



# The Role of Federal Home Loan Banks in the Financial System



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# At a Glance

In 1932, lawmakers created a system of Federal Home Loan Banks (FHLBs) as a government-sponsored enterprise (GSE) to support mortgage lending by the banks' member institutions. The 11 regional FHLBs raise funds by issuing debt and then lend those funds in the form of advances (collateralized loans) to their members—commercial banks, credit unions, insurance companies, and community development financial institutions.

In addition to supporting mortgage lending, FHLBs provide a key source of liquidity, during periods of financial stress, to members that are depository institutions. During such periods, advances can go to institutions with little mortgage lending. Some of those institutions have subsequently failed, but the FHLBs did not bear any of the losses.

FHLBs receive subsidies from two sources because of their GSE status:

- The perception that the federal government backs their debt, often referred to as an implied guarantee, which enhances the perceived credit quality of that debt and thereby reduces FHLBs' borrowing costs; and
- Regulatory and income tax exemptions that reduce their operating costs.

Federal subsidies to FHLBs are not explicitly appropriated by the Congress in legislation, nor do they appear in the federal budget as outlays. The Congressional Budget Office estimates that in fiscal year 2024, the net government subsidy to the FHLB system will amount to \$6.9 billion (the central estimate, with a plausible range of about \$5.3 billion to \$8.5 billion). That subsidy is net of the FHLBs' required payments, totaling 10 percent of their net income, to member institutions for affordable housing programs. CBO estimates that in fiscal year 2024, such payments will amount to \$350 million.

Because members are both owners and customers of FHLBs, almost all of the subsidy (after affordable housing payments are deducted) probably passes through to them, either in the form of low-cost advances or, to a lesser extent, through dividends. FHLBs' advances may therefore lead to lower interest rates for borrowers on loans made by member institutions, including lower interest rates on single-family residential mortgages. That effect on rates is difficult to quantify because members can use the advances to fund any type of loan or investment.

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# Contents

<b>Summary</b>	1
What Are FHLBs' Mission and Structure?	1
What Is the Financial Condition of the FHLB System?	1
What Subsidies Do FHLBs Receive?	2
What Risks Do FHLBs Pose?	2
<b>Overview of the FHLB System</b>	3
FHLBs' Mission	4
FHLBs' Structure and Membership	5
<b>Financial Condition of the FHLB System</b>	6
Capital	8
Dividends	9
Advances	9
Portfolio Investments	11
Debt	12
Affordable Housing Programs	12
<b>Subsidies to FHLBs</b>	12
Subsidies in Fiscal Year 2024	12
Comparison With Other Subsidy Estimates	14
<b>Distribution of Benefits From Subsidies</b>	15
<b>Risks Posed by FHLBs</b>	17
Risk of Failure of the FHLB System	19
Risk to the Financial System	19
Risk to the FDIC's Deposit Insurance Fund	21
<b>Appendix: How CBO Estimated the Subsidies to FHLBs for Fiscal Year 2024</b>	23
<b>List of Tables and Figures</b>	27
<b>About This Document</b>	28
<b>Boxes</b>	
1. Comparing FHLBs With Fannie Mae and Freddie Mac	6
2. Competition in the Residential Mortgage Market	18
3. FHLBs During Periods of Financial Stress and Bank Failures	20

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# Notes About This Report

Unless this report indicates otherwise, all years referred to are calendar years.

Numbers in the text and tables may not add up to totals because of rounding.

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# The Role of Federal Home Loan Banks in the Financial System

## Summary

The Federal Home Loan Bank (FHLB) system is a government-sponsored enterprise (GSE) consisting of 11 regional banks created to support mortgage lending. The regional banks provide funding to their member institutions—commercial banks, credit unions, insurance companies, and community development financial institutions—that is intended to finance residential housing or improve their liquidity.<sup>1</sup> FHLBs fund those loans by issuing bonds in the capital markets. The banks' GSE status allows them to borrow money at a lower cost than private financial institutions (with similar risk profiles) can, and it provides several regulatory and tax exemptions that lower their operating costs. In this report, the Congressional Budget Office describes the FHLBs' role in financial markets, their financial condition, the value of the subsidies they receive from the federal government, and the risks they pose.

## What Are FHLBs' Mission and Structure?

Lawmakers created FHLBs to supply stable mortgage funding by serving as a link between lenders and investors. Unlike Fannie Mae and Freddie Mac, the two other GSEs that provide the bulk of mortgage financing, FHLBs do not securitize (that is, pool and sell) mortgages. Their principal business activity is to borrow in the capital markets and make loans to their members. The loans, called advances, are secured mostly by mortgages. The FHLBs maintain a super-lien position on the collateral, which means that if a member institution fails, the FHLB receives payment before the Federal Deposit Insurance Corporation (FDIC) does. As a result of requiring an amount of collateral that exceeds the amount of the advance (a practice known as overcollateralization) and, to a lesser extent, the super-lien position, FHLBs have never experienced credit losses on advances.

Although the Federal Housing Finance Agency (FHFA) restricts the type of collateral that is eligible for advances, it does not restrict the use of advances. Long-term advances finance residential housing and other loans or investments, and short-term advances enhance the liquidity of member institutions. The amount of outstanding advances varies over time, tending to rise during periods of stress in the financial system. In addition to issuing advances, FHLBs invest in assets, including mortgages they purchase from their members and mortgage-backed securities (MBSs) issued by Freddie Mac, Fannie Mae, and Ginnie Mae. The investments are a source of income and provide liquidity in the market for some of the assets.

FHLBs are required to fund affordable housing through, for example, grants or subsidized advances to member institutions to finance homeownership. As the law requires, such funding amounts to 10 percent of each FHLB's net income.

The FHLB system is organized as a cooperative; the individual banks are owned by their members, and FHLBs do not issue publicly traded stock (in contrast to Fannie Mae and Freddie Mac). One implication is that the system is run for the benefit of its members. The 11 FHLBs are jointly and severally liable for the system's debt; if any one of them fails, the remaining banks become responsible for its debt.

## What Is the Financial Condition of the FHLB System?

As of December 31, 2022, the FHLBs reported assets of \$1,247 billion, liabilities of \$1,179 billion, and capital (the difference between assets and liabilities) of \$68 billion. Assets included \$819 billion in advances, \$204 billion of investments, and a \$56 billion mortgage portfolio. Liabilities included \$1,161 billion of debt. For calendar year 2022, FHLBs reported net income of \$3.2 billion and paid members \$1.4 billion in cash and stock dividends. FHLBs' affordable housing payments that year amounted to \$0.4 billion.

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1. In November 2023, the Federal Housing Finance Agency, the system's regulator, released a report reassessing the role of FHLBs. See Federal Housing Finance Agency, *FHLBank System at 100: Focusing on the Future* (November 2023), <https://tinyurl.com/5c24xpbk> (PDF).

Capital is supplied to FHLBs by their member institutions, which must make a minimum capital stock investment to become a member and contribute additional capital when taking an advance. As of December 31, 2022, the FHLB system reported capital amounting to 5.4 percent of assets and had met all regulatory capital requirements.

### What Subsidies Do FHLBs Receive?

Because of their GSE status, FHLBs receive subsidies from two sources:

- The perception that the government backs their debt—a so-called implied guarantee—which reduces their costs to borrow money from bond investors; and
- A series of regulatory exemptions and federal, state, and local income tax exemptions that reduce their operating costs.

The FHLBs probably pass through almost all of the subsidies, net of affordable housing payments, to their members. The lower interest rates on FHLBs' debt are passed through in the form of lower rates on advances. In addition, member institutions receive dividends from their FHLB on the capital they contributed.

CBO estimates that in fiscal year 2024, FHLBs will receive subsidies totaling \$7.3 billion (the central estimate, with a plausible range of \$5.7 billion to \$8.9 billion).<sup>2</sup> The size of the total subsidy is driven mainly by the amount of FHLBs' new debt and the reduction in their debt-service costs. CBO estimates that in fiscal year 2024, FHLBs will issue \$800 billion worth of debt and make advances amounting to \$560 billion—which reflects the average amount of debt issued and advances made between 2015 and 2022. If the FHLB system was private instead of public, it would carry a credit rating in the range of AA to A instead of its current rating of AA+, in CBO's assessment.

On the basis of interest rate spreads in other financial markets, CBO estimates that the perception of a federal guarantee reduces FHLBs' borrowing costs by 0.4 percentage points. The agency also made calculations

2. In estimating the amount of the subsidy that the FHLBs pass through to members, CBO did not deduct the FHLBs' operating expenses, which were \$1.5 billion in 2022. In CBO's analysis, those expenses are paid from the portion of the proceeds from the FHLBs' investment portfolios that would have been earned even if the debt issued by the banks to acquire those investments did not benefit from their GSE status.

using cost reductions of 0.3 percentage points and 0.5 percentage points to illustrate how results would change using the range of values for that parameter that it concluded were plausible. On the basis of those three parameters, CBO's central estimate of the annual subsidy on debt is \$6.3 billion, and the plausible range extends from \$4.7 billion to \$7.9 billion.

CBO determined the net subsidy available to members by adding the estimated subsidy from tax and regulatory exemptions of \$0.9 billion to the annual subsidy on debt, and then subtracting the affordable housing payments of \$0.4 billion (rounded from \$350 million) that FHLBs will make in fiscal year 2024. On that basis, CBO's central estimate of the net subsidy available to members in that year is \$6.9 billion, with a plausible range of \$5.3 billion to \$8.5 billion.

Competition in retail lending leads members to pass a share of that subsidy through to borrowers. However, estimates of the impact of the subsidy on single-family mortgage rates are uncertain, mainly for two reasons: the fungibility of member institutions' funding, and the fact that lending decisions are not made on the basis of the source of the lent funds. For example, it is difficult to know whether a particular dollar in lending by a member institution was supported by advances, customers' deposits, debt issued in the capital markets, or some combination of those funding sources. Moreover, it is difficult to know whether a particular dollar in advances was used to improve a member's liquidity, loaned to a single-family mortgage borrower, or used to support a different type of consumer or corporate borrowing. As a result, CBO did not estimate the amount by which FHLBs reduce single-family mortgage rates.

### What Risks Do FHLBs Pose?

FHLBs' activities pose three types of risk to the government and the financial system:

- Risk to taxpayers arising from the possibility that the FHLB system might fail and require direct government support;
- Risk that stress in the FHLB system might spill over to the financial system; and
- Risk posed by the impact of FHLBs' activities on losses to the FDIC's Deposit Insurance Fund as a result of the banks' use of collateralized lending and their super-lien position. (Banks and their customers ultimately bear those risks and losses.)

With the exception of their affordable housing programs, FHLBs' activities are not reported in the federal budget, because the Congress does not appropriate funds for them and they are treated as being undertaken by private institutions. Even so, lawmakers might consider it necessary to take action if the system failed. But the system poses little credit risk to taxpayers (that is, the risk of losses from loans and investments) because of the joint-and-several liability of FHLBs. During the 2007–2009 financial crisis, several FHLBs lost money on investments in private-label MBSs (that is, MBSs issued by private companies without government backing). Although one of the undercapitalized FHLBs eventually merged with a stronger bank in 2015, the system remained solvent and did not require any direct federal assistance; nor has it ever required such assistance.

Several aspects of FHLBs' business model help reduce the risk of the system's failure, including the overcollateralized and super-lien position of advances, restrictions that limit investments to investment-grade securities, and the joint-and-several nature of their debt issuances. However, FHLBs face interest rate risk, which is the risk that changes in rates will affect the value of bonds and other securities. FHLBs attempt to limit that risk by matching the maturities of their assets and liabilities and through other types of hedging. Interest rate risk stemming from mortgage portfolios has contributed to losses by some banks in the past.

The risk that FHLBs pose to the financial system arises from the role they play in providing liquidity (through advances) to member institutions during times of financial stress. By doing so, they support the financial system. But if FHLBs themselves experienced stress—because, for example, the government's implied guarantee of their debt came into question—then their ability to provide funding to members could be impaired. In those circumstances, members' access to liquidity could be reduced or the cost of that liquidity could increase, causing them, in turn, to reduce the amount of credit they extend to borrowers.

Finally, FHLBs require borrowing members to pledge specific collateral against advances, thus giving the FHLBs priority in receivership over other creditors, including the FDIC. Such lending therefore limits the assets that the FDIC has access to when resolving a failed commercial bank. Moreover, if a commercial bank that is a member institution fails, FHLBs' advances are paid

before the FDIC is paid because the FHLB has a priority claim on collateral. The FDIC is thus exposed to more losses, whereas FHLBs are fully protected. Such risk is highlighted by the recent failures of several regional banks whose use of advances increased sharply as they experienced financial stress.

## Overview of the FHLB System

Lawmakers created the Federal Home Loan Bank system in 1932 as a government-sponsored enterprise to support mortgage lending.<sup>3</sup> Today, 11 regional FHLBs fulfill that role by providing low-cost funding to their member institutions (commercial banks, credit unions, insurance companies and community development financial institutions) in the form of highly collateralized loans, called advances (see Figure 1). FHLBs fund advances by issuing bonds in global capital markets. The FHLBs' GSE status creates the perception among investors that the banks' debt is protected by the federal government, which allows them to borrow money at a lower cost than a fully private financial institution would pay. FHLBs also benefit from regulatory and tax exemptions that lower their operating costs.

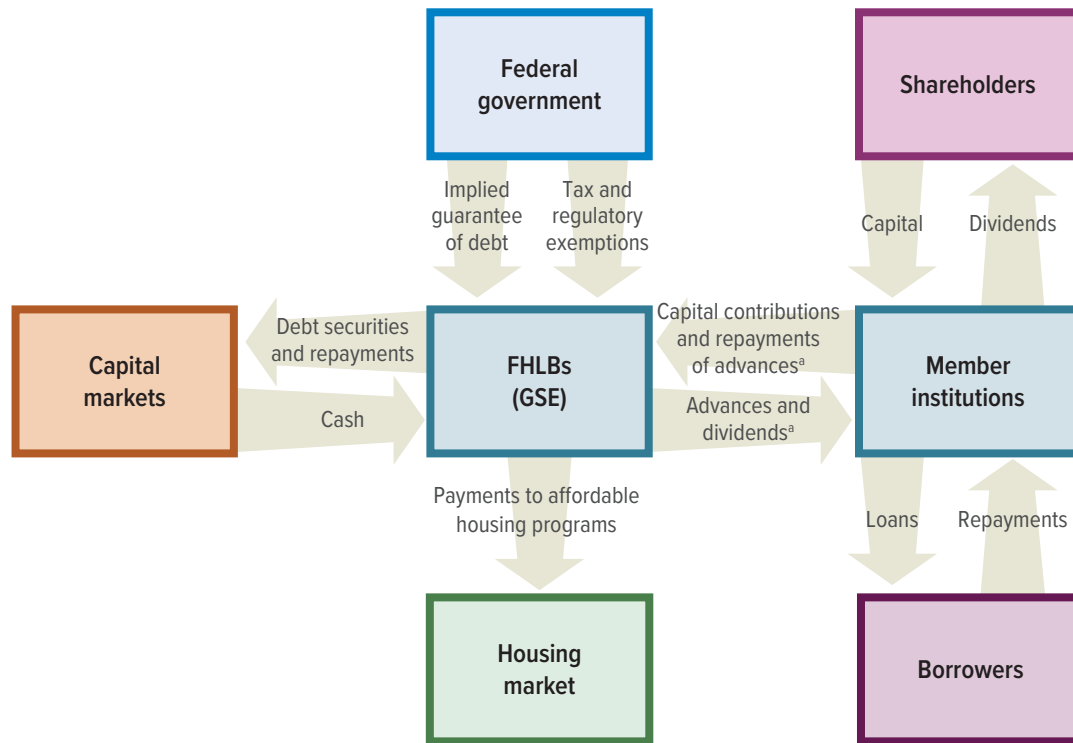
Today's housing finance markets differ in important ways from the markets in 1932. First, nonbank financial institutions, which are not eligible for membership in FHLBs, now originate most residential mortgage loans. (Nonbank institutions, which include independent mortgage lenders, are financial firms that do not have a banking license and do not accept deposits.) Second, a large secondary (or resale) mortgage market has developed in which Fannie Mae and Freddie Mac, two other housing GSEs that are now in federal conservatorship, play dominant roles, as does Ginnie Mae.<sup>4</sup> Fannie Mae and Freddie Mac purchase mortgages from lenders (including members of the regional FHLBs) and package the loans into mortgage-backed securities that they guarantee and then sell to investors (see Box 1 on page 6). Ginnie Mae, a government-owned corporation, guarantees the timely payment of principal and interest on MBSs that private financial institutions create

3. For more details, see Congressional Budget Office, *The Federal Home Loan Banks in the Housing Finance System* (July 1993), [www.cbo.gov/publication/19584](http://www.cbo.gov/publication/19584).

4. Congressional Budget Office, *Fannie Mae, Freddie Mac, and the Federal Role in the Secondary Mortgage Market* (December 2010), [www.cbo.gov/publication/21992](http://www.cbo.gov/publication/21992), and *Transitioning to Alternative Structures for Housing Finance: An Update* (August 2018), [www.cbo.gov/publication/54218](http://www.cbo.gov/publication/54218).

Figure 1.

## Overview of the Federal Home Loan Bank System



Data source: Congressional Budget Office.

FHLBs = Federal Home Loan Banks; GSE = government-sponsored enterprise.

a. Advances are collateralized loans that Federal Home Loan Banks issue to their member institutions.

from home loans that are insured or guaranteed by other federal programs.<sup>5</sup>

Today, the primary business of FHLBs still is making advances to their members. The collateral that smaller institutions are allowed to use for advances has broadened to include secured loans and securities for small businesses, agriculture, or community development. Advances fund other types of bank loans in addition to mortgages.<sup>6</sup>

During financial crises and other periods of market stress, FHLBs also provide liquidity to member

institutions, including those in financial distress.

Providing liquidity is one way to protect the financial system from liquidity-driven bank failures. In normal times, however, FHLBs aim to increase the availability of, and lower the rates of, residential mortgages by serving as a source of subsidized funds for financial institutions originating those mortgages. FHLBs play an additional statutory role in affordable housing programs: Ten percent of their income goes to community-based programs that provide housing assistance for low-income households.

### FHLBs' Mission

FHLBs were created to provide a stable source of mortgage funding for homebuyers and short-term liquidity for member institutions. They accomplish those missions by acting as an intermediary between the capital markets and lenders. FHLBs provide their member institutions with advances, which are funded by issuing debt in the capital markets.

5. Congressional Budget Office, *Ginnie Mae and the Securitization of Federally Guaranteed Mortgages* (January 2022), [www.cbo.gov/publication/57176](http://www.cbo.gov/publication/57176).

6. W. Scott Frame, Diana Hancock, and Wayne Passmore, *Federal Home Loan Bank Advances and Commercial Bank Portfolio Composition*, Working Paper 2007-17 (Federal Reserve Bank of Atlanta, July 2007), <https://tinyurl.com/4bkjmh9>.



Before FHLBs were created, housing finance was limited in two respects. First, mortgage finance depended on locally operated savings and loan institutions and mutual savings banks collectively known as thrifts. Until 1980, the thrifts lacked access to the Federal Reserve's discount window, an important source of liquidity.<sup>7</sup> Thrifts could not accommodate the rapid growth in demand for mortgages in some regions of the country, so regional imbalances in mortgage lending developed. Second, that lack of access to liquidity made the thrift industry vulnerable to failure during financial downturns, when depositors withdrew their money from their savings accounts to pay bills. The downturns impaired thrifts' ability to issue mortgages. During the Great Depression, some 1,700 thrift institutions became insolvent before deposit insurance was implemented in 1934. Most FHLB member institutions were thrifts until the demise of the thrift industry during the savings and loan crisis of the 1980s.<sup>8</sup> As a result, commercial banks were allowed to join in 1989 and quickly grew to represent the majority of institutions.

Today, the secondary mortgage market is the foundation of the housing finance system, which, in part, diminishes the FHLBs' role in providing a stable source of mortgage funding. The GSEs Fannie Mae and Freddie Mac (each now in federal conservatorship) and the government-owned corporation Ginnie Mae form the portion of the secondary mortgage market called the agency market. Ginnie Mae guarantees MBSs backed by pools of mortgages insured by the Federal Housing Administration, the Department of Veterans Affairs, and the Department of Agriculture's Rural Housing Service.<sup>9</sup> Fannie Mae, Freddie Mac, and Ginnie Mae funded about \$9.0 trillion of the \$13.9 trillion of single-family mortgage debt that was outstanding at the end of September 30, 2023; banks and other depositories held

about \$2.9 trillion of that debt.<sup>10</sup> In addition to making advances, FHLBs also purchase and resell individual mortgages through programs aimed at providing liquidity to their member institutions.

### FHLBs' Structure and Membership

The FHLB system is a cooperative consisting of 11 regional banks, each owned by its member institutions (which can be members of more than one regional FHLB). The FHLBs are based in Atlanta, Boston, Chicago, Cincinnati, Dallas, Des Moines, Indianapolis, New York, Pittsburgh, San Francisco, and Topeka.<sup>11</sup> As of September 30, 2023, they served approximately 6,500 member institutions. To become a member, insured depository institutions (except community financial institutions) must purchase or originate mortgages (including MBSs) and have at least 10 percent of their total assets in mortgages or related assets.<sup>12</sup> Four types of financial institutions are eligible for membership: federally insured depository institutions (that is, banks and credit unions), insurance companies, community development financial institutions, and certain nonfederally insured credit unions. Nonbank financial institutions (including independent mortgage banks) are not eligible for membership. The benefits of membership include dividends, which are paid from the FHLBs' profits, on members' capital investments, and access to advances.

7. All insured depository institutions have had access to the discount window—a term that refers to the Federal Reserve's lending programs to depository institutions—for more than four decades.

8. For more information on the savings and loan crisis, see Kenneth J. Robinson, "Savings and Loan Crisis" (essay posted on Federal Reserve History, accessed February 14, 2024), <http://tinyurl.com/ytakhhby>.

9. Congressional Budget Office, *Ginnie Mae and the Securitization of Federally Guaranteed Mortgages* (January 2022), [www.cbo.gov/publication/57176](http://www.cbo.gov/publication/57176).

10. The amount of debt held by banks excludes their holdings of MBSs. See Federal Reserve Bank of St. Louis: Economic Data, "Release Tables: Mortgage Debt Outstanding" (Release Z.1, accessed December 13, 2024), <https://tinyurl.com/2et8jzpb>.

11. Originally, 12 FHLBs existed, but the FHLB of Seattle merged with the Des Moines bank in 2015 after suffering losses in its investment portfolio, mainly losses on its private-label MBSs. See Federal Housing Finance Agency, Office of Inspector General, *Merger of the Federal Home Loan Banks of Des Moines and Seattle: FHFA's Role and Approach for Overseeing the Continuing FHLBank*, White Paper 2016-002 (March 2016), <https://tinyurl.com/282h4cnh> (PDF).

12. Currently, the 10 percent asset requirement is enforced only when membership is initiated and does not apply to nondepository community development financial institutions, insurance companies, or community financial institutions (banks with less than \$1.4 billion of assets in 2023). The FHFA plans to propose a rule that would require certain members to maintain at least 10 percent of their assets in residential mortgage loans (or in other assets that align with the FHLBs' mission of supporting mortgage markets and community development) on an ongoing basis to remain eligible for FHLB financing. See Federal Housing Finance Agency, *FHLBank System at 100: Focusing on the Future* (November 2023), p. 61, <https://tinyurl.com/5c24xpbk> (PDF).

## Box 1.

## Comparing FHLBs With Fannie Mae and Freddie Mac

Decades ago, the federal government established Federal Home Loan Banks (FHLBs), Fannie Mae, and Freddie Mac as government-sponsored enterprises (GSEs) to help finance home loans nationwide. Those entities operate in the secondary mortgage market that channels funds to borrowers by facilitating the resale of mortgages and mortgage-backed securities. Amid the 2007–2009 financial crisis, the Federal Housing Finance Agency (FHFA) placed Fannie Mae and Freddie Mac in conservatorship, thus taking control of their assets and business. In 2023, Fannie Mae and Freddie Mac backed about half of the nation’s outstanding residential mortgage debt.

As was the case with Fannie Mae and Freddie Mac before they were placed in conservatorship, the FHLB system’s status as a GSE creates the perception among investors that its debt is protected by an implied federal guarantee. That implied guarantee lowers the interest rates that FHLBs pay on their debt and reduces their costs compared with those of fully private financial institutions.<sup>1</sup> Although their missions are similar, the three housing GSEs differ in their structures, in the regulatory and tax benefits they receive, and in their exposure to credit risk.

### Structural Differences

FHLBs are cooperatives owned by their member institutions, whereas Fannie Mae and Freddie Mac are private corporations owned by stockholders.<sup>2</sup> But as long as Fannie Mae and Fred-

die Mac remain in conservatorship, the federal government effectively owns and controls them.

Before being placed in conservatorship, Fannie Mae and Freddie Mac faced inherent tensions arising from the dual nature of their public-private purpose. Most notably, because they were private companies with a responsibility to increase expected returns to their shareholders, the implied federal guarantee of their debt and mortgage-backed securities encouraged them to take excessive risk—which came at the expense of taxpayers. There was also an inherent tension between the need for prudent risk management and the affordable housing goals set by regulators.

The public-private nature of FHLBs also creates tensions, but the magnitude and type of risks they pose to the financial system differ from those posed by Fannie Mae and Freddie Mac.<sup>3</sup> Because the 11 FHLBs are jointly and severally liable for their debt obligations, individual banks may have incentives to take excessive risks because they can profit from the upside benefits while passing some of the downside costs of default to other FHLBs, which limits the risk of spillovers to the financial system.

### Regulatory and Tax Benefits

The FHFA regulates the three housing GSEs and sets standards for the amount of capital they maintain. All three GSEs are exempt from state and local income taxes and from the Securities and Exchange Commission’s registration requirements, and their debt can be purchased by the Federal Reserve. But unlike the interest earned on Fannie Mae’s and Freddie Mac’s debt, the interest earned on the debt of FHLBs is exempt from

1. Congressional Budget Office, *Fannie Mae, Freddie Mac, and the Federal Role in the Secondary Mortgage Market* (December 2010), [www.cbo.gov/publication/21992](http://www.cbo.gov/publication/21992).

2. Lawmakers established Freddie Mac under the Federal Home Loan Mortgage Corporation Act of 1970 and placed it under the ownership of the FHLBs. In 1989, the Financial Institutions Reform, Recovery, and Enforcement Act reorganized Freddie Mac into a publicly traded company. The FHLBs sold their ownership stakes.

3. Stefan Gissler, Borghan Narajabad, and Daniel K. Tarullo, *Federal Home Loan Banks and Financial Stability* (Harvard Public Law Working Paper No. 22-20, June 2022), <https://ssrn.com/abstract=4135685>; and Daniel K. Tarullo, “How to Limit the Risks to Financial Stability Posed by the Federal Home Loan Bank System,” *Brookings Institution: Commentary* (July 11, 2022), <https://tinyurl.com/3na55wjin>.

Continued

The 11 regional FHLBs are jointly and severally liable for the system’s debt obligations. If any of them fail, the remaining banks become responsible for honoring the failed banks’ debt obligations. (Members of the failed FHLBs would lose the value of their capital investments.) The Office of Finance, an entity operated on behalf of FHLBs, issues and services the debt of the individual regional banks. It also issues combined financial statements for the FHLB system and provides the

FHLBs with information about capital markets and the broader economic environment.

## Financial Condition of the FHLB System

As of December 31, 2022, the FHLBs reported assets of \$1,247 billion, liabilities of \$1,179 billion, and balance sheet capital (the difference between assets and liabilities) of \$68 billion (see Table 1). Those numbers were reported

Box 1.

Continued

## Comparing FHLBs With Fannie Mae and Freddie Mac

state and local taxes for investors, and the FHLBs are exempt from paying federal income taxes.

FHLBs must use 10 percent of their net income to support affordable housing programs. Fannie Mae and Freddie Mac have related but different obligations. The FHFA sets goals for Fannie Mae and Freddie Mac to promote the financing of loans that are affordable to low- and moderate-income households, although the cost of those goals is more like a subsidy that is granted to certain borrowers meeting the goals' requirements and paid by other borrowers who do not meet them.<sup>4</sup> Fannie Mae and Freddie Mac also finance two federal funds that support affordable housing through fees they pay on the new mortgage guarantees they make.<sup>5</sup>

In the wake of the savings and loan crisis in the 1980s, FHLBs were required to pay 20 percent of their net income to meet the cost of bonds issued by the Resolution Funding Corporation from 1989 to 1991, to help finance the Federal Savings and Loan Insurance Corporation's obligations for insured deposits of insolvent thrift institutions. Those payments ended in July 2011.<sup>6</sup>

### Exposure to Credit Risk

Credit risk is the risk that a loan or investment will default. Fannie Mae and Freddie Mac take more credit risk than FHLBs do

4. For information on Fannie Mae's and Freddie Mac's housing goals, see Federal Housing Finance Agency, "Fannie Mae and Freddie Mac Affordable Housing Goals" (accessed August 1, 2023), <https://tinyurl.com/2mbm6szm>.

5. Congressional Budget Office, *How the Housing Trust Fund and Capital Magnet Fund Support Affordable Housing* (November 2022), [www.cbo.gov/publication/58427](http://www.cbo.gov/publication/58427).

6. The 20 percent requirement began in 1999. Previously, FHLBs paid \$300 million annually. See Federal Housing Finance Agency, "FHFA Announces Completion of RefCorp Obligation and Approves FHLB Plans to Build Capital" (press release, August 5, 2011), <https://tinyurl.com/34hyt3zp>.

because they operate differently in the secondary (resale) mortgage market. Fannie Mae and Freddie Mac purchase mortgages that meet certain standards from banks and other originators, pool those loans into mortgage-backed securities (MBSs) that they guarantee against losses from defaults on the underlying mortgages, and sell the securities to investors—a process known as securitization. In addition, they hold mortgages and MBSs (both each other's and those issued by private companies) in their portfolios. The credit risk they took contributed to financial distress and losses during the financial crisis.

FHLBs do not securitize mortgage loans. Their primary activity is making advances (which equaled about two-thirds of their assets as of December 31, 2022) to their members.<sup>7</sup> Advances are not risk-free, but FHLBs have never suffered losses on an advance, for two reasons. First, when an advance is made, the value of the collateral exceeds the size of the advance. Second, if a member becomes insolvent, its FHLB is repaid before depositors and before the Federal Deposit Insurance Corporation. FHLBs take some credit risk on their investments and mortgage portfolio.

The FHLB system remained solvent throughout the financial crisis. Although FHLBs were eligible for federal assistance under the Housing and Economic Recovery Act of 2008, they did not require any injections of capital from the Treasury. The Federal Reserve purchased relatively small amounts of the FHLB system's debt, along with its much larger purchases of debt and MBSs from Fannie Mae and Freddie Mac.

7. For an analysis of the benefits and costs of allowing FHLBs to securitize mortgages, see Federal Housing Finance Agency, *Securitization of Mortgage Loans by the Federal Home Loan Bank System* (July 2009), <https://tinyurl.com/yh6dzhbm>.

on the basis of standards known as generally accepted accounting principles (GAAP). Assets included \$819 billion in advances, \$204 billion of investment securities, and a \$56 billion mortgage portfolio. Liabilities included \$1,161 billion of debt (referred to as consolidated obligations).<sup>13</sup>

13. Federal Home Loan Banks, Office of Finance, *Combined Financial Report for the Year Ended December 31, 2022* (March 2023), p. F-7, <http://tinyurl.com/6nfb7an2> (PDF).

FHLBs also disclosed their fair-value balance sheet, which uses market valuations (and estimates of those valuations). GAAP measures include both current market measures and measures based on historical costs. Fair-value measures, which consistently use market measures and estimates, can provide a more comprehensive and timely measure of solvency than historical costs can. The rise in interest rates that started in 2022 reduced the market value of the FHLB system's assets and liabilities by about \$10 billion each and thus left the market value

Table 1.

## Balance Sheet of the Federal Home Loan Bank System as of December 31, 2022

Billions of dollars

	Accounting method	
	GAAP	Fair value
<b>Assets</b>		
Mortgage portfolio	56.0	49.2
Investment securities		
Trading	15.9	15.9
Available for sale	129.9	129.9
Held to maturity	57.8	56.3
Total investment securities	203.6	202.1
Advances	819.1	817.2
Other	168.5	168.5
<b>Total assets</b>	<b>1,247.2</b>	<b>1,237.0</b>
<b>Liabilities</b>		
Consolidated obligations		
Notes	466.0	465.8
Bonds	695.4	685.1
Total consolidated obligations	1,161.4	1,150.9
Other	18.0	18.0
<b>Total liabilities</b>	<b>1,179.4</b>	<b>1,169.0</b>
<b>Capital<sup>a</sup></b>		
Capital stock	44.0	n.a.
Retained earnings	24.6	n.a.
Accumulated other comprehensive income	-0.8	n.a.
<b>Total capital</b>	<b>67.8</b>	<b>68.1</b>
<b>Total capital as a percentage of total assets</b>	<b>5.4</b>	<b>5.5</b>

Data source: Congressional Budget Office, using data from the Federal Home Loan Bank system's Office of Finance. See [www.cbo.gov/publication/59712#data](http://www.cbo.gov/publication/59712#data).

On the Federal Home Loan Bank system's balance sheet reflecting GAAP principles, investment securities accounted for as trading and available for sale are reported at fair value, whereas those accounted for as held to maturity are reported at historical cost. The losses on securities that are available for sale do not affect income but do affect capital.

GAAP = generally accepted accounting principles; n.a. = not applicable.

a. In notes accompanying their financial statements, Federal Home Loan Banks disclose the fair value of assets and liabilities but not the fair value of capital. CBO estimated the fair value of capital by subtracting the fair value of liabilities from the fair value of assets.

of capital about the same. The effects of higher rates on the fair-value measures were muted because investments classified as "trading" or "available for sale," as opposed to those "held to maturity," were already reported at market values on a GAAP basis.

For calendar year 2022, the FHLBs reported net income of \$3.5 billion before the affordable housing payments, which

was adjusted to \$3.2 billion to account for the 10 percent of their income allotted to affordable housing programs.

### Capital

Member institutions supply capital to FHLBs, which issue no publicly traded stock. To achieve and maintain membership in a regional FHLB, a member must make a minimum capital stock investment in that bank. A member's required capital investment is adjusted automatically when the amount of its advances changes. Members are required to contribute additional capital by increasing their equity (purchasing more stock) in an FHLB when taking an advance—typically an increase equaling 4 percent to 5 percent of the principal. The FHLB may repurchase that capital stock once the associated advance has been repaid.

The FHFA's current capital framework defines the types of capital each FHLB must retain and their total capital requirements. Each bank is subject to three capital requirements: those for risk-based capital, regulatory capital, and leverage capital. As of September 20, 2023, the FHLB system met all regulatory requirements related to capital.<sup>14</sup> As of December 31, 2022, the FHLB system reported balance sheet capital of 5.4 percent of assets. (On a fair-value basis, capital was slightly greater, at 5.5 percent. The estimates of the difference between the values reported on a fair-value basis and a GAAP basis were larger for debt than for assets, particularly mortgage loans, investment securities, and advances.)

**Risk-Based Capital.** Each FHLB's permanent capital is defined as the value of its Class B capital stock (a form of capital stock that can be redeemed by members with a five-year notice) plus the amount of its retained earnings. To meet the risk-based capital requirement, an FHLB must maintain permanent capital equal to the sum of the capital required to cover its credit risk, market risk, and operational risk, as defined by the FHFA. As of December 31, 2022, under that standard, the minimum requirement for risk-based capital for the FHLB system was \$8.8 billion; the system's actual risk-based capital amounted to \$69 billion.

The components of that capital requirement are determined as follows: Credit risk is based on a computation that assesses the risk associated with all advances,

14. Any FHLB that the FHFA designates as undercapitalized must submit a capital restoration plan for its approval. Once the plan is approved, the FHLB may face restrictions on dividend payments and repurchasing capital stock during the restoration period.

residential mortgage assets, nonmortgage assets, certain other assets, off-balance-sheet items, and derivatives held by the FHLB.<sup>15</sup> Market risk is based on an assessment of the potential change in the market value of an FHLB's portfolio attributable to interest rates and other market movements during a period of stress. And operational risk is based on potential losses a bank may incur because of failed internal controls, mismanagement, or unexpected external events. To meet the capital requirement for operational risk, an FHLB must maintain an amount of capital equal to 30 percent of its capital requirements for credit risk and market risk.

**Regulatory Capital.** Each FHLB must maintain regulatory capital equal to at least 4 percent of its assets. For that purpose, regulatory capital is defined as the sum of permanent capital (Class B stock plus retained earnings), Class A stock (which is purchased by member institutions and redeemable with written notice six months in advance), and other “loss absorbing” amounts, such as the loan loss allowance.<sup>16</sup> As of December 31, 2022, the actual regulatory capital ratio for the FHLB system as a whole was 5.55 percent.

**Leverage Capital.** Each FHLB must maintain leverage capital equal to at least 5 percent of its assets. The amount of leverage capital is calculated as 1.5 times permanent capital, plus all other capital without a weighting factor. As of December 31, 2022, the actual leverage capital ratio for the FHLB system was 8.32 percent.

### Dividends

If an FHLB meets its capital requirements, it may pay dividends to member institutions—either in cash or in the form of additional capital stock—from its unrestricted retained earnings. (Whereas unrestricted retained earnings can be used to pay dividends, restricted retained earnings are used to increase capital.) Along with

low-cost advances, dividends represent another benefit of FHLB membership.

Each FHLB allocates 20 percent of its net income to an account for restricted retained earnings until that account has a balance equal to 1 percent of its average balance of outstanding obligations for the calendar quarter. Those restricted retained earnings may be released if the account balance exceeds 150 percent of the minimum requirement.<sup>17</sup>

In 2022, FHLBs paid almost \$1.4 billion in cash and stock dividends to their members. Those payouts represented about 43 percent of the FHLBs' net income (a measure known as the dividend payout ratio).

### Advances

The principal business activity of FHLBs is to borrow in the capital markets and issue advances to their member institutions. Advances come in two forms: traditional advances and liquidity advances. Traditional advances are intended but not required to be used by members to finance residential housing or by a community financial institution to fund loans for small businesses, small farms, or community development activities. The mortgage-related advances can be used as longer-term funding for loans that are not sold in the secondary mortgage market—such as loans retained by a member in its portfolio—or as interim funding for loans that a member ultimately sells or securitizes.

FHLBs may also make liquidity advances to members, provided that the member is solvent, has the necessary collateral, and has reasonable prospects of returning to a satisfactory financial condition. In that capacity, the FHLBs serve as an alternative to using the Federal Reserve's discount window, allowing members facing liquidity shocks (that is, urgent demands for cash) to access short-term funding without experiencing the regulatory and market oversight often associated with borrowing from the discount window.<sup>18</sup> (Commercial banks can also borrow at market rates in the federal funds market from other banks and from FHLBs, which

15. A derivative is a financial contract that derives its value from the performance of other financial instruments, such as interest rates and foreign currency exchange rates.

16. The allowance for loan losses is a reserve to cover estimated credit losses on assets. The amounts are charged against the FHLBs' operating income. The redeemable nature of an FHLB's capital stock limits its loss-absorbing capacity. However, the five-year notice period for redeeming Class B capital stock increases its ability to absorb potential losses compared with Class A capital stock (which has a six-month notice period for redemption). On December 30, 2022, the value of Class B capital stock (\$43.8 billion) exceeded that of Class A capital stock (\$0.2 billion).

17. In addition, an FHLB may not pay dividends in the form of capital stock if doing so would cause its excess capital stock to exceed 1 percent of its total assets.

18. Adam Ashcraft, Morten L. Bech, and W. Scott Frame, “The Federal Home Loan Bank System: The Lender of Next-to-Last Resort?” *Journal of Money, Credit, and Banking*, vol. 42, no. 4 (June 2010), pp. 551–583, <https://www.jstor.org/stable/40732603>.

lend in that market.)<sup>19</sup> In 2022, almost two-thirds of the total principal amount of FHLBs' advances were for one year or less, and about two-thirds of the advances were fixed-rate loans.

Although advances are not risk-free, no FHLB has ever suffered a credit loss on an advance. All advances are collateralized by eligible assets, which include residential and commercial mortgages, securities issued by the federal government, Fannie Mae, and Freddie Mac, and certain other loans for real estate, small businesses, agriculture, or community development. In December 2022, for example, 49 percent of the collateral held by FHLBs against advances was in the form of single-family mortgages, 20 percent was in commercial real estate loans, 10 percent was in agency securities (such as MBSs issued by Fannie Mae and Freddie Mac), 9 percent was in multifamily loans, and the rest was other eligible assets. However, the way the advances are collateralized does not restrict members from using them to fund other types of loans or investments.

When an advance is made, the value of the collateral must exceed the size of the advance. Therefore, when pledging collateral, members receive less in advances than the value of the collateral. That difference—often referred to as a “haircut”—depends primarily on the type of collateral used to secure the advance rather than on current economic conditions. For single-family mortgages, for example, the average haircut amounts to about 28 percent (from a range of 12 percent to 55 percent), whereas for commercial real estate loans it amounts to roughly 34 percent (from a range of 19 percent to 50 percent).<sup>20</sup>

19. Stefan Gissler and Borghan Narajabad, “The Increased Role of the Federal Home Loan Bank System in Funding Markets, Part I: Background,” *FEDS Notes* (Board of Governors of the Federal Reserve System, October 18, 2017), <https://doi.org/10.17016/2380-7172.2070>; and Darryl E. Getter, *The Federal Home Loan Bank (FHLB) System and Selected Policy Issues*, Report R46499, version 2 (Congressional Research Service, August 27, 2020), <https://tinyurl.com/fd7mhhf6>.

20. “Haircuts” are also based on the financial strength of the borrowing member, which determines how the collateral is pledged to support an advance. The ranges and average cited here are for haircuts whereby the FHLB or a third-party custodian takes physical possession or control of the collateral. See Federal Home Loan Banks, Office of Finance, *Combined Financial Report for the Year Ended December 31, 2022* (March 2023), pp. 102–106, <https://tinyurl.com/6nfb7an2> (PDF).

The overcollateralization of advances is the FHLBs' main source of protection against credit losses on advances. FHLBs are further protected from losses by their super-lien position, which gives them priority on collateral over other creditors—including the FDIC—if a member institution fails and the value of collateral decreases. The Competitive Equality Banking Act of 1987 created that super-lien position; however, the protections that it provided to FHLBs beyond those available to other secured lenders were narrowed in 2001 by changes to the Uniform Commercial Code.<sup>21</sup> (In the case of advances to insurance companies, which are regulated differently than commercial banks are, FHLBs take additional steps to preserve their access to collateral—including mortgages, mortgage-backed securities, and bonds—in those states where the super-lien position is not in place.)<sup>22</sup> Because of the super-lien position, losses that might otherwise be borne by FHLBs may instead be borne by the FDIC and uninsured depositors. FHLBs' lack of exposure to such losses may reduce their incentive to lend only to creditworthy members.

Although advances pose little credit risk to FHLBs, they do pose concentration risk (that is, the risk that a small number of members hold a disproportionate share of outstanding advances)—though that risk has been declining since 2016. In 2022, the top five borrowers accounted for 17 percent of the loans, compared with 30 percent in 2016.<sup>23</sup> The share in 2022 was the smallest since 2010.

As of December 31, 2022, about 55 percent of members had outstanding advances, but some of the largest members were among the largest borrowers. In 2022, the largest borrower was Wells Fargo, followed by PNC Financial. Metropolitan Life Insurance Company, an insurer, was among the top 10 borrowers, which collectively accounted for about one-quarter of total advances. SVB Financial

21. Jonathan A. Scott and Reginald T. O'Shields, ““Super Lien” Doesn't Mean Super Risk: Money Market Intermediation, Security Interests, Federal Home Loan Bank Lien Protections and Systemic Risk,” *North Carolina Banking Institute*, vol. 23, no. 1 (2019), pp. 11–25, <http://tinyurl.com/46whk6pf> (PDF).

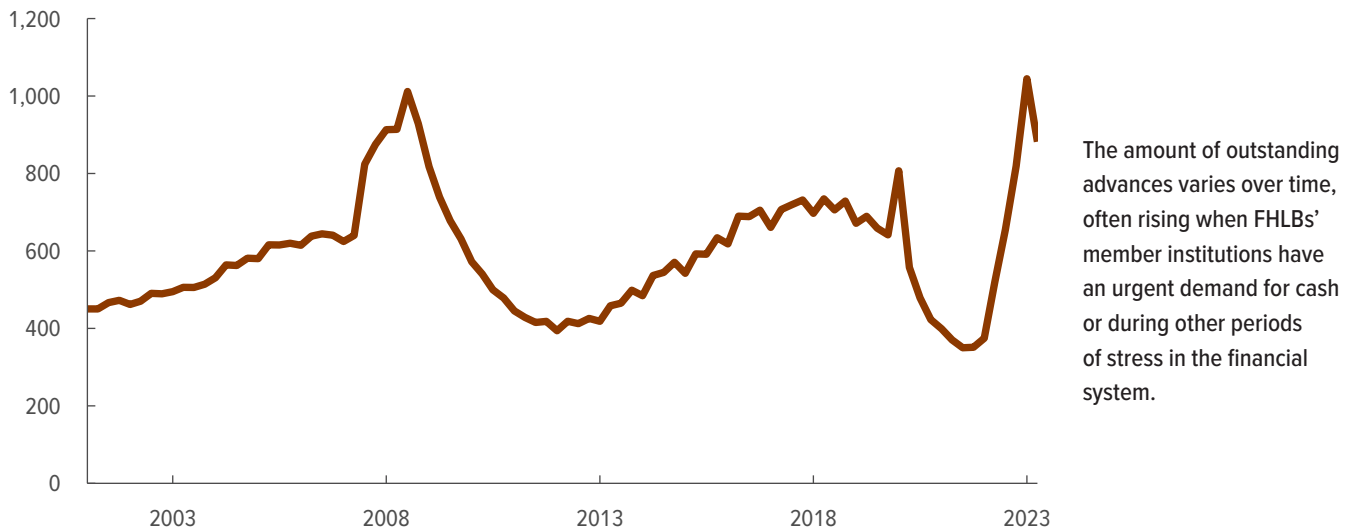
22. Allen Tischler and others, “Moody's Affirms the Federal Home Loan Banks' (FHLBanks) Aaa Long-Term Senior Unsecured Debt Ratings: Outlook Remains Negative” (Moody's, January 24, 2024).

23. Federal Housing Finance Agency, *2022 Report to Congress* (June 2023), pp. 25–26, <https://tinyurl.com/3m9krmfc> (PDF).

Figure 2.

## Outstanding Advances From Federal Home Loan Banks, by Quarter

Billions of dollars



Data sources: Congressional Budget Office; Federal Housing Finance Agency, *FHLBank System at 100: Focusing on the Future* (November 2023), <https://tinyurl.com/5c24xpbk> (PDF). See [www.cbo.gov/publication/59712#data](https://www.cbo.gov/publication/59712#data).

Advances are collateralized loans that Federal Home Loan Banks issue to their member institutions.

FHLBs = Federal Home Loan Banks.

Group and First Republic Bank, both of which failed in 2023, were also among the top 10 borrowers.<sup>24</sup> In 2022, insurance companies made up just 4 percent of members but accounted for one-sixth of all advances (down from about one-third in 2021). Life insurance companies' holdings of whole-loan mortgages accounted for less than 1 percent of the \$13.6 trillion of FHLBs' outstanding single-family mortgage debt at the end of 2022 (though the companies also invest in MBSs).<sup>25</sup>

The amount of outstanding advances varies over time, often rising during liquidity shocks or other periods of stress in the financial system (see Figure 2). For example,

24. In all, about 70 percent of the advances go to members who borrow more than \$1 billion. See Federal Home Loan Banks, Office of Finance, *Combined Financial Report for the Year Ended December 31, 2022* (March 2023), pp. 59 and 105, <https://tinyurl.com/6nfb7an2> (PDF).

25. Life insurance companies held nearly \$800 billion (about 4 percent) of total mortgage debt in the form of whole mortgages as of December 31, 2022, but most was commercial real estate (\$458 billion) and multifamily debt (\$211 billion). See Federal Reserve Bank of St. Louis: Economic Data, "Release Tables: Mortgage Debt Outstanding" (Release Z.1, accessed December 13, 2023), <https://tinyurl.com/2et8jzpb>.

there were about \$375 billion in outstanding advances at the end of March 2022. During the ensuing year, several member institutions experienced financial stress and used advances to enhance their liquidity. As a result, outstanding advances had increased to \$1.0 trillion by the end of March 2023 before dropping to below \$900 billion by September 2023.

### Portfolio Investments

FHLBs invest in a variety of short- and long-term assets as a source of income and to provide liquidity in the market for those assets. The investments include mortgages purchased from members and MBSs issued by Freddie Mac, Fannie Mae, and Ginnie Mae. Investments in private-label securities (privately issued MBSs that lack a federal guarantee) and home equity loans led some FHLBs to suffer losses during the 2007–2009 financial crisis. The FHLBs of Boston, Chicago, and Seattle each reported negative net income in 2008 and 2009, although the system as a whole remained profitable.<sup>26</sup> (Losses by the FHLB of Seattle eventually triggered its merger with the Des Moines FHLB.)

26. Federal Housing Finance Agency, *2021 Report to Congress* (June 2022), Table 21, p. 120, <https://tinyurl.com/bdcmblkwv> (PDF).

FHLBs are prohibited from speculating and cannot invest in noninvestment grade securities, securities issued by non-U.S. entities, or securities such as common stock that grant ownership interests (with exceptions for certain investments targeted to low-income communities). No FHLB has purchased private-label MBSs since 2008.

At the end of 2022, FHLBs held a combined \$204 billion in investment securities (totaling about one-sixth of their assets) and \$56 billion in mortgages (equaling less than 5 percent of assets).<sup>27</sup> Those investment securities and mortgages generated \$6.2 billion in interest income in 2022; interest income from advances amounted to \$13.3 billion that year. FHLBs use such income to cover operating expenses, to increase retained earnings, or to pay dividends to members.

Beginning in 1997, mortgage purchase programs put FHLBs in limited competition with Fannie Mae and Freddie Mac.<sup>28</sup> Under those programs, FHLBs purchased pools of mortgages from members and shared risks with them; members generally retained most of the credit risk on the mortgages, and FHLBs usually accepted the interest rate and prepayment risk (the risk of losses when fluctuating interest rates change the expected timing of the repayment of the mortgage), which they managed using derivatives and other hedging techniques. The FHLBs of Chicago and Seattle experienced problems managing those risks, which, in 2004, led regulators to restrict the growth of their mortgage purchase programs.<sup>29</sup> As a result, mortgage holdings dropped from 12 percent of FHLBs' total assets in 2004 to less than 5 percent in 2022.

Several FHLBs now have programs under which they aggregate their members' mortgage loans and sell them in the secondary market at prices more favorable than the members could receive on their own. Under those programs, member institutions may retain servicing

rights on the loans and have lower requirements for risk-based capital than traditional mortgage partnership programs would allow. Moreover, FHLBs have reduced exposure to interest rate and prepayment risk through the program—which was not the case with some earlier programs that helped smaller banks manage risk.

### Debt

At the end of 2022, FHLBs had nearly \$1.2 trillion in outstanding debt—\$467 billion in shorter-term discount notes (with maturities ranging from one day to one year) and \$695 billion in longer-term bonds. The bonds were a mix of fixed and variable rate securities. The FHLBs paid approximately \$17 billion in interest on those obligations in 2022.

### Affordable Housing Programs

The Federal Home Loan Bank Act requires each FHLB to establish an affordable housing program. The programs are funded by an assessment equal to 10 percent of each bank's net income (as long as that amount does not contribute to the bank's financial instability).<sup>30</sup> The funds are used to provide grants or subsidized advances to member institutions to finance homeownership by families with income at or below 80 percent of the median income for the area and to purchase, construct, or rehabilitate rental housing for very low-income households. The funds also support homeownership for low- and moderate-income households through downpayment assistance, counseling, and rehabilitation associated with home purchases. For contributions to their affordable housing programs, FHLBs were assessed \$355 million in 2022, \$201 million in 2021, and \$315 million in 2020.

### Subsidies to FHLBs

With the exception of their required affordable housing programs, the activities of FHLBs are not reported in the federal budget, because of their GSE status. However, FHLBs benefit from the perception that their debt is backed by the government and from regulatory and tax exemptions for which the federal government receives no direct payment from the FHLB system.

### Subsidies in Fiscal Year 2024

FHLBs receive two distinct but related types of subsidies from the government as a function of their GSE status (see Figure 3). Most of the total federal subsidy to FHLBs stems from the reduction in borrowing rates on their debt

27. Federal Home Loan Banks, Office of Finance, *Combined Financial Report for the Year Ended December 31, 2022* (March 2023), pp. 63–67, <https://tinyurl.com/6nfb7an2> (PDF).

28. W. Scott Frame, "Federal Home Loan Bank Mortgage Purchases: Implications for Mortgage Markets," *Economic Review* (Federal Reserve Bank of Atlanta, Third Quarter 2003), pp. 17–31, <https://tinyurl.com/3curvzvf> (PDF).

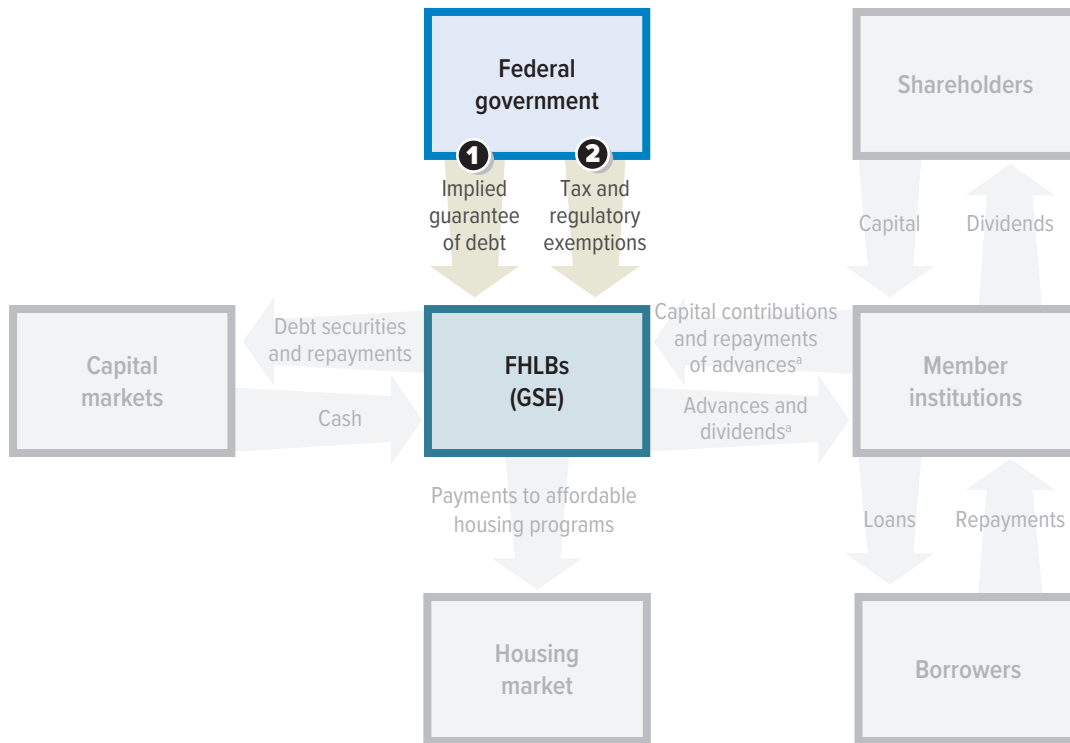
29. Statement of Ronald A. Rosenfeld, Chairman, Federal Housing Finance Board, Before the Subcommittee on Capital Markets, Insurance, and Government-Sponsored Enterprises of the House Committee on Financial Services, *GSE Reform and the Federal Home Loan Bank System* (March 9, 2005), pp. 8–32, <http://tinyurl.com/ytc5trxc> (PDF).

30. The minimum contribution by the FHLB system is \$100 million. See Federal Home Loan Bank Act of 1932, Public Law 72-304, 47 Stat. 128.



Figure 3.

**Forms of Subsidies to Federal Home Loan Banks**



1. The federal government’s implied backing enhances the perceived credit quality of debt issued by FHLBs. As a result, FHLBs experience lower financing costs than private financial institutions do when they hold similar amounts of capital and take comparable risks.
2. FHLBs are exempt from income taxes and from registration requirements and fees imposed by the Securities and Exchange Commission. Also, they can use the Federal Reserve as their fiscal agent (which, in part, allows the Federal Reserve to provide services to support the FHLBs with their debt issuances), and the Treasury is authorized to lend them up to \$4 billion.

Data source: Congressional Budget Office.

FHLBs = Federal Home Loan Banks; GSE = government-sponsored enterprise.

securities (see the appendix). The perception of federal backing enhances the perceived credit quality of the debt they issue and reduces their financing costs. (The federal government has not explicitly provided FHLBs with backing, as it did in the case of Fannie Mae’s and Freddie Mac’s conservatorships. Nor did the federal government need to provide financial assistance when an undercapitalized FHLB merged with a healthier one.) The rest of the subsidy takes the form of tax and regulatory exemptions, which reduce their operating costs.

CBO estimates that in fiscal year 2024, the subsidy from lower borrowing costs will be \$6.3 billion (the central estimate, with a plausible range of \$4.7 billion to

\$7.9 billion) and that from regulatory and tax exemptions will amount to \$0.9 billion (see Table 2).<sup>31</sup> The latter estimate includes FHLBs’ exemptions from state and local income taxes (\$0.2 billion) and federal income taxes (\$0.6 billion). CBO’s central estimate of the total subsidy for fiscal year 2024 is \$7.3 billion (with a plausible range of \$5.7 billion to \$8.9 billion).

31. That range holds the amount of debt issued constant at \$800 billion. If debt issuances were increased by \$100 billion, the central estimate of the total subsidy would increase to \$8.1 billion (with a range of \$6.3 billion to \$9.9 billion). If debt issuances were decreased by \$100 billion, the central estimate of the total subsidy would decrease to \$6.5 billion (with a range of \$5.1 billion to \$7.8 billion).



Table 2.

**Estimated Subsidies to Federal Home Loan Banks in Fiscal Year 2024**

Billions of dollars

	Central estimate (annual subsidy rate of 0.4 percentage points on FHLBs' debt)	Lower end of the plausible range (annual subsidy rate of 0.3 percentage points on FHLBs' debt)	Upper end of the plausible range (annual subsidy rate of 0.5 percentage points on FHLBs' debt)
Subsidy to FHLBs from lower borrowing costs	6.3	4.7	7.9
Subsidy to FHLBs from regulatory and tax exemptions	0.9	0.9	0.9
<b>Total subsidy</b>	<b>7.3</b>	<b>5.7</b>	<b>8.9</b>
FHLBs' affordable housing payments	-0.4	-0.4	-0.4
<b>Net subsidy available to member institutions</b>	<b>6.9</b>	<b>5.3</b>	<b>8.5</b>

Data source: Congressional Budget Office. See [www.cbo.gov/publication/59712#data](http://www.cbo.gov/publication/59712#data).

FHLBs = Federal Home Loan Banks.

The net subsidy available to members is the amount of the total subsidy minus the required affordable housing payments (estimated at \$0.4 billion in fiscal year 2024). Based on that calculation, CBO's central estimate of the net subsidy available to members in fiscal year 2024 is \$6.9 billion (from a range of \$5.3 billion to \$8.5 billion).

FHLBs probably pass through almost all of the subsidies (after subtracting their affordable housing payments) to member institutions (see Figure 4). Lower financing costs on FHLBs' debt are passed along through lower rates on advances than members would receive when borrowing in private debt markets. In turn, competition leads members to offer lower rates to borrowers. Although most long-term advances are intended to fund mortgages, member institutions can use the money for other lending or for liquidity. In effect, advances provide liquidity without restrictions on their intended use. In addition, a portion of the subsidies can be passed through to members in the dividends paid by their FHLB on the capital they contributed to it. Members pay dividends to their shareholders, in part from income earned as part of their FHLB membership.<sup>32</sup>

In this report, CBO estimates a plausible range of values for the total federal subsidy that FHLBs will receive in fiscal year 2024. CBO's current central estimate of the subsidy rate on FHLBs' debt—0.4 percentage points—is about the same as CBO estimated in its earlier reports.<sup>33</sup>

32. Some of the subsidy may not be paid immediately to members through dividends but may be used to increase capital through retained earnings.

33. In 2001 and 2004, CBO estimated the sources and amount of subsidies that FHLBs had recently received because of their GSE status and how the subsidies were distributed to members

Unlike the single-point estimates provided in those reports, that range reflects the varying degrees by which the implied guarantee of federal backing may enhance the perceived credit quality of FHLBs' debt.

**Comparison With Other Subsidy Estimates**

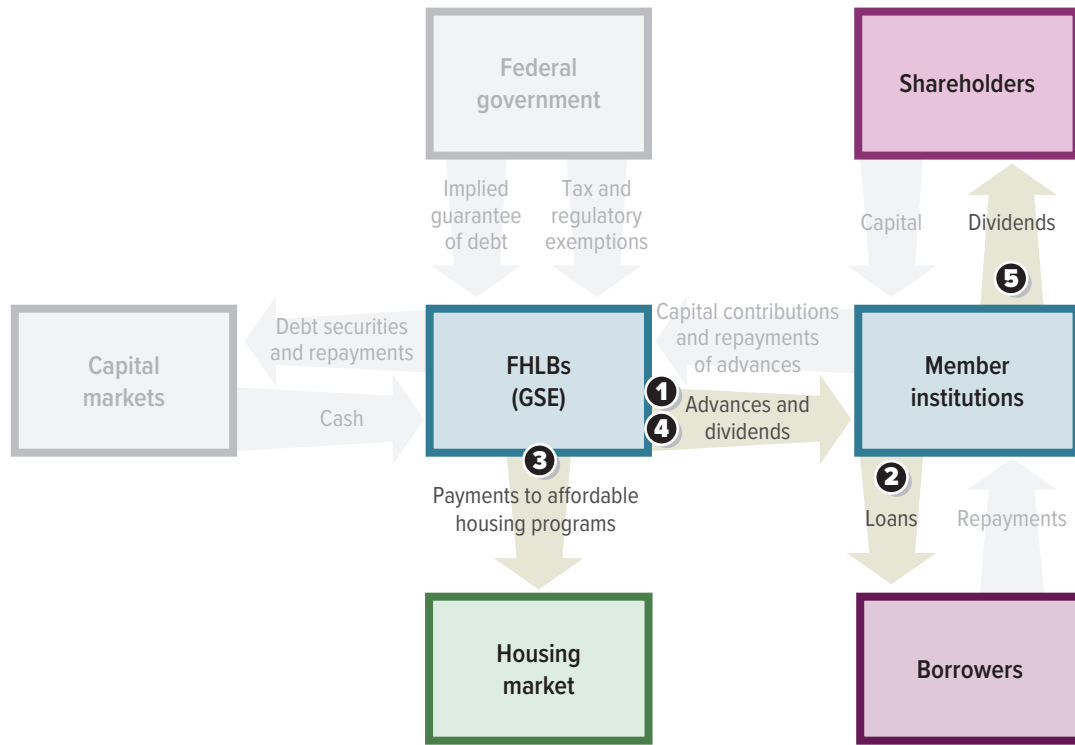
CBO's estimate of the total subsidy received by FHLBs is close to estimates made by other analysts—although in some cases, their methods and assumptions differ from CBO's. Three analyses of the subsidy associated with FHLBs' debt have been released since 2020. Two of them estimated the annual subsidy on the basis of the stock of FHLBs' outstanding debt rather than using (as CBO did) the present value of the debt associated with a single year.<sup>34</sup> Both of those analyses calculated a subsidy of approximately \$5.5 billion, based on an annual subsidy rate of debt of 0.5 percentage points and \$1.1 trillion in outstanding debt. (Neither analysis estimated the subsidy value of the regulatory and tax exemptions.) But estimating

and the primary mortgage market. See Congressional Budget Office, *Federal Subsidies and the Housing GSEs* (May 2001), [www.cbo.gov/publication/13072](http://www.cbo.gov/publication/13072), and *Updated Estimates of the Subsidies to the Housing GSEs* (attachment to a letter to the Honorable Richard C. Shelby, April 8, 2004), [www.cbo.gov/publication/15556](http://www.cbo.gov/publication/15556).

34. Don Layton, *The Role of the Implied Guarantee Subsidy in FHLB Membership: Beautiful Politics but Ugly Policy* (Joint Center for Housing Studies of Harvard University, July 2020), pp. 12–13, <http://tinyurl.com/yvuu4zk8>; and Cornelius Hurley, "Weighing the Costs and Benefits of Federal Home Loan Banks," *American Banker* (November 21, 2022), <https://tinyurl.com/4dexpbyc>. A present value is a single number that expresses the flow of current and future payments or income in terms of an equivalent lump sum paid or received at a specified time. The present value depends on the rate of interest (known as the discount rate) that is used to translate past or future cash flows into current dollars.

Figure 4.

**Use of Subsidies to Federal Home Loan Banks**



1. Lower financing costs on FHLBs' debt are passed along through lower rates on advances to member institutions than they would receive in private debt markets.
2. Lower rates on advances allow member institutions to offer lower rates to borrowers. Although FHLBs' advances are primarily for funding mortgages, member institutions may use the money for other lending or for short- or long-term liquidity.
3. The FHLBs contribute 10 percent of their net income to affordable housing programs.
4. Member institutions receive dividends from their FHLB on the capital they contribute.
5. Member institutions pay dividends to their shareholders, in part from income earned as a part of their FHLB membership.

Data source: Congressional Budget Office.

FHLBs = Federal Home Loan Banks; GSE = government-sponsored enterprise.

a. Advances are collateralized loans that Federal Home Loan Banks issue to their member institutions.

subsidies on the basis of the stock of debt ties the subsidy to past transactions rather than to new credit extended in a given year. Yet when GSEs' debt is priced and sold, the benefits of a lower interest rate are secured for each year that the financing is expected to be outstanding, not just for the current year.<sup>35</sup> The third analysis, which followed the approach used in CBO's 2001 report, calculated a total

subsidy of \$5.5 billion for 2022, based on a subsidy value amounting to \$4.7 billion for debt issued and regulatory and tax exemptions totaling \$0.8 billion.<sup>36</sup>

**Distribution of Benefits From Subsidies**

Subsidies flow from FHLBs to their members and then to those members' customers. FHLBs are cooperatively

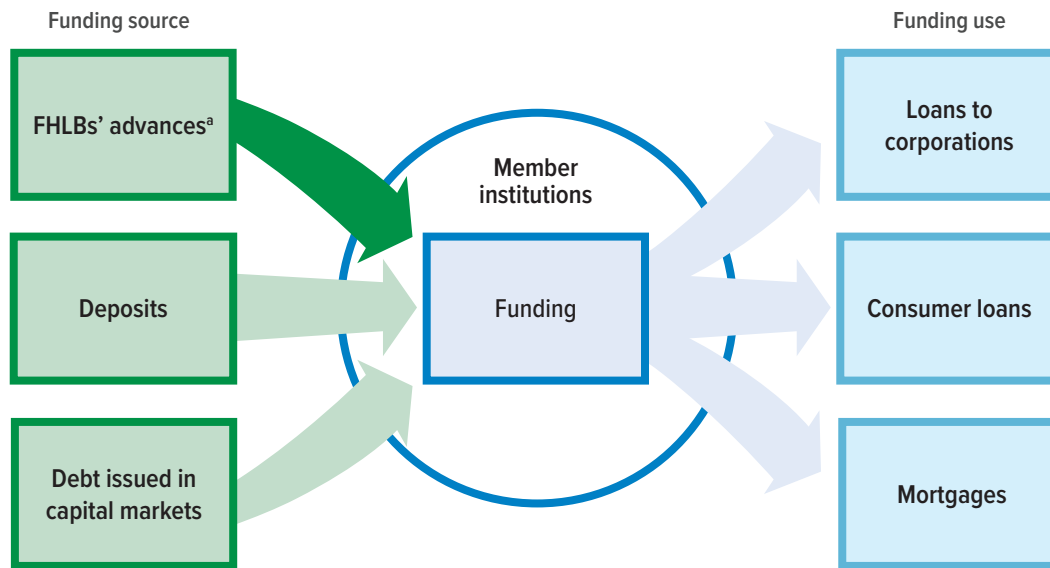
35. Congressional Budget Office, *Federal Subsidies and the Housing GSEs* (May 2001), pp. 19–20, [www.cbo.gov/publication/13072](http://www.cbo.gov/publication/13072), and *Updated Estimates of the Subsidies to the Housing GSEs* (attachment to a letter to the Honorable Richard C. Shelby, April 8, 2004), [www.cbo.gov/publication/15556](http://www.cbo.gov/publication/15556).

36. Jim Parrott and Mark M. Zandi, *In Defense of the Federal Home Loan Banks* (Urban Institute, Housing Finance Policy Center, April 2023), [www.urban.org/research/publication/defense-federal-home-loan-banks](http://www.urban.org/research/publication/defense-federal-home-loan-banks).



Figure 5.

## Use of Advances From Federal Home Loan Banks and Funds From Other Sources



Data source: Congressional Budget Office.

FHLBs = Federal Home Loan Banks.

a. Advances are collateralized loans that Federal Home Loan Banks issue to their member institutions.

owned by retail financial institutions that are eligible to borrow from them. Because members are both owners and customers of FHLBs, almost all of the total subsidy (after affordable housing payments are deducted) probably passes through to them, either in the form of low-cost advances or, to a lesser extent, through dividends. (Other stakeholders of FHLBs, including the executives and owners of the banks, might also realize benefits.) Retail lending is a highly competitive industry, so members may be forced to pass most of the subsidy through to their borrowers. But because members make a wide variety of loans and no data are reported on their use of advances, it is difficult to know how much of the subsidy flows to borrowers with single-family mortgages and how much flows to other borrowers.

Although member institutions are required to pledge mortgage-related collateral against their advances—which increases the incentive to maintain a presence in the mortgage market—they are not required to use the proceeds of those advances to finance housing-related activities. Advances, like other sources of funding, are fungible, and members can use them for any purpose (see Figure 5). In general, members consolidate funds received from advances with funds received from other sources—such as deposits and debt issued in the capital

markets. Members then allocate those consolidated funds to their various lending businesses—including single-family mortgages—on the basis of their profitability targets and charge competitive interest rates on those loans. Thus, the interest rates charged to single-family mortgage borrowers may not reflect the prorated share of the subsidy that members receive from advances.

Although members disclose the amount of advances they receive, they do not disclose how they use the advances. Some short-term advances are used to provide members with liquidity; other advances, both short- and long-term, are used to fund members' nonmortgage lending activities. The share of advances supporting members' liquidity varies by institution and over time, depending on the cost and availability of alternative financing. For example, at the end of 2022 (before the failure of Silicon Valley Bank and Signature Bank in early 2023), 64 percent of advances were due in less than one year. At the end of 2021, such short-term advances made up about 42 percent of all advances.

Not all short-term advances are used for members' liquidity. Some may be substitutes for short-term loans, also known as warehouse lending, needed by members for the period between funding and securitization in the secondary (resale) mortgage market. Members determine

the share of the subsidy that they pass through to the housing market—in the form of a reduction in the rate paid by borrowers in the single-family mortgage market, among other things.

Because of the complex structure of the market for mortgage originations and mortgage pricing, the share of the subsidy that FHLBs' members pass through to the single-family mortgage market is uncertain (see Box 2). In its 2001 report, CBO found that “because of competitive forces, a large part of the subsidy passes through them [the FHLBs] and other financial intermediaries to the intended beneficiaries—primarily mortgage borrowers, but also other borrowers of FHLB member institutions.”<sup>37</sup> However, the mortgage market was very different when CBO made that assessment; in particular, the large share of mortgages originated by nonbanks did not yet exist. A recent analysis challenged the extent to which the FHLBs' subsidy is passed along to borrowers.<sup>38</sup> The role of nonbanks, which finance more than half of all mortgages and do not have direct access to the FHLB system, could reduce the amount of the subsidy passed through to borrowers, but the effect depends on several potentially offsetting factors.

All else being equal, nonbanks would probably have difficulty maintaining their market share if FHLBs' members passed along the full amount of the subsidy to borrowers. But some analysts contend that nonbanks originate mortgages more efficiently than FHLBs' members do, causing the members to pass along the subsidy to match nonbanks' rates—or that nonbanks receive the subsidy through their borrowing from FHLBs' members and pass it along to their borrowers in the primary mortgage market.<sup>39</sup> Although nonbanks lack access to low-cost insured deposits, they have different capital requirements and do not face other regulatory lending requirements,

including those in the Community Reinvestment Act, that add to costs.<sup>40</sup>

Although the mechanism and size of the subsidy pass through from member institutions to mortgage borrowers are uncertain, the existence of the FHLB system, in CBO's assessment, probably reduces mortgage rates and provides liquidity to the housing market, particularly during periods of financial stress.<sup>41</sup> There is no consensus among analysts about the effect that FHLBs currently have on mortgage rates, and little research has been devoted to that question in the past 20 years.<sup>42</sup> The multiple sources of subsidies to residential mortgages further complicate the analysis of that effect. As of September 2023, commercial banks held about \$2.6 trillion in residential mortgages on their balance sheets (amounting to just over 11 percent of their assets), out of a total of \$16.0 trillion in outstanding residential mortgage debt. They also held \$2.5 trillion in MBSs.

## Risks Posed by FHLBs

FHLBs pose less risk to taxpayers than Fannie Mae, Freddie Mac, and commercial banks do. No credit losses have ever been sustained on FHLBs' advances. Those advances are fully collateralized and benefit from the banks' super-lien position. In addition, because of the

37. Congressional Budget Office, *Federal Subsidies and the Housing GSEs* (May 2001), pp. 2–3, [www.cbo.gov/publication/13072](http://www.cbo.gov/publication/13072).

38. Don Layton, *The Role of the Implied Guarantee Subsidy in FHLB Membership: Beautiful Politics but Ugly Policy* (Joint Center for Housing Studies of Harvard University, July 2020), <http://tinyurl.com/yvuv4zk8>.

39. One reason that nonbanks' market share has risen is that compared with larger banks, they have a sizable cost advantage, but not a funding advantage, in originating mortgages. For example, nonbanks have demonstrated more flexibility in responding to shifts in demand for mortgages through changes in staffing. See Tom Finnegan, “The Large Bank Mortgage Banking Profitability Conundrum,” *Current Insights* (Stratmor Group, June 2019), <https://tinyurl.com/yc4una63>.

40. Those factors help explain why banks' funding advantages have not translated into competitive advantages in servicing mortgages. See Michael Fratantoni, “Why Have Banks Stepped Back From Mortgage Servicing?” *International Banker* (September 2, 2020), <https://tinyurl.com/5b6zanhv>.

41. CBO has not estimated the FHLBs' current effects on mortgage rates. In a previous study, CBO assumed that FHLBs' members use the subsidy to match the rate reduction that Fannie Mae and Freddie Mac pass through on conforming mortgages. That assumption resulted in an estimate that about 10 percent of the FHLBs' subsidy flowed to borrowers with conforming mortgages, which are eligible for sale to Fannie Mae and Freddie Mac. CBO allocated the remainder of the subsidy in equal shares across the other assets that banks held. Those assumptions led to the conclusion that FHLBs reduce interest rates on jumbo mortgage loans (mortgages with balances above the ceiling on conforming mortgages) by 3 basis points (or 0.03 percent). At the time, most conforming mortgages were securitized and not held by banks. See Congressional Budget Office, *Federal Subsidies and the Housing GSEs* (May 2001), pp. 25–28, [www.cbo.gov/publication/13072](http://www.cbo.gov/publication/13072).

42. One (unpublished) study estimated that FHLBs reduced mortgage rates in local markets by less than 0.20 percent when new members entered those markets. Entry also led to increased mortgage lending. See Dayin Zhang, *Government-Sponsored Wholesale Funding and the Industrial Organization of Bank Lending* (August 2020), <https://tinyurl.com/4s9dt47c> (PDF).

## Box 2.

**Competition in the Residential Mortgage Market**

Federal Home Loan Banks (FHLBs) receive subsidies from the federal government, which are passed on to their member institutions via advances (collateralized loans). It is difficult to determine the amount of the subsidies that ultimately reaches borrowers of all types of loans, but especially residential mortgage borrowers, because a number of factors affect the rates that are charged on such mortgages. One of the key determinants of that amount is the degree of competition that FHLBs' member institutions face in attracting mortgage borrowers. The competitive landscape of the primary mortgage market is complex, with nearly 4,500 financial institutions originating mortgages in 2022.<sup>1</sup> The 10 largest of those lenders accounted for 24 percent of the market.<sup>2</sup>

In addition to its size, another significant feature of the mortgage market is the type of funding the institutions use to finance the origination of their loans. Most members of FHLBs are traditional depository institutions that use borrowers' deposits (along with FHLBs' advances and other sources of financing) to fund their loan originations.<sup>3</sup> However, in 2022, more than 57 percent of mortgages were originated by nonbank financial institutions—firms that do not have a banking license

and do not accept deposits. Nonbanks do not have direct access to FHLBs' advances, although they are partially funded by FHLBs' members with which they compete in originating mortgages.

Another factor that affects how much of the subsidy provided to FHLBs' members through their advances is passed through to residential mortgage borrowers is the degree of transparency in mortgage pricing. Although most mortgages are quoted to borrowers using annual rates—for example, a 6 percent rate means that the borrower pays 6 percent interest per year on the outstanding balance of the loan—several other elements affect the total cost of a mortgage.

Borrowers are also charged up-front fees, often referred to as points, due when their loans are originated and quoted as a percentage of the original mortgage balance.<sup>4</sup> And they are charged several other fees, some directly by the lender to cover costs and some by third parties for services provided as a part of the origination process. In some cases, those fees can be waived or reduced in exchange for a higher interest rate or additional up-front fees. As a result, it can be challenging for borrowers to directly compare the total cost of two mortgages, even if their interest rates are identical. That lack of transparency in mortgage pricing might enable FHLBs' members to retain some of the subsidy rather than passing it through to mortgage borrowers.

1. Consumer Financial Protection Bureau, *Data Point: 2022 Mortgage Market Activity and Trends* (September 2023), <http://tinyurl.com/4mcjshc6>.

2. For a discussion about measuring competitiveness in mortgage originations, see Mike Fratantoni, "MBA's Mike Fratantoni on Measuring Mortgage Competition," *HousingWire* (February 2, 2022), <https://tinyurl.com/dbs9c32s>.

3. According to the 2022 annual report on the FHLB system, 56 percent of members had outstanding advances at the end of 2022, which suggests that other sources of funds, including deposits, might be cheaper.

4. Borrowers are sometimes given the option to pay fewer (or more) points in exchange for a higher (or lower) interest rate and to have points added to their mortgage balance (and paid over the term of the mortgage) instead of paying them at the time of origination.

banks' joint-and-several liability, the insolvency of a single FHLB does not threaten the solvency of the whole system.

Even with those strengths, FHLBs pose three types of risk: the risk that the FHLB system might fail in an economic crisis and require explicit government support (though no failure occurred in the 2007–2009 financial crisis); the risk that stress in the FHLB system might spill over to the financial system; and the risk that FHLBs' activities might adversely affect the FDIC's Deposit Insurance Fund.<sup>43</sup>

43. For a description of risks facing the FHLB system, see Federal Housing Finance Agency, Office of Inspector General, *An Overview of the Federal Home Loan Bank*

Although federal law established FHLBs for public purposes, they are privately owned and operated corporations. Their only direct connection with the federal budget is their annual contributions for their affordable housing programs. Those contributions are classified both as federal revenues (because they are compulsory—FHLBs are required by the government to pay their contributions)

*System*, White Paper 2023-002 (March 2023), pp. 15–17, <https://tinyurl.com/mwye7hat> (PDF). For risks to the financial system, see Stefan Gissler and Borghan Narajabad, "The Increased Role of the Federal Home Loan Bank System in Funding Markets, Part I: Background," *FEDS Notes* (Board of Governors of the Federal Reserve System, October 18, 2017), <https://doi.org/10.17016/2380-7172.2070>.

and as direct spending (that is, as mandatory outlays—because the contributions do not require an appropriation and thus are spent without further action by the Congress). That budgetary treatment differs from that of Fannie Mae and Freddie Mac, which the Federal Housing Finance Agency placed in conservatorship in September 2008.<sup>44</sup> Since then, CBO has treated Fannie Mae and Freddie Mac as government entities and included their activities in its baseline budget projections.<sup>45</sup>

### Risk of Failure of the FHLB System

FHLBs experienced stress during the 2007–2009 financial crisis, including a sharp increase in advances and the forced merger of two banks (see Box 3). Nevertheless, the system remained solvent, in contrast to Fannie Mae and Freddie Mac.<sup>46</sup> CBO has not quantitatively assessed the risk of the FHLB system’s failing but estimates that the risk is small, though not zero.

Although the FHLB system relies heavily on debt rather than capital to finance its assets and had about \$18 in assets for every dollar of capital at the end of 2023, several aspects of its business model help insulate the system from failure:

- FHLBs’ principal activity—granting advances to members—is overcollateralized and benefits from the banks’ super-lien position, resulting in a low probability of large losses.
- After some FHLBs lost money on private-label MBSs during the financial crisis, the banks have generally invested in securities with low credit risk. Those investments still expose the banks to interest rate risk, however—the source of stress that caused turbulence in the U.S. banking sector in 2023.
- Each FHLB’s debt issuances are liabilities of the entire system, making the system less susceptible to regional stresses.

44. Federal Housing Finance Agency, “Conservatorship” (accessed July 5, 2023), [www.fhfa.gov/Conservatorship](http://www.fhfa.gov/Conservatorship).

45. The Administration continues to treat those two entities as nongovernmental. See Congressional Budget Office, *Accounting for Fannie Mae and Freddie Mac in the Federal Budget* (September 2018), [www.cbo.gov/publication/54475](http://www.cbo.gov/publication/54475).

46. In September 2008, the Treasury created the Government Sponsored Enterprise Credit Facility, which allowed FHLBs to borrow from the Treasury. No borrowing was necessary. See Department of the Treasury, *FY 2011 Budget in Brief* (February 2010), pp. 87–89, <https://tinyurl.com/24aju967>.

- FHLBs’ capital requirements exceed those of Fannie Mae and Freddie Mac when they were placed in conservatorship.<sup>47</sup>

FHLBs have nonetheless experienced periods of weakness. During the financial crisis, the FHLBs of Seattle and Chicago saw the value of their investments decline and the value of their capital drop to 1.0 percent and 1.5 percent of their assets, respectively. Although the FHLB of Chicago eventually recovered as its earnings increased, the FHLB of Seattle failed to regain sufficient profitability and was merged with the FHLB of Des Moines (without any federal assistance).<sup>48</sup> The failure, in September 2008, of Washington Mutual Bank, which had been the Seattle bank’s largest member, contributed to the merger.<sup>49</sup>

### Risk to the Financial System

Even if the risk of their failure is low, FHLBs could still be a source of stress to the financial system. If the strength of the government’s implied guarantee came into doubt, as happened for a brief period during the financial crisis, the system could see a jump in borrowing costs and reduced access to the capital markets. Firms that relied on FHLBs for funding could face a liquidity crunch because FHLBs are a “lender of next-to-last resort.” (Banks turn to them before accessing the Federal Reserve’s discount window because borrowing from the window signals that a bank is under stress.) That kind of effect on broader financial markets occurred when the stress that Fannie Mae and Freddie Mac experienced during the financial crisis spilled over to the funding costs of FHLBs and raised the cost of their debt. Investors’ confidence in the implied guarantee of FHLBs’ debt recovered after Fannie Mae and Freddie Mac were placed in conservatorship.

47. The FHFA raised the capital requirements for Fannie Mae and Freddie Mac during their conservatorships. See Federal Housing Finance Agency, *Enterprise Regulatory Capital Framework Final Rule* (December 2020), <https://tinyurl.com/2r3ut257>. And see Congressional Budget Office, *Measuring the Capital Positions of Fannie Mae and Freddie Mac* (June 2006), [www.cbo.gov/publication/17889](http://www.cbo.gov/publication/17889).

48. Stefan Gissler and Borghan Narajabad, “The Increased Role of the Federal Home Loan Bank System in Funding Markets, Part 3: Implications for Financial Stability,” *FEDS Notes* (Board of Governors of the Federal Reserve System, October 18, 2017), <https://tinyurl.com/346ce3vn>.

49. Kirsten Grind, *The Lost Bank: The Story of Washington Mutual—The Biggest Bank Failure in American History* (Simon & Schuster, 2013), <https://tinyurl.com/mrcbt4s4>.

## Box 3.

**FHLBs During Periods of Financial Stress and Bank Failures**

During the 2007–2009 financial crisis, demand for loans (known as advances) from Federal Home Loan Banks (FHLBs) fluctuated significantly—which was consistent with the banks’ emerging as the “lender of next-to-last resort.”<sup>1</sup> Outstanding advances jumped from \$0.6 trillion at the beginning of 2007 to \$0.9 trillion in July 2008. Ten percent of the outstanding advances in June 2008 went to two institutions—Countrywide FSB and Washington Mutual Bank—that were adversely affected by the financial crisis and soon acquired by stronger institutions (Bank of America Corporation and J.P. Morgan Chase Bank, respectively). A third institution, IndyMac Bank, was closed by the Office of Thrift Supervision and placed into receivership with the Federal Deposit Insurance Corporation (FDIC). At the time of its closure, IndyMac Bank had \$9.1 billion in outstanding advances with the FHLB of San Francisco. Those advances were collateralized by approximately \$24.7 billion in mortgage loans and mortgage-backed securities.<sup>2</sup>

In March 2023, FHLBs’ advances jumped as a result of stress in the banking system, rising to more than \$1.0 trillion. Although the source of stress in financial markets differed from that of the earlier financial crisis, the response of FHLBs’ member institutions was similar: an increased reliance on advances using eligible collateral to obtain short-term funding to stave off a liquidity crisis.<sup>3</sup> To date, those recent spikes in advances have had no adverse effect on the FHLB system; the advances were ultimately repaid, even when a member institution failed.

FHLBs issued a record amount of debt (\$495 billion) in March 2023 to members under stress or trying to replace lost uninsured deposits rather than support mortgage lending.<sup>4</sup> Some

member institutions—commercial banks—failed. In those cases, the members’ use of advances spiked ahead of their failure and helped them replace lost uninsured deposits.<sup>5</sup>

Silvergate Bank, a lender to the cryptocurrency industry, obtained \$4.3 billion in advances from the FHLB of San Francisco shortly before ceasing operations in March 2023.<sup>6</sup> Silvergate repaid its advances and did not need support from the FDIC to repay depositors.

Silicon Valley Bank and Signature Bank failed in March 2023. At the end of 2022, Silicon Valley Bank was the largest holder of advances (\$15 billion worth) from the FHLB of San Francisco. It mainly served clients in information technology. Signature Bank was then the fourth-largest holder of advances from the FHLB of New York—\$11.3 billion worth, compared with \$2.6 billion worth of advances held on December 31, 2021. Because those advances were collateralized, neither FHLB suffered credit losses.

First Republic Bank failed on May 1, 2023. On March 31 of that year, it held \$28.1 billion in long-term advances from the FHLB of San Francisco (along with \$93 billion worth of borrowing from the Federal Reserve). The long-term advances it held on December 31, 2022, amounted to \$14.0 billion.<sup>7</sup>

Silicon Valley Bank and Signature Bank were placed in receivership by the FDIC. J.P. Morgan purchased First Republic Bank after it was shut by the FDIC. It is unclear to what extent the FHLBs’ protection against losses on advances will affect costs to the FDIC’s Deposit Insurance Fund.

1. Adam Ashcraft, Morten L. Bech, and W. Scott Frame, “The Federal Home Loan Bank System: The Lender of Next-to-Last Resort?” *Journal of Money, Credit, and Banking*, vol. 42, no. 4 (June 2010), pp. 551–583, [www.jstor.org/stable/i40033226](http://www.jstor.org/stable/i40033226).

2. Federal Home Loan Banks, Office of Finance, *Quarterly Combined Financial Report for the Six Months Ended June 30, 2008* (August 2008), <https://tinyurl.com/hn9fwwa5> (PDF).

3. Steven Kelly, Susan McLaughlin, and Andrew Metrick, *FHLB Dividends: Low-Hanging Fruit for Reconfiguring FHLB Lending* (Yale School of Management, Program on Financial Stability, January 18, 2024), <http://tinyurl.com/3ktu2zm9>.

4. Rachel Louise Ensign, David Harrison, and Hannah Miao, “Banks Leaned on a Little-Known Lender in March as Customers Fled,” *The Wall Street Journal* (April 19, 2023), <https://tinyurl.com/msc3hj7y>.

5. Kathryn Judge, “The Unraveling of the Federal Home Loan Banks” (Columbia Law and Economics Working Paper No. 668, November 2023), <http://dx.doi.org/10.2139/ssrn.4626125>.

6. The Federal Housing Finance Agency’s Office of Inspector General noted that the FHLB failed to stop Silvergate’s advances or adjust its credit rating to reflect the increased risk it posed. See Federal Housing Finance Agency, Office of Inspector General, *DBR Adapted the Scope of Its Federal Home Loan Bank Supervisory Activities in 2023 in Response to Market Disruptions*, Evaluation Report EVL-2023-004 (September 2023), pp. 12–13, <https://tinyurl.com/yf7rptst> (PDF).

7. State of California, Department of Financial Protection and Innovation, “In the Matter of First Republic Bank: Order Taking Possession of Property and Business” (May 1, 2023), <https://tinyurl.com/akcyyrjv> (PDF).



### Risk to the FDIC's Deposit Insurance Fund

The risk posed by the FHLB system comes from the liquidity it provides to member institutions during times of financial stress. Although such support may help some members stave off failure, it may not be enough to save other members.<sup>50</sup> Issuing additional advances to prolong the survival of members that eventually fail could increase the cost of their failures to the Federal Deposit Insurance Corporation. After taking control of the failed institution, the FDIC would be required to repay all advances to the FHLB from available assets before resolving other claims—thus diminishing the amount of assets available to repay insured deposits. If those assets

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50. A recent study found that member banks (particularly those with less than \$50 billion of assets) that increased their use of advances had lower probabilities of failure. See Damien Moore and others, *The Federal Home Loan Banks Support Systemic Stability* (Urban Institute, November 2023), <https://tinyurl.com/peysuats>.

were insufficient, costs to the FDIC's Deposit Insurance Fund would increase.<sup>51</sup> Banks rather than taxpayers are expected to cover the cost of deposit insurance over time. By law, any costs associated with insurance losses must be recovered through assessments on solvent insured depository institutions. The FDIC sets deposit fees paid by banks to ensure full-cost recovery in the long run.<sup>52</sup>

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51. One study found that both default probability and the losses given default increase with advances. The FDIC can price the additional risk posed by advances. See Rosalind L. Bennett, Mark D. Vaughan, and Timothy J. Yeager, *Should the FDIC Worry About the FHLB? The Impact of the Federal Home Loan Bank Advances on the Bank Insurance Fund*, Working Paper No. 2005-10 (FDIC Center for Financial Research, July 2005), <https://tinyurl.com/bdfmb3ms> (PDF).

52. Congressional Budget Office, *Measuring the Costs of Federal Insurance Programs: Cash or Accrual?* (December 2018), [www.cbo.gov/publication/53921](http://www.cbo.gov/publication/53921).



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# Appendix: How CBO Estimated the Subsidies to FHLBs for Fiscal Year 2024

The Congressional Budget Office's estimate of the amount of subsidies that Federal Home Loan Banks (FHLBs) receive from the federal government depends mainly on the amount of debt that the banks issue. The term structure and subsidy rate of the debt are key inputs to that estimate, and the cash flows from the benefits are discounted to a present value (see Table A-1).<sup>1</sup> In addition, the estimate reflects the value of exemptions from federal, state, and local taxes and from regulatory fees.

The largest component of the total federal subsidy to FHLBs is the reduction in borrowing rates on their debt securities. Furthermore, regulatory and tax exemptions reduce FHLBs' operating costs and increase the subsidy available to member institutions.

## Annual Subsidy Rate on FHLBs' Debt

CBO estimates that in fiscal year 2024, the subsidy rate on FHLBs' debt will amount to 0.4 percentage points (the central estimate, with a plausible range of 0.3 percentage points to 0.5 percentage points). In general, the size of the subsidy will increase with the amount by which the FHLB system's status as a government-sponsored enterprise (GSE) lowers the banks' cost of debt and the amount of debt issued, which depends on members' demand for advances. That demand varies with financial conditions and the cost of alternative financing.

The special treatment of FHLBs' securities under federal law suggests to investors that the federal government would feel compelled to intervene to support FHLBs if necessary. FHLBs therefore enjoy lower financing costs than do private financial institutions holding similar amounts of capital and taking comparable risks. The degree to which the perceived credit quality of debt

issued by FHLBs is enhanced by their GSE status can be approximated by the spread between the interest rates on FHLBs' debt and rates on comparable debt issued by other financial institutions. In its 2001 and 2004 reports, CBO calculated an annual spread advantage from GSE status of 0.41 percentage points on the basis of a regression model of bond spreads.<sup>2</sup>

More recent analyses have used an approach based on the difference in how rating agencies assess the credit risk of FHLBs and financial institutions of comparable financial strength without a GSE designation.<sup>3</sup> For example, Standard & Poor's (S&P) rates the credit quality of regional FHLBs as AA+.<sup>4</sup> That rating reflects the government's oversight of the banks and their central role in housing finance and policy, which create an expectation of government support in the event of financial distress.<sup>5</sup> Those factors improve FHLBs' credit risk compared with that of financial firms with similar earnings, assets, liabilities, and capital but without GSE status and the same expectation of support.

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1. A present value is a single number that expresses the flow of current and future payments or income in terms of an equivalent lump sum paid or received at a specified time. The present value depends on the rate of interest (known as the discount rate) that is used to translate past or future cash flows into current dollars.

2. The regression model can be found in a report commissioned by CBO. See Brent W. Ambrose and Arthur Warga, "Measuring Potential GSE Funding Advantages," *Journal of Real Estate Finance and Economics* (September–December 2002), pp. 129–150, <https://tinyurl.com/2ycxvrt3>.

3. Those analyses placed the spread advantage closer to 0.5 percentage points. See Don Layton, *The Role of the Implied Guarantee Subsidy in FHLB Membership: Beautiful Politics but Ugly Policy* (Joint Center for Housing Studies of Harvard University, July 2020), <http://tinyurl.com/yvvu4zk8>; and Cornelius Hurley, "Weighing the Costs and Benefits of Federal Home Loan Banks," *American Banker* (November 21, 2022), <https://tinyurl.com/4dexpbyc>.

4. Moody's rates the obligations "Aaa," its highest rating. See Federal Home Loan Banks, Office of Finance, "Credit Ratings" (accessed February 28, 2023), <http://tinyurl.com/2z3pntrx>.

5. CBO's current estimate of the subsidy from lower borrowing costs does not directly account for the exemption that FHLBs' debt receives from state and local income taxes, which increases its value to investors. However, that exemption is cited in ratings of FHLBs by ratings agencies.

Table A-1.

## CBO's Model Inputs and Outputs for Estimating the Amount of the Total Subsidy to Federal Home Loan Banks for Fiscal Year 2024

Model inputs	Values used	Basis
Total amount of debt	\$800 billion	The average amount of debt issued between 2015 and 2022.
Total amount of advances	\$560 billion	The average amount of advances made between 2015 and 2022.
Terms of debt issuance and advances	60 percent for maturities less than one year 15 percent for maturities between one year and three years 15 percent for maturities between three years and five years 10 percent for maturities greater than five years	The total debt outstanding before the recent increase in advances associated with stress in the banking system in early 2023.
Annual subsidy rate on debt	0.3 percentage points 0.4 percentage points (central estimate) 0.5 percentage points	The reduction in interest rates that CBO estimated in earlier analyses, other analysts' estimates, and an analysis of market debt spreads.
Discount rate	5.0 percent for cash flows occurring in three years or less 4.5 percent for cash flows occurring in years four and five 4.0 percent for cash flows occurring after five years	CBO's macroeconomic forecast and an estimate of FHLBs' cost of funds beginning in fiscal year 2024.
Tax exemptions	\$0.8 billion	Estimates of exemptions from state and local income taxes (\$0.2 billion) and federal income taxes (\$0.6 billion). The estimated state taxable income is approximately \$3.15 billion, with an average state and local tax rate of 7 percent. Estimated federal taxable income (which is reduced by a deduction for state and local taxes) is approximately \$2.92 billion, with a federal tax rate of 21 percent.
Regulatory fee exemptions	\$0.1 billion	Exemption from the Securities and Exchange Commission's registration requirements and fees of \$147.60 per \$1 million of issued bonds, based on \$800 billion in issuances.
Affordable housing payments	\$0.4 billion	Expected income of \$3.5 billion and a 10 percent contribution rate.
<b>Model outputs</b>	<b>Calculation</b>	
Total subsidy	<p>Total debt issuance is allocated to maturity buckets (one year or less, one to three years, three to five years, and greater than five years) on the basis of the term structure of debt issuance inputs.</p> <p>Debt issuance in each maturity bucket is multiplied by the annual subsidy rate on debt to create annual cash flows. The present value of the one-to-three-year bucket is based on two years of cash flows. The present value of the three-to-five-year bucket is based on four years of cash flows. The present value of the greater-than-five-year bucket is based on seven years of cash flows.</p> <p>Annual cash flows are discounted to a present value using the appropriate nominal discount rate for the timing of the cash flow and are summed.</p> <p>The value of tax exemptions and regulatory fee exemptions is added to discounted annual cash flows to calculate the total subsidy.</p>	
Subsidy available to member institutions	Spending for affordable housing programs is subtracted from the total subsidy to calculate the subsidy available to members.	

Data source: Congressional Budget Office.

FHLBs = Federal Home Loan Banks.



CBO projects that without those benefits deriving from their GSE status, FHLBs would receive an S&P rating in the range of A to BBB+, or four to six notches below AA+. Therefore, CBO analyzed monthly bond yields for S&P ratings categories between AAA and A (five notches) for 5-year and 10-year issuances over selected intervals from 1996 to 2023. The agency found a spread in a range that supports its previous estimate of 0.41 percentage points. Because the actual GSE benefit may be greater or less than S&P's estimates, and because the mix of FHLBs' debt may include terms other than the 5-year and 10-year issuances analyzed, in this report CBO evaluates the subsidy using a range of 0.3 percentage points to 0.5 percentage points, with a central estimate of 0.4 percentage points.

### Converting Yield Spreads to Subsidy Values

CBO's calculation of the total benefit from lower borrowing costs reflects the total subsidy associated with new credit extended in a given year—the capitalized subsidy. When FHLBs' bonds are priced and sold to investors, the benefits of a lower interest rate are secured for each year the financing is expected to be outstanding, not just for the current year. CBO's use of the capitalized subsidy measure is consistent with the approach of the Federal Credit Reform Act of 1990, under which the costs of long-lived credit transactions are to be recognized and disclosed when the commitment to a direct loan or guarantee is made.

CBO calculated the subsidy in two steps. First, it obtained the annual flow of the incremental benefit by multiplying the net increase in annual outstanding debt, plus any assumed rollover of debt, by the estimated reduction in interest rates that results from the federal subsidy. Second, it determined the present value of the annual benefit by discounting those annual flows over the time horizon used in the analysis, using the cost of funds to FHLBs. For the current analysis, CBO used a set of discount rates consistent with its forecast of interest rates on Treasury securities, making a small adjustment to reflect the fact that interest rates on FHLBs' debt are slightly higher than the Treasury's rates. (That difference arises because FHLBs' debt is not considered risk-free.)<sup>6</sup> In that approach, CBO used a rate of 5.0 percent to discount cash flows occurring in three years or less, 4.5 percent for cash flows occurring in years four and five, and 4.0 percent for cash flows occurring after five years.

6. For example, the capital requirements for banks put a risk weight of zero on Treasury securities but a risk weight of 20 percent on GSEs' securities.

The choice of discount rate affects the estimated value of the subsidy. CBO used FHLBs' expected cost of funds as a discount rate because the risk of the subsidy is similar to that of FHLBs' debt. Alternatively, using a higher, risk-adjusted discount rate would be consistent with standard capital budgeting used by private firms and would decrease the estimated subsidy. In contrast, using a lower, risk-free rate would increase the estimated value of the subsidy.

### Terms of Debt Issuance and Advances

FHLBs issue a variety of debt instruments to raise funds. Bonds vary by their length of term and depending on whether the interest rate on the debt is fixed or variable. For the current analysis, CBO used the following mix for the terms of debt issuances: 60 percent for maturities less than one year; 15 percent for maturities between one year and three years (with cash flows discounted for an average of two years); 15 percent for maturities between three years and five years (with cash flows discounted for an average of four years); and 10 percent for maturities greater than five years (with cash flows discounted for an average of seven years). That mix is generally consistent with FHLBs' total amount of outstanding debt before early 2023, when the volume of advances began to increase as a result of stress in the banking system.

In CBO's current analysis, the terms of advances made to members in fiscal year 2024 are structured the same as the terms of debt issuances, and all interest rates are assumed to be fixed.<sup>7</sup>

### Amount of Debt Issuance and Advances

The amount of outstanding debt issuance and advances varies over time, often rising during liquidity shocks or other periods of stress in the financial system. For this report, the amount of debt issuance is set at \$800 billion, reflecting the average amount of debt issued between 2015 and 2022. Advances are set at \$560 billion, or 70 percent of debt issuances, reflecting the ratio of debt issued and new annual advances over that same period. The amount of issued debt is higher than the amount of advances because debt is also used to fund other short- and long-term assets that FHLBs use to provide liquidity and to generate income to cover their operating expenses.

7. Although FHLBs issue adjustable-rate debt, the spread on that debt is similar to spreads on their fixed-rate debt.

## Subsidy From Regulatory and Tax Exemptions

CBO estimates that the subsidy from regulatory and tax exemptions will amount to about \$0.9 billion in fiscal year 2024. That estimate includes FHLBs' exemption from the Securities and Exchange Commission's registration requirements and fees. That exemption, which CBO estimates to be \$147.60 per \$1 million of issued bonds, is worth approximately \$0.1 billion (based on \$800 billion in issuances).<sup>8</sup> The subsidy also includes FHLBs' exemptions from state and local income taxes (\$0.2 billion) and federal income taxes (\$0.6 billion). Those estimated values of the exemptions are based on an implied state taxable income of approximately

\$3.15 billion (net income of \$3.5 billion, reflecting the average income since 2015, minus the contribution to affordable housing programs of approximately \$350 million); an average state and local tax rate of 7 percent; and a federal tax rate of 21 percent.

In general, the estimated value of the subsidy from regulatory and tax exemptions increases with the size of the FHLBs' earnings and debt issuances. Other special provisions of the law establishing the FHLBs, such as the right to use the Federal Reserve as a fiscal agent—which, in part, allows the Federal Reserve to provide services to support the FHLBs with their debt issuances—and the Treasury's authority to purchase up to \$4 billion of FHLBs' debt, result in savings to the FHLBs, but CBO did not estimate those savings.

8. Securities and Exchange Commission, "Filing Fee Rate" (accessed February 15, 2024), [www.sec.gov/ofm/filing-fee-rate](http://www.sec.gov/ofm/filing-fee-rate).

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# List of Tables and Figures

## Tables

1.	Balance Sheet of the Federal Home Loan Bank System as of December 31, 2022	8
2.	Estimated Subsidies to Federal Home Loan Banks in Fiscal Year 2024	14
A-1.	CBO's Model Inputs and Outputs for Estimating the Amount of the Total Subsidy to Federal Home Loan Banks for Fiscal Year 2024	24

## Figures

1.	Overview of the Federal Home Loan Bank System	4
2.	Outstanding Advances From Federal Home Loan Banks, by Quarter	11
3.	Forms of Subsidies to Federal Home Loan Banks	13
4.	Use of Subsidies to Federal Home Loan Banks	15
5.	Use of Advances From Federal Home Loan Banks and Funds From Other Sources	16

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# About This Document

This report, which is part of the Congressional Budget Office's continuing efforts to make its work transparent, supplies information about how CBO estimates the amount of subsidies that Federal Home Loan Banks receive from the federal government. It describes the banks' role in financial markets, their financial condition, the value of the subsidies they receive, and the risks they pose. In keeping with the agency's mandate to provide objective, impartial analysis, the report makes no recommendations.

David Torregrosa and Mitchell Remy wrote the report with guidance from Sebastien Gay and contributions from Molly Sherlock. Julia Aman, Richard DeKaser, Michael Falkenheim, Daniel Fried, Cornelia Hall, Justin Humphrey, Michael LaCour-Little, Zunara Naeem, and Emily Stern offered comments. Wendy Kiska fact-checked the report.

Scott Frame of the Structured Finance Association, Ed Golding and Deborah Lucas of the Massachusetts Institute of Technology, Donald Layton of New York University's Furman Center, and Damien Moore and Mark Zandi of Moody's Analytics commented on an earlier draft. The assistance of external reviewers implies no responsibility for the final product; that responsibility rests solely with CBO.

Jeffrey Kling and Robert Sunshine reviewed the report. Scott Craver edited it, and R. L. Rebach created the graphics and prepared the text for publication. The report is available at [www.cbo.gov/publication/59712](http://www.cbo.gov/publication/59712).

CBO seeks feedback to make its work as useful as possible. Please send comments to [communications@cbo.gov](mailto:communications@cbo.gov).



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