Derivatives Q&A

The source of this document is the Combined Financial Report for the year ended December 31, 2024, which was issued on March 25, 2025. Certain information contained in this document may be updated upon issuance of the Combined Financial Reports for the quarterly periods of 2025. This document should be read in conjunction with the most recently issued quarterly Combined Financial Report.

March 25, 2025

What is a financial derivative?

A financial derivative is a financial contract whose value depends on the value of one or more underlying assets, indices, or reference rates. In other words, the fair market value of the financial contract will generally be derived from changes in the values of an underlying asset or index referenced by that contract. For example, the value of a U.S. Treasury bond futures contract will be determined by the price movements of actual Treasury bonds.

How do the FHLBanks use derivatives?

An FHLBank enters into derivatives to manage interest-rate risk, prepayment risk, and other exposure inherent in otherwise unhedged assets and funding positions. Derivatives are also used to manage the effective maturity, repricing frequency, or option characteristics of financial instruments to achieve risk-management objectives.

The FHLBanks are exposed to interest-rate risk primarily from the effect of interest rate changes on their interest-earning assets and their interest-bearing liabilities that finance these assets. The goal of each FHLBank's interest-rate risk management strategy is not to eliminate interest-rate risk, but to manage it within appropriate limits. To mitigate the risk of loss, each FHLBank has established policies and procedures, which include guidelines on the amount of exposure to interest rate changes it is willing to accept. In addition, each FHLBank monitors the risk to its interest income, net interest margin, and average maturity of interest-earning assets and interest-bearing liabilities.

Consistent with FHFA regulation, an FHLBank enters into derivatives: (1) to manage the interest-rate risk exposures inherent in its otherwise unhedged assets and funding positions, (2) to achieve the FHLBank's risk management objectives, and (3) to act as an intermediary between its members and counterparties. FHFA regulation and each FHLBank's risk management policy prohibit the speculative use of these derivative instruments and limit credit risk arising from these instruments. The use of derivatives is an integral part of each FHLBank's financial and risk management strategy.

The most common ways in which an FHLBank uses derivatives are to:
- reduce the interest-rate sensitivity and repricing gaps of assets and liabilities;
- preserve a favorable interest-rate spread between the yield of an asset (e.g., an advance) and the cost of the related liability (e.g., the consolidated obligation used to fund the advance);
- mitigate the adverse earnings effects of the shortening or extension of certain assets (e.g., advances or mortgage assets) and liabilities;
- manage embedded options in assets and liabilities;
- reduce funding costs by combining a derivative with a consolidated obligation because the cost of a combined funding structure can be lower than the cost of a comparable consolidated obligation; and
- protect the value of existing asset or liability positions or of anticipated transactions.

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Do the FHLBanks all use the same pricing models and assumptions in measuring interest rate risk?

Each FHLBank is a separately chartered cooperative with its own board of directors and management and is responsible for establishing its own accounting and financial reporting policies in accordance with accounting principles generally accepted in the United States of America (GAAP). Although the FHLBanks work together in an effort to achieve consistency on significant accounting policies, the FHLBanks' accounting and financial reporting policies and practices may vary because alternative policies and presentations are permitted under GAAP in certain circumstances.

Each FHLBank bases the fair values of derivatives with similar terms on market prices, when available. However, active markets do not exist for many of the FHLBanks' derivatives. Consequently, fair values for these instruments are generally estimated using standard valuation techniques such as discounted cash flow analysis and comparisons to similar instruments. In limited instances, fair value estimates for derivatives are obtained from dealers and are corroborated by an FHLBank using a pricing model and observable market data. In addition, the results of the models are subject to PricewaterhouseCoopers' audit procedures as part of their annual audit of each FHLBank.

Each FHLBank's board of directors must adopt policies to manage the FHLBank's exposure to credit, liquidity, and interest-rate risk. In addition, each board of directors is responsible for monitoring that FHLBank's compliance with FHFA regulations.

What is the FHLBanks exposure to credit risk from derivatives transactions?

Each FHLBank transacts most of its derivatives with counterparties that are large banks and major broker-dealers. Some of these banks and broker-dealers, or their affiliates, buy, sell, and distribute consolidated obligations. Derivative transactions may be either executed with a counterparty, referred to as uncleared derivatives, or cleared through a Futures Commission Merchant (i.e., clearing agent) with a Derivative Clearing Organization, referred to as cleared derivatives.

Each FHLBank is subject to credit risk due to the risk of non-performance by counterparties to its derivative transactions, and manages credit risk through credit analyses of derivative counterparties, collateral requirements, and adherence to the requirements set forth in its policies, U.S. Commodity Futures Trading Commission regulations, and FHFA regulations.

The contractual or notional amount of derivative transactions reflects the involvement of an FHLBank in the various classes of financial instruments. The maximum credit risk of an FHLBank with respect to derivative transactions is the estimated cost of replacing the derivative transactions if there is a default, minus the value of any related collateral. In determining maximum credit risk, each FHLBank considers accrued interest receivables and payables, as well as the netting requirements to net assets and liabilities.

Uncleared Derivatives. For uncleared derivatives, the degree of credit risk depends on the extent to which master netting arrangements are included in these contracts to mitigate the risk. Each FHLBank requires collateral agreements on its uncleared derivatives. Additionally, collateral related to derivatives with member institutions includes collateral assigned to an FHLBank, as evidenced by a written security agreement and held by the member institution for the benefit of that FHLBank.

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Uncleared derivative transactions executed on or after the dates specified in applicable regulations are subject to two-way initial margin requirements as mandated by the Wall Street Reform and Consumer Protection Act, or Dodd-Frank Act, if an FHLBank's aggregate uncleared derivative transactions exposure to a counterparty exceeds a specified threshold. The initial margin is required to be held at a third-party custodian and does not change ownership. Rather, the party in respect of which the initial margin has been posted to the third-party custodian will have a security interest in the amount of initial margin required under the uncleared margin rules and can only take ownership upon the occurrence of certain events, including an event of default due to bankruptcy, insolvency, or similar proceeding.

For all uncleared transactions entered into on or after March 1, 2017, the derivative agreements are fully collateralized with a zero unsecured threshold in accordance with variation margin requirements issued by the U.S. federal bank regulatory agencies and the Commodity Futures Trading Commission.

Cleared Derivatives. For cleared derivatives, a Derivative Clearing Organization (Clearinghouse) is an FHLBank's counterparty. The Clearinghouse notifies the clearing agent of the required initial and variation margin and the clearing agent in turn notifies the FHLBank. Each FHLBank utilizes one or two Clearinghouses for all cleared derivative transactions, LCH Ltd. and/or CME Clearing. At both Clearinghouses, variation margin is characterized as daily settlement payments and initial margin is considered collateral. The requirement that an FHLBank post initial and variation margin, through the clearing agent to the Clearinghouse, exposes an FHLBank to credit risk if the clearing agent or the Clearinghouse fails to meet its obligations. The use of cleared derivatives is intended to mitigate credit risk exposure because a central counterparty is substituted for individual counterparties and collateral/payments for changes in the fair value of cleared derivatives is posted daily through a clearing agent.

How do the accounting guidelines for derivatives affect the financial statements of the FHLBanks?

Under GAAP, an FHLBank is required to recognize certain unrealized losses or gains on derivative positions whether or not the offsetting gains or losses on the related hedged items (i.e., the underlying assets or liabilities being hedged) are recognized in a symmetrical manner. For instance, an economic hedge by definition introduces the potential for earnings variability caused by the changes in fair value of the derivatives that are recorded in an FHLBank's income but that are not offset by corresponding changes in the value of the economically hedged assets, liabilities, or firm commitments. As a result, an FHLBank recognizes only the net interest and the change in fair value of these derivatives in current period earnings, with no offsetting fair value adjustments for the assets, liabilities, or firm commitments. As a result, when interest rates change significantly, an FHLBank's reported GAAP earnings may exhibit considerable variability.

Certain FHLBanks have each elected the fair value option for certain financial assets, financial liabilities and commitments that either do not qualify for hedge accounting or may be at risk for not meeting hedge effectiveness requirements. These fair value elections were made primarily in an effort to mitigate the potential income statement volatility that can arise from economic hedging relationships in which the carrying value of the hedged item is not adjusted for changes in fair value.

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