.

PLAN OF DISTRIBUTION

Dealers

We contract with various dealers (all such dealers, together, the “Dealers”) under the Master Dealer Agreement, dated as of January 1, 2019 (together with the exhibits and schedules thereto and the dealer accession letters referred to therein, in each case as amended, supplemented or restated from time to time, the “Master Dealer Agreement”), which, among other things, provides for the offering and sale of Securities by the Office of Finance acting on behalf of the FHLBanks to one or more Dealers, as principal, for resale to investors and other purchasers or through one or more Dealers, as agent, to investors and other purchasers, and governs the appointment, accession, suspension and termination of Dealers from time to time.

Lists of Dealers for Bonds and Discount Notes can be obtained by writing or calling the Office of Finance at the address, phone number or web site identified under the caption “AVAILABILITY OF INFORMATION AND INCORPORATION BY REFERENCE.”

Bonds

We will offer Bonds from time to time primarily to Dealers as principal, whether individually or in a syndicate. We may also offer certain Bonds through Dealers as our agents. The participating Dealers with respect to an issue of Bonds will be identified in the applicable Supplement for that issue of Bonds. We may pay participating Dealers a concession, in the form of a discount and in the amount specified in the applicable Supplement. This concession may be expressed as a dollar amount per thousand dollars, or as a percentage, of the principal amount (or, in certain circumstances, the initial offering price for Zero Coupon Bonds and certain other Bonds sold at a discount) of those Bonds.

Any agreement for the sale of Bonds will, among other things, make provision for the form and terms and conditions of the relevant Bonds, the method of distribution of the Bonds, the price at which those Bonds will be purchased by the Dealers and the commissions or other agreed deductibles (if any) that are payable or allowable by the FHLBanks in respect of such purchase.

One or more Dealers may purchase Bonds as principal in underwritten transactions through negotiation, a competitive bidding process or other methods. The purchase price is identified in the applicable Supplement. Those Bonds may be resold to investors at a fixed offering price or at varying offering prices related to market prices prevailing at the time of resale or otherwise as determined by the participating Dealer or Dealers. A Dealer may sell the Bonds it has purchased as principal to other dealers at a concession. Any concessions or reallowances that will be provided to other dealers in connection with such offering, as provided by such Dealer or Dealers, will be specified in the applicable Supplement. After the initial offering of any issue of Bonds, the offering price (in the case of a fixed price offering), the concession and the reallowance may be changed.

Certain Bonds also may be offered through selected Dealers as our agents. We may authorize Dealers to solicit customer offers to purchase Bonds upon the terms and conditions we determine. Dealers also may approach us on behalf of investors and other purchasers with offers to purchase Bonds. These Bonds will be sold to investors at 100% of their principal amount, unless otherwise specified in the applicable Supplement. Each Dealer acting as agent will communicate to us each offer to purchase Bonds received by it as agent that, in the Dealer’s reasonable judgment, should be considered by us. We will have the sole right to accept offers to purchase those Bonds and may reject any offer in whole or in part. Each Dealer acting as agent will have the right to reject any offer to purchase Bonds that the Dealer considers to be unacceptable.

Discount Notes

We may offer and sell Discount Notes using one or a combination of methods including, but not limited to:

- auction;
- allocation to selected Dealers as agent in accordance with procedures established by us for reoffering to investors; or

- sale to Dealers as principal.

Discount Notes may also be sold by us directly to investors. Dealers may receive a concession, in the form of a discount, from the FHLBanks in connection with the sale of Discount Notes.

We will have the sole right to accept offers to purchase Discount Notes and may reject any offer in whole or in part. Each Dealer acting as agent will have the right to reject any offer to purchase Discount Notes that the Dealer considers to be unacceptable.

Discount Notes generally are offered on a continuous basis for sale to Dealers, and there may be more than one sale on a given day. Current quotations for Discount Notes of varying maturities can be obtained by contacting any Dealer for Discount Notes.

Secondary Market

Each Dealer has agreed with us to use its reasonable efforts to support a secondary market for each particular issue of Securities that it will distribute by providing a reasonable bid in respect of each such issue, based on market conditions at the time of the bid.

No issue of Securities will have an established trading market when issued. There can be no assurance that a secondary market for any of the Securities will develop or, if it develops, it will continue or provide liquidity at all times.

Selling Restrictions

Each Dealer is subject to all applicable laws and regulations in each jurisdiction in which it may offer, sell or deliver Securities or in which it distributes this Information Memorandum, the applicable Supplement or any other information in connection with a particular issue of Securities. Each Dealer has represented and agreed that it will comply with all such applicable laws and regulations.

Each Dealer has agreed that, in connection with the offering and sale of the Securities, the only information such Dealer will represent that we are responsible for is the information contained in this Information Memorandum and the applicable Supplement. Each Dealer has further agreed that it shall be responsible for any other representations that it makes, or any other information that it provides to any offeree or purchaser, in connection with the offering and sale of the Securities.

Selling restrictions may be modified or supplemented following a change in any applicable law, regulation or directive. Selling restrictions may also be added to reflect the requirements of any particular Specified Currency. Any such modification or supplement will be set forth in the applicable Supplement issued in respect of each issue of Bonds to which such modification or addition relates or in an amendment or supplement to this Information Memorandum. Each Dealer has agreed to observe the selling restrictions on the offering, sale and delivery of Securities and distribution of offering materials relating to the Securities. Some of the restrictions that may be applicable to the offer and sale of the Securities are set forth below.

Prohibition of Sales to EEA Retail Investors

The Securities that are the subject of an offering contemplated by this Information Memorandum as completed by the applicable Supplement may not be offered, sold or otherwise made available to any retail investor in the EEA. For the purposes of this provision:

- (a) the expression “retail investor” means a person who is one (or more) of the following:
 - (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; or
 - (ii) a customer within the meaning of the Insurance Distribution Directive, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
 - (iii) not a qualified investor as defined in the Prospectus Regulation; and

(b) the expression “offer” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Securities to be offered so as to enable an investor to decide to purchase or subscribe for the Securities.

Canada

The Securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the Securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if the offering memorandum (including any amendment thereto) contains a misrepresentation; provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (“NI 33-105”), the Dealers are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering of the Securities.

France

Each Dealer has represented and agreed that it has not offered or sold and will not offer or sell, directly or indirectly, any Securities to the public in France and it has not distributed or caused to be distributed and will not distribute or cause to be distributed to the public in France this Information Memorandum or any Supplement or any other offering material relating to the Securities and such offers, sales and distributions have been and will be made in France only to qualified investors (*investisseurs qualifiés*), as defined in and in accordance with Article L. 411-2 of the French *Code monétaire et financier*.

Germany

The offering of the Securities is not a public offering in the Federal Republic of Germany (“Germany”). The Securities may only be offered, sold and acquired in accordance with the provisions of the Prospectus Regulation, as amended, the Commission Delegated Regulation (EU) 2019/980 of 14 March 2019, as amended, the German Securities Prospectus Act (the “Securities Prospectus Act”, *Wertpapierprospektgesetz, WpPG*), as amended, the PRIIPs Regulation, as amended, and any other laws applicable in Germany governing the issue, offering and sale of securities. No application has been made under German law to permit a public offer of the Securities in Germany. This Information Memorandum, any applicable Supplement and any other document or material relating to any Securities offered hereby have not been and will not be approved under the Prospectus Regulation and the Securities Prospectus Act for purposes of a public offer of the Securities and accordingly the Securities may not be, and are not being, offered or advertised publicly or by public promotion in Germany. Therefore, this Information Memorandum is strictly for private use and the offer is only being made to recipients to whom the document is personally addressed and does not constitute an offer or advertisement to the public. The Securities will only be available to, and this Information Memorandum and any other offering material in relation to the Securities is directed only at, persons who are qualified investors (*qualifizierte Anleger*) within the meaning of Article 2(e) of the Prospectus Regulation or in circumstances where another exemption in accordance with Article 1(4)) of the Prospectus Regulation applies. Any resale of the Securities in Germany may only be made in accordance with the applicable laws. We have not, and do not intend to, file and submit a securities prospectus to the German Federal Financial Supervisory Authority (“BaFin”, *Bundesanstalt für Finanzdienstleistungsaufsicht*) for approval or obtain a notification to BaFin from another competent authority of a member state of the EEA, to which a securities prospectus may have been submitted.

Hong Kong

The Securities have not been offered or sold and will not be offered or sold in Hong Kong by means of any document, except for Securities which are a “structured product” as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), other than (i) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) and any rules made under that Ordinance, or (ii) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) or which do not constitute an offer to the public within the meaning of that Ordinance; and no advertisement, invitation or document relating to the Securities has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to Securities which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) and any rules made under that Ordinance.

Italy

The offering of the Securities has not been registered with the *Commissione Nazionale per le Società e la Borsa* (“CONSOB”) pursuant to Italian securities legislation.

No Securities may be offered, sold or delivered, nor may copies of this Information Memorandum or of any other document relating to the Securities be distributed in the Republic of Italy except, in accordance with all Italian securities, tax and exchange control and other applicable laws and regulations, to qualified investors (*investitori qualificati*) — as defined in Article 35, paragraph 1(d) of CONSOB Regulation No. 20307 of 15 February 2018, as amended (“Regulation No. 20307”) pursuant to Article 34-ter, first paragraph, letter b) of CONSOB Regulation No. 11971 of 14 May 1999, as amended, implementing Article 100 of Legislative Decree No. 58 of 24 February, 1998, as amended (the “Financial Services Act”) — that are subject to prudential supervision (*vigilanza prudenziale*) and operate in the banking, financial, securities, insurance and pension funds sectors.

In addition, and subject to the foregoing, any offer, sale or delivery of the Securities or distribution of copies of this Information Memorandum or any other document relating to the Securities in the Republic of Italy referred to above must be effected:

- (i) by an investment firm, bank or financial intermediary permitted to conduct such activities in the Republic of Italy in accordance with the Financial Services Act, Regulation No. 20307 and Legislative Decree No. 385 of 1 September 1993, as amended (the “Banking Act”); and
- (ii) in compliance with any other applicable laws and regulations or requirements imposed by the Bank of Italy (including, *inter alia*, where applicable, the reporting requirements pursuant to Article 129 of the Banking Act, as amended, and the implementing guidelines of the Bank of Italy, as amended), CONSOB and/or any other Italian authority.

Japan

Each Dealer understands that the Securities have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended, the “Financial Instruments and Exchange Law”), and has represented and agreed that it has not, directly or indirectly, offered or sold and will not, directly or indirectly, offer or sell any Securities in Japan or to, or for the account or benefit of, any resident of Japan, or to, or for the account or benefit of, others for reoffering or resale, directly or indirectly, in Japan or to, or for the account or benefit of, any resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Law and other applicable laws, regulations and ministerial guidelines of Japan. As used in this paragraph, “resident of Japan” means any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

People's Republic of China

Each Dealer has represented and agreed that the Securities will not be offered or sold within the People's Republic of China (excluding Hong Kong, Macau and Taiwan, the "PRC") by means of this Information Memorandum or any other document unless such offer or sale is in compliance with all applicable laws and regulations of the PRC. This Information Memorandum does not constitute a public offer of the Securities or the solicitation of an offer to buy the Securities, whether by sale or by subscription, in the PRC.

Spain

Each Dealer has represented and agreed that the Securities will not be offered, sold or distributed, nor will any subsequent resale of Securities be carried out in Spain, except in circumstances which do not constitute a public offer of securities in Spain within the meaning of the Restated Text of the Spanish Securities Market Law approved by Legislative Royal Decree 4/2015 of 23 October (*Real Decreto Legislativo 4/2015, de 23 de Octubre, por el que se aprueba el texto refundido de la Ley del Mercado de Valores*), as amended, or without complying with all legal and regulatory requirements under Spanish securities laws. Neither the Securities nor this Information Memorandum has been, nor it is intended that they will be, registered with the Spanish Securities Market Commission (*Comisión Nacional del Mercado de Valores*) and therefore this Information Memorandum is not intended for any public offer of the Securities in Spain.

United Kingdom

Securities that have a maturity of less than one year may not be offered or sold other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the Securities would otherwise constitute a contravention of Section 19 of the FSMA by us.

Any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) in connection with the issue or sale of the Securities may only be communicated or caused to be communicated in circumstances in which Section 21(1) of the FSMA does not apply to us.

All applicable provisions of the FSMA must be complied with in respect to anything done by any person in relation to the Securities in, from or otherwise involving the United Kingdom.

General

We may offer and sell Securities through arrangements other than those set forth in or pursuant to the Master Dealer Agreement and to or through persons other than the Dealers. We may also offer and sell Securities directly to investors, which may but need not involve payment of an arrangement fee to third parties.

Securities with similar terms but different interest rates and yields may be offered concurrently to different investors. Bonds with different variable terms also may be offered concurrently to different investors.

Payment of the purchase price of Securities to the FHLBanks must be made in immediately available funds and will be effective only upon receipt of those funds by the FHLBanks. In the case of Securities sold through a Dealer on an agency basis, that Dealer will act on behalf of the purchaser of those Securities in transmitting the purchaser's funds to the FHLBanks.

The FHLBanks and the Dealers have agreed to indemnify each other against certain liabilities.

After an agreement is reached between one or more Dealers and us with respect to the issuance of particular Securities, the Dealers may confirm sales of those Securities on a "when-issued" basis, although the issuance and delivery of those Securities by us may not occur if certain conditions are not satisfied or waived and the Dealers terminate their agreement to purchase those Securities as a result.

The Dealers and certain of their respective affiliates engage in transactions with and perform services for the FHLBanks, including without limitation the purchase and sale of investment securities. In connection with any

particular issue of Securities, one or more of the FHLBanks may enter into interest rate swaps or other hedging transactions with, or arranged by, the applicable Dealer participating in the issuance, an affiliate of the Dealer, or an unrelated third party, including hedging transactions involving the sale and purchase of Securities from time to time in connection with the issuance of Securities. The Dealer, affiliate of the Dealer or unrelated third party may receive compensation, trading gain or other benefits in connection with these hedging transactions. Counterparties to these hedging transactions may also engage in market transactions involving the Securities. In some cases, some or all of the net proceeds from an issue of Securities may be loaned to an FHLBank member that is affiliated with a Dealer involved in underwriting or otherwise distributing that issue of Securities.

In connection with any particular issue of Securities, a Dealer or any other entity through which those Securities are sold may over-allot or effect transactions that seek to stabilize or maintain the market price of the Securities at levels above those that might otherwise prevail in the open market. Those transactions may include stabilizing bids or purchases for the purpose of maintaining the market price of the Securities. A Dealer or any other entity through which Securities are sold may also create a short position in those Securities and may reduce that short position by purchasing Securities in the open market.

Transactions described above may cause the price of the applicable Securities to be higher than it might otherwise be in the absence of those transactions. Those transactions, if commenced, may be discontinued at any time. If a Dealer or any other entity through which Securities are sold engages in any such transaction, it will do so for its own account and not as an agent for us.

From time to time, we may request, and Dealers may disclose, information relating to the Securities that they distribute, including the identity of investors that have made purchases of the Securities.

The size of an issue of Bonds may be increased from time to time, without notice to or the consent of any holder of Bonds, by issuing additional Bonds with the same terms (other than the Issue Date, the Interest Commencement Date, the offering price and other underwriting terms, which may vary). We reserve the right to reopen an issue of Bonds one or more times and an issue of Bonds may be reopened at any time when the reopening is consistent with the FHLBanks' funding needs and overall market conditions. The evaluation of these criteria and the decision whether to reopen Bond issues are in our sole discretion, and there can be no assurance that an issue of Bonds will be reopened or increased. Furthermore, we may elect to issue another issue of Bonds with identical terms rather than reopen an issue of Bonds.

Unless otherwise specified by us (in the applicable Supplement in the case of Bonds), the Securities will not be listed on any securities exchange or quotation system.

EXHIBIT A
FORM OF PRICING SUPPLEMENT

Pricing Supplement



**Federal Home Loan Banks
Global Debt Program**

Series []
[Title of Issue of Bonds]

The Bonds are Joint and Several Obligations of the FHLBanks and are not obligations of the United States and are not guaranteed by the United States.

SEE “CERTAIN INVESTMENT CONSIDERATIONS” IN THE INFORMATION MEMORANDUM [AND ON PAGE __ OF THIS PRICING SUPPLEMENT] FOR A DISCUSSION OF CERTAIN FACTORS THAT SHOULD BE CONSIDERED IN CONNECTION WITH AN INVESTMENT IN THE BONDS OFFERED HEREBY.

[Dealer Marketing Name(s)]

The date of this Pricing Supplement is [Pricing Date or, in the case of a syndicated offering, the date of the Syndication Agreement].

This document (“Pricing Supplement”) is issued to give details of an issue of Bonds by the Federal Home Loan Banks (the “Issuer” or “FHLBanks”) under the Global Debt Program [and to provide information supplemental to the Information Memorandum referred to below].

This Pricing Supplement supplements the terms and conditions in, and incorporates by reference, the Information Memorandum dated September 30, 2019, as supplemented or amended, and all documents incorporated by reference therein (collectively, the “Information Memorandum”), and should be read in conjunction with the Information Memorandum. Unless otherwise defined in this Pricing Supplement, terms used herein have the same meanings as in the Information Memorandum.

No person is authorized to give any information or to make any representation not contained or incorporated by reference in the Information Memorandum or this Pricing Supplement, and any information or representation not contained or incorporated by reference herein or in the Information Memorandum must not be relied on as having been authorized by or on behalf of the FHLBanks or by any of the Dealers (as defined in the Information Memorandum). The delivery of the Information Memorandum or this Pricing Supplement at any time does not imply that the information contained in the Information Memorandum or this Pricing Supplement, as the case may be, is correct at any time subsequent to the date of the Information Memorandum or, if later, the date of the documents incorporated by reference in the Information Memorandum or to the date of this Pricing Supplement, respectively.

Terms and Conditions

The following items under this heading “Terms and Conditions” are the particular terms which relate to the issue the subject of this Pricing Supplement. These are the only terms which form part of the form of Bonds for such issue.

[Include whichever of the following apply]

1. Series: [Number]
2. Form of Bonds: [Form]
3. Aggregate Principal Amount: [Amount]
4. Authorized Denomination(s): [Currency and Amount(s)]
5. Specified Currency: [Currency of Denomination]
6. Specified Principal Payment Currency: [Currency]
(Delete term if identical to Specified Currency)
7. Specified Interest Payment Currency: [Currency]
(Delete term if identical to Specified Currency)
8. Issue Date: [Date]
9. Maturity Date: [Date]
10. Business Day Convention/FRN Convention: [Specify]
 - (a) Relevant Business Day: [Describe]
 - (b) Relevant Financial Center(s): [Specify]
11. Fixed Rate Bonds: [Applicable/Not Applicable]
(if not applicable, delete the remaining subparagraphs of this paragraph)

OR

11. Conversion Bonds:
 - (a) Calculation Amount: [Amount of principal outstanding/other]
 - (b) Interest Commencement Date: [Date]
(Delete term if identical to Issue Date)
 - (c) Interest Payment Date(s): [Date(s)]
 - (d) Fixed Interest Rate(s): [] percent per annum [for period]
[[] percent per annum for additional step-up periods]
 - (e) Fixed Rate Day Count Fraction(s): [Specify]
12. Variable Rate Bonds: [Applicable/Not Applicable]
(If not applicable, delete the remaining subparagraphs of this paragraph)
 - (a) Calculation Amount: [Amount of principal outstanding/other]
 - (b) Interest Commencement Date: [Date]
(Delete term if identical to Issue Date)
 - (c) Interest Payment Date(s): [Date(s)]
 - (d) Rate of Interest: [Spread Multiplier, if any x] Reference Rate
[+/-Spread, if any]

- (e) Spread: [+/- [] percent per annum/Not Applicable]
- (f) Spread Multiplier: [Specify/Not Applicable]
- (g) Variable Rate Day Count Fraction(s): [Specify]
- (h) Minimum Interest Rate: [Percent]
- (i) Maximum Interest Rate: [Percent/Not Applicable]
- (j) Rounding Convention for Rate of Interest: [Round to three decimal places/other convention]
- (k) Rounding Convention for indexing formulas and intermediate calculations: [Round to five decimal places/other convention]
- (l) Reference Rate(s): [Specify, indicating whether bid, offer or mean]
- (1) Primary Source Page: [Specify]
- (2) Secondary Source Page: [Specify]
- (3) Back-Up Source: [Specify and describe]
- (4) Reset Dates: [Specify]
- (5) Determination Date(s): [Specify]
- (6) Rate Cut-Off Date: [Describe]
- (7) Relevant Banking Day: [Describe]
- (8) Relevant Banking Center(s): [Specify]
- (9) Relevant Term: [Specify]
- (m) Calculation Agent: [Specify]
13. Zero Coupon Bonds: [Applicable/Not Applicable]
(If not applicable, delete the remaining subparagraphs of this paragraph)
- (a) Amortization Yield: [Yield]
14. Redemption of Zero Coupon Bonds: [Applicable/Not Applicable]
(If not applicable, delete the remaining subparagraphs of this paragraph)
- (a) Reference Price: [Price]
- (b) Terms: [Describe]
15. Redemption According to Formula: [Applicable/Not Applicable]
(If not applicable, delete the remaining subparagraphs of this paragraph)
- (a) Redemption Date(s): [Specify]
- (b) Terms: [Specify]
- (c) Reference Rate(s): [Specify, indicating whether bid, offer or mean]
- (1) Primary Source Page: [Specify]
- (2) Secondary Source Page: [Specify]
- (3) Back-Up Source: [Specify]

- (4) Reset Dates: [Specify]
- (5) Determination Date(s): [Specify]
- (6) Rate Cut-Off Date: [Describe]
- (7) Relevant Banking Day: [Describe]
- (8) Relevant Banking Center(s): [Specify]
- (d) Price paid on Redemption Date: [Price]
16. Issuer's Optional Redemption: [Applicable/Not Applicable]
(If not applicable, delete the remaining sub-paragraphs of this paragraph)
- (a) Redemption Date(s): [Dates]
- (b) Terms: [Specify whole or whole and part]
- (c) Price paid on Redemption Date: [Specify]
- (d) Notice: [Specify]
17. Redemption at the Option of a Registered Holder: [Applicable/Not Applicable]
(If not applicable, delete the remaining sub-paragraphs of this paragraph)
- (a) Redemption Date(s): [Dates]
- (b) Terms: [Specify]
- (c) Price paid on Redemption Date: [Specify]
- (d) Notice to registered owner: [Specify]
- (e) Withdrawal of Bonds: [Give details]
18. Amortizing Bonds: [Applicable/Not Applicable]
(If not applicable, delete the remaining sub-paragraphs of this paragraph)
- (a) Redemption Date(s): [Specify]
- (b) Installment Amount(s): [Specify]
- (c) Price paid on Redemption Date(s): [Specify]
19. Eligible to be Stripped: [Applicable/Not Applicable]
(If not applicable, delete the remaining sub-paragraphs of this paragraph)
- (a) Minimum Principal Amount: [Amount]
- (b) Minimum Interest Component: [Specify]
- (c) Minimum Principal Component: [Specify]
- (d) Cut-Off Date: [Specify]
- (e) Other Terms: [Describe]
- Other Relevant Terms**
1. Listing (if yes, specify Stock exchange): [Stock Exchange]
2. Details of Clearance System and Clearance and Settlement Procedures: [Give details]

3. Method of Payment: [Delivery versus Payment/Free Delivery Basis/or other method specified]
4. Distribution: [Individual/Syndicated/Agency]
5. Dealer Liability: [Several/Joint and Several]
6. Dealer(s):
- (a) Lead Manager(s)/Dealer(s) (and principal amount(s)): [Legal Name]
 - (b) Co-Lead Manager(s) (and principal amount(s)): [Not Applicable/Legal Name]
7. Stabilizing Manager: [Legal Name]
8. Issue Price: [Price]
9. Commissions, Concessions, Reallowance and other Compensation: [Specify]
10. Codes:
- (a) Common Code: [Number]
 - (b) ISIN: [Number]
 - (c) CUSIP: [Number]
 - (d) CINS: [Number]
 - (e) Other: [Number]
11. Agents:
- (a) Global Agent: [Not Applicable/Legal Name]
 - (b) Registrar: [Not Applicable/Legal Name]
 - (c) Transfer Agent(s): [Not Applicable/Legal Name]
 - (d) Custodian: [Not Applicable/Legal Name]
 - (e) Exchange Agent: [Not Applicable/Legal Name]
 - (f) Calculation Agent: [Not Applicable/Legal Name]

General Information

All required U.S. authorizations for the issuance of the Bonds have been obtained. [Set out any additions or variations to the selling restrictions.]

[Supplemental Disclosure

[Set out here any additional disclosure regarding, for example, investment considerations or taxation which is considered necessary or advisable for the particular issue of Bonds.]]

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EXHIBIT B

FORM OF OFFERING NOTICE



OFFERING NOTICE

FEDERAL HOME LOAN BANKS

This Offering Notice relates to the [Type of] Bonds described below and sold by us to the dealer(s) identified below, and should be read in conjunction with the Information Memorandum dated September 30, 2019, as supplemented or amended, and all documents incorporated by reference therein (collectively, the “Information Memorandum”), relating to our Securities. Unless otherwise defined herein, capitalized terms used herein have the meaning given to them in the Information Memorandum, which is hereby incorporated by reference.

THE BONDS ARE NOT OBLIGATIONS OF THE UNITED STATES AND ARE NOT GUARANTEED BY THE UNITED STATES.

SEE “CERTAIN INVESTMENT CONSIDERATIONS” IN THE INFORMATION MEMORANDUM FOR A DISCUSSION OF CERTAIN FACTORS THAT SHOULD BE CONSIDERED IN CONNECTION WITH AN INVESTMENT IN THE BONDS OFFERED HEREBY.

[Include whichever of the following apply]

Aggregate Original Principal Amount:	[Amount]
Title:	[Description]
Series:	[Number]
CUSIP Number:	[Number]
Authorized Denominations:	[Amounts]
Pricing Date:	[Date]
Issue Date:	[Date]
Maturity Date:	[Date]
Principal amount paid on Maturity Date:	[Percent]% of outstanding principal amount of the Bonds
Specific Fixed Rate Bond Terms	[Delete paragraph and subparagraphs if not applicable]
(a) Interest Rate:	[coupon]%
(b) Interest Payment Dates:	[Dates]
(c) Day Count Convention:	[Day count convention]
Specific Zero Coupon Bond Terms	[Delete paragraph and subparagraphs if not applicable]
(a) Interest Rate:	0.00%

Specific Step Rate Bond Terms [Delete paragraph and subparagraphs if not applicable]
 (a) Interest Rate: The interest rate on the Bonds for the applicable Interest Period is as follows:

Interest Period Commencing [Interest Periods]	Interest Rate [coupon]%
--	----------------------------

(b) Interest Payment Dates: [Dates]

(c) Day Count Convention: [Day count convention]

Specific Variable Rate Bond Terms [Delete paragraph and subparagraphs if not applicable]

(a) Interest Rate: [Multiplier, if any x] Reference Rate [+/-Spread, if any]

(b) Spread: [Spread %/Not Applicable]

(c) Multiplier: [Specify/Not Applicable]

(d) Day Count Convention: [Day count convention]

(e) Floor (Minimum Interest Rate): [Specify/0.00%]

(f) Cap (Maximum Interest Rate): [Specify/Not Applicable]

(g) Rounding Convention for Interest Rate: [Round to three decimal places/other convention]

(h) Rounding Convention for Intermediate Calculations: [Round to five decimal places/other convention]

(i) Reference Rate: [Specify]

(1) Reference Rate Dates: [Specify]

(2) Reset Date: [Specify]

(3) Determination Date: [Specify]

(4) Rate Cut Off Date: [Describe]

(5) Relevant Term: [Specify]

(6) Primary Source Page: [Specify]

(7) Secondary Source Page: [Specify]

(8) Back-Up Source Page: [Specify]

Specific Range Bond Terms [Delete paragraph and subparagraphs if not applicable]

(a) Interest Rate: For each Interest Period listed below, the interest rate on the Bonds for the applicable Interest Period will depend on the Reference Rate on the applicable Reset Date and will be equal to a rate determined by the applicable formula:

Interest Periods Commencing [Dates]	Interest Rate [coupon]%
--	----------------------------

(b) Spread: [Spread%/Not Applicable]

(c) Multiplier: [Specify/Not Applicable]

(d) Day Count Convention: [Day count convention]

(e) Reference Rate: [Specify]

(1) Primary Source Page: [Specify]

(2) Reference Rate Dates: [Specify]

(3) Reset Date: [Specify]

(4) Determination Date: [Specify]

(5) Non-Banking Determination Dates:	[Describe]
(6) Rate Cut Off Date:	[Describe]
(7) Relevant Term:	[Specify]
Specific Conversion Bond Terms	[Delete paragraph and subparagraphs if not applicable]
[Interest Payment Dates] ¹	[Dates]
(a) Interest Periods (fixed rate):	The Bonds will bear interest at a fixed rate during the Interest Periods occurring from [specify period] as follows:
(1) Interest Rate	[coupon]%
(2) Day Count Convention	[Day count convention]
(b) Interest Periods (variable rate)	The Bonds will bear interest at a fixed rate during the Interest Periods occurring from [specify period] as follows:
(1) Interest Rate:	[Multiplier, if any x] Reference Rate [+/-Spread, if any]
(2) Spread:	[Spread %/Not Applicable]
(3) Multiplier:	[Specify/Not Applicable]
(4) Day Count Convention:	[Day count convention]
(5) Floor (Minimum Interest Rate):	[Specify/0.00%]
(6) Cap (Maximum Interest Rate):	[Specify/Not Applicable]
(7) Rounding Convention for Interest Rate:	[Round to three decimal places/other convention]
(8) Rounding Convention for Intermediate Calculations:	[Round to five decimal places/other convention]
(9) Reference Rate:	[Specify]
(i) Primary Source Page:	[Specify]
(ii) Reference Rate Dates:	[Specify]
(iii) Reset Date:	[Specify]
(iv) Determination Date:	[Specify]
(v) Relevant Term	[Describe]
Redemption:	[None/Redemption at the option of the FHLBanks] <i>(If none, delete the remaining paragraphs of this subparagraph)</i>
(a) Notice of Redemption:	[Specify]
(b) Redemption Dates:	[Date(s)]
(c) Terms:	[Specify]
(d) Price Paid on Redemption Date:	[Specify]%
Dealer:	[Legal name]
Dealer(s) Liability:	[Specify]
Price Sold to Dealer:	[Specify]

¹ If not identified above

Initial Offering Price to Public:

Variable Price Offer

Proceeds to FHLBanks from Sale of Bonds:

[Specify]

Dealer Compensation:

(a) Concession:

[Specify/None]

(b) Reallowance:

[Specify/None]

[Describe swap or delete this section if none]

[Supplemental Disclosure]

[Set out here any additional disclosure regarding, for example, investment considerations or taxation which is considered necessary or advisable for the particular issue of Bonds.]

This Offering Notice is dated [Date].

EXHIBIT C

SELECTED REFERENCE RATES

Selected Reference Rates:

(i) Federal Funds Rate:

Primary Source Page

(1) The Federal Funds Rate for a Reference Rate Date will be the rate set forth in the Federal Reserve Statistical Release “H.15, Selected Interest Rates (Daily),” or any successor publication of the Federal Reserve Board available on its web site at www.federalreserve.gov/releases/h15/ or any successor web site (each as determined by the Calculation Agent) (“H.15 Daily Update”), for the Determination Date applicable to that Reference Rate Date opposite the caption “Federal funds (effective)”, as such rate is displayed on the Reuters Screen FEDFUNDS1 Page.

Secondary Source Page

(2) If, by 5:00 p.m., New York City time, on the day that is one New York Banking Day following the Determination Date, such rate for the Determination Date does not appear on the Reuters Screen FEDFUNDS1 Page, the rate for that Determination Date will be the rate set forth in H.15 Daily Update, or such other recognized electronic source used for the purpose of displaying such rate as determined by the Calculation Agent, for the Determination Date opposite the caption “Federal funds (effective).”

Back-Up Sources

(3) If, by 5:00 p.m., New York City time, on the date that is one New York Banking Day following the Determination Date, such rate for the Determination Date does not appear on the Reuters Screen FEDFUNDS1 Page nor is it published in H.15 Daily Update or another recognized electronic source as determined by the Calculation Agent, the rate for that Determination Date will be the rate for the immediately preceding day for which such rate is set forth in H.15 Daily Update opposite the caption “Federal funds (effective)”, as such rate is displayed on the Reuters Screen FEDFUNDS1 Page.

(4) The last Federal Funds Rate actually determined and applied to a Reference Rate Date which falls on or before the Rate Cut Off Date, if any, will be the Federal Funds Rate for each Reference Rate Date from such Reference Rate Date to but excluding the applicable Interest Payment Date.

* * * * *

(ii) **LIBOR:**

Primary Source Page

(1) The LIBOR for a Reference Rate Date will be that rate published on the Reuters Screen LIBOR01 Page for the Relevant Term as of 11:00 a.m., London time, on the corresponding Determination Date, but may be published by such other information vendor as the ICE Benchmark Administration Limited (or any successor administrator of LIBOR) may select or on such other Primary Source Page specified in the applicable Supplement.

Secondary Source Page

(2) If such rate does not appear on the Reuters Screen LIBOR01 Page (or published by such other information vendor as the ICE Benchmark Administration Limited (or any successor administrator of LIBOR) may select or on such other Primary Source Page specified in the applicable Supplement) as described above, then the LIBOR in respect of the applicable Reference Rate Date will be the rate for deposits in U.S. dollars for the Relevant Term which appears on the Bloomberg Screen BTMM Page under the heading "LIBOR FIX" as of 11:00 a.m., London time, on the corresponding Determination Date.

Back-Up Sources

(3) If such rate does not appear on the Reuters Screen LIBOR01 Page (or published by such other information vendor as the ICE Benchmark Administration Limited (or any successor administrator of LIBOR) may select or on such other Primary Source Page specified in the applicable Supplement), or on the Bloomberg Screen BTMM Page, as described above, then the LIBOR in respect of the applicable Reference Rate Date will be such other recognized electronic source used for the purpose of displaying such data as selected by the Calculation Agent.

Effect of Benchmark Transition Event

(a) *Benchmark Replacement.* Notwithstanding any of the provisions under paragraphs (1) through (3) above, if the Calculation Agent determines that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any determination of the Benchmark on any date, the Benchmark Replacement will replace the then-current Benchmark for all purposes relating to the Bonds in respect of such determination on such date and all determinations on all subsequent dates.

(b) *Benchmark Replacement Conforming Changes.* In connection with the implementation of a Benchmark Replacement, the Calculation Agent will have the right to make Benchmark Replacement Conforming Changes from time to time.

(c) *Decisions and Determinations.* Any determination, decision or election that may be made by the Calculation Agent pursuant to this section entitled "Effect of Benchmark Transition Event," including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error, may be made in the Calculation Agent's sole discretion (provided that, to the extent any third party other than the Office of Finance serves as the Calculation Agent, the Calculation Agent shall consult with us prior to such determination, decision or election and shall not make any such determination, decision or election to which we reasonably object) and, notwithstanding anything to the contrary in this Information Memorandum, any applicable Supplement or any other documentation relating to the Bonds, shall become effective without consent from any holder of the Bonds or any other party.

If the Calculation Agent does not make any determination, decision or election that it is required to make pursuant to this section entitled "Effect of Benchmark Transition Event," then we will make that determination, decision or election in our sole discretion on the same basis (and with the same conclusive and binding effect as if we were the Calculation Agent) as described in this section.

(d) *Certain Defined Terms.* For purposes of this section entitled "Effect of Benchmark Transition Event," the following definitions shall apply. To the extent the following definitions are inconsistent with any other definition

contained elsewhere in this Information Memorandum, the following definitions shall control with respect to this section entitled “Effect of Benchmark Transition Event”.

“Benchmark” means, initially, LIBOR; provided that if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to LIBOR or the then-current Benchmark, then “Benchmark” means the applicable Benchmark Replacement.

“Benchmark Replacement” means the Interpolated Benchmark; provided that if the Calculation Agent cannot determine the Interpolated Benchmark as of the Benchmark Replacement Date, then “Benchmark Replacement” means the first alternative set forth in the order below that can be determined by the Calculation Agent as of the Benchmark Replacement Date:

- (1) the sum of: (a) Term SOFR and (b) the Benchmark Replacement Adjustment;
- (2) the sum of: (a) Compounded SOFR and (b) the Benchmark Replacement Adjustment;
- (3) the sum of: (a) the alternate rate of interest that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark for the applicable Corresponding Tenor and (b) the Benchmark Replacement Adjustment;
- (4) the sum of: (a) the ISDA Fallback Rate and (b) the Benchmark Replacement Adjustment;
- (5) the sum of: (a) the alternate rate of interest that has been selected by the Calculation Agent as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to any industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar denominated floating rate notes at such time and (b) the Benchmark Replacement Adjustment.

“Benchmark Replacement Adjustment” means the first alternative set forth in the order below that can be determined by the Calculation Agent as of the Benchmark Replacement Date:

- (1) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;
- (2) if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, then the ISDA Fallback Adjustment;
- (3) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the Calculation Agent giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar denominated floating rate notes at such time.

“Benchmark Replacement Conforming Changes” means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of “Interest Period,” timing and frequency of determining rates and making payments of interest, changes to the definition of “Corresponding Tenor” solely when such tenor is longer than the Interest Period, and other administrative matters) that the Calculation Agent decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the Calculation Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Calculation Agent determines that no market practice for use of the Benchmark Replacement exists, in such other manner as the Calculation Agent determines is reasonably necessary).

“Benchmark Replacement Date” means the earliest to occur of the following events with respect to the then-current Benchmark:

- (1) in the case of clause (1) or (2) of the definition of “Benchmark Transition Event,” the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of the Benchmark permanently or indefinitely ceases to provide the Benchmark; or

(2) in the case of clause (3) of the definition of “Benchmark Transition Event,” the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination.

“Benchmark Transition Event” means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of the Benchmark announcing that such administrator has ceased or will cease to provide the Benchmark, permanently or indefinitely; provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark;

(2) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark, the central bank for the currency of the Benchmark, an insolvency official with jurisdiction over the administrator for the Benchmark, a resolution authority with jurisdiction over the administrator for the Benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark, which states that the administrator of the Benchmark has ceased or will cease to provide the Benchmark permanently or indefinitely; provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark; or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark announcing that the Benchmark is no longer representative.

“Compounded SOFR” means the compounded average of SOFRs for the applicable Corresponding Tenor, with the rate, or methodology for this rate, and conventions for this rate being established by the Calculation Agent in accordance with:

(1) the rate, or methodology for this rate, and conventions for this rate selected or recommended by the Relevant Governmental Body for determining compounded SOFR; provided that:

(2) if, and to the extent that, the Calculation Agent determines that Compounded SOFR cannot be determined in accordance with clause (1) above, then the rate, or methodology for this rate, and conventions for this rate that have been selected by the Calculation Agent giving due consideration to any industry-accepted market practice for U.S. dollar denominated floating rate notes at such time.

“Corresponding Tenor” with respect to a Benchmark Replacement means a tenor (including overnight) having approximately the same length (disregarding business day adjustment) as the applicable tenor for the then-current Benchmark.

“Federal Reserve Bank of New York’s Website” means the web site of the Federal Reserve Bank of New York at www.newyorkfed.org, or any successor source.

“Interpolated Benchmark” with respect to the Benchmark means the rate determined for the Corresponding Tenor by interpolating on a linear basis between: (1) the Benchmark for the longest period (for which the Benchmark is available) that is shorter than the Corresponding Tenor and (2) the Benchmark for the shortest period (for which the Benchmark is available) that is longer than the Corresponding Tenor.

“ISDA Definitions” means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time.

“ISDA Fallback Adjustment” means the spread adjustment (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA Definitions to be determined upon the occurrence of an index cessation event with respect to the Benchmark for the applicable tenor.

“ISDA Fallback Rate” means the rate that would apply for derivatives transactions referencing the ISDA Definitions to be effective upon the occurrence of an index cessation date with respect to the Benchmark for the applicable tenor excluding the applicable ISDA Fallback Adjustment.

“Reference Time” with respect to any determination of the Benchmark means (1) if the Benchmark is LIBOR, 11:00 a.m., London time, on the applicable Determination Date, and (2) if the Benchmark is not LIBOR, the time determined by the Calculation Agent in accordance with the Benchmark Replacement Conforming Changes.

“Relevant Governmental Body” means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

“SOFR” with respect to any day means the secured overnight financing rate published for such day by the Federal Reserve Bank of New York, as the administrator of the benchmark (or a successor administrator), on the Federal Reserve Bank of New York’s Website.

“Term SOFR” means the forward-looking term rate for the applicable Corresponding Tenor based on SOFR that has been selected or recommended by the Relevant Governmental Body.

“Unadjusted Benchmark Replacement” means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

* * * * *

(iii) U.S. Treasury Bill Rate:

Primary Source Page

(1) The U.S. Treasury Bill Rate for a Reference Rate Date is defined as the average bond equivalent yield of the most recent U.S. Treasury bill auction for the Relevant Term which occurs on the first New York Banking Day during the period from the Monday immediately preceding the applicable Determination Date up to and including such Determination Date. The U.S. Treasury Bill Rate currently appears on the Reuters Screen USAUCTION10 Page, USAUCTION11 Page or USAUCTION13 Page (as specified in the applicable Supplement) under the heading “INVEST RATE” in the row corresponding to the first New York Banking Day of the week containing the applicable Reference Rate Date (or such other Primary Source Page specified in the applicable Supplement). For example, if the Determination Date is a Wednesday, the U.S. Treasury Bill Rate for the Relevant Term for the corresponding Reference Rate Date would be the rate which appears on the Reuters Screen USAUCTION10 Page, USAUCTION11 Page or USAUCTION13 Page (as specified in the applicable Supplement) under the heading “INVEST RATE” in the row corresponding to the Monday immediately preceding the Wednesday Determination Date (assuming such day is a New York Banking Day).

Secondary Source Page

(2) If U.S. Treasury bills of the Relevant Term have been auctioned during the period from the Monday immediately preceding the applicable Determination Date up to and including such Determination Date but such rate for such Reference Rate Date does not appear on the Reuters Screen USAUCTION10 Page, USAUCTION11 Page or USAUCTION13 Page (as specified in the applicable Supplement), the rate for that Reference Rate Date will be the bond equivalent yield of the rate set forth in H.15 Daily Update, or such other recognized electronic source used for the purpose of displaying such rate as determined by the Calculation Agent, for that day in respect of the Relevant Term under the caption “U.S. government securities/Treasury bills (secondary market).”

(3) If U.S. Treasury bills of the Relevant Term have been auctioned on a Reference Rate Date during the period from the Monday immediately preceding the applicable Determination Date up to and including such Determination Date but such rate for such Reference Rate Date does not appear on the Reuters Screen USAUCTION10 Page, USAUCTION11 Page or USAUCTION13 Page (as specified in the applicable Supplement) and is not set forth in H.15 Daily Update in respect of the Relevant Term under the caption “U.S. government securities/Treasury bills (secondary market)” or another recognized electronic source as determined by the Calculation Agent, the rate for that Reference Rate Date will be the bond equivalent yield of the auction rate for those Treasury bills as announced by the United States Department of the Treasury.

Back-Up Sources

(4) If United States Treasury bills of the Relevant Term are not auctioned during any period of seven consecutive calendar days ending on, and including, any Friday and a Reference Rate Date occurred during that seven-day period, such Reference Rate Date will be deemed to have occurred on the day during that seven-day period on which such Treasury bills would have been auctioned in accordance with the usual practices of the United States Department of the Treasury, and the rate for that Reference Rate Date will be the bond equivalent yield of the rate set forth in H.15 Daily Update, or such other recognized electronic source as determined by the Calculation Agent, for that day in respect of the Relevant Term under the caption “U.S. government securities/Treasury bills (secondary market).” If on the Determination Date for a Reset Period such rate for the corresponding Reference Rate Date is not yet published in H.15 Daily Update or another recognized electronic source used for the purpose of displaying such rate as determined by the Calculation Agent, the rate for that Reference Rate Date will be the bond equivalent yield of the arithmetic mean of the secondary market bid rates of three leading U.S. Government securities dealers (with such dealers selected by the Calculation Agent) as of approximately 3:30 p.m., New York City time, on that day for the issue of United States Treasury bills with a remaining maturity closest to the Relevant Term.

(5) If the Calculation Agent is unable to obtain three such quotations, then the U.S. Treasury Bill Rate for such Reference Rate Date will be the arithmetic mean of all such quotations obtained by the Calculation Agent.

(6) If, for any Determination Date, the Calculation Agent is unable to obtain any such quotation, then the U.S. Treasury Bill Rate for the corresponding Reference Rate Date will be the same as the U.S. Treasury Bill Rate for the immediately preceding Reference Rate Date.

(7) The last U.S. Treasury Bill Rate actually determined and applied to a Reference Rate Date which falls on or before the Rate Cut Off Date, if any, will be the U.S. Treasury Bill Rate for each Reference Rate Date from such Reference Rate Date to but excluding the applicable Interest Payment Date.

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(iv) Prime Rate:

Primary Source Page

(1) The Prime Rate for a Reference Rate Date will be the daily rate for the applicable Determination Date as set forth in H.15 Daily Update opposite the caption “Bank prime loan” and under the heading for the corresponding Determination Date (or such other Primary Source Page as specified in the applicable Supplement).

Secondary Source Page

(2) If the Prime Rate for a Reference Rate Date is not published in H.15 Daily Update (or such other Primary Source Page as specified in the applicable Supplement) by 5:00 p.m., New York City time, on the day which is one New York Banking Day following the Reference Rate Date, then the Prime Rate for such Reference Rate Date will be the rate set forth in such other recognized electronic source used for the purpose of displaying such rate, as determined by the Calculation Agent, for the day opposite the caption “Bank prime loan”.

Back-Up Sources

(3) If the Prime Rate for a Reference Rate Date is not published in H.15 Daily Update (or such other Primary Source Page as specified in the applicable Supplement) or another recognized electronic source as determined by the Calculation Agent, then the Prime Rate for such Reference Rate Date will be the arithmetic mean of the rates of interest publicly announced by each bank that appears on the Reuters Screen USPRIME1 Page as that bank’s prime rate or base lending rate as in effect as of 11:00 a.m., New York City time, on the corresponding Determination Date.

(4) If fewer than four of these rates appear on the Reuters Screen USPRIME 1 Page on the corresponding Determination Date, then the Prime Rate for such Reference Rate Date will be the Prime Rate in effect on the immediately preceding Reference Rate Date.

(5) The last Prime Rate actually determined and applied to a Reference Rate Date which falls on or before the Rate Cut Off Date, if any, will be the Prime Rate for each Reference Rate Date from such Reference Rate Date to but excluding the applicable Interest Payment Date.

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(v) CMT:

Primary Source Page

(1) The CMT for a Reference Rate Date shall be that rate published on the Reuters Screen FEDCMT Page for the corresponding Determination Date under the column for the Relevant Term and next to the row for such Determination Date (or such other Primary Source Page specified in the applicable Supplement).

Secondary Source Page

(2) If the Reuters Screen FEDCMT Page (or such other Primary Source Page specified in the applicable Supplement) is unavailable, the CMT for the applicable Reference Rate Date will be set forth in H.15 Daily Update opposite the caption “U.S. government securities/Treasury constant maturities” for the Relevant Term and under the column for the corresponding Determination Date (or such other Secondary Source Page specified in the applicable Supplement).

Back-Up Sources

(3) If such rate is no longer published on the Reuters Screen FEDCMT Page (or such other Primary Source Page specified in the applicable Supplement) or H.15 Daily Update (or such other Secondary Source Page specified in the applicable Supplement), then the CMT for such Reference Rate Date will be the Constant Maturity Treasury rate (or other United States Treasury rate) for the Relevant Term on the corresponding Determination Date as published by either the Federal Reserve Board or the United States Department of the Treasury that the Calculation Agent determines to be comparable to the rate formerly displayed on Reuters Screen FEDCMT Page and published in H.15 Daily Update.

(4) If such information is not provided, then the CMT for the Reference Rate Date will be calculated by the Calculation Agent and will be a yield to maturity, based on the arithmetic mean of the secondary market closing mid-market prices as of approximately 3:45 p.m., New York City time, on the corresponding Determination Date reported, according to their written records, by three leading primary United States government securities dealers in New York City selected by the Calculation Agent, for the most recently issued direct non-callable fixed rate obligations of the United States (Treasury Notes) with an original maturity of approximately the Relevant Term and a remaining term to maturity of not less than the Relevant Term.

(5) If the Calculation Agent is unable to obtain three such Treasury Note quotations, the CMT for such Reference Rate Date will be calculated by the Calculation Agent and will be a yield to maturity based on the arithmetic mean of the secondary market mid-market prices as of approximately 3:45 p.m., New York City time, on the corresponding Determination Date of three leading primary United States government securities dealers in New York City (from five such dealers selected by the Calculation Agent and eliminating the highest quotation (or, in the event of equality, one of the highest) and the lowest quotation (or, in the event of equality, one of the lowest)), for Treasury Notes with an original maturity of greater than the Relevant Term and a remaining term to maturity closest to the Relevant Term. If two Treasury Notes with an original maturity of greater than the Relevant Term have remaining terms to maturity equally close to the Relevant Term, the quotes for the Treasury Notes with the shorter remaining term to maturity will be used.

(6) If three or four (and not five) of such leading primary United States government securities dealers are quoting as described in paragraph (5) above, then the CMT will be based on the arithmetic mean of the mid-market prices obtained and neither the highest nor the lowest of such quotes will be eliminated.

(7) If fewer than three leading primary United States government securities dealers selected by the Calculation Agent are quoting as described in paragraph (5) above, then the CMT for the Reference Rate Date will be the CMT in effect on the immediately preceding Reference Rate Date.

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(vi) **CMS:**

Primary Source Page

(1) The CMS is the CMS Constant Maturity Swap U.S. Treasury yield index for the Relevant Term, as such rate is displayed on the Reuters Screen ICESWAP1 Page, under the USD column, at 11:00 a.m., New York City time, on the corresponding Determination Date.

Secondary Source Page

(2) If such rate is not displayed on the Reuters Screen ICESWAP1 Page, the CMS for the applicable Reference Rate Date will be the rate set forth in such other recognized electronic source used for the purpose of displaying such rate, as determined by the Calculation Agent, for the Relevant Term on the corresponding Determination Date.

Back-Up Sources

(3) If such rate is not displayed on the Reuters Screen ICESWAP1 Page nor is it published in another recognized electronic source as determined by the Calculation Agent, then the CMS for such Reference Rate Date will be the interest rate swap for the Relevant Term on the corresponding Determination Date as published by either the Federal Reserve Board or the United States Department of the Treasury that the Calculation Agent determines to be comparable to the rate formerly displayed on the Reuters Screen ICESWAP1 Page.

(4) If such information is not provided, then CMS for the Reference Rate Date will be a percentage determined on the basis of the mid-market semi-annual swap rate quotations provided by five leading swap dealers in the New York City interbank market at approximately 11:00 a.m., New York City time, on the corresponding Determination Date, and, for this purpose, the semi-annual swap rate means the mean of the bid and offered rates for the semi-annual fixed leg, calculated on a 30/360 day count basis, of a fixed-for-floating U.S. Dollar interest rate swap transaction with a term equal to the Relevant Term commencing on the Reference Rate Date and in an amount that is representative for a single transaction in the relevant market at the relevant time with an acknowledged dealer of good credit in the swap market, where the floating leg, calculated on an Actual/360 day count basis, is equivalent to USD-LIBOR-BBA (as defined in the Annex to the ISDA Definitions published by the International Swap and Derivatives Association and as amended, supplemented or replaced from time to time) with a term of three months. The Calculation Agent will request the principal New York City office of each of five leading swap dealers in the New York City interbank market to provide a quotation of its rate. If at least three such quotations are provided, the rate for the Reference Rate Date will be the arithmetic mean of the quotations, eliminating the highest quotation (or, in the event of equality, one of the highest) and the lowest quotation (or, in the event of equality, one of the lowest).

(5) If fewer than three such quotations are provided, then the CMS for the Reference Rate Date will be the CMS in effect on the immediately preceding Reference Rate Date.

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(vii) **SOFR:**

SOFR means, with respect to any Reset Date:

- (1) the Secured Overnight Financing Rate in respect of the related Determination Date (for trades made on the related Determination Date), as published on or about 8:00 a.m. (New York time) on the Federal Reserve's Website on the Reset Date (or, if such Reset Date is not a U.S. Government Securities Business Day, on the first U.S. Government Securities Business Day immediately preceding such Reset Date).
- (2) if the rate specified in paragraph (1) above does not so appear by 5:00 p.m. (New York time) on the Reset Date (or, if such Reset Date is not a U.S. Government Securities Business Day, on the first U.S. Government Securities Business Day immediately preceding such Reset Date), and a SOFR Index Cessation Event and a SOFR Index Cessation Date have not occurred, then the Calculation Agent shall use the Secured Overnight Financing Rate published on the Federal Reserve's Website in respect of the first preceding U.S. Government Securities Business Day for which the Secured Overnight Financing Rate was published on the Federal Reserve's Website.
- (3) if a SOFR Index Cessation Event and a SOFR Index Cessation Date have occurred, the Calculation Agent shall calculate SOFR as if references to SOFR were references to the rate that was recommended as the replacement for the Secured Overnight Financing Rate by the Federal Reserve Board and/or the Federal Reserve Bank of New York or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York for the purpose of recommending a replacement for the Secured Overnight Financing Rate (which rate may be produced by a Federal Reserve Bank or other designated administrator, and which rate may include any adjustments or spreads). If no such rate has been recommended within one U.S. Government Securities Business Day of the SOFR Index Cessation Event, then the Calculation Agent shall use the Overnight Bank Funding Rate published on the Federal Reserve's Website for any Reset Date after the SOFR Index Cessation Date (it being understood that the Overnight Bank Funding Rate for any such Reset Date will be for trades made on the related Determination Date).
- (4) if the Calculation Agent is required to use the Overnight Bank Funding Rate in paragraph (3) above and an OBFR Index Cessation Event has occurred, then for any Reset Date after the OBFR Index Cessation Date, the Calculation Agent shall use the short-term interest rate target set by the Federal Open Market Committee and published on the Federal Reserve's Website, or if the Federal Open Market Committee has not set a single rate, the mid-point of the short-term interest rate target range set by the Federal Open Market Committee and published on the Federal Reserve's Website (calculated as the arithmetic average of the upper bound of the target range and the lower bound of the target range).

For purposes of the preceding description of SOFR, the following definitions shall apply. To the extent the following definitions are inconsistent with any other definition contained elsewhere in this Information Memorandum, the following definitions shall control with respect to the preceding description of SOFR.

"Determination Date" means, with respect to any Reset Date, the first (or, if such Reset Date is not a U.S. Government Securities Business Day, the second) U.S. Government Securities Business Day immediately preceding such Reset Date.

"Federal Reserve's Website" means the web site of the Federal Reserve Bank of New York, currently at www.newyorkfed.org, or any successor web site of the Federal Reserve Bank of New York.

"OBFR Index Cessation Date" means, in respect of an OBFR Index Cessation Event, the earlier of the date as of which the Federal Reserve Bank of New York (or any successor administrator of the Overnight Bank Funding Rate) ceases to publish the Overnight Bank Funding Rate and the date as of which the Overnight Bank Funding Rate may no longer be used.

"OBFR Index Cessation Event" means the occurrence of one or more of the following events:

1. a public statement by the Federal Reserve Bank of New York (or a successor administrator of the Overnight Bank Funding Rate) announcing that it has ceased to publish or will cease to provide the Overnight Bank Funding Rate permanently or indefinitely; provided that, at that time, there is no successor administrator that will continue to publish or provide the Overnight Bank Funding Rate; or
2. the publication of information which reasonably confirms that the Federal Reserve Bank of New York (or a successor administrator of the Overnight Bank Funding Rate) has ceased or will cease to provide the Overnight Bank Funding Rate permanently or indefinitely; provided that, at that time, there is no successor administrator that will continue to publish or provide the Overnight Bank Funding Rate.

“SIFMA” means the Securities Industry and Financial Markets Association (or any successor entity).

“SOFR Index Cessation Date” means, in respect of a SOFR Index Cessation Event, the earlier of the date as of which the Federal Reserve Bank of New York (or any successor administrator of the Secured Overnight Financing Rate) ceases to publish the Secured Overnight Financing Rate and the date as of which the Secured Overnight Financing Rate may no longer be used.

“SOFR Index Cessation Event” means the occurrence of one or more of the following events:

1. a public statement by the Federal Reserve Bank of New York (or a successor administrator of the Secured Overnight Financing Rate) announcing that it has ceased to publish or will cease to provide the Secured Overnight Financing Rate permanently or indefinitely; provided that, at that time, there is no successor administrator that will continue to publish or provide the Secured Overnight Financing Rate; or
2. the publication of information which reasonably confirms that the Federal Reserve Bank of New York (or a successor administrator of the Secured Overnight Financing Rate) has ceased or will cease to provide the Secured Overnight Financing Rate permanently or indefinitely; provided that, at that time, there is no successor administrator that will continue to publish or provide the Secured Overnight Financing Rate.

“U.S. Government Securities Business Day” means any day except for a Saturday, a Sunday or a day on which SIFMA recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. Government Securities.

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