

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-Q



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

For the quarterly period ended September 30, 2022

or



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

For the transition period from _____ to _____.

Commission File No. 000-51399

FEDERAL HOME LOAN BANK OF CINCINNATI

(Exact name of registrant as specified in its charter)

Federally chartered corporation of the United States

*(State or other jurisdiction of
incorporation or organization)*

600 Atrium Two, P.O. Box 598, Cincinnati, Ohio

(Address of principal executive offices)

31-6000228

*(I.R.S. Employer
Identification No.)*

45201-0598

(Zip Code)

(513) 852-7500

(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

☒ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated Filer ☐

Accelerated Filer ☐

Non-accelerated Filer ☒

Smaller reporting company ☐

Emerging growth company ☐

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

☐ Yes ☒ No

The capital stock of the registrant is not listed on any securities exchange or quoted on any automated quotation system, only may be owned by members and former members and is transferable only at its par value of \$100 per share. As of October 31, 2022, the registrant had 46,002,110 shares of capital stock outstanding, which included stock classified as mandatorily redeemable.

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PART I – FINANCIAL INFORMATION

Item 1. Financial Statements.

FEDERAL HOME LOAN BANK OF CINCINNATI STATEMENTS OF CONDITION (Unaudited)

(In thousands, except par value)

	September 30, 2022	December 31, 2021
ASSETS		
Cash and due from banks	\$ 20,788	\$ 167,822
Interest-bearing deposits	1,050,115	340,147
Securities purchased under agreements to resell	7,145,945	1,282,440
Federal funds sold	11,143,000	5,505,000
Investment securities:		
Trading securities	1,979,395	6,780,817
Available-for-sale securities (amortized cost of \$8,617,467 and \$5,240,998 at September 30, 2022 and December 31, 2021, respectively)	8,586,841	5,267,123
Held-to-maturity securities (fair value of \$14,378,436 and \$10,269,821 at September 30, 2022 and December 31, 2021, respectively)	14,705,163	10,216,756
Total investment securities	25,271,399	22,264,696
Advances (includes \$4,955 and \$25,805 at fair value under fair value option at September 30, 2022 and December 31, 2021, respectively)	59,748,232	23,054,748
Mortgage loans held for portfolio, net of allowance for credit losses of \$267 and \$233 at September 30, 2022 and December 31, 2021, respectively	7,294,618	7,588,184
Accrued interest receivable	216,587	88,672
Derivative assets	510,760	297,736
Other assets, net	21,946	28,140
TOTAL ASSETS	\$ 112,423,390	\$ 60,617,585
LIABILITIES		
Deposits	\$ 1,242,902	\$ 1,415,651
Consolidated Obligations:		
Discount Notes (includes \$28,847,917 and \$10,420,974 at fair value under fair value option at September 30, 2022 and December 31, 2021, respectively)	51,022,546	29,837,696
Bonds (includes \$6,936,787 and \$7,175,060 at fair value under fair value option at September 30, 2022 and December 31, 2021, respectively)	52,427,001	24,601,838
Total Consolidated Obligations	103,449,547	54,439,534
Mandatorily redeemable capital stock	197,932	21,211
Accrued interest payable	147,371	60,682
Affordable Housing Program payable	83,174	84,504
Derivative liabilities	632	3,291
Other liabilities	1,520,383	796,811
Total liabilities	106,641,941	56,821,684
Commitments and contingencies		
CAPITAL		
Capital stock Class B putable (\$100 par value); issued and outstanding shares: 44,629 shares at September 30, 2022 and 24,900 shares at December 31, 2021	4,462,871	2,490,016
Retained earnings:		
Unrestricted	822,030	783,072
Restricted	539,223	509,719
Total retained earnings	1,361,253	1,292,791
Accumulated other comprehensive income (loss)	(42,675)	13,094
Total capital	5,781,449	3,795,901
TOTAL LIABILITIES AND CAPITAL	\$ 112,423,390	\$ 60,617,585

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

FEDERAL HOME LOAN BANK OF CINCINNATI
STATEMENTS OF INCOME
(Unaudited)

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
INTEREST INCOME:				
Advances	\$ 381,615	\$ 30,688	\$ 547,586	\$ 103,219
Prepayment fees on Advances, net	104	2,229	3,107	8,629
Interest-bearing deposits	7,646	154	9,749	535
Securities purchased under agreements to resell	14,466	72	17,798	339
Federal funds sold	70,738	1,436	93,945	3,982
Investment securities:				
Trading securities	19,157	47,260	86,727	158,982
Available-for-sale securities	52,628	2,296	74,590	3,975
Held-to-maturity securities	69,916	23,796	127,733	77,939
Total investment securities	141,701	73,352	289,050	240,896
Mortgage loans held for portfolio	51,793	42,515	151,217	125,359
Loans to other FHLBanks	97	—	209	—
Total interest income	668,160	150,446	1,112,661	482,959
INTEREST EXPENSE:				
Consolidated Obligations:				
Discount Notes	281,546	2,624	376,128	9,853
Bonds	236,968	83,704	431,373	266,479
Total Consolidated Obligations	518,514	86,328	807,501	276,332
Deposits	5,650	100	7,589	348
Loans from other FHLBanks	1	—	1	—
Mandatorily redeemable capital stock	2,357	70	4,019	274
Total interest expense	526,522	86,498	819,110	276,954
NET INTEREST INCOME	141,638	63,948	293,551	206,005
NON-INTEREST INCOME (LOSS):				
Net gains (losses) on investment securities	(89,342)	(50,642)	(337,328)	(204,891)
Net gains (losses) on financial instruments held under fair value option	41,828	1,301	121,259	7,808
Net gains (losses) on derivatives	26,620	5,924	144,094	66,989
Letters of Credit fees	6,435	6,475	19,066	18,918
Other, net	370	478	1,727	1,307
Total non-interest income (loss)	(14,089)	(36,464)	(51,182)	(109,869)
NON-INTEREST EXPENSE:				
Compensation and benefits	12,250	10,698	39,376	35,687
Other operating expenses	6,031	5,522	18,024	16,706
Finance Agency	1,651	1,879	5,098	5,637
Office of Finance	1,548	1,315	4,712	3,757
Other	4,871	1,629	10,801	6,690
Total non-interest expense	26,351	21,043	78,011	68,477
INCOME BEFORE ASSESSMENTS	101,198	6,441	164,358	27,659
Affordable Housing Program assessments	10,356	651	16,838	2,793
NET INCOME	\$ 90,842	\$ 5,790	\$ 147,520	\$ 24,866

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

FEDERAL HOME LOAN BANK OF CINCINNATI
STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)

(In thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net income	\$ 90,842	\$ 5,790	\$ 147,520	\$ 24,866
Other comprehensive income (loss) adjustments:				
Net unrealized gains (losses) on available-for-sale securities	(8,991)	11,607	(56,751)	23,254
Pension and postretirement benefits	(36)	696	982	2,048
Total other comprehensive income (loss) adjustments	(9,027)	12,303	(55,769)	25,302
Comprehensive income	\$ 81,815	\$ 18,093	\$ 91,751	\$ 50,168

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

FEDERAL HOME LOAN BANK OF CINCINNATI
STATEMENTS OF CAPITAL
(Unaudited)

(In thousands)	Capital Stock Class B - Putable		Retained Earnings			Accumulated Other Comprehensive Income (Loss)	Total Capital
	Shares	Par Value	Unrestricted	Restricted	Total		
BALANCE, JUNE 30, 2021	27,184	\$2,718,430	\$ 791,390	\$ 505,136	\$ 1,296,526	\$ (1,986)	\$4,012,970
Comprehensive income (loss)			4,632	1,158	5,790	12,303	18,093
Proceeds from sale of capital stock	309	30,896					30,896
Repurchase of capital stock	(3,200)	(320,000)					(320,000)
Net shares reclassified to mandatorily redeemable capital stock	(6)	(579)					(579)
Cash dividends on capital stock			(13,863)		(13,863)		(13,863)
BALANCE, SEPTEMBER 30, 2021	<u>24,287</u>	<u>\$2,428,747</u>	<u>\$ 782,159</u>	<u>\$ 506,294</u>	<u>\$ 1,288,453</u>	<u>\$ 10,317</u>	<u>\$3,727,517</u>
BALANCE, JUNE 30, 2022	44,145	\$4,414,529	\$ 793,150	\$ 521,054	\$ 1,314,204	\$ (33,648)	\$5,695,085
Comprehensive income (loss)			72,673	18,169	90,842	(9,027)	81,815
Proceeds from sale of capital stock	12,021	1,202,103					1,202,103
Repurchase of capital stock	(2,081)	(208,150)					(208,150)
Net shares reclassified to mandatorily redeemable capital stock	(9,456)	(945,611)					(945,611)
Cash dividends on capital stock			(43,793)		(43,793)		(43,793)
BALANCE, SEPTEMBER 30, 2022	<u>44,629</u>	<u>\$4,462,871</u>	<u>\$ 822,030</u>	<u>\$ 539,223</u>	<u>\$ 1,361,253</u>	<u>\$ (42,675)</u>	<u>\$5,781,449</u>

(In thousands)	Capital Stock Class B - Putable		Retained Earnings			Accumulated Other Comprehensive Income (Loss)	Total Capital
	Shares	Par Value	Unrestricted	Restricted	Total		
BALANCE, DECEMBER 31, 2020	26,409	\$2,640,863	\$ 802,715	\$ 501,321	\$ 1,304,036	\$ (14,985)	\$3,929,914
Comprehensive income (loss)			19,893	4,973	24,866	25,302	50,168
Proceeds from sale of capital stock	10,358	1,035,868					1,035,868
Repurchase of capital stock	(11,864)	(1,186,402)					(1,186,402)
Net shares reclassified to mandatorily redeemable capital stock	(616)	(61,582)					(61,582)
Cash dividends on capital stock			(40,449)		(40,449)		(40,449)
BALANCE, SEPTEMBER 30, 2021	<u>24,287</u>	<u>\$2,428,747</u>	<u>\$ 782,159</u>	<u>\$ 506,294</u>	<u>\$ 1,288,453</u>	<u>\$ 10,317</u>	<u>\$3,727,517</u>
BALANCE, DECEMBER 31, 2021	24,900	\$2,490,016	\$ 783,072	\$ 509,719	\$ 1,292,791	\$ 13,094	\$3,795,901
Comprehensive income (loss)			118,016	29,504	147,520	(55,769)	91,751
Proceeds from sale of capital stock	45,460	4,545,966					4,545,966
Repurchase of capital stock	(2,081)	(208,150)					(208,150)
Net shares reclassified to mandatorily redeemable capital stock	(23,650)	(2,364,961)					(2,364,961)
Cash dividends on capital stock			(79,058)		(79,058)		(79,058)
BALANCE, SEPTEMBER 30, 2022	<u>44,629</u>	<u>\$4,462,871</u>	<u>\$ 822,030</u>	<u>\$ 539,223</u>	<u>\$ 1,361,253</u>	<u>\$ (42,675)</u>	<u>\$5,781,449</u>

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

FEDERAL HOME LOAN BANK OF CINCINNATI
STATEMENTS OF CASH FLOWS
(Unaudited)

(In thousands)

	Nine Months Ended September 30,	
	2022	2021
OPERATING ACTIVITIES:		
Net income	\$ 147,520	\$ 24,866
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization/(accretion)	205,090	68,026
Net change in derivative and hedging activities	1,396,653	155,958
Net change in fair value adjustments on trading securities	337,328	204,891
Net change in fair value adjustments on financial instruments held under fair value option	(121,259)	(7,808)
Other adjustments, net	692	667
Net change in:		
Accrued interest receivable	(128,652)	8,024
Other assets	4,902	6,353
Accrued interest payable	124,996	(23,656)
Other liabilities	(8,804)	(22,601)
Total adjustments	1,810,946	389,854
Net cash provided by (used in) operating activities	1,958,466	414,720
INVESTING ACTIVITIES:		
Net change in:		
Interest-bearing deposits	(850,709)	244,522
Securities purchased under agreements to resell	(5,863,505)	1,528,668
Federal funds sold	(5,638,000)	(1,475,000)
Premises, software, and equipment	(1,094)	(833)
Trading securities:		
Proceeds from maturities and paydowns	2,975,070	1,000,097
Proceeds from sales	1,489,024	2,174,690
Available-for-sale securities:		
Purchases	(4,439,109)	(3,301,754)
Held-to-maturity securities:		
Proceeds from maturities and paydowns	1,335,386	2,270,257
Purchases	(5,006,428)	(1,768,566)
Advances:		
Repaid	1,258,440,169	307,504,422
Originated	(1,295,666,366)	(305,113,614)
Mortgage loans held for portfolio:		
Principal collected	940,613	2,927,342
Purchases	(681,827)	(1,138,756)
Net cash provided by (used in) investing activities	(52,966,776)	4,851,475

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

(continued from previous page)

FEDERAL HOME LOAN BANK OF CINCINNATI
STATEMENTS OF CASH FLOWS
(Unaudited)

(In thousands)	Nine Months Ended September 30,	
	2022	2021
FINANCING ACTIVITIES:		
Net change in deposits and pass-through reserves	\$ (165,899)	\$ 198,285
Net proceeds from issuance of Consolidated Obligations:		
Discount Notes	216,827,582	147,066,103
Bonds	60,564,949	26,224,969
Payments for maturing and retiring Consolidated Obligations:		
Discount Notes	(195,790,454)	(147,951,166)
Bonds	(32,645,420)	(33,509,000)
Proceeds from issuance of capital stock	4,545,966	1,035,868
Payments for repurchase of capital stock	(208,150)	(1,186,402)
Payments for repurchase/redemption of mandatorily redeemable capital stock	(2,188,240)	(68,181)
Cash dividends paid	(79,058)	(40,449)
Net cash provided by (used in) financing activities	50,861,276	(8,229,973)
Net increase (decrease) in cash and due from banks	(147,034)	(2,963,778)
Cash and due from banks at beginning of the period	167,822	2,984,073
Cash and due from banks at end of the period	\$ 20,788	\$ 20,295
Supplemental Disclosures:		
Interest paid	\$ 544,567	\$ 306,978
Affordable Housing Program payments, net	\$ 21,168	\$ 23,697

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

FEDERAL HOME LOAN BANK OF CINCINNATI

NOTES TO UNAUDITED FINANCIAL STATEMENTS

Background Information

The Federal Home Loan Bank of Cincinnati (the FHLB), a federally chartered corporation, is one of 11 District Federal Home Loan Banks (FHLBanks). The FHLBanks are government-sponsored enterprises (GSEs) that serve the public by enhancing the availability of credit for residential mortgages and targeted community development. The FHLB is regulated by the Federal Housing Finance Agency (Finance Agency).

Note 1 - Basis of Presentation

The accompanying interim financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The preparation of financial statements in accordance with GAAP requires management to make assumptions and estimates. These assumptions and estimates affect the reported amount of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported amounts of income and expenses. Actual results could differ from these estimates. The interim financial statements presented are unaudited, but they include all adjustments (consisting of only normal recurring adjustments) which are, in the opinion of management, necessary for a fair statement of the financial condition, results of operations, and cash flows for such periods. These financial statements do not include all disclosures associated with annual financial statements and accordingly should be read in conjunction with the audited financial statements and notes included in the FHLB's Annual Report on Form 10-K for the year ended December 31, 2021 filed with the Securities and Exchange Commission (SEC). Results for the nine months ended September 30, 2022 are not necessarily indicative of operating results for the full year.

The FHLB presents certain financial instruments, including derivative instruments and securities purchased under agreements to resell, on a net basis when it has a legal right of offset and all other requirements for netting are met (collectively referred to as the netting requirements). For these instruments, the FHLB has elected to offset its asset and liability positions, as well as cash collateral received or pledged, when it has met the netting requirements. The FHLB did not have any offsetting liabilities related to its securities purchased under agreements to resell for the periods presented.

The net exposure for these financial instruments can change on a daily basis; therefore, there may be a delay between the time this exposure change is identified and additional collateral is requested, and the time this collateral is received or pledged. Likewise, there may be a delay for excess collateral to be returned. For derivative instruments that meet the requirements for netting, any excess cash collateral received or pledged is recognized as a derivative liability or derivative asset. Additional information regarding these agreements is provided in Note 6. Based on the fair value of the related collateral held, the securities purchased under agreements to resell were fully collateralized for the periods presented. For more information about the FHLB's investments in securities purchased under agreements to resell, see "Item 8. Financial Statements and Supplementary Data - Note 1 - Summary of Significant Accounting Policies" in the FHLB's 2021 Annual Report on Form 10-K.

Subsequent Events

The FHLB has evaluated subsequent events for potential recognition or disclosure through the issuance of these financial statements and believes there have been no material subsequent events requiring additional disclosure or recognition in these financial statements.

Note 2 - Recently Issued and Adopted Accounting Guidance

Troubled Debt Restructurings and Vintage Disclosures. On March 31, 2022, the Financial Accounting Standards Board (FASB) issued guidance that eliminates the accounting guidance for troubled debt restructurings by creditors that have adopted the current expected credit losses methodology while enhancing disclosure requirements for certain loan refinancings and restructurings by creditors made to borrowers experiencing financial difficulty. Additionally, this guidance requires disclosure of current-period gross write-offs by year of origination for financing receivables and net investment in leases. The guidance becomes effective for the FHLB for the interim and annual periods beginning on January 1, 2023. Early adoption is permitted. The FHLB does not intend to adopt this guidance early. At this time, the FHLB expects this new guidance will not have a material impact on its financial condition, results of operations, and cash flows.

Fair Value Hedging - Portfolio Layer Method. On March 28, 2022, the FASB issued guidance that expands fair value hedging under the current last-of-layer method by allowing multiple hedged layers of a single closed portfolio under the method. To reflect that expansion, the last-of-layer method is renamed the portfolio layer method. Additionally, among other things, this guidance (1) expands the scope of the portfolio layer method to include nonprepayable assets, (2) specifies eligible hedging instruments in a single-layer hedge, (3) provides additional guidance on the accounting for and disclosure of hedge basis adjustments under the portfolio layer method, and (4) specifies how hedge basis adjustments should be considered when determining credit losses for the assets included in the closed portfolio. The guidance becomes effective for the FHLB for the interim and annual periods beginning on January 1, 2023. Early adoption is permitted. The FHLB does not intend to adopt this guidance early. At this time, the FHLB expects this new guidance will not have a material impact on its financial condition, results of operations, and cash flows.

Facilitation of the Effects of Reference Rate Reform on Financial Reporting, as amended. On March 12, 2020, the FASB issued temporary, optional guidance to ease the potential burden in accounting for reference rate reform. The new guidance provides optional expedients and exceptions for applying GAAP to transactions affected by reference rate reform if certain criteria are met. The transactions primarily include (1) contract modifications, (2) hedging relationships, and (3) sale and/or transfer of debt securities classified as held-to-maturity. This guidance became effective immediately, and the FHLB may elect to apply the amendments through December 31, 2022. The FHLB either elected or plans to elect the majority of the optional expedients and exceptions provided, and the effect on the FHLB's financial condition, results of operations and cash flows is not expected to be material. In particular, during the fourth quarter of 2021, the FHLB elected optional practical expedients specific to fair value hedging relationships, which did not have a material effect.

Note 3 - Investments

The FHLB makes short-term investments in interest-bearing deposits, securities purchased under agreements to resell, and Federal funds sold and may make other investments in debt securities, which are classified as either trading, available-for-sale, or held-to-maturity.

Interest-Bearing Deposits, Securities Purchased under Agreements to Resell, and Federal Funds Sold

The FHLB invests in interest-bearing deposits, securities purchased under agreements to resell, and Federal funds sold to provide short-term liquidity. These investments are transacted with counterparties that have received a credit rating of single-A or greater by a nationally recognized statistical rating organization (NRSRO). The FHLB's internal ratings of these counterparties may differ from those issued by an NRSRO.

Federal funds sold are unsecured loans that are generally transacted on an overnight term. Finance Agency regulations include a limit on the amount of unsecured credit the FHLB may extend to a counterparty. At September 30, 2022 and December 31, 2021, all investments in interest-bearing deposits and Federal funds sold were repaid or expected to be repaid according to the contractual terms. No allowance for credit losses was recorded for these assets at September 30, 2022 and December 31, 2021. Carrying values of interest-bearing deposits and Federal funds sold exclude accrued interest receivable of (in thousands) \$1,170 and \$952 as of September 30, 2022, and \$1 and \$10 as of December 31, 2021.

Securities purchased under agreements to resell are short-term and are structured such that they are evaluated regularly to determine if the market value of the underlying securities decreases below the market value required as collateral (i.e., subject to collateral maintenance provisions). If so, the counterparty must place an equivalent amount of additional securities as collateral or remit an equivalent amount of cash, generally by the next business day. Based upon the collateral held as security and collateral maintenance provisions with counterparties, the FHLB determined that no allowance for credit losses was needed for its securities purchased under agreements to resell at September 30, 2022 and December 31, 2021. The carrying value of securities purchased under agreements to resell excludes accrued interest receivable of (in thousands) \$683 and \$10 as of September 30, 2022 and December 31, 2021, respectively.

Debt Securities

The FHLB invests in debt securities, which are classified as either trading, available-for-sale, or held-to-maturity. The FHLB is prohibited by Finance Agency regulations from purchasing certain higher-risk securities, such as equity securities and debt instruments that are not investment quality, other than certain investments targeted at low-income persons or communities and instruments that experienced credit deterioration after their purchase by the FHLB.

Trading Securities
Table 3.1 - Trading Securities by Major Security Types (in thousands)

Fair Value	September 30, 2022	December 31, 2021
Non-mortgage-backed securities (non-MBS):		
U.S. Treasury obligations	\$ 491,513	\$ 5,030,946
GSE obligations	1,487,747	1,749,661
Total non-MBS	1,979,260	6,780,607
Mortgage-backed securities (MBS):		
U.S. obligation single-family	135	210
Total MBS	135	210
Total	\$ 1,979,395	\$ 6,780,817

Table 3.2 - Net Gains (Losses) on Trading Securities (in thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net unrealized gains (losses) on trading securities held at period end	\$ (87,474)	\$ (43,693)	\$ (285,014)	\$ (163,166)
Net gains (losses) on trading securities sold/matured during the period	(1,868)	(6,949)	(52,314)	(41,725)
Net gains (losses) on trading securities	\$ (89,342)	\$ (50,642)	\$ (337,328)	\$ (204,891)

Available-for-Sale Securities
Table 3.3 - Available-for-Sale Securities by Major Security Types (in thousands)

	September 30, 2022			
	Amortized Cost ⁽¹⁾	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Non-MBS:				
U.S. Treasury obligations	\$ 7,149,264	\$ 5,560	\$ (5,258)	\$ 7,149,566
GSE obligations	117,202	673	(102)	117,773
Total non-MBS	7,266,466	6,233	(5,360)	7,267,339
MBS:				
GSE multi-family	1,351,001	156	(31,655)	1,319,502
Total MBS	1,351,001	156	(31,655)	1,319,502
Total	<u>\$ 8,617,467</u>	<u>\$ 6,389</u>	<u>\$ (37,015)</u>	<u>\$ 8,586,841</u>
	December 31, 2021			
	Amortized Cost ⁽¹⁾	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Non-MBS:				
U.S. Treasury obligations	\$ 4,475,664	\$ 23,206	\$ —	\$ 4,498,870
GSE obligations	133,058	2,250	—	135,308
Total non-MBS	4,608,722	25,456	—	4,634,178
MBS:				
GSE multi-family	632,276	2,961	(2,292)	632,945
Total MBS	632,276	2,961	(2,292)	632,945
Total	<u>\$ 5,240,998</u>	<u>\$ 28,417</u>	<u>\$ (2,292)</u>	<u>\$ 5,267,123</u>

- (1) Amortized cost of available-for-sale securities includes adjustments made to the cost basis of an investment for accretion, amortization, and/or fair value hedge accounting adjustments, and excludes accrued interest receivable of (in thousands) \$36,802 and \$13,014 at September 30, 2022 and December 31, 2021.

Table 3.4 summarizes the available-for-sale securities with unrealized losses, which are aggregated by major security type and length of time that individual securities have been in a continuous gross unrealized loss position.

Table 3.4 - Available-for-Sale Securities in a Continuous Gross Unrealized Loss Position (in thousands)

	September 30, 2022					
	Less than 12 Months		12 Months or more		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Non-MBS:						
U.S. Treasury obligations	\$4,139,842	\$ (5,258)	\$ —	\$ —	\$4,139,842	\$ (5,258)
GSE obligations	8,005	(102)	—	—	8,005	(102)
Total non-MBS	4,147,847	(5,360)	—	—	4,147,847	(5,360)
MBS:						
GSE multi-family MBS	1,258,766	(31,655)	—	—	1,258,766	(31,655)
Total MBS	1,258,766	(31,655)	—	—	1,258,766	(31,655)
Total	\$5,406,613	\$ (37,015)	\$ —	\$ —	\$5,406,613	\$ (37,015)

	December 31, 2021					
	Less than 12 Months		12 Months or more		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
GSE multi-family MBS	\$ 489,983	\$ (2,292)	\$ —	\$ —	\$ 489,983	\$ (2,292)
Total	\$ 489,983	\$ (2,292)	\$ —	\$ —	\$ 489,983	\$ (2,292)

Table 3.5 - Available-for-Sale Securities by Contractual Maturity (in thousands)

Year of Maturity	September 30, 2022		December 31, 2021	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Non-MBS:				
Due in 1 year or less	\$ —	\$ —	\$ —	\$ —
Due after 1 year through 5 years	2,271,550	2,270,254	81,194	82,185
Due after 5 years through 10 years	4,984,841	4,987,104	4,515,054	4,538,945
Due after 10 years	10,075	9,981	12,474	13,048
Total non-MBS	7,266,466	7,267,339	4,608,722	4,634,178
MBS ⁽¹⁾	1,351,001	1,319,502	632,276	632,945
Total	\$ 8,617,467	\$ 8,586,841	\$ 5,240,998	\$ 5,267,123

(1) MBS are not presented by contractual maturity because their expected maturities will likely differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment fees.

Table 3.6 - Interest Rate Payment Terms of Available-for-Sale Securities (in thousands)

	September 30, 2022	December 31, 2021
Amortized cost of non-MBS:		
Fixed-rate	\$ 7,266,466	\$ 4,608,722
Total amortized cost of non-MBS	7,266,466	4,608,722
Amortized cost of MBS:		
Fixed-rate	1,351,001	632,276
Total amortized cost of MBS	1,351,001	632,276
Total	\$ 8,617,467	\$ 5,240,998

The FHLB had no sales of securities out of its available-for-sale portfolio for the nine months ended September 30, 2022 or 2021.

Held-to-Maturity Securities

Table 3.7 - Held-to-Maturity Securities by Major Security Types (in thousands)

	September 30, 2022			
	Amortized Cost ⁽¹⁾	Gross Unrecognized Holding Gains	Gross Unrecognized Holding Losses	Fair Value
Non-MBS:				
U.S. Treasury obligations	\$ 47,054	\$ —	\$ (83)	\$ 46,971
Total non-MBS	47,054	—	(83)	46,971
MBS:				
U.S. obligation single-family	1,261,738	—	(150,686)	1,111,052
GSE single-family	1,500,637	59	(113,567)	1,387,129
GSE multi-family	11,895,734	377	(62,827)	11,833,284
Total MBS	14,658,109	436	(327,080)	14,331,465
Total	\$ 14,705,163	\$ 436	\$ (327,163)	\$ 14,378,436
	December 31, 2021			
	Amortized Cost ⁽¹⁾	Gross Unrecognized Holding Gains	Gross Unrecognized Holding Losses	Fair Value
Non-MBS:				
U.S. Treasury obligations	\$ 46,879	\$ —	\$ —	\$ 46,879
Total non-MBS	46,879	—	—	46,879
MBS:				
U.S. obligation single-family	1,056,729	11,553	(8,337)	1,059,945
GSE single-family	1,860,197	49,026	—	1,909,223
GSE multi-family	7,252,951	4,841	(4,018)	7,253,774
Total MBS	10,169,877	65,420	(12,355)	10,222,942
Total	\$ 10,216,756	\$ 65,420	\$ (12,355)	\$ 10,269,821

- (1) Carrying value equals amortized cost. Amortized cost of held-to-maturity securities includes adjustments made to the cost basis of an investment for accretion and amortization and excludes accrued interest receivable of (in thousands) \$27,773 and \$7,461 as of September 30, 2022 and December 31, 2021.

Table 3.8 - Held-to-Maturity Securities by Contractual Maturity (in thousands)

<u>Year of Maturity</u>	<u>September 30, 2022</u>		<u>December 31, 2021</u>	
	<u>Amortized Cost ⁽¹⁾</u>	<u>Fair Value</u>	<u>Amortized Cost ⁽¹⁾</u>	<u>Fair Value</u>
Non-MBS:				
Due in 1 year or less	\$ 47,054	\$ 46,971	\$ 46,879	\$ 46,879
Due after 1 year through 5 years	—	—	—	—
Due after 5 years through 10 years	—	—	—	—
Due after 10 years	—	—	—	—
Total non-MBS	47,054	46,971	46,879	46,879
MBS ⁽²⁾	14,658,109	14,331,465	10,169,877	10,222,942
Total	<u>\$ 14,705,163</u>	<u>\$ 14,378,436</u>	<u>\$ 10,216,756</u>	<u>\$ 10,269,821</u>

(1) Carrying value equals amortized cost.

(2) MBS are not presented by contractual maturity because their expected maturities will likely differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment fees.

Table 3.9 - Interest Rate Payment Terms of Held-to-Maturity Securities (in thousands)

	<u>September 30, 2022</u>	<u>December 31, 2021</u>
Amortized cost of non-MBS:		
Fixed-rate	\$ 47,054	\$ 46,879
Total amortized cost of non-MBS	47,054	46,879
Amortized cost of MBS:		
Fixed-rate	2,602,768	2,718,127
Variable-rate	12,055,341	7,451,750
Total amortized cost of MBS	14,658,109	10,169,877
Total	<u>\$ 14,705,163</u>	<u>\$ 10,216,756</u>

From time to time the FHLB may sell securities out of its held-to-maturity portfolio. These securities, generally, have less than 15 percent of the acquired principal outstanding at the time of the sale. These sales are considered maturities for the purposes of security classification. For the nine months ended September 30, 2022 and 2021, the FHLB did not sell any held-to-maturity securities.

Allowance for Credit Losses on Available-for-Sale and Held-to-Maturity Securities

The FHLB evaluates available-for-sale and held-to-maturity investment securities for credit losses on a quarterly basis. The FHLB's available-for-sale and held-to-maturity securities are U.S. Treasury obligations, GSE obligations, and MBS issued by Fannie Mae, Freddie Mac and Ginnie Mae that are backed by single-family or multi-family mortgage loans. The FHLB only purchases securities considered investment quality. At September 30, 2022 and December 31, 2021, all available-for-sale and held-to-maturity securities were rated single-A, or above, by an NRSRO, based on the lowest long-term credit rating for each security used by the FHLB. The FHLB's internal ratings of these securities may differ from those obtained from an NRSRO.

The FHLB evaluates individual available-for-sale securities for impairment by comparing the security's fair value to its amortized cost. Impairment may exist when the fair value of the investment is less than its amortized cost (i.e., in an unrealized loss position). At September 30, 2022 and December 31, 2021, certain available-for-sale securities were in an unrealized loss position. These losses are considered temporary as the FHLB expects to recover the entire amortized cost basis on these available-for-sale investment securities and does not intend to sell these securities nor considers it more likely than not that it will be required to sell these securities before the anticipated recovery of each security's remaining amortized cost basis. Further, the FHLB has not experienced any payment defaults on the instruments. In addition, all of these securities carry an implicit or explicit government guarantee. As a result, no allowance for credit losses was recorded on these available-for-sale securities at September 30, 2022 and December 31, 2021.

The FHLB evaluates its held-to-maturity securities for impairment on a collective, or pooled basis, unless an individual assessment is deemed necessary because the securities do not possess similar risk characteristics. As of September 30, 2022 and December 31, 2021, the FHLB had not established an allowance for credit loss on any held-to-maturity securities because the securities: (1) were all highly-rated and/or had short remaining terms to maturity, (2) had not experienced, nor did the FHLB

expect, any payment default on the instruments, (3) in the case of U.S. obligations, the securities carry an explicit government guarantee such that the FHLB considered the risk of nonpayment to be zero, and (4) in the case of GSE obligations or MBS, the securities are purchased under an assumption that the U.S. government is willing and able to intervene on behalf of investors during a financial crisis.

Note 4 - Advances

The FHLB offers a wide range of fixed- and variable-rate Advance products with different maturities, interest rates, payment characteristics and optionality. The following table presents Advance redemptions by contractual maturity, including index-amortizing Advances, which are presented according to their predetermined amortization schedules.

Table 4.1 - Advances by Redemption Term (dollars in thousands)

Redemption Term	September 30, 2022		December 31, 2021	
	Amount	Weighted Average Interest Rate	Amount	Weighted Average Interest Rate
Due in 1 year or less	\$ 40,683,800	3.06 %	\$ 11,608,264	0.49 %
Due after 1 year through 2 years	9,007,184	3.00	1,451,741	2.06
Due after 2 years through 3 years	3,525,808	2.82	1,832,622	1.89
Due after 3 years through 4 years	2,162,656	2.96	2,486,809	0.97
Due after 4 years through 5 years	2,078,178	2.93	2,168,145	0.98
Thereafter	2,722,990	2.28	3,406,837	1.49
Total principal amount	60,180,616	2.99	22,954,418	0.95
Commitment fees	(109)		(156)	
Discount on Affordable Housing Program (AHP) Advances	(923)		(1,382)	
Discounts	(1,401)		(1,838)	
Hedging adjustments	(429,906)		104,401	
Fair value option valuation adjustments and accrued interest	(45)		(695)	
Total ⁽¹⁾	<u>\$ 59,748,232</u>		<u>\$ 23,054,748</u>	

(1) Carrying values exclude accrued interest receivable of (in thousands) \$106,672 and \$18,823 as of September 30, 2022 and December 31, 2021.

The FHLB offers certain fixed- and variable-rate Advances to members that may be prepaid on specified dates (call dates) without incurring prepayment or termination fees (callable Advances). If the call option is exercised, replacement funding may be available to members. Other Advances may only be prepaid subject to a prepayment fee paid to the FHLB that makes the FHLB financially indifferent to the prepayment of the Advance.

Table 4.2 - Advances by Redemption Term or Next Call Date (in thousands)

Redemption Term or Next Call Date	September 30, 2022	December 31, 2021
Due in 1 year or less	\$ 46,191,801	\$ 14,642,697
Due after 1 year through 2 years	6,503,134	1,444,659
Due after 2 years through 3 years	2,021,857	1,809,871
Due after 3 years through 4 years	662,656	1,003,709
Due after 4 years through 5 years	2,078,178	668,145
Thereafter	2,722,990	3,385,337
Total principal amount	<u>\$ 60,180,616</u>	<u>\$ 22,954,418</u>

The FHLB also offers puttable Advances. With a puttable Advance, the FHLB effectively purchases put options from the member that allows the FHLB to terminate the Advance at predetermined dates. The FHLB normally would exercise its put option when interest rates increase relative to contractual rates.

Table 4.3 - Advances by Redemption Term or Next Put Date for Puttable Advances (in thousands)

Redemption Term or Next Put Date	September 30, 2022	December 31, 2021
Due in 1 year or less	\$ 42,083,800	\$ 13,995,514
Due after 1 year through 2 years	9,032,184	1,511,741
Due after 2 years through 3 years	3,550,808	1,818,372
Due after 3 years through 4 years	2,162,656	2,471,809
Due after 4 years through 5 years	2,008,178	2,160,145
Thereafter	1,342,990	996,837
Total principal amount	\$ 60,180,616	\$ 22,954,418

Table 4.4 - Advances by Interest Rate Payment Terms (in thousands)

	September 30, 2022	December 31, 2021
Total fixed-rate ⁽¹⁾	\$ 41,473,339	\$ 19,372,859
Total variable-rate ⁽¹⁾	18,707,277	3,581,559
Total principal amount	\$ 60,180,616	\$ 22,954,418

(1) Payment terms based on current interest rate terms, which reflect any option exercises or rate conversions that have occurred subsequent to the related Advance issuance.

Credit Risk Exposure and Security Terms

The FHLB's Advances are made to member financial institutions. The FHLB manages its credit exposure to Advances through an integrated approach that includes establishing a credit limit for each borrower and ongoing review of each borrower's financial condition, coupled with collateral and lending policies to limit risk of loss while balancing borrowers' needs for a reliable source of funding.

In addition, the FHLB lends to eligible borrowers in accordance with federal law and Finance Agency regulations, which require the FHLB to obtain sufficient collateral to fully secure credit products. Under regulation, collateral eligible to secure new or renewed Advances includes:

- one-to-four family loans (delinquent for no more than 60 days) and multi-family mortgage loans (delinquent for no more than 30 days) and securities representing such mortgages;
- loans and securities issued and insured, or guaranteed by the U.S. government or any U.S. government agency (for example, mortgage-backed securities issued or guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae);
- cash or deposits in the FHLB;
- certain other collateral that is real estate-related, provided that the collateral has a readily ascertainable value, can be reliably discounted to account for liquidation and other risks, can be liquidated in due course and the FHLB can perfect a security interest in it; and
- certain qualifying securities representing undivided equity interests in eligible Advance collateral.

Residential mortgage loans are the principal form of collateral for Advances. The estimated value of the collateral required to secure each member's credit products is calculated by applying collateral discounts, or haircuts, to the value of the collateral. In addition, community financial institutions are eligible to utilize expanded statutory collateral provisions for small business and agribusiness loans. The FHLB's capital stock owned by its member borrowers is also pledged as collateral. Collateral arrangements and a member's borrowing capacity vary based on the financial condition and performance of the institution, the types of collateral pledged and the overall quality of those assets. The FHLB can also require additional or substitute collateral to protect its security interest. The FHLB also has policies and procedures for validating the reasonableness of its collateral valuations and makes changes to its collateral guidelines, as necessary, based on current market conditions. In addition, collateral verifications and reviews are performed by the FHLB based on the risk profile of the borrower. Management of the FHLB believes that these policies effectively manage the FHLB's credit risk from Advances.

Members experiencing financial difficulties are subject to FHLB-performed “stress tests” to evaluate the impact of poorly performing assets on the member’s capital and loss reserve positions. Depending on the results of these tests and the level of over-collateralization, a member may be allowed to maintain pledged loan assets in its custody, may be required to deliver those loans into the custody of the FHLB or its agent, or may be required to provide details on those loans to facilitate an estimate of their fair value. The FHLB perfects its security interest in all pledged collateral. The FHLBank Act affords any security interest granted to the FHLB by a member priority over the claims or rights of any other party except for claims or rights of a third party that would otherwise be entitled to priority under applicable law and that are held by a bona fide purchaser for value or by a secured party holding a prior perfected security interest.

Using a risk-based approach, the FHLB considers the payment status, collateralization levels, and borrower’s financial condition to be indicators of credit quality for its credit products. At September 30, 2022 and December 31, 2021, the FHLB did not have any Advances that were past due, in non-accrual status or considered impaired. In addition, there were no troubled debt restructurings related to Advances of the FHLB during the nine months ended September 30, 2022 or 2021. At September 30, 2022 and December 31, 2021, the FHLB had rights to collateral on a member-by-member basis with an estimated value in excess of its outstanding extensions of credit.

Based upon the collateral held as security, its credit extension and collateral policies and the repayment history on Advances, the FHLB did not expect any credit losses on Advances as of September 30, 2022 and, therefore, no allowance for credit losses on Advances was recorded. For the same reasons, the FHLB did not record any allowance for credit losses on Advances at December 31, 2021.

Advance Concentrations

The FHLB’s Advances are concentrated in commercial banks, savings institutions, and insurance companies. Advance borrower concentrations can change significantly because of members’ ability to quickly increase or decrease their amount of Advances based on their current funding needs.

Table 4.5 - Borrowers Holding Five Percent or more of Total Advances, Including Any Known Affiliates that are Members of the FHLB (dollars in millions)

September 30, 2022			December 31, 2021		
	Principal	% of Total Principal Amount of Advances		Principal	% of Total Principal Amount of Advances
U.S. Bank, N.A.	\$ 13,592	23 %	U.S. Bank, N.A.	\$ 3,272	14 %
Keybank National Association	10,347	17	Third Federal Savings and Loan Association	3,179	14
Fifth Third Bank	5,751	10	Protective Life Insurance Company	2,800	12
Third Federal Savings and Loan Association	4,562	8	Nationwide Life Insurance Company	2,702	12
Protective Life Insurance Company	3,400	6	Western-Southern Life Assurance Co.	1,487	6
Total	<u>\$ 37,652</u>	<u>64 %</u>	Total	<u>\$ 13,440</u>	<u>58 %</u>

Note 5 - Mortgage Loans

Total mortgage loans held for portfolio represent residential mortgage loans under the Mortgage Purchase Program (MPP) that the FHLB’s members originate, credit enhance, and then sell to the FHLB. The FHLB does not service any of these loans. The FHLB plans to retain its existing portfolio of mortgage loans.

Table 5.1 - Mortgage Loans Held for Portfolio (in thousands)

	September 30, 2022	December 31, 2021
Fixed rate medium-term single-family mortgage loans ⁽¹⁾	\$ 557,860	\$ 649,052
Fixed rate long-term single-family mortgage loans	6,575,554	6,752,858
Total unpaid principal balance	7,133,414	7,401,910
Premiums	156,069	168,993
Discounts	(2,174)	(1,088)
Hedging basis adjustments ⁽²⁾	7,576	18,602
Total mortgage loans held for portfolio ⁽³⁾	7,294,885	7,588,417
Allowance for credit losses on mortgage loans	(267)	(233)
Mortgage loans held for portfolio, net	<u>\$ 7,294,618</u>	<u>\$ 7,588,184</u>

(1) Medium-term is defined as a term of 15 years or less.

(2) Represents the unamortized balance of the mortgage purchase commitments' market values at the time of settlement. The market value of the commitment is included in the basis of the mortgage loan and amortized accordingly.

(3) Excludes accrued interest receivable of (in thousands) \$22,008 and \$22,847 at September 30, 2022 and December 31, 2021.

Table 5.2 - Mortgage Loans Held for Portfolio by Collateral/Guarantee Type (in thousands)

	September 30, 2022	December 31, 2021
Conventional mortgage loans	\$ 7,016,249	\$ 7,262,740
Federal Housing Administration (FHA) mortgage loans	117,165	139,170
Total unpaid principal balance	<u>\$ 7,133,414</u>	<u>\$ 7,401,910</u>

Table 5.3 - Members, Including Any Known Affiliates that are Members of the FHLB, and Former Members Selling Five Percent or more of Total Unpaid Principal (dollars in millions)

	September 30, 2022			December 31, 2021	
	Principal	% of Total		Principal	% of Total
Union Savings Bank	\$ 1,694	24 %	Union Savings Bank	\$ 1,841	25 %
FirstBank	737	10	FirstBank	565	8
Guardian Savings Bank FSB	449	6	Guardian Savings Bank FSB	524	7

Credit Risk Exposure

The FHLB manages credit risk exposure for conventional mortgage loans primarily through conservative underwriting and purchasing loans with characteristics consistent with favorable expected credit performance and by applying various credit enhancements.

Credit Enhancements. The conventional mortgage loans under the MPP are primarily supported by some combination of credit enhancements (primary mortgage insurance (PMI) and the Lender Risk Account (LRA), including pooled LRA for those members participating in an aggregated MPP pool). These credit enhancements apply after a homeowner's equity is exhausted. The LRA is funded by the FHLB upfront as a portion of the purchase proceeds. The LRA is recorded in other liabilities in the Statement of Condition. Excess funds from the LRA are released to the member in accordance with the terms of the Master Commitment Contract, which is typically after five years, subject to performance of the related loan pool. The LRA established for a pool of loans is limited to only covering losses of that specific pool of loans. Because the FHA makes an explicit guarantee on FHA mortgage loans, the FHLB does not require any credit enhancements on these loans beyond primary mortgage insurance.

Table 5.4 - Changes in the LRA (in thousands)

	Nine Months Ended September 30, 2022
LRA at beginning of year	\$ 252,310
Additions	7,197
Claims	(11)
Scheduled distributions	(14,293)
LRA at end of period	<u>\$ 245,203</u>

Payment Status of Mortgage Loans. The key credit quality indicator for conventional mortgage loans is payment status, which allows the FHLB to monitor borrower performance. Past due loans are those where the borrower has failed to make a full payment of principal and interest within one month of its due date. Table 5.5 presents the payment status of conventional mortgage loans.

Table 5.5 - Credit Quality Indicator of Conventional Mortgage Loans (in thousands)

	September 30, 2022		
	Origination Year		
	Prior to 2018	2018 to September 30, 2022	Total
Payment status, at amortized cost:			
Past due 30-59 days	\$ 13,490	\$ 11,140	\$ 24,630
Past due 60-89 days	3,088	2,943	6,031
Past due 90 days or more	8,834	3,790	12,624
Total past due mortgage loans	25,412	17,873	43,285
Current mortgage loans	2,481,641	4,651,918	7,133,559
Total conventional mortgage loans	<u>\$ 2,507,053</u>	<u>\$ 4,669,791</u>	<u>\$ 7,176,844</u>

	December 31, 2021		
	Origination Year		
	Prior to 2017	2017 to 2021	Total
Payment status, at amortized cost:			
Past due 30-59 days	\$ 16,105	\$ 11,557	\$ 27,662
Past due 60-89 days	3,703	2,533	6,236
Past due 90 days or more	12,185	11,623	23,808
Total past due mortgage loans	31,993	25,713	57,706
Current mortgage loans	2,542,107	4,848,339	7,390,446
Total conventional mortgage loans	<u>\$ 2,574,100</u>	<u>\$ 4,874,052</u>	<u>\$ 7,448,152</u>

Other delinquency statistics include loans in process of foreclosure, serious delinquency rates, loans past due 90 days or more and still accruing interest, and non-accrual loans. Table 5.6 presents other delinquency statistics of mortgage loans.

Table 5.6 - Other Delinquency Statistics (dollars in thousands)

	September 30, 2022		
	Conventional MPP Loans	FHA Loans	Total
Amortized Cost:			
In process of foreclosure ⁽¹⁾	\$ 7,548	\$ 375	\$ 7,923
Serious delinquency rate ⁽²⁾	0.18 %	1.31 %	0.19 %
Past due 90 days or more still accruing interest ⁽³⁾	\$ 11,816	\$ 1,487	\$ 13,303
Loans on non-accrual status ⁽⁴⁾	\$ 1,752	\$ —	\$ 1,752

	December 31, 2021		
	Conventional MPP Loans	FHA Loans	Total
Amortized Cost:			
In process of foreclosure ⁽¹⁾	\$ 4,424	\$ 501	\$ 4,925
Serious delinquency rate ⁽²⁾	0.32 %	2.00 %	0.35 %
Past due 90 days or more still accruing interest ⁽³⁾	\$ 23,169	\$ 2,812	\$ 25,981
Loans on non-accrual status ⁽⁴⁾	\$ 1,617	\$ —	\$ 1,617

(1) Includes loans where the decision of foreclosure or a similar alternative such as pursuit of deed-in-lieu has been reported.

(2) Loans that are 90 days or more past due or in the process of foreclosure (including past due or current loans in the process of foreclosure) expressed as a percentage of the total loan portfolio class.

(3) Each conventional loan past due 90 days or more still accruing interest is on a schedule/scheduled monthly settlement basis and contains one or more credit enhancements. Loans that are well secured and in the process of collection as a result of remaining credit enhancements and schedule/scheduled settlement are not placed on non-accrual status.

(4) At September 30, 2022 and December 31, 2021, (in thousands) \$1,095 and \$1,617, respectively, of conventional MPP loans on non-accrual status do not have a related allowance because these loans were either previously charged off to their expected recoverable value and/or the fair value of the underlying collateral, including any credit enhancements, is greater than the amortized cost of the loans.

The FHLB did not have any real estate owned at September 30, 2022 or December 31, 2021.

Evaluation of Current Expected Credit Losses

Mortgage Loans - FHA. The FHLB invests in fixed-rate mortgage loans secured by one to four family residential properties insured by the FHA. The FHLB expects to recover any losses from such loans from the FHA. Any losses from these loans that are not recovered from the FHA would be caused by a claim rejection by the FHA and, as such, would be recoverable from the selling participating financial institutions. Therefore, the FHLB only has credit risk for these loans if the seller or servicer fails to pay for losses not covered by the FHA insurance, but in such instance, the FHLB would have recourse against the servicer for such failure. As a result, the FHLB did not record an allowance for credit losses on its FHA insured mortgage loans. Furthermore, due to the insurance, none of these mortgage loans have been placed on non-accrual status.

Mortgage Loans - Conventional MPP. Conventional loans are evaluated collectively when similar risk characteristics exist; loans that do not share risk characteristics with other pools are removed from the collective evaluation and evaluated for expected credit losses on an individual basis. For loans with similar risk characteristics, the FHLB determines the allowance for credit losses through analyses that include considering various loan portfolio and collateral-related characteristics, such as past performance, current conditions, and reasonable and supportable forecasts of expected economic conditions. The FHLB uses a model that employs a variety of methods, such as projected cash flows to estimate expected credit losses over the life of the loans. This model relies on a number of inputs, such as both current and forecasted property values and interest rates as well as historical borrower behavior experience. The FHLB's calculation of expected credit losses includes a forecast of home prices over the entire contractual terms of its conventional loans rather than a reversion to historical home price trends after an initial forecast period. The FHLB also incorporates associated credit enhancements to determine estimated expected credit losses.

Certain conventional loans may be evaluated for credit losses by using the practical expedient for collateral dependent assets. A mortgage loan is considered collateral dependent when the borrower is experiencing financial difficulty and repayment is expected to be substantially through the sale of the underlying collateral. The FHLB may estimate the fair value of this

collateral by either applying an appropriate loss severity rate, using third-party estimates, or using a property valuation model. The expected credit loss of a collateral dependent mortgage loan is equal to the difference between the amortized cost of the loan and the estimated fair value of the collateral, less estimated selling costs. The FHLB will either reserve for these estimated losses or record a direct charge-off of the loan balance, if certain triggering criteria are met. Expected recoveries of prior charge-offs, if any, are included in the allowance for credit losses.

The FHLB also assesses other qualitative factors in its estimation of loan losses for the collectively evaluated population. This amount represents a subjective management judgment, based on facts and circumstances that exist as of the reporting date, which is intended to cover other expected losses that may not otherwise be captured in the methodology described above.

Allowance for Credit Losses on Conventional Mortgage Loans. At September 30, 2022 and December 31, 2021 the FHLB's allowance for credit losses on its conventional mortgage loans held for portfolio was (in thousands) \$267 and \$233, respectively.

Note 6 - Derivatives and Hedging Activities

Nature of Business Activity

The FHLB is exposed to interest rate risk primarily from the effect of changes in interest rates. The goal of the FHLB's interest-rate risk management strategy is not to eliminate interest-rate risk, but to manage it within appropriate limits. To mitigate the risk of loss, the FHLB has established policies and procedures, which include guidelines on the amount of exposure to interest rate changes it is willing to accept. In addition, the FHLB monitors the risk to its interest income, net interest margin and average maturity of interest-earning assets and interest-bearing liabilities. The FHLB uses derivatives when they are considered to be the most cost-effective alternative to achieve the FHLB's financial and risk management objectives. See Note 7 - Derivatives and Hedging Activities in the FHLB's 2021 Annual Report on Form 10-K for additional information on the FHLB's derivative transactions.

The FHLB transacts its derivatives with large banks and major broker-dealers. Some of these banks and broker-dealers or their affiliates buy, sell, and distribute Consolidated Obligations. Derivative transactions may be executed either with a counterparty, referred to as uncleared derivatives, or cleared through a Futures Commission Merchant (i.e., clearing agent) with a Derivative Clearing Organization, referred to as cleared derivatives. Once a derivative transaction has been accepted for clearing by a Derivative Clearing Organization (Clearinghouse), the executing counterparty is replaced with the Clearinghouse. The FHLB is not a derivative dealer and does not trade derivatives for short-term profit.

Financial Statement Effect and Additional Financial Information

The notional amount of derivatives serves as a factor in determining periodic interest payments or cash flows received and paid. The notional amount reflects the FHLB's involvement in the various classes of financial instruments and represents neither the actual amounts exchanged nor the overall exposure of the FHLB to credit and market risk; the overall risk is much smaller. The risks of derivatives only can be measured meaningfully on a portfolio basis that takes into account the counterparties, the types of derivatives, the items being hedged and any offsets between the derivatives and the items being hedged.

Table 6.1 summarizes the notional amount and fair value of derivative instruments and total derivative assets and liabilities. Total derivative assets and liabilities include the effect of netting adjustments and cash collateral. For purposes of this disclosure, the derivative values include the fair value of derivatives and the related accrued interest.

Table 6.1 - Fair Value of Derivative Instruments (in thousands)

	September 30, 2022		
	Notional Amount of Derivatives	Derivative Assets	Derivative Liabilities
Derivatives designated as fair value hedging instruments:			
Interest rate swaps	\$ 19,434,941	\$ 60,044	\$ 27,275
Derivatives not designated as hedging instruments:			
Interest rate swaps	37,991,173	11,109	47,301
Interest rate swaptions	355,000	9,157	—
Mortgage delivery commitments	22,463	1	567
Total derivatives not designated as hedging instruments	38,368,636	20,267	47,868
Total derivatives before adjustments	<u>\$ 57,803,577</u>	<u>80,311</u>	<u>75,143</u>
Netting adjustments and cash collateral ⁽¹⁾		430,449	(74,511)
Total derivative assets and total derivative liabilities		<u>\$ 510,760</u>	<u>\$ 632</u>

	December 31, 2021		
	Notional Amount of Derivatives	Derivative Assets	Derivative Liabilities
Derivatives designated as fair value hedging instruments:			
Interest rate swaps	\$ 13,720,290	\$ 710	\$ 77,992
Derivatives not designated as hedging instruments:			
Interest rate swaps	24,059,664	1,919	291
Interest rate swaptions	1,219,000	532	—
Mortgage delivery commitments	249,581	77	829
Total derivatives not designated as hedging instruments	25,528,245	2,528	1,120
Total derivatives before adjustments	<u>\$ 39,248,535</u>	<u>3,238</u>	<u>79,112</u>
Netting adjustments and cash collateral ⁽¹⁾		294,498	(75,821)
Total derivative assets and total derivative liabilities		<u>\$ 297,736</u>	<u>\$ 3,291</u>

- (1) Amounts represent the application of the netting requirements that allow the FHLB to settle positive and negative positions, and also cash collateral, including accrued interest, held or placed by the FHLB with the same clearing agent and/or counterparty. Cash collateral posted, including accrued interest, was (in thousands) \$512,282 and \$370,779 at September 30, 2022 and December 31, 2021. Cash collateral received, including accrued interest, was (in thousands) \$7,322 and \$460 at September 30, 2022 and December 31, 2021.

Table 6.2 presents the impact of qualifying fair value hedging relationships on net interest income as well as the total interest income (expense) by product.

Table 6.2 - Impact of Fair Value Hedging Relationships on Net Interest Income (in thousands)

	Three Months Ended September 30, 2022		
	Advances	Available-for-Sale Securities	Consolidated Bonds
Total interest income (expense) recorded in the Statements of Income	<u>\$ 381,615</u>	<u>\$ 52,628</u>	<u>\$ (236,968)</u>
Impact of Fair Value Hedging Relationships			
Interest rate swaps:			
Net interest settlements	\$ 10,498	\$ 13,560	\$ (1,106)
Gain (loss) on derivatives	207,501	435,131	(19,961)
Gain (loss) on hedged items	(204,055)	(440,029)	20,290
Effect on net interest income	<u>\$ 13,944</u>	<u>\$ 8,662</u>	<u>\$ (777)</u>

Three Months Ended September 30, 2021			
	Advances	Available-for-Sale Securities	Consolidated Bonds
Total interest income (expense) recorded in the Statements of Income	\$ 30,688	\$ 2,296	\$ (83,704)
Impact of Fair Value Hedging Relationships			
Interest rate swaps:			
Net interest settlements	\$ (24,885)	\$ (6,317)	\$ 270
Gain (loss) on derivatives	31,492	35,549	(208)
Gain (loss) on hedged items	(32,371)	(35,356)	201
Effect on net interest income	\$ (25,764)	\$ (6,124)	\$ 263

Nine Months Ended September 30, 2022			
	Advances	Available-for-sale Securities	Consolidated Bonds
Total interest income (expense) recorded in the Statements of Income	\$ 547,586	\$ 74,590	\$ (431,373)
Impact of Fair Value Hedging Relationships			
Interest rate swaps:			
Net interest settlements	\$ (23,891)	\$ (10,366)	\$ 1,599
Gain (loss) on derivatives	541,760	976,694	(42,739)
Gain (loss) on hedged items	(534,278)	(983,258)	43,030
Effect on net interest income	\$ (16,409)	\$ (16,930)	\$ 1,890

Nine Months Ended September 30, 2021			
	Advances	Available-for-Sale Securities	Consolidated Bonds
Total interest income (expense) recorded in the Statements of Income	\$ 103,219	\$ 3,975	\$ (266,479)
Impact of Fair Value Hedging Relationships			
Interest rate swaps:			
Net interest settlements	\$ (85,580)	\$ (10,025)	\$ 790
Gain (loss) on derivatives	177,912	40,265	(1,034)
Gain (loss) on hedged items	(178,173)	(39,835)	1,016
Effect on net interest income	\$ (85,841)	\$ (9,595)	\$ 772

Table 6.3 presents the cumulative basis adjustments on hedged items designated as fair value hedges and the related amortized cost of the hedged items.

Table 6.3 - Cumulative Basis Adjustments for Fair Value Hedges (in thousands)

	September 30, 2022		
	Advances	Available-for-Sale Securities	Consolidated Bonds
Amortized cost of hedged asset or liability ⁽¹⁾	\$ 7,992,186	\$ 8,606,029	\$ 1,326,361
Fair value hedging adjustments			
Basis adjustments for active hedging relationships included in amortized cost	\$ (430,545)	\$ (1,044,531)	\$ (44,135)
Basis adjustments for discontinued hedging relationships included in amortized cost	639	7,075	—
Total amount of fair value hedging basis adjustments	\$ (429,906)	\$ (1,037,456)	\$ (44,135)
	December 31, 2021		
	Advances	Available-for-Sale Securities	Consolidated Bonds
Amortized cost of hedged asset or liability ⁽¹⁾	\$ 8,089,716	\$ 5,238,549	\$ 450,369
Fair value hedging adjustments			
Basis adjustments for active hedging relationships included in amortized cost	\$ 103,468	\$ (61,734)	\$ (1,104)
Basis adjustments for discontinued hedging relationships included in amortized cost	933	2,627	—
Total amount of fair value hedging basis adjustments	\$ 104,401	\$ (59,107)	\$ (1,104)

(1) Includes only the portion of amortized cost representing the hedged items in fair value hedging relationships.

Table 6.4 presents net gains (losses) recorded in non-interest income (loss) on derivatives not designated as hedging instruments.

Table 6.4 - Net Gains (Losses) Recorded in Non-interest Income (Loss) on Derivatives Not Designated as Hedging Instruments (in thousands)

	Three Months Ended September 30,	
	2022	2021
Derivatives not designated as hedging instruments:		
Economic hedges:		
Interest rate swaps	\$ 42,188	\$ 42,661
Interest rate swaptions	4,450	(257)
Net interest settlements	(18,558)	(40,467)
Mortgage delivery commitments	(1,244)	3,947
Total net gains (losses) related to derivatives not designated as hedging instruments	26,836	5,884
Price alignment amount ⁽¹⁾	(216)	40
Net gains (losses) on derivatives	<u>\$ 26,620</u>	<u>\$ 5,924</u>
	Nine Months Ended September 30,	
	2022	2021
Derivatives not designated as hedging instruments:		
Economic hedges:		
Interest rate swaps	\$ 191,830	\$ 191,507
Interest rate swaptions	11,008	157
Net interest settlements	(49,999)	(129,262)
Mortgage delivery commitments	(8,568)	4,487
Total net gains (losses) related to derivatives not designated as hedging instruments	144,271	66,889
Price alignment amount ⁽¹⁾	(177)	100
Net gains (losses) on derivatives	<u>\$ 144,094</u>	<u>\$ 66,989</u>

(1) This amount is for derivatives for which variation margin is characterized as a daily settled contract.

Credit Risk on Derivatives

The FHLB is subject to credit risk given the risk of non-performance by counterparties to its derivative transactions, and manages credit risk through credit analysis, collateral requirements and adherence to the requirements set forth in its policies, U.S. Commodity Futures Trading Commission regulations, and Finance Agency regulations.

For uncleared derivatives, the degree of credit risk depends on the extent to which master netting arrangements are included in these contracts to mitigate the risk. The FHLB requires collateral agreements on its uncleared derivatives with the collateral delivery threshold set to zero.

For cleared derivatives, the Clearinghouse is the FHLB's counterparty. The Clearinghouse notifies the clearing agent of the required initial and variation margin and the clearing agent in turn notifies the FHLB. The FHLB utilizes two Clearinghouses for all cleared derivative transactions, LCH Ltd. and CME Clearing. At both Clearinghouses, variation margin is characterized as daily settlement payments, while initial margin is considered to be collateral. The requirement that the FHLB post initial and variation margin through the clearing agent, to the Clearinghouse, exposes the FHLB to credit risk if the clearing agent or the Clearinghouse fails to meet its obligations. The use of cleared derivatives is intended to mitigate credit risk exposure because a central counterparty is substituted for individual counterparties and collateral/payments for changes in the value of cleared derivatives is posted daily through a clearing agent. On the Statements of Cash Flows, the variation margin cash payments, or daily settlement payments, are included in net change in derivative and hedging activities, as an operating activity.

For cleared derivatives, the Clearinghouse determines initial margin requirements and generally credit ratings are not factored into the initial margin. However, clearing agents may require additional initial margin to be posted based on credit considerations, including, but not limited to, credit rating downgrades. At September 30, 2022, the FHLB was not required to post additional initial margin by its clearing agents based on credit considerations.

Offsetting of Derivative Assets and Derivative Liabilities

The FHLB presents derivative instruments, related cash collateral received or pledged, and associated accrued interest, on a net basis by clearing agent and/or by counterparty when it has met the netting requirements.

The FHLB has analyzed the enforceability of offsetting rights incorporated in its cleared derivative transactions, and it expects that the exercise of those offsetting rights by a non-defaulting party under these transactions would be upheld under applicable law upon an event of default including bankruptcy, insolvency, or similar proceeding involving the Clearinghouse or the FHLB's clearing agent, or both. Based on this analysis, the FHLB presents a net derivative receivable or payable for all of its transactions through a particular clearing agent with a particular Clearinghouse.

Table 6.5 presents separately the fair value of derivative instruments meeting or not meeting netting requirements, including the related collateral. At September 30, 2022 and December 31, 2021, the FHLB did not receive or pledge any non-cash collateral. Any over-collateralization under an individual clearing agent and/or counterparty level is not included in the determination of the net unsecured amount.

Table 6.5 - Offsetting of Derivative Assets and Derivative Liabilities (in thousands)

September 30, 2022								
	Derivative Instruments Meeting Netting Requirements			Derivative Instruments Not Meeting Netting Requirements ^(f)	Total Derivative Assets and Total Derivative Liabilities			
	Gross Recognized Amount	Gross Amount of Netting Adjustments and Cash Collateral						
Derivative Assets:								
Uncleared	\$	19,686	\$	(14,093)	\$	1	\$	5,594
Cleared		60,624		444,542		—		505,166
Total							\$	510,760
Derivative Liabilities:								
Uncleared	\$	72,563	\$	(72,498)	\$	567	\$	632
Cleared		2,013		(2,013)		—		—
Total							\$	632
December 31, 2021								
	Derivative Instruments Meeting Netting Requirements			Derivative Instruments Not Meeting Netting Requirements ^(f)	Total Derivative Assets and Total Derivative Liabilities			
	Gross Recognized Amount	Gross Amount of Netting Adjustments and Cash Collateral						
Derivative Assets:								
Uncleared	\$	1,892	\$	(1,748)	\$	77	\$	221
Cleared		1,269		296,246		—		297,515
Total							\$	297,736
Derivative Liabilities:								
Uncleared	\$	77,126	\$	(74,664)	\$	829	\$	3,291
Cleared		1,157		(1,157)		—		—
Total							\$	3,291

(1) Represents mortgage delivery commitments that are not subject to an enforceable netting agreement.

Note 7 - Consolidated Obligations

Table 7.1 - Consolidated Discount Notes Outstanding (dollars in thousands)

	Carrying Value	Principal Amount	Weighted Average Interest Rate ⁽¹⁾
September 30, 2022	\$ 51,022,546	\$ 51,287,732	2.50 %
December 31, 2021	\$ 29,837,696	\$ 29,843,992	0.05 %

(1) Represents an implied rate without consideration of concessions.

Table 7.2 - Consolidated Bonds Outstanding by Original Contractual Maturity (dollars in thousands)

<u>Year of Original Contractual Maturity</u>	<u>September 30, 2022</u>		<u>December 31, 2021</u>	
	<u>Amount</u>	<u>Weighted Average Interest Rate</u>	<u>Amount</u>	<u>Weighted Average Interest Rate</u>
Due in 1 year or less	\$ 40,439,965	2.78 %	\$ 12,828,885	0.55 %
Due after 1 year through 2 years	3,242,795	2.19	3,836,120	1.91
Due after 2 years through 3 years	2,645,730	2.00	1,724,405	2.23
Due after 3 years through 4 years	1,510,000	1.43	2,095,000	1.39
Due after 4 years through 5 years	1,415,000	1.91	870,000	1.86
Thereafter	3,259,140	2.66	3,235,000	2.17
Total principal amount	52,512,630	2.63	24,589,410	1.21
Premiums	24,890		31,181	
Discounts	(19,671)		(17,709)	
Hedging adjustments	(44,135)		(1,104)	
Fair value option valuation adjustment and accrued interest	(46,713)		60	
Total	<u>\$ 52,427,001</u>		<u>\$ 24,601,838</u>	

Table 7.3 - Consolidated Bonds Outstanding by Call Features (in thousands)

	<u>September 30, 2022</u>	<u>December 31, 2021</u>
Principal Amount of Consolidated Bonds:		
Non-callable	\$ 40,138,130	\$ 19,689,410
Callable	12,374,500	4,900,000
Total principal amount	<u>\$ 52,512,630</u>	<u>\$ 24,589,410</u>

Table 7.4 - Consolidated Bonds Outstanding by Original Contractual Maturity or Next Call Date (in thousands)

<u>Year of Original Contractual Maturity or Next Call Date</u>	<u>September 30, 2022</u>	<u>December 31, 2021</u>
Due in 1 year or less	\$ 46,614,965	\$ 17,518,885
Due after 1 year through 2 years	2,038,795	3,085,120
Due after 2 years through 3 years	1,102,730	1,262,405
Due after 3 years through 4 years	554,000	728,000
Due after 4 years through 5 years	180,000	547,000
Thereafter	2,022,140	1,448,000
Total principal amount	<u>\$ 52,512,630</u>	<u>\$ 24,589,410</u>

Table 7.5 - Consolidated Bonds by Interest-rate Payment Type (in thousands)

	<u>September 30, 2022</u>	<u>December 31, 2021</u>
Principal Amount of Consolidated Bonds:		
Fixed-rate	\$ 21,502,630	\$ 23,739,410
Variable-rate	30,700,000	850,000
Step-up	310,000	—
Total principal amount	<u>\$ 52,512,630</u>	<u>\$ 24,589,410</u>

Note 8 - Affordable Housing Program (AHP)

The FHLBank Act requires each FHLBank to establish an AHP. Each FHLBank provides subsidies in the form of direct grants or below-market interest rate AHP Advances to members who use the funds to assist in the purchase, construction, or

rehabilitation of housing for very low-, low-, and moderate-income households. Each FHLBank is required to contribute to its AHP the greater of 10 percent of its previous year's income subject to assessment, or the prorated sum required to ensure the aggregate contribution by the FHLBanks is no less than \$100 million for each year. For purposes of the AHP calculation, income subject to assessment is defined as net income before AHP assessments, plus interest expense related to mandatorily redeemable capital stock. The FHLB accrues AHP expense monthly based on its income subject to assessment. The FHLB reduces the AHP liability as members use subsidies. In addition to the required AHP assessment, the Board of Directors may elect to make voluntary contributions to the AHP.

Table 8.1 - Rollforward of the AHP Liability (in thousands)

Balance at December 31, 2021	\$	84,504
Assessments (current year additions)		16,838
Voluntary contribution		3,000
Subsidy uses, net		(21,168)
Balance at September 30, 2022	\$	<u>83,174</u>

Note 9 - Capital

Table 9.1 - Capital Requirements (dollars in thousands)

	September 30, 2022		December 31, 2021	
	Minimum Requirement	Actual	Minimum Requirement	Actual
Risk-based capital	\$ 889,215	\$ 6,022,056	\$ 856,322	\$ 3,804,018
Capital-to-assets ratio (regulatory)	4.00 %	5.36 %	4.00 %	6.28 %
Regulatory capital	\$ 4,496,936	\$ 6,022,056	\$ 2,424,703	\$ 3,804,018
Leverage capital-to-assets ratio (regulatory)	5.00 %	8.03 %	5.00 %	9.41 %
Leverage capital	\$ 5,621,170	\$ 9,033,084	\$ 3,030,879	\$ 5,706,027

Restricted Retained Earnings. At September 30, 2022 and December 31, 2021 the FHLB had (in thousands) \$539,223 and \$509,719, respectively, in restricted retained earnings. These restricted retained earnings are not available to pay dividends but are available to absorb unexpected losses, if any, that an FHLBank may experience.

Table 9.2 - Rollforward of Mandatorily Redeemable Capital Stock (in thousands)

Balance, December 31, 2021	\$	21,211
Capital stock subject to mandatory redemption reclassified from equity		2,364,961
Repurchase/redemption of mandatorily redeemable capital stock		(2,188,240)
Balance, September 30, 2022	\$	<u>197,932</u>

Table 9.3 - Mandatorily Redeemable Capital Stock by Contractual Year of Redemption (in thousands)

<u>Contractual Year of Redemption</u>	<u>September 30, 2022</u>	<u>December 31, 2021</u>
Year 1	\$ 547	\$ 1,091
Year 2	651	1,427
Year 3	14	270
Year 4	242	5
Year 5	189,097	10,791
Past contractual redemption date due to remaining activity ⁽¹⁾	7,381	7,627
Total	<u>\$ 197,932</u>	<u>\$ 21,211</u>

(1) Represents mandatorily redeemable capital stock that is past the end of the contractual redemption period because there is activity outstanding to which the mandatorily redeemable capital stock relates.

Note 10 - Accumulated Other Comprehensive Income (Loss)

The following tables summarize the changes in accumulated other comprehensive income (loss) for the three and nine months ended September 30, 2022 and 2021.

Table 10.1 - Accumulated Other Comprehensive Income (Loss) (in thousands)

	Net unrealized gains (losses) on available-for-sale securities	Pension and postretirement benefits	Total accumulated other comprehensive income (loss)
BALANCE, JUNE 30, 2021	\$ 16,365	\$ (18,351)	\$ (1,986)
Other comprehensive income before reclassification:			
Net unrealized gains (losses)	11,607	—	11,607
Reclassifications from other comprehensive income (loss) to net income:			
Amortization - pension and postretirement benefits ⁽¹⁾	—	696	696
Net current period other comprehensive income (loss)	11,607	696	12,303
BALANCE, SEPTEMBER 30, 2021	<u>\$ 27,972</u>	<u>\$ (17,655)</u>	<u>\$ 10,317</u>
BALANCE, JUNE 30, 2022	\$ (21,635)	\$ (12,013)	\$ (33,648)
Other comprehensive income before reclassification:			
Net unrealized gains (losses)	(8,991)	—	(8,991)
Reclassifications from other comprehensive income (loss) to net income:			
Amortization - pension and postretirement benefits ⁽¹⁾	—	(36)	(36)
Net current period other comprehensive income (loss)	(8,991)	(36)	(9,027)
BALANCE, SEPTEMBER 30, 2022	<u>\$ (30,626)</u>	<u>\$ (12,049)</u>	<u>\$ (42,675)</u>
BALANCE, DECEMBER 31, 2020	\$ 4,718	\$ (19,703)	\$ (14,985)
Other comprehensive income before reclassification:			
Net unrealized gains (losses)	23,254	—	23,254
Reclassifications from other comprehensive income (loss) to net income:			
Amortization - pension and postretirement benefits ⁽¹⁾	—	2,048	2,048
Net current period other comprehensive income (loss)	23,254	2,048	25,302
BALANCE, SEPTEMBER 30, 2021	<u>\$ 27,972</u>	<u>\$ (17,655)</u>	<u>\$ 10,317</u>
BALANCE, DECEMBER 31, 2021	\$ 26,125	\$ (13,031)	\$ 13,094
Other comprehensive income before reclassification:			
Net unrealized gains (losses)	(56,751)	—	(56,751)
Reclassifications from other comprehensive income (loss) to net income:			
Amortization - pension and postretirement benefits ⁽¹⁾	—	982	982
Net current period other comprehensive income (loss)	(56,751)	982	(55,769)
BALANCE, SEPTEMBER 30, 2022	<u>\$ (30,626)</u>	<u>\$ (12,049)</u>	<u>\$ (42,675)</u>

(1) Included in Non-Interest Expense - Other in the Statements of Income.

Note 11 - Segment Information

The FHLB has identified two primary operating segments based on its method of internal reporting: Traditional Member Finance and the MPP. These segments reflect the FHLB's two primary Mission Asset Activities and the manner in which they are managed from the perspective of development, resource allocation, product delivery, pricing, credit risk and operational administration. The segments identify the principal ways the FHLB provides services to member stockholders.

Table 11.1 - Financial Performance by Operating Segment (in thousands)

	Three Months Ended September 30,		
	Traditional Member Finance	MPP	Total
2022			
Net interest income (loss)	\$ 120,400	\$ 21,238	\$ 141,638
Non-interest income (loss)	(17,296)	3,207	(14,089)
Non-interest expense	23,944	2,407	26,351
Income (loss) before assessments	79,160	22,038	101,198
Affordable Housing Program assessments	8,152	2,204	10,356
Net income (loss)	\$ 71,008	\$ 19,834	\$ 90,842
2021			
Net interest income (loss)	\$ 72,657	\$ (8,709)	\$ 63,948
Non-interest income (loss)	(40,228)	3,764	(36,464)
Non-interest expense	18,822	2,221	21,043
Income (loss) before assessments	13,607	(7,166)	6,441
Affordable Housing Program assessments	1,368	(717)	651
Net income (loss)	\$ 12,239	\$ (6,449)	\$ 5,790
	Nine Months Ended September 30,		
	Traditional Member Finance	MPP	Total
2022			
Net interest income (loss)	\$ 257,602	\$ 35,949	\$ 293,551
Non-interest income (loss)	(51,942)	760	(51,182)
Non-interest expense	70,066	7,945	78,011
Income (loss) before assessments	135,594	28,764	164,358
Affordable Housing Program assessments	13,962	2,876	16,838
Net income (loss)	\$ 121,632	\$ 25,888	\$ 147,520
2021			
Net interest income (loss)	\$ 240,902	\$ (34,897)	\$ 206,005
Non-interest income (loss)	(114,459)	4,590	(109,869)
Non-interest expense	60,888	7,589	68,477
Income (loss) before assessments	65,555	(37,896)	27,659
Affordable Housing Program assessments	6,583	(3,790)	2,793
Net income (loss)	\$ 58,972	\$ (34,106)	\$ 24,866

Table 11.2 - Asset Balances by Operating Segment (in thousands)

	Assets		
	Traditional Member Finance	MPP	Total
September 30, 2022	\$ 103,236,083	\$ 9,187,307	\$ 112,423,390
December 31, 2021	50,086,904	10,530,681	60,617,585

Note 12 - Fair Value Disclosures

The fair value amounts recorded on the Statements of Condition and presented in the related note disclosures have been determined by the FHLB using available market information and the FHLB's best judgment of appropriate valuation methods. GAAP defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (i.e., an exit price). The fair values reflect the FHLB's judgment of how a market participant would estimate the fair values.

Fair Value Hierarchy. GAAP establishes a fair value hierarchy and requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The inputs are evaluated and an overall level for the measurement is determined. This overall level is an indication of how market observable the fair value measurement is.

The fair value hierarchy prioritizes the inputs used to measure fair value into three broad levels:

Level 1 Inputs - Quoted prices (unadjusted) for identical assets or liabilities in an active market that the reporting entity can access on the measurement date. An active market for the asset or liability is a market in which the transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2 Inputs - Inputs other than quoted prices within Level 1 that are observable inputs for the asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include the following: (1) quoted prices for similar assets or liabilities in active markets; (2) quoted prices for identical or similar assets or liabilities in markets that are not active; (3) inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates and yield curves that are observable at commonly quoted intervals, and implied volatilities); and (4) inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 Inputs - Unobservable inputs for the asset or liability, which are supported by limited to no market activity and reflect the FHLB's own assumptions.

The FHLB reviews the fair value hierarchy classifications on a quarterly basis. Changes in the observability of the valuation inputs may result in a reclassification of certain financial assets or liabilities. The FHLB did not have any transfers of assets or liabilities into or out of Level 3 of the fair value hierarchy during the nine months ended September 30, 2022 or 2021.

Table 12.1 presents the carrying value, fair value, and fair value hierarchy of financial assets and liabilities of the FHLB. The FHLB records trading securities, available-for-sale securities, derivative assets, derivative liabilities, certain Advances and certain Consolidated Obligations at fair value on a recurring basis, and on occasion, certain mortgage loans held for portfolio on a nonrecurring basis. The FHLB records all other financial assets and liabilities at amortized cost. Refer to Table 12.2 for further details about the financial assets and liabilities held at fair value on either a recurring or nonrecurring basis.

Table 12.1 - Fair Value Summary (in thousands)

	September 30, 2022					
		Fair Value				
Financial Instruments	Carrying Value ⁽¹⁾	Total	Level 1	Level 2	Level 3	Netting Adjustments and Cash Collateral ⁽²⁾
Assets:						
Cash and due from banks	\$ 20,788	\$ 20,788	\$ 20,788	\$ —	\$ —	\$ —
Interest-bearing deposits	1,050,115	1,050,115	—	1,050,115	—	—
Securities purchased under agreements to resell	7,145,945	7,145,949	—	7,145,949	—	—
Federal funds sold	11,143,000	11,143,000	—	11,143,000	—	—
Trading securities	1,979,395	1,979,395	—	1,979,395	—	—
Available-for-sale securities	8,586,841	8,586,841	—	8,586,841	—	—
Held-to-maturity securities	14,705,163	14,378,436	—	14,378,436	—	—
Advances ⁽³⁾	59,748,232	59,675,343	—	59,675,343	—	—
Mortgage loans held for portfolio	7,294,618	6,326,078	—	6,313,666	12,412	—
Accrued interest receivable	216,587	216,587	—	216,587	—	—
Derivative assets	510,760	510,760	—	80,311	—	430,449
Liabilities:						
Deposits	1,242,902	1,241,861	—	1,241,861	—	—
Consolidated Obligations:						
Discount Notes ⁽⁴⁾	51,022,546	51,001,292	—	51,001,292	—	—
Bonds ⁽⁵⁾	52,427,001	51,436,247	—	51,436,247	—	—
Mandatorily redeemable capital stock	197,932	197,932	197,932	—	—	—
Accrued interest payable	147,371	147,371	—	147,371	—	—
Derivative liabilities	632	632	—	75,143	—	(74,511)

(1) For certain financial instruments, the amounts represent net carrying value, which include an allowance for credit losses.

(2) Amounts represent the application of the netting requirements that allow the FHLB to settle positive and negative positions and also cash collateral and related accrued interest held or placed by the FHLB with the same counterparty.

(3) Includes (in thousands) \$4,955 of Advances recorded under the fair value option at September 30, 2022.

(4) Includes (in thousands) \$28,847,917 of Consolidated Obligation Discount Notes recorded under the fair value option at September 30, 2022.

(5) Includes (in thousands) \$6,936,787 of Consolidated Obligation Bonds recorded under the fair value option at September 30, 2022.

	December 31, 2021						
		Fair Value					
Financial Instruments	Carrying Value ⁽¹⁾	Total	Level 1	Level 2	Level 3	Netting Adjustments and Cash Collateral ⁽²⁾	
Assets:							
Cash and due from banks	\$ 167,822	\$ 167,822	\$ 167,822	\$ —	\$ —	\$ —	
Interest-bearing deposits	340,147	340,147	—	340,147	—	—	
Securities purchased under agreements to resell	1,282,440	1,282,440	—	1,282,440	—	—	
Federal funds sold	5,505,000	5,505,000	—	5,505,000	—	—	
Trading securities	6,780,817	6,780,817	—	6,780,817	—	—	
Available-for-sale securities	5,267,123	5,267,123	—	5,267,123	—	—	
Held-to-maturity securities	10,216,756	10,269,821	—	10,269,821	—	—	
Advances ⁽³⁾	23,054,748	23,191,040	—	23,191,040	—	—	
Mortgage loans held for portfolio	7,588,184	7,728,670	—	7,705,035	23,635	—	
Accrued interest receivable	88,672	88,672	—	88,672	—	—	
Derivative assets	297,736	297,736	—	3,238	—	294,498	
Liabilities:							
Deposits	1,415,651	1,415,456	—	1,415,456	—	—	
Consolidated Obligations:							
Discount Notes ⁽⁴⁾	29,837,696	29,837,184	—	29,837,184	—	—	
Bonds ⁽⁵⁾	24,601,838	24,906,306	—	24,906,306	—	—	
Mandatorily redeemable capital stock	21,211	21,211	21,211	—	—	—	
Accrued interest payable	60,682	60,682	—	60,682	—	—	
Derivative liabilities	3,291	3,291	—	79,112	—	(75,821)	

- (1) For certain financial instruments, the amounts represent net carrying value, which include an allowance for credit losses.
- (2) Amounts represent the application of the netting requirements that allow the FHLB to settle positive and negative positions and also cash collateral and related accrued interest held or placed by the FHLB with the same counterparty.
- (3) Includes (in thousands) \$25,805 of Advances recorded under the fair value option at December 31, 2021.
- (4) Includes (in thousands) \$10,420,974 of Consolidated Obligation Discount Notes recorded under the fair value option at December 31, 2021.
- (5) Includes (in thousands) \$7,175,060 of Consolidated Obligation Bonds recorded under the fair value option at December 31, 2021.

Summary of Valuation Methodologies and Primary Inputs.

The valuation methodologies and primary inputs used to develop the measurement of fair value for assets and liabilities that are measured at fair value on a recurring or nonrecurring basis in the Statement of Condition are disclosed in Note 15 - Fair Value Disclosures in the FHLB's 2021 Annual Report on Form 10-K. There have been no significant changes in the valuation methodologies during 2022.

Fair Value Measurements.

Table 12.2 presents the fair value of financial assets and liabilities that are recorded on a recurring basis at September 30, 2022 and December 31, 2021, by level within the fair value hierarchy.

Table 12.2 - Fair Value Measurements (in thousands)

	Fair Value Measurements at September 30, 2022				
	Total	Level 1	Level 2	Level 3	Netting Adjustments and Cash Collateral ⁽¹⁾
Recurring fair value measurements - Assets					
Trading securities:					
U.S. Treasury obligations	\$ 491,513	\$ —	\$ 491,513	\$ —	\$ —
GSE obligations	1,487,747	—	1,487,747	—	—
U.S. obligation single-family MBS	135	—	135	—	—
Total trading securities	1,979,395	—	1,979,395	—	—
Available-for-sale securities:					
U.S. Treasury obligations	7,149,566	—	7,149,566	—	—
GSE obligations	117,773	—	117,773	—	—
GSE multi-family MBS	1,319,502	—	1,319,502	—	—
Total available-for-sale securities	8,586,841	—	8,586,841	—	—
Advances	4,955	—	4,955	—	—
Derivative assets:					
Interest rate related	510,759	—	80,310	—	430,449
Mortgage delivery commitments	1	—	1	—	—
Total derivative assets	510,760	—	80,311	—	430,449
Total assets at fair value	<u>\$ 11,081,951</u>	<u>\$ —</u>	<u>\$ 10,651,502</u>	<u>\$ —</u>	<u>\$ 430,449</u>
Recurring fair value measurements - Liabilities					
Consolidated Obligations:					
Discount Notes	\$28,847,917	\$ —	\$28,847,917	\$ —	\$ —
Bonds	6,936,787	—	6,936,787	—	—
Total Consolidated Obligations	35,784,704	—	35,784,704	—	—
Derivative liabilities:					
Interest rate related	65	—	74,576	—	(74,511)
Mortgage delivery commitments	567	—	567	—	—
Total derivative liabilities	632	—	75,143	—	(74,511)
Total liabilities at fair value	<u>\$35,785,336</u>	<u>\$ —</u>	<u>\$35,859,847</u>	<u>\$ —</u>	<u>\$ (74,511)</u>

(1) Amounts represent the application of the netting requirements that allow the FHLB to settle positive and negative positions and also cash collateral and related accrued interest held or placed by the FHLB with the same counterparty.

Fair Value Measurements at December 31, 2021					
	Total	Level 1	Level 2	Level 3	Netting Adjustments and Cash Collateral ⁽¹⁾
Recurring fair value measurements - Assets					
Trading securities:					
U.S. Treasury obligations	\$ 5,030,946	\$ —	\$ 5,030,946	\$ —	\$ —
GSE obligations	1,749,661	—	1,749,661	—	—
U.S. obligation single-family MBS	210	—	210	—	—
Total trading securities	6,780,817	—	6,780,817	—	—
Available-for-sale securities:					
U.S. Treasury obligations	4,498,870	—	4,498,870	—	—
GSE obligations	135,308	—	135,308	—	—
GSE multi-family MBS	632,945	—	632,945	—	—
Total available-for-sale securities	5,267,123	—	5,267,123	—	—
Advances	25,805	—	25,805	—	—
Derivative assets:					
Interest rate related	297,659	—	3,161	—	294,498
Mortgage delivery commitments	77	—	77	—	—
Total derivative assets	297,736	—	3,238	—	294,498
Total assets at fair value	\$ 12,371,481	\$ —	\$ 12,076,983	\$ —	\$ 294,498
Recurring fair value measurements - Liabilities					
Consolidated Obligations:					
Discount Notes	\$ 10,420,974	\$ —	\$ 10,420,974	\$ —	\$ —
Bonds	7,175,060	—	7,175,060	—	—
Total Consolidated Obligations	17,596,034	—	17,596,034	—	—
Derivative liabilities:					
Interest rate related	2,462	—	78,283	—	(75,821)
Mortgage delivery commitments	829	—	829	—	—
Total derivative liabilities	3,291	—	79,112	—	(75,821)
Total liabilities at fair value	\$ 17,599,325	\$ —	\$ 17,675,146	\$ —	\$ (75,821)

(1) Amounts represent the application of the netting requirements that allow the FHLB to settle positive and negative positions and also cash collateral and related accrued interest held or placed by the FHLB with the same counterparty.

Fair Value Option. The fair value option provides an irrevocable option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value. It requires a company to display the fair value of those assets and liabilities for which it has chosen to use fair value on the face of the Statements of Condition. Fair value is used for both the initial and subsequent measurement of the designated assets, liabilities and commitments, with the changes in fair value recognized in net income. If elected, interest income and interest expense on Advances and Consolidated Obligations carried at fair value are recognized based solely on the contractual amount of interest due or unpaid. Any transaction fees or costs are immediately recognized into other non-interest income or other non-interest expense.

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

Table 12.3 presents net gains (losses) recognized in earnings related to financial assets and liabilities in which the fair value option was elected during the three and nine months ended September 30, 2022 and 2021.

Table 12.3 – Fair Value Option - Financial Assets and Liabilities (in thousands)

Net Gains (Losses) from Changes in Fair Value Recognized in Earnings	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Advances	\$ 2,957	\$ (148)	\$ 675	\$ (1,283)
Consolidated Discount Notes	(2,778)	(108)	35,516	(58)
Consolidated Bonds	41,649	1,557	85,068	9,149
Total net gains (losses)	<u>\$ 41,828</u>	<u>\$ 1,301</u>	<u>\$ 121,259</u>	<u>\$ 7,808</u>

For instruments recorded under the fair value option, the related contractual interest income, contractual interest expense and the discount amortization on Discount Notes are recorded as part of net interest income on the Statements of Income. The remaining changes in fair value for instruments in which the fair value option has been elected are recorded as “Net gains (losses) on financial instruments held under fair value option” in the Statements of Income, except for changes in fair value related to instrument specific credit risk, which are recorded in accumulated other comprehensive income in the Statement of Condition. The FHLB has determined that none of the remaining changes in fair value were related to instrument-specific credit risk for the nine months ended September 30, 2022 or 2021. In determining that there has been no change in instrument-specific credit risk period to period, the FHLB primarily considered the following factors:

- The FHLB is a federally chartered GSE, and as a result of this status, the FHLB’s Consolidated Obligations have historically received the same credit ratings as the government bond credit rating of the United States, even though they are not obligations of the United States and are not guaranteed by the United States.
- The FHLB is jointly and severally liable with the other 10 FHLBanks for the payment of principal and interest on all Consolidated Obligations of each of the other FHLBanks.

The following table reflects the difference between the aggregate unpaid principal balance outstanding and the aggregate fair value for Advances and Consolidated Obligations for which the fair value option has been elected.

Table 12.4 – Aggregate Unpaid Balance and Aggregate Fair Value (in thousands)

	September 30, 2022			December 31, 2021		
	Aggregate Unpaid Principal Balance	Aggregate Fair Value	Aggregate Fair Value Over/ (Under) Aggregate Unpaid Principal Balance	Aggregate Unpaid Principal Balance	Aggregate Fair Value	Aggregate Fair Value Over/ (Under) Aggregate Unpaid Principal Balance
Advances	\$ 5,000	\$ 4,955	\$ (45)	\$ 26,500	\$ 25,805	\$ (695)
Consolidated Discount Notes	29,000,909	28,847,917	(152,992)	10,426,400	10,420,974	(5,426)
Consolidated Bonds	6,983,500	6,936,787	(46,713)	7,175,000	7,175,060	60

Note 13 - Commitments and Contingencies

Off-Balance Sheet Commitments. Table 13.1 represents off-balance sheet commitments at September 30, 2022 and December 31, 2021. The FHLB has deemed it unnecessary to record any liabilities for credit losses on these commitments at September 30, 2022 and December 31, 2021.

Table 13.1 - Off-Balance Sheet Commitments (in thousands)

Notional Amount	September 30, 2022			December 31, 2021		
	Expire within one year	Expire after one year	Total	Expire within one year	Expire after one year	Total
Letters of Credit	\$ 38,740,524	\$ 261,065	\$39,001,589	\$ 34,281,457	\$ 355,646	\$34,637,103
Commitments for standby bond purchases	11,015	—	11,015	14,035	12,885	26,920
Commitments to purchase mortgage loans	22,463	—	22,463	249,581	—	249,581
Unsettled Consolidated Bonds, principal amount ⁽¹⁾	1,060,000	—	1,060,000	—	—	—
Unsettled Consolidated Discount Notes, principal amount ⁽¹⁾	14,000	—	14,000	—	—	—

(1) Expiration is based on settlement period rather than underlying contractual maturity of Consolidated Obligations.

The carrying value of guarantees related to Letters of Credit are recorded in other liabilities and were (in thousands) \$8,921 and \$8,751 at September 30, 2022 and December 31, 2021.

Legal Proceedings. From time to time, the FHLB is subject to legal proceedings arising in the normal course of business. The FHLB would record an accrual for a loss contingency when it is probable that a loss has been incurred and the amount could be reasonably estimated. After consultation with legal counsel, management does not anticipate that the ultimate liability and the range of reasonably possible losses, if any, arising out of any matters will have a material effect on the FHLB's financial condition or results of operations.

Note 14 - Transactions with Other FHLBanks

The FHLB notes all transactions with other FHLBanks on the face of its financial statements. Occasionally, the FHLB loans short-term funds to and borrows short-term funds from other FHLBanks. These loans and borrowings are transacted at then current market rates when traded. There were no such loans or borrowings outstanding at September 30, 2022 or December 31, 2021. The following table details the average daily balance of lending and borrowing between the FHLB and other FHLBanks for the nine months ended September 30, 2022 and 2021.

Table 14.1 - Lending and Borrowing Between the FHLB and Other FHLBanks (in thousands)

	Average Daily Balances for the Nine Months Ended September 30,	
	2022	2021
Loans to other FHLBanks	\$ 16,670	\$ —
Borrowings from other FHLBanks	37	183

In addition, the FHLB may, from time to time, assume the outstanding primary liability for Consolidated Obligations of another FHLBank (at then current market rates on the day when the transfer is traded) rather than issuing new debt for which the FHLB is the primary obligor. The FHLB then becomes the primary obligor on the transferred debt. There were no Consolidated Obligations transferred to the FHLB during the nine months ended September 30, 2022 or 2021. The FHLB had no Consolidated Obligations transferred to other FHLBanks during these periods.

Note 15 - Transactions with Stockholders

As a cooperative, the FHLB's capital stock is owned by its members, by former members that retain the stock as provided in the FHLB's Capital Plan and by nonmember institutions that have acquired members and must retain the stock to support Advances or other activities with the FHLB. All Advances are issued to members and all mortgage loans held for portfolio are purchased from members. The FHLB also maintains demand deposit accounts for members, primarily to facilitate settlement activities that are directly related to Advances and mortgage loan purchases. Additionally, the FHLB may enter into interest rate swaps with its stockholders. The FHLB may not invest in any equity securities issued by its stockholders and it has not purchased any MBS securitized by, or other direct long-term investments in, its stockholders.

For financial statement purposes, the FHLB defines related parties as those members with more than 10 percent of the voting interests of the FHLB capital stock outstanding. Federal statute prescribes the voting rights of members in the election of both Member and Independent directors. For Member directorships, the Finance Agency designates the number of Member directorships in a given year and an eligible voting member may vote only for candidates seeking election in its respective state. For Independent directors, the FHLB's Board of Directors nominates candidates to be placed on the ballot in an at-large election. For both Member and Independent director elections, a member is entitled to vote one share of required capital stock, subject to a statutory limitation, for each applicable directorship. Under this limitation, the total number of votes that a member may cast is limited to the average number of shares of the FHLB's capital stock that were required to be held by all members in that state as of the record date for voting. Nonmember stockholders are not eligible to vote in director elections. Due to these statutory limitations, no member owned more than 10 percent of the voting interests of the FHLB at September 30, 2022 or December 31, 2021.

All transactions with stockholders are entered into in the ordinary course of business. Finance Agency regulations require the FHLB to offer the same pricing for Advances and other services to all members regardless of asset or transaction size, charter type, or geographic location. However, the FHLB may, in pricing its Advances, distinguish among members based upon its assessment of the credit and other risks to the FHLB of lending to any particular member or upon other reasonable criteria that may be applied equally to all members. The FHLB's policies and procedures require that such standards and criteria be applied consistently and without discrimination to all members applying for Advances.

Transactions with Directors' Financial Institutions. In the ordinary course of its business, the FHLB provides products and services to members whose officers or directors serve as directors of the FHLB (Directors' Financial Institutions). Finance Agency regulations require that transactions with Directors' Financial Institutions be made on the same terms as those with any other member. The following table reflects balances with Directors' Financial Institutions for the items indicated below. The FHLB had no MBS or derivatives transactions with Directors' Financial Institutions at September 30, 2022 or December 31, 2021.

Table 15.1 - Transactions with Directors' Financial Institutions (dollars in millions)

	September 30, 2022		December 31, 2021	
	Balance	% of Total ⁽¹⁾	Balance	% of Total ⁽¹⁾
Advances	\$ 16,668	27.7 %	\$ 6,131	26.7 %
MPP	57	0.8	166	2.2
Regulatory capital stock	1,218	26.1	393	15.7

(1) Percentage of total principal (Advances), unpaid principal balance (MPP), and regulatory capital stock.

Concentrations. The following table shows regulatory capital stock balances, outstanding Advance principal balances, and unpaid principal balances of mortgage loans held for portfolio of stockholders holding five percent or more of regulatory capital stock and includes any known affiliates that are members of the FHLB.

Table 15.2 - Stockholders Holding Five Percent or more of Regulatory Capital Stock (dollars in millions)

<u>September 30, 2022</u>	Regulatory Capital Stock		Advance Principal	MPP Unpaid Principal Balance
	Balance	% of Total		
U.S. Bank, N.A.	\$ 1,011	22 %	\$ 13,592	\$ 8
Keybank National Association	670	14	10,347	—
Fifth Third Bank	381	8	5,751	—
The Huntington National Bank	236	5	2,502	354

<u>December 31, 2021</u>	Regulatory Capital Stock		Advance Principal	MPP Unpaid Principal Balance
	Balance	% of Total		
U.S. Bank, N.A.	\$ 186	7 %	\$ 3,272	\$ 10
Third Federal Savings & Loan Association	163	6	3,179	29
Protective Life Insurance Company	143	6	2,800	—
Nationwide Life Insurance Company	143	6	2,702	—

Nonmember Affiliates. The FHLB has relationships with three nonmember affiliates, the Kentucky Housing Corporation, the Ohio Housing Finance Agency and the Tennessee Housing Development Agency. The FHLB had no investments in or borrowings to any of these nonmember affiliates at September 30, 2022 or December 31, 2021. The FHLB has executed standby bond purchase agreements with the Ohio Housing Finance Agency whereby the FHLB, for a fee, agrees as a liquidity provider if required, to purchase and hold the authority's bonds until the designated marketing agent can find a suitable investor or the housing authority repurchases the bond according to a schedule established by the standby agreement. During the first nine months of 2022 and 2021, the FHLB was not required to purchase any bonds under these agreements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

This document contains forward-looking statements that describe the objectives, expectations, estimates, and assessments of the Federal Home Loan Bank of Cincinnati (the FHLB). These statements use words such as “anticipates,” “expects,” “believes,” “could,” “estimates,” “may,” and “should.” By their nature, forward-looking statements relate to matters involving risks or uncertainties, some of which we may not be able to know, control, or completely manage. Actual future results could differ materially from those expressed or implied in forward-looking statements or could affect the extent to which we are able to realize an objective, expectation, estimate, or assessment. Some of the risks and uncertainties that could affect our forward-looking statements include the following:

- the effects of economic, financial, credit, market, and member conditions on our financial condition and results of operations, including changes in economic growth, general liquidity conditions, inflation and deflation, interest rates, interest rate spreads, interest rate volatility, mortgage originations, prepayment activity, housing prices, asset delinquencies, and members' mergers and consolidations, deposit flows, liquidity needs, and loan demand;

- political, national, or world events, including acts of war, civil unrest, terrorism, natural disasters, climate change, pandemics, including the COVID-19 pandemic, or other catastrophic events, and legislative, regulatory, government, judicial or other developments that could affect us, our members, our counterparties, other Federal Home Loan Banks (FHLBanks) and other government-sponsored enterprises (GSEs), and/or investors in the Federal Home Loan Bank System's (FHLBank System) unsecured debt securities, which are called Consolidated Obligations or Obligations;
- competitive forces, including those related to other sources of funding available to members, to purchases of mortgage loans, and to our issuance of Consolidated Obligations;
- the financial results and actions of other FHLBanks that could affect our ability, in relation to the FHLBank System's joint and several liability for Consolidated Obligations, to access the capital markets on favorable terms or preserve our profitability, or could alter the regulations and legislation to which we are subject;
- changes in ratings assigned to FHLBank System Obligations or the FHLB that could raise our funding cost;
- changes in investor demand for Obligations;
- the volatility of market prices, interest rates, credit quality, and other indices that could affect the value of investments and collateral we hold as security for member obligations and/or for counterparty obligations;
- uncertainties relating to the phasing out of the London InterBank Offered Rate (LIBOR) that could impact our mortgage-backed securities (MBS) investments, Advances, derivatives, and collateral;
- the ability to attract and retain skilled management and other key employees;
- the ability to develop, secure and support technology and information systems that help effectively manage the risks we face (including cybersecurity risks);
- the risk of loss arising from failures or interruptions in our ongoing business operations, internal controls, information systems or other operating technologies;
- the ability to successfully manage new products and services; and
- the risk of loss arising from litigation filed against us or one or more other FHLBanks.

We do not undertake any obligation to update any forward-looking statements made in this document.

EXECUTIVE OVERVIEW

Recent Developments

Business Environment

During the first nine months of 2022, concerns about inflation and interest rate hikes by the Federal Reserve, continued economic pressures related to the COVID-19 pandemic and Russia's invasion of Ukraine, and the ensuing market volatility were dominant themes. Furthermore, the pandemic has caused lasting impacts on communities and businesses worldwide, including those in the Fifth District. Despite these challenges, we have continued to fulfill our mission of providing robust access to a key source of readily available and competitively priced wholesale funding to member financial institutions and supporting our commitment to affordable housing and community investment. We demonstrated our commitment to affordable housing with a \$3 million voluntary contribution to our Affordable Housing Program in the third quarter. Our capital and liquidity positions remained strong, as did our overall ability to fund operations through the issuance of Consolidated Obligations at acceptable interest costs. Additionally, overall residual credit risk exposure from our Credit Services, mortgage loan portfolio, investments, and derivative transactions has remained de minimis. We continue to monitor the changing economic landscape and effects of the COVID-19 pandemic and are committed to assisting members and their communities as impacts related to the pandemic continue to unfold.

Finance Agency Review of the FHLBank System

On July 20, 2022, Finance Agency Director Sandra Thompson testified to the House Financial Services Committee that the Finance Agency would conduct a review of the FHLBank System. On September 29, 2022, the Finance Agency kicked off this

review with a three-day listening session featuring oral comments from interested persons on the following six key areas: the FHLBanks' general mission and purpose in a changing marketplace; FHLBank organization, operational efficiency, and effectiveness; FHLBanks' role in promoting affordable, sustainable, equitable, and resilient housing and community investment; addressing the unique needs of rural and financially vulnerable communities; member products, services, and collateral requirements; and membership eligibility requirements. These sessions were followed by a request for written comments through October 31, 2022. At this time, it is not possible to determine when any future events or requests for comment will occur, whether any actions will result from these events or comments, and the extent to which those actions may impact us or the FHLBank System as a whole.

Financial Condition

Mission Assets and Activities

Primary Mission Assets (i.e., principal balances of Advances and mortgage loans held for portfolio) and Supplemental Mission Activities (i.e., Letters of Credit, Mandatory Delivery Contracts and standby bond purchase agreements) are the primary means by which we fulfill our mission with direct connections to members and what we refer to as Mission Assets and Activities. We regularly monitor our concentration of Mission Assets and Activities. One measure we use to assess mission achievement is our Primary Mission Asset ratio, which measures the sum of average Advances and mortgage loans as a percentage of average Consolidated Obligations (adjusted for certain high-quality liquid assets, as permitted by regulation). In the first nine months of 2022, the Primary Mission Asset ratio averaged 72 percent, slightly above the Finance Agency's preferred ratio of 70 percent. In assessing overall mission achievement, we also consider supplemental sources of Mission Assets and Activities, the most significant of which is Letters of Credit issued for the benefit of members.

The following table summarizes our Mission Assets and Activities.

(In millions)	Ending Balances			Average Balances		
	September 30,		December 31,	Nine Months Ended		Year Ended
	2022	2021	2021	September 30,	2021	December 31,
Primary Mission Assets ⁽¹⁾ :						
Advances	\$ 60,181	\$ 22,617	\$ 22,954	\$ 47,043	\$ 23,987	\$ 23,721
Mortgage loans held for portfolio	7,133	7,496	7,402	7,325	8,077	7,931
Total Primary Mission Assets	<u>\$ 67,314</u>	<u>\$ 30,113</u>	<u>\$ 30,356</u>	<u>\$ 54,368</u>	<u>\$ 32,064</u>	<u>\$ 31,652</u>
Supplemental Mission Activities ⁽²⁾ :						
Letters of Credit (notional)	\$ 39,002	\$ 33,454	\$ 34,637	\$ 35,957	\$ 33,861	\$ 33,922
Mandatory Delivery Contracts (notional)	22	265	250	54	251	249
Standby bond purchase agreements (notional)	11	28	27	16	31	31
Total Supplemental Mission Activities	<u>\$ 39,035</u>	<u>\$ 33,747</u>	<u>\$ 34,914</u>	<u>\$ 36,027</u>	<u>\$ 34,143</u>	<u>\$ 34,202</u>

(1) Amounts represent principal balances.

(2) Amounts represent off-balance sheet commitments.

Advance principal balances increased \$37.2 billion (162 percent) from year-end 2021. Additionally, average principal Advance balances for the nine months ended September 30, 2022 increased \$23.1 billion (96 percent) compared to the same period of 2021. The increase in Advances was primarily due to members' higher demand for liquidity, especially short-term Advances, in light of the increasing interest rate environment, certain members' deposit balances beginning to decline and escalating uncertainties in the financial markets. Advance demand may continue to rise as reductions in government liquidity programs or changes in the Federal Reserve monetary policy take place.

Advance balances are often volatile because of members' ability to quickly, normally on the same day, increase or decrease their amount of Advances. We believe that a key benefit of membership comes from our business model as a wholesale lender GSE, which provides members flexibility in their Advance funding levels and helps support their asset-liability management needs. We act as a readily available source of funding for our members. Our business model is designed to support significant changes in asset levels without having to undergo material changes in staffing, operations, risk practices, or general resource

needs. A key reason for this scalability is that our Capital Plan provides for additional capital when Advances grow and the opportunity for us to retire capital when Advances decline, thereby acting, along with our efficient level of operating expenses, to preserve competitive profitability.

The MPP principal balance declined \$0.3 billion (four percent) from the year-end 2021 balance, ending the third quarter of 2022 at \$7.1 billion. During the first nine months of 2022, we purchased \$0.7 billion of mortgage loans, while principal reductions were \$1.0 billion. Principal reductions in the first nine months of 2022 trended much lower than the reductions in 2021 reflecting the rise in mortgage rates.

Letters of Credit rose 13 percent compared to year-end 2021, ending the third quarter of 2022 at \$39.0 billion. Letters of Credit balances began increasing in the second half of 2020 and have remained strong primarily because of members using them to secure elevated levels of public unit deposits. We normally earn fees on Letters of Credit based on the actual average amount of the Letters utilized, which generally is less than the notional amount issued.

Investments

The balance of investments at September 30, 2022 was \$44.6 billion, an increase of \$15.2 billion (52 percent) from year-end 2021. At September 30, 2022, investments included \$16.0 billion of MBS and \$28.6 billion of other investments, which consisted primarily of highly-rated short-term instruments and longer-term U.S. Treasury and GSE obligations held for liquidity. All of our MBS held at September 30, 2022 were issued and guaranteed by Fannie Mae, Freddie Mac or Ginnie Mae.

Investments averaged \$37.4 billion in the first nine months of 2022, an increase of \$9.4 billion (34 percent) compared to the average during the same period of 2021, which was driven by higher liquidity investments and MBS. The ending and average balances of MBS rose given our increased authority to purchase MBS, which was a result of the higher regulatory capital balance in support of Advance borrowings. The majority of the \$6.6 billion of MBS purchased were variable-rate products indexed to the Secured Overnight Financing Rate (SOFR). The increases in average and ending liquidity investments were driven by holding more liquidity in light of the increased Advance demand, which has been concentrated in short-term Advances and somewhat volatile. Liquidity investments can vary significantly on a daily basis during times of volatility in Advance balances. We maintained a robust amount of asset liquidity throughout the first nine months of 2022 across a variety of liquidity measures, as discussed in the "Liquidity Risk" section of "Quantitative and Qualitative Disclosures About Risk Management."

Capital

Capital adequacy surpassed all minimum regulatory capital requirements in the first nine months of 2022. The GAAP and regulatory capital-to-assets ratios at September 30, 2022 were 5.14 percent and 5.36 percent, respectively. Both ratios exceeded the regulatory required minimum of four percent. Regulatory capital includes mandatorily redeemable capital stock accounted for as a liability under GAAP. GAAP and regulatory capital increased \$2.0 billion and \$2.2 billion, respectively, in the first nine months of 2022. The increase in capital was driven by purchases of capital stock to support Advance activity in the first nine months of 2022. Retained earnings totaled \$1.4 billion at September 30, 2022, an increase of five percent from year-end 2021. We believe the amount of retained earnings is sufficient to protect against members' impairment risk of their capital stock investment in the FHLB and to provide the opportunity to stabilize or increase future dividends.

Results of Operations

Overall Results

Our earnings over time reflect the combination of a stable business model and conservative management of risk. Key market driven factors that can cause significant periodic volatility in our profitability are changes in the level of interest rates, changes in spreads between benchmark interest rates and our short-term funding costs, recognition of net amortization from accelerated prepayments of mortgage assets, and fair value adjustments related to the use of derivatives and the associated hedged items. Our profitability may also be affected by our members' overall Advance demand, which is largely influenced by the monetary policies of the U.S. government and its agencies, including the Federal Reserve, and general economic conditions. The table below summarizes our results of operations.

(Dollars in millions)	Three Months Ended September 30,		Nine Months Ended September 30,		Year Ended December 31,
	2022	2021	2022	2021	2021
Net income	\$ 91	\$ 6	\$ 148	\$ 25	\$ 42
Affordable Housing Program assessments	10	1	17	3	5
Return on average equity (ROE)	6.43 %	0.60 %	3.99 %	0.85 %	1.08 %
Return on average assets	0.32	0.04	0.21	0.05	0.07
Weighted average dividend rate	5.00	2.00	3.50	2.00	2.00
Dividend payout ratio ⁽¹⁾	48.2	239.4	53.6	162.7	126.8
Average overnight interest rates ⁽²⁾	2.16	0.07	1.01	0.06	0.06
ROE spread to average overnight interest rates	4.27	0.53	2.98	0.79	1.02
Dividend rate spread to average overnight interest rates	2.84	1.93	2.49	1.94	1.94

(1) Dividend payout ratio is dividends declared in the period as a percentage of net income.

(2) Average overnight interest rates consist of SOFR and the Federal funds effective rate.

Net income increased \$85 million in the three-month comparison period and \$123 million in the nine-month comparison period. The increases in net income were primarily because of the rising interest rate environment and significantly higher average Advance balances. For example, higher average short-term interest rates increased the earnings generated from investing the FHLB's capital. Additionally, higher mortgage rates resulted in a lower volume of mortgage refinance activity, which reduced premium amortization. The increase in profitability in the year-to-date comparison period was partially offset by unrealized losses on certain derivatives and other financial instruments carried at fair value.

In the first nine months of 2022, we accrued \$17 million for the Affordable Housing Program (AHP) pool of funds, which will be available to members in 2023. In September 2022, our Board of Directors affirmed its commitment to affordable housing by electing to make a voluntary AHP contribution of \$3 million. This contribution will be distributed with our 2022 AHP pool of funds in order to increase access to affordable housing throughout the Fifth District. In addition to the required AHP assessment and the voluntary AHP contribution, we provided voluntary sponsorship of two other housing programs. These programs provided funds to cover accessibility and emergency repairs for special needs and elderly homeowners and funds for the replacement or repair of homes damaged or destroyed by natural disasters within the Fifth District.

In September 2022, we paid stockholders a quarterly dividend at a 5.00 percent annualized rate on their capital investment in our company, which is 2.84 percentage points above third quarter average overnight interest rates.

Effect of Interest Rate Environment

Trends in market interest rates and the resulting shapes of the market yield curves strongly influence our results of operations and profitability because of how they affect members' demand for Mission Assets and Activities, spreads on assets, funding costs and decisions in managing the tradeoffs in our market risk/return profile. The following table presents key market interest rates (obtained from Bloomberg L.P.).

	Nine Months Ended September 30,									
	Quarter 3 2022		Quarter 2 2022		Quarter 1 2022		2022	2021	Year 2021	
	Ending	Average	Ending	Average	Ending	Average	Average	Average	Ending	Average
Federal funds effective	3.08 %	2.18 %	1.58 %	0.77 %	0.33 %	0.12 %	1.03 %	0.08 %	0.07 %	0.08 %
SOFR	2.98	2.13	1.50	0.71	0.29	0.09	0.98	0.04	0.05	0.04
3-month LIBOR	3.75	2.99	2.29	1.51	0.96	0.51	1.68	0.16	0.21	0.16
2-year LIBOR	4.55	3.67	3.28	3.03	2.55	1.63	2.78	0.27	0.94	0.38
10-year LIBOR	3.88	3.15	3.09	2.99	2.41	2.01	2.72	1.42	1.58	1.45
2-year U.S. Treasury	4.28	3.36	2.96	2.71	2.34	1.43	2.51	0.17	0.73	0.26
10-year U.S. Treasury	3.83	3.08	3.02	2.92	2.34	1.93	2.65	1.40	1.51	1.43
15-year mortgage current coupon ⁽¹⁾	4.98	3.91	3.69	3.49	2.82	2.17	3.20	1.15	1.41	1.21
30-year mortgage current coupon ⁽¹⁾	5.68	4.53	4.38	4.16	3.49	2.83	3.85	1.78	2.07	1.84

(1) Current coupon rate of Fannie Mae par MBS indications.

The Federal Reserve has responded to inflationary concerns by increasing the target overnight Federal funds rate and indicating further expected rate hikes. At September 30, 2022 the target overnight Federal funds rate was in the range of 3.00 to 3.25 percent, a significant increase from the range of 1.50 to 1.75 percent at June 30, 2022. In November 2022, the Federal Reserve increased the target overnight Federal funds rate by 0.75 percent to a range of 3.75 to 4.00 percent.

Average overnight rates were approximately 95 basis points higher in the first nine months of 2022 compared to the same period of 2021, while average mortgage rates increased approximately 205 basis points. The substantial increase in mortgage rates in the first nine months of 2022 benefited net income as it resulted in fewer homeowners refinancing, which decreased the amount of principal prepayments and lowered the associated premium amortization. Additionally, the increase in short-term rates improved our earnings from capital by \$30 million and \$38 million in the three and nine months ended September 30, 2022, respectively.

During the first nine months of 2022, and all of 2021, the market risk exposure to changing interest rates was moderate overall and well within policy limits. We believe that longer-term profitability will be competitive, unless interest rates were to further increase significantly for a sustained period of time. In the short-term, profitability could begin to decrease if long-term interest rates decline more than 200 basis points, leading to modestly faster prepayments of mortgage assets.

Regulatory and Legislative Developments

For the quarterly period ended September 30, 2022, there were no significant regulatory and legislative actions and developments not previously disclosed.

LIBOR Transition Update

We are planning for the replacement of LIBOR and the establishment of SOFR as the recommended alternative to LIBOR. Under the July 2017 and March 2021 announcements by the United Kingdom's Financial Conduct Authority (FCA), the one-week and two-month U.S. dollar LIBOR settings ceased to be provided by any administrator and were no longer representative as of January 1, 2022. The remaining U.S. dollar LIBOR settings will either cease to be provided by any administrator or no longer be representative immediately after June 30, 2023. Although the FCA does not expect these remaining LIBOR settings to become unrepresentative before the cessation date, there is no assurance that any of them will continue to be published or be representative through any particular date.

In March 2022, the Adjustable Interest Rate (LIBOR) Act (LIBOR Act) was signed into law. The LIBOR Act provides a national, uniform approach to legacy contracts with inadequate or unworkable fallback provisions commencing from the LIBOR replacement date. For relevant contracts, the LIBOR Act will automatically impose a rate selected by the Federal Reserve Board based upon SOFR including any applicable tenor spread adjustment. The legislation also includes a safe harbor against liability for parties with contractual discretion who choose the Federal Reserve Board's SOFR-based rate to replace LIBOR. In July 2022, the Federal Reserve Board published a proposed rule that would implement the LIBOR Act. For example, the proposed rule identifies separate Federal Reserve Board-selected replacement rates for derivatives transactions, covered GSE contracts, and all other covered contracts. The proposed rule defines covered GSE contracts to include FHLBank Advances. We are reviewing the proposed rule, including the impact it may have on the fallback language we added to our Advance contracts noted below; however, it is not possible to determine the extent to which the rule will be adopted as proposed and, as a result, the impact the final rule may have.

In preparation for the replacement of LIBOR, we have developed and implemented a LIBOR transition plan to remediate our LIBOR-linked financial instruments and contracts. We have added or adjusted fallback language for our Advances and have worked with our counterparties to address over-the-counter derivative agreements referencing U.S. dollar LIBOR as part of our LIBOR transition efforts. As the market activity in SOFR-linked financial instruments has continued to develop, we have offered SOFR-linked Consolidated Obligations and SOFR-linked Advances on an ongoing basis. In addition, we have been using SOFR-based derivatives to manage interest-rate risk, purchasing SOFR-linked MBS, and converting certain LIBOR-based derivatives to SOFR. We expect to continue to convert certain LIBOR-based derivatives, in particular those with maturities after June 30, 2023, to an alternative reference rate prior to the cessation of LIBOR. Collectively, we believe these efforts have reduced our LIBOR exposure and have kept us on track for the full replacement of LIBOR.

The following table presents our remaining LIBOR-indexed Advances, investment securities and derivatives at September 30, 2022. At September 30, 2022, all of our variable rate Consolidated Obligations were linked to SOFR.

(In millions)	Maturing on or before June 30, 2023	Maturing after June 30, 2023
LIBOR-Indexed Variable Rate Financial Instruments		
Advances by redemption term	\$ 103	\$ 3,007
MBS by contractual maturity ⁽¹⁾	—	3,810
Total principal amount	\$ 103	\$ 6,817
Derivatives, notional amount by termination date	\$ 313	\$ 338

(1) MBS are presented by contractual maturity; however, their expected maturities will likely differ from contractual maturities as borrowers may have the right to call or prepay obligations with or without call or prepayment fees.

The market transition away from LIBOR towards SOFR is complicated, including the possible development of term structures and credit adjustments to accommodate differences between LIBOR and SOFR and the potential introduction of other alternative reference rates. However, we believe our LIBOR transition plan has positioned us for the full replacement of LIBOR and has reduced the risk of adverse effects the transition may have on our business.

ANALYSIS OF FINANCIAL CONDITION

Credit Services

Credit Activity and Advance Composition

The table below shows trends in Advance balances by major programs and in the notional amount of Letters of Credit.

(Dollars in millions)	September 30, 2022		June 30, 2022		March 31, 2022		December 31, 2021	
	Balance	Percent ⁽¹⁾	Balance	Percent ⁽¹⁾	Balance	Percent ⁽¹⁾	Balance	Percent ⁽¹⁾
Adjustable/Variable-Rate Indexed:								
LIBOR	\$ 3,110	5 %	\$ 3,292	6 %	\$ 3,292	10 %	\$ 3,295	14 %
SOFR	11,864	20	7,169	13	426	1	123	1
Other	3,733	6	2,855	5	174	1	163	1
Total	18,707	31	13,316	24	3,892	12	3,581	16
Fixed-Rate:								
Repurchase based (REPO)	20,018	33	24,852	44	14,496	43	3,980	17
Regular Fixed-Rate	15,941	27	13,061	23	9,656	29	9,773	42
Putable ⁽²⁾	1,450	2	1,240	2	2,342	7	2,467	11
Amortizing/Mortgage Matched	1,399	2	1,433	3	1,464	4	1,533	7
Other	2,666	5	2,100	4	1,800	5	1,620	7
Total	41,474	69	42,686	76	29,758	88	19,373	84
Total Advances Principal	<u>\$60,181</u>	<u>100 %</u>	<u>\$56,002</u>	<u>100 %</u>	<u>\$33,650</u>	<u>100 %</u>	<u>\$22,954</u>	<u>100 %</u>
Letters of Credit (notional) ⁽³⁾	<u>\$39,002</u>		<u>\$37,009</u>		<u>\$33,813</u>		<u>\$34,637</u>	

(1) As a percentage of total Advances principal.

(2) Excludes Putable Advances where the related put options have expired or where the Advance is indexed to a variable-rate. These Advances are classified based on their current terms.

(3) Represents the amount of an off-balance sheet obligation.

Advance principal balances at September 30, 2022 increased 162 percent compared to year-end 2021. Members' demand for Advances accelerated quickly in the first nine months of 2022. Demand increased as interest rates rose, some members' deposit balances began to decline and overall uncertainty in the financial markets escalated. Although Advance balances have increased, much of the demand has been for short-term Advances, which are often volatile as members' funding needs may change quickly. The future levels of Advance balances will depend on many factors, including but not limited to, changes in interest rates, governmental stimulus actions, and changes in the Federal Reserve's monetary policy.

Letters of Credit are issued on behalf of members to support certain obligations of members (or members' customers) to third-party beneficiaries. Letters of Credit were elevated throughout 2021 and balances have remained high through the first nine months of 2022 as members continue to primarily use them to secure higher levels of public unit deposits. Letters of Credit usually expire without being drawn upon.

Advance Usage

In addition to analyzing Advance balances by dollar trends, we monitor the degree to which members use Advances to fund their balance sheets. The following table shows the unweighted, average ratio of each member's Advance balance to its most-recently available figures for total assets.

	September 30, 2022	December 31, 2021
<u>Average Advances-to-assets for members</u>		
Assets less than \$1.0 billion (491 members)	1.93 %	1.46 %
Assets over \$1.0 billion (127 members)	2.86	1.50
All members	2.12	1.47

The following tables present principal balances for the five members with the largest Advance borrowings.

(Dollars in millions)

September 30, 2022			December 31, 2021		
Name	Principal Amount of Advances	Percent of Total Principal Amount of Advances	Name	Principal Amount of Advances	Percent of Total Principal Amount of Advances
U.S. Bank, N.A.	\$ 13,592	23 %	U.S. Bank, N.A.	\$ 3,272	14 %
Keybank National Association	10,347	17	Third Federal Savings and Loan Association	3,179	14
Fifth Third Bank	5,751	10	Protective Life Insurance Company	2,800	12
Third Federal Savings and Loan Association	4,562	8	Nationwide Life Insurance Company	2,702	12
Protective Life Insurance Company	3,400	6	Western-Southern Life Assurance Co.	1,487	6
Total of Top 5	<u>\$ 37,652</u>	<u>64 %</u>	Total of Top 5	<u>\$ 13,440</u>	<u>58 %</u>

We believe that having large financial institutions that actively use our products augments the value of membership to all members. For example, such activity improves our operating efficiency, increases our earnings and thereby contributions to housing and community investment programs. This activity may enable us to obtain more favorable funding costs, and helps us maintain competitively priced products.

Mortgage Loans Held for Portfolio (Mortgage Purchase Program, or MPP)

The table below shows principal purchases and reductions of loans in the MPP for the first nine months of 2022. All loans acquired in the first nine months of 2022 were conventional loans.

(In millions)	MPP Principal
Balance at December 31, 2021	\$ 7,402
Principal purchases	672
Principal reductions	(941)
Balance at September 30, 2022	<u>\$ 7,133</u>

We closely track the refinancing incentives of our mortgage assets (including loans in the MPP and MBS) because the option for homeowners to change their principal payments normally represents the largest portion of our market risk exposure and can affect MPP balances. MPP principal paydowns decreased in the first nine months of 2022 to a 13 percent annual constant prepayment rate, compared to the 34 percent rate for all of 2021, driven by the sharp increase in mortgage rates. Likewise, the increase in mortgage rates substantially slowed the purchases of new MPP loans in the first nine months of 2022.

Overall, MPP yields on new purchases and existing portfolio balances, relative to their market and credit risks, are expected to continue to generate a profitable long-term return.

Investments

The table below presents the ending and average balances of our investment portfolio.

(In millions)	Nine Months Ended September 30, 2022		Year Ended December 31, 2021	
	Ending Balance	Average Balance	Ending Balance	Average Balance
Liquidity investments	\$ 28,632	\$ 24,271	\$ 18,589	\$ 18,576
MBS	15,978	12,675	10,803	9,186
Other investments ⁽¹⁾	—	414	—	340
Total investments	<u>\$ 44,610</u>	<u>\$ 37,360</u>	<u>\$ 29,392</u>	<u>\$ 28,102</u>

(1) The average balance includes the rights or obligations to cash collateral, which are included in the fair value of derivative assets or derivative liabilities on the Statements of Condition at period end.

Liquidity investments are either short-term (primarily overnight), or longer-term investments that can be easily sold and converted to cash. Under our regulatory requirements, liquidity includes certain high-quality liquid assets, which are defined as uncommitted U.S. Treasury obligations with remaining maturities of 10 years or less held as trading securities or available-for-sale securities. It is normal for liquidity investments to vary by up to several billion dollars on a daily basis. Liquidity investment levels can vary significantly based on changes in the amount of actual Advances, anticipated demand for Advances, regulatory liquidity requirements, the availability of acceptable net spreads, and the number of eligible counterparties that meet our unsecured credit risk criteria. The ending balance of liquidity investments at September 30, 2022 grew \$10.0 billion (54 percent) compared to the balance at year-end 2021 because of additional liquidity investments being held in light of the increased level and volatility of Advance demand as previously described.

Our overarching strategy for balances of MBS is to keep holdings as close as possible to the regulatory maximum. Finance Agency regulations prohibit us from purchasing MBS if our investment in these securities exceeds three times regulatory capital on the day we intend to purchase the securities. The ratio of MBS to regulatory capital was 2.69 at September 30, 2022, which has increased throughout 2022 given we have purchased \$6.6 billion of MBS. However, the MBS ratio was still slightly below our preference to hold it near the three times regulatory maximum primarily because of the rapid increase in regulatory capital as we issued \$4.5 billion of capital stock to members in support of Advance borrowings in the first nine months of 2022.

The balance of MBS at September 30, 2022 consisted of \$14.7 billion of securities issued by Fannie Mae or Freddie Mac (of which \$12.1 billion were floating-rate securities), and \$1.3 billion of securities issued by Ginnie Mae (which are primarily fixed rate).

The table below shows principal purchases and paydowns of our MBS for the first nine months of 2022. The majority of the purchases were variable-rate MBS linked to SOFR.

(In millions)	MBS Principal
Balance at December 31, 2021	\$ 10,795
Principal purchases	6,646
Principal paydowns	(1,243)
Balance at September 30, 2022	<u>\$ 16,198</u>

As mortgage rates rose in the first nine months of 2022, MBS principal paydowns decreased to a 13 percent annual constant prepayment rate from the 26 percent rate experienced in all of 2021.

Consolidated Obligations

We fund variable-rate assets with Discount Notes (a portion of which may be swapped), adjustable-rate Bonds, and swapped fixed-rate Bonds because they give us the ability to effectively match the underlying rate reset periods embedded in these assets. The balances and composition of our Consolidated Obligations tend to fluctuate with changes in the balances and composition of our assets. In addition, changes in the amount and composition of our funding may be necessary from time to time to meet the days of positive liquidity and asset/liability maturity funding gap requirements discussed in the "Liquidity Risk" section of "Quantitative and Qualitative Disclosures About Risk Management."

The table below presents the ending and average balances of our participations in Consolidated Obligations.

(In millions)	Nine Months Ended September 30, 2022		Year Ended December 31, 2021	
	Ending Balance	Average Balance	Ending Balance	Average Balance
Discount Notes:				
Unswapped	\$ 22,287	\$ 25,790	\$ 19,418	\$ 22,933
Swapped	29,001	20,368	10,426	3,156
Total par Discount Notes	51,288	46,158	29,844	26,089
Other items ⁽¹⁾	(265)	(125)	(6)	(1)
Total Discount Notes	51,023	46,033	29,838	26,088
Bonds:				
Unswapped fixed-rate	13,458	14,295	16,112	18,840
Unswapped adjustable-rate ⁽²⁾	30,700	17,121	850	6,710
Swapped fixed-rate	8,355	6,573	7,627	2,737
Total par Bonds	52,513	37,989	24,589	28,287
Other items ⁽¹⁾	(86)	(17)	13	24
Total Bonds	52,427	37,972	24,602	28,311
Total Consolidated Obligations ⁽³⁾	<u>\$ 103,450</u>	<u>\$ 84,005</u>	<u>\$ 54,440</u>	<u>\$ 54,399</u>

(1) Includes unamortized premiums/discounts, fair value option valuation adjustments, hedging and other basis adjustments.

(2) At September 30, 2022 and December 31, 2021, all unswapped adjustable-rate Bonds were indexed to SOFR.

(3) The 11 FHLBanks have joint and several liability for the par amount of all of the Consolidated Obligations issued on their behalves. The par amount of the outstanding Consolidated Obligations for all of the FHLBanks was (in millions) \$1,031,910 and \$652,862 at September 30, 2022 and December 31, 2021, respectively.

The balances of Discount Notes and unswapped adjustable-rate Bonds in the first nine months of 2022 were higher compared to the balances at year-end 2021 primarily due to growth in short-term and variable-rate Advances during the first nine months of 2022 as some members sought funding given the rise in interest rates, the decline in some members' deposit balances and escalating uncertainties in the financial markets.

The ending and average balances of swapped Discount Notes at September 30, 2022 were higher than year-end 2021 because the market environment in the first nine months of 2022 has generally favored swapped debt. We swap term Discount Notes and fixed-rate bonds to adjustable-rates in order to match the underlying rate reset periods to the assets the Discount Notes and Bonds are funding, as well as to reduce the repricing risk of Discount Notes.

Deposits

Total deposits with us are normally a relatively minor source of low-cost funding. Total interest-bearing deposits at September 30, 2022 were \$1.2 billion, a decrease of \$0.2 billion compared to the balance at year-end 2021.

Derivatives Hedging Activity and Liquidity

Our use of derivatives is discussed in the "Effect of the Use of Derivatives on Net Interest Income" and "Non-Interest Income (Loss)" sections in "Results of Operations." Liquidity is discussed in the "Liquidity Risk" section in "Quantitative and Qualitative Disclosures About Risk Management."

Capital Resources

The following tables present capital amounts and capital-to-assets ratios, on both a GAAP and regulatory basis. We consider the regulatory ratio to be a better representation of financial leverage than the GAAP ratio because, although the GAAP ratio treats mandatorily redeemable capital stock as a liability, it protects investors in our debt in the same manner as GAAP capital stock and retained earnings.

(In millions)	Nine Months Ended		Year Ended	
	September 30, 2022		December 31, 2021	
	Period End	Average	Period End	Average
<u>GAAP and Regulatory Capital</u>				
GAAP Capital Stock	\$ 4,463	\$ 3,643	\$ 2,490	\$ 2,585
Mandatorily Redeemable Capital Stock	198	131	21	19
Regulatory Capital Stock	4,661	3,774	2,511	2,604
Retained Earnings	1,361	1,318	1,293	1,304
Regulatory Capital	<u>\$ 6,022</u>	<u>\$ 5,092</u>	<u>\$ 3,804</u>	<u>\$ 3,908</u>
	Nine Months Ended		Year Ended	
	September 30, 2022		December 31, 2021	
	Period End	Average	Period End	Average
<u>GAAP and Regulatory Capital-to-Assets Ratio</u>				
GAAP	5.14 %	5.36 %	6.26 %	6.40 %
Regulatory ⁽¹⁾	5.36	5.52	6.28	6.44

(1) At all times, the FHLB must maintain at least a four percent minimum regulatory capital-to-assets ratio.

Our business model is structured to be able to absorb sharp changes in assets because we can execute commensurate changes in liability and capital stock balances. For example, in the first nine months of 2022, we issued \$4.5 billion of capital stock to members in support of Advance borrowings, some of which were repaid prior to September 30, 2022. As such, certain members requested the redemption of \$2.4 billion of capital stock that was no longer required to support Advance borrowings. These redemptions requests were reclassified to mandatorily redeemable capital stock, most of which were subsequently redeemed in the first nine months of 2022.

A portion of our capital stock is excess, meaning it is not required as a condition to being a member and is not currently capitalizing Mission Assets and Activities. Excess capital stock provides a base of capital to manage financial leverage at prudent levels, augments loss protections for bondholders, and may be used to capitalize a portion of growth in Mission Assets and Activities. At September 30, 2022, the amount of excess stock, as defined by our Capital Plan, was \$856 million, an increase of \$430 million compared to the balance at year-end 2021. The balance of excess stock increased in the first nine months of 2022 given the volatility in short-term Advance borrowings.

See the "Capital Adequacy" section in "Quantitative and Qualitative Disclosures About Risk Management" for discussion of our retained earnings.

Membership and Stockholders

In the first nine months of 2022, we added five new member stockholders and lost five member stockholders, ending the quarter at 618 member stockholders. Of the five members lost, three merged with other Fifth District members and the other two merged out of district.

RESULTS OF OPERATIONS

Components of Earnings and Return on Equity

The following table is a summary income statement for the three and nine months ended September 30, 2022 and 2021. Each ROE percentage is computed by dividing income or expense for the category by the average amount of stockholders' equity for the period.

(Dollars in millions)	Three Months Ended September 30,				Nine Months Ended September 30,			
	2022		2021		2022		2021	
	Amount	ROE ⁽¹⁾	Amount	ROE ⁽¹⁾	Amount	ROE ⁽¹⁾	Amount	ROE ⁽¹⁾
Net interest income	\$ 141	10.03 %	\$ 64	6.60 %	\$ 294	7.94 %	\$ 206	7.01 %
Non-interest income (loss):								
Net gains (losses) on investment securities	(89)	(6.33)	(50)	(5.23)	(337)	(9.12)	(205)	(6.97)
Net gains (losses) on derivatives	26	1.89	6	0.61	144	3.89	67	2.28
Net gains (losses) on financial instruments held under fair value option	42	2.96	1	0.14	121	3.28	8	0.26
Other non-interest income, net	7	0.48	7	0.72	21	0.56	20	0.69
Total non-interest income (loss)	(14)	(1.00)	(36)	(3.76)	(51)	(1.39)	(110)	(3.74)
Total income	127	9.03	28	2.84	243	6.55	96	3.27
Non-interest expense	26	1.87	21	2.17	78	2.11	68	2.33
Affordable Housing Program assessments	10	0.73	1	0.07	17	0.45	3	0.09
Net income	<u>\$ 91</u>	<u>6.43 %</u>	<u>\$ 6</u>	<u>0.60 %</u>	<u>\$ 148</u>	<u>3.99 %</u>	<u>\$ 25</u>	<u>0.85 %</u>

(1) The ROE amounts have been computed using dollars in thousands. Accordingly, recalculations based upon the disclosed amounts in millions may produce nominally different results.

Details on the individual factors contributing to the level and changes in profitability are explained in the sections below.

Net Interest Income

Components of Net Interest Income

The following table shows selected components of net interest income.

(Dollars in millions)	Three Months Ended September 30,				Nine Months Ended September 30,			
	2022		2021		2022		2021	
	Amount	% of Earning Assets	Amount	% of Earning Assets	Amount	% of Earning Assets	Amount	% of Earning Assets
Components of net interest rate spread:								
Net (amortization)/accretion ^{(1) (2)}	\$ (7)	(0.02)%	\$ (19)	(0.13)%	\$ (25)	(0.04)%	\$ (75)	(0.17)%
Prepayment fees on Advances, net ⁽²⁾	—	—	2	0.01	3	0.01	9	0.02
Other components of net interest rate spread	111	0.40	74	0.51	257	0.37	251	0.56
Total net interest rate spread	104	0.38	57	0.39	235	0.34	185	0.41
Earnings from funding assets with interest-free capital	37	0.12	7	0.05	59	0.09	21	0.05
Total net interest income/net interest margin ⁽³⁾	\$ 141	0.50 %	\$ 64	0.44 %	\$ 294	0.43 %	\$ 206	0.46 %

(1) Includes monthly recognition of premiums and discounts paid on purchases of mortgage assets, premiums, discounts and concessions paid on Consolidated Obligations and other hedging basis adjustments.

(2) This component of net interest rate spread has been segregated to display its relative impact.

(3) Net interest margin is net interest income as a percentage of average total interest-earning assets.

Net Amortization/Accretion (generally referred to as "amortization"): Net amortization can become substantial and volatile with changes in interest rates. When mortgage rates decrease, premium amortization of mortgage assets generally increases, which reduces net interest income. In the three and nine months ended September 30, 2022, mortgage rates increased rapidly and reduced mortgage refinance activity, which decreased net amortization. Net amortization was higher in the 2021 periods given the historically low mortgage rates that existed at the end of 2020 and continued into the first half of 2021.

Prepayment Fees on Advances: Fees for members' early repayment of certain Advances, which are included in net interest income, are designed to make us economically indifferent to whether members hold Advances to maturity or repay them before maturity. Advance prepayment fees were minimal in the three and nine months ended September 30, 2022.

Other Components of Net Interest Rate Spread: The total other components of net interest rate spread increased \$37 million and \$6 million in the three- and nine-months comparisons periods, respectively. The net increases were primarily due to the factors below.

Nine-Months Comparison

- **Higher average Advance balances-Favorable:** The \$22.7 billion increase in the average balance of Advances improved net interest income by an estimated \$54 million.
- **Higher spreads earned on mortgage assets-Favorable:** Higher spreads on the mortgage assets portfolio increased net interest income by an estimated \$27 million. Spreads improved primarily because of the rising interest rate environment.
- **Higher average balances of investments-Favorable:** Increases of \$3.7 billion in average MBS and \$5.6 billion in average liquidity investment balances improved net interest income by an estimated \$12 million.
- **Lower spreads on shorter-term and floating-rate assets-Unfavorable:** Lower spreads on shorter-term and floating-rate assets (including those that have been swapped to a floating rate) decreased net interest income by an estimated \$81 million. However, the decrease in net interest income was mostly offset by lower non-interest losses primarily because of a \$79 million decline in the net interest settlements being paid on related derivatives not receiving hedge accounting.
- **Higher interest paid on mandatorily redeemable capital stock-Unfavorable:** Interest paid on mandatorily redeemable capital stock was higher by \$4 million. The interest expense increased due to higher average dividend rates

paid and a higher average balance of mandatorily redeemable capital stock driven by members requesting the redemption of capital stock no longer supporting Advance borrowings.

- **Lower average balances of mortgage loans held for portfolio-*Unfavorable*:** The \$0.8 billion decrease in the average balance of mortgage loans held for portfolio lowered net interest income by an estimated \$4 million. Mortgage balances declined because of the acceleration of principal cash flows driven by historically low mortgage interest rates in 2021.

Three-Months Comparison

Although the lower spreads on shorter-term and floating-rate investments was less significant in the three-months comparison, the same factors generally affected the other components of net interest rate spread as in the nine-months comparison and by approximately the same relative magnitude.

Earnings from Capital: Earnings from capital increased \$30 million and \$38 million in the three- and nine-months comparison periods, respectively, primarily because of the significantly higher average short-term interest rates.

Average Balance Sheet and Rates

The following tables provide average balances and rates for major balance sheet accounts, which determine the changes in net interest rate spreads. Interest amounts and average rates are affected by our use of derivatives and the related accounting elections we make. Interest amounts reported for Advances, MBS, Other investments and Swapped Bonds include gains (losses) on hedged items and derivatives in qualifying fair value hedge relationships.

In addition, the net interest settlements of interest receivables or payables associated with derivatives in a fair value hedge relationship are included in net interest income and interest rate spread. However, if the derivatives do not qualify for fair value hedge accounting, the related net interest settlements of interest receivables or payables are recorded in “Non-interest income (loss)” as “Net gains (losses) on derivatives” and therefore are excluded from the calculation of net interest rate spread. Amortization associated with some hedging-related basis adjustments is also reflected in net interest income, which affects interest rate spread.

(Dollars in millions)

	Three Months Ended September 30, 2022			Three Months Ended September 30, 2021		
	Average Balance	Interest	Average Rate ⁽¹⁾	Average Balance	Interest	Average Rate ⁽¹⁾
Assets:						
Advances	\$ 63,265	\$ 382	2.39 %	\$ 22,538	\$ 33	0.58 %
Mortgage loans held for portfolio ⁽²⁾	7,358	52	2.79	7,646	43	2.21
Federal funds sold and securities purchased under resale agreements	15,360	85	2.20	7,007	1	0.09
Interest-bearing deposits in banks ⁽³⁾	1,509	8	2.01	701	—	0.09
MBS ⁽⁴⁾	14,378	79	2.20	8,734	24	1.09
Other investments ⁽⁴⁾	9,685	62	2.55	11,013	49	1.78
Loans to other FHLBanks	16	—	2.36	—	—	—
Total interest-earning assets	111,571	668	2.38	57,639	150	1.03
Other assets	565			410		
Total assets	<u>\$ 112,136</u>			<u>\$ 58,049</u>		
Liabilities and Capital:						
Term deposits	\$ 70	—	1.47	\$ 76	—	0.17
Other interest bearing deposits ⁽³⁾	1,191	6	1.80	1,474	—	0.02
Discount Notes	59,180	282	1.89	22,910	2	0.05
Unswapped fixed-rate Bonds	13,467	70	2.06	20,496	81	1.56
Unswapped adjustable-rate Bonds	22,556	127	2.24	5,850	1	0.07
Swapped Bonds	7,883	40	2.01	2,520	2	0.31
Mandatorily redeemable capital stock	168	2	5.55	14	—	2.01
Other borrowings	—	—	3.33	1	—	—
Total interest-bearing liabilities	104,515	527	2.00	53,341	86	0.64
Other liabilities	2,020			865		
Total capital	5,601			3,843		
Total liabilities and capital	<u>\$ 112,136</u>			<u>\$ 58,049</u>		
Net interest rate spread			<u>0.38 %</u>			<u>0.39 %</u>
Net interest income and net interest margin ⁽⁵⁾		<u>\$ 141</u>	<u>0.50 %</u>		<u>\$ 64</u>	<u>0.44 %</u>
Average interest-earning assets to interest-bearing liabilities			<u>106.75 %</u>			<u>108.06 %</u>

(1) Amounts used to calculate average rates are based on dollars in thousands. Accordingly, recalculations based upon the disclosed amounts in millions may not produce the same results.

(2) Non-accrual loans are included in average balances used to determine average rate.

(3) The average balance amounts include the rights or obligations to cash collateral, which are included in the fair value of derivative assets or derivative liabilities on the Statements of Condition at period end.

(4) Includes available-for-sale securities based on their amortized costs. The yield information does not give effect to changes in fair value that are reflected as a component of stockholders' equity for available-for-sale securities.

(5) Net interest margin is net interest income as a percentage of average total interest-earning assets.

(Dollars in millions)

	Nine Months Ended September 30, 2022			Nine Months Ended September 30, 2021		
	Average Balance	Interest	Average Rate ⁽¹⁾	Average Balance	Interest	Average Rate ⁽¹⁾
Assets:						
Advances	\$ 46,920	\$ 551	1.57 %	\$ 24,236	\$ 112	0.62 %
Mortgage loans held for portfolio ⁽²⁾	7,496	151	2.70	8,279	125	2.02
Federal funds sold and securities purchased under resale agreements	13,003	112	1.15	7,622	4	0.08
Interest-bearing deposits in banks ⁽³⁾	1,159	10	1.13	747	1	0.10
MBS ⁽⁴⁾	12,691	141	1.49	8,961	79	1.17
Other investments ⁽⁴⁾	10,513	148	1.88	10,606	162	2.04
Loans to other FHLBanks	17	—	1.68	—	—	—
Total interest-earning assets	91,799	1,113	1.62	60,451	483	1.07
Other assets	485			545		
Total assets	<u>\$ 92,284</u>			<u>\$ 60,996</u>		
Liabilities and Capital:						
Term deposits	\$ 79	1	0.69	\$ 87	—	0.25
Other interest bearing deposits ⁽³⁾	1,408	7	0.68	1,417	—	0.02
Discount Notes	46,033	376	1.09	25,108	10	0.05
Unswapped fixed-rate Bonds	14,304	210	1.97	19,658	252	1.71
Unswapped adjustable-rate Bonds	17,121	163	1.27	8,154	5	0.07
Swapped Bonds	6,547	58	1.18	1,761	10	0.78
Mandatorily redeemable capital stock	131	4	4.10	18	—	2.00
Other borrowings	—	—	2.27	—	—	—
Total interest-bearing liabilities	85,623	819	1.28	56,203	277	0.66
Other liabilities	1,717			864		
Total capital	4,944			3,929		
Total liabilities and capital	<u>\$ 92,284</u>			<u>\$ 60,996</u>		
Net interest rate spread			<u>0.34 %</u>			<u>0.41 %</u>
Net interest income and net interest margin ⁽⁵⁾		<u>\$ 294</u>	<u>0.43 %</u>		<u>\$ 206</u>	<u>0.46 %</u>
Average interest-earning assets to interest-bearing liabilities			<u>107.21 %</u>			<u>107.56 %</u>

(1) Amounts used to calculate average rates are based on dollars in thousands. Accordingly, recalculations based upon the disclosed amounts in millions may not produce the same results.

(2) Non-accrual loans are included in average balances used to determine average rate.

(3) The average balance amounts include the rights or obligations to cash collateral, which are included in the fair value of derivative assets or derivative liabilities on the Statements of Condition at period end.

(4) Includes available-for-sale securities based on their amortized costs. The yield information does not give effect to changes in fair value that are reflected as a component of stockholders' equity for available-for-sale securities.

(5) Net interest margin is net interest income as a percentage of average total interest-earning assets.

Rates and corresponding levels of interest income and expense on most of our interest-bearing assets and liabilities increased in the three and nine months ended September 30, 2022 compared to the same periods of 2021 as these assets and liabilities have repriced to the higher interest rates.

Volume/Rate Analysis

Changes in both average balances (volume) and interest rates influence changes in net interest income, as shown in the following table.

(In millions)	Three Months Ended September 30, 2022 over 2021			Nine Months Ended September 30, 2022 over 2021		
	Volume ⁽¹⁾⁽³⁾	Rate ⁽²⁾⁽³⁾	Total	Volume ⁽¹⁾⁽³⁾	Rate ⁽²⁾⁽³⁾	Total
Increase (decrease) in interest income						
Advances	\$ 128	\$ 221	\$ 349	\$ 166	\$ 273	\$ 439
Mortgage loans held for portfolio	(2)	11	9	(13)	39	26
Federal funds sold and securities purchased under resale agreements	4	80	84	6	102	108
Interest-bearing deposits in banks	1	7	8	—	9	9
MBS	21	34	55	38	24	62
Other investments	(6)	19	13	(1)	(13)	(14)
Loans to other FHLBanks	—	—	—	—	—	—
Total	146	372	518	196	434	630
Increase (decrease) in interest expense						
Term deposits	—	—	—	—	1	1
Other interest-bearing deposits	—	6	6	—	7	7
Discount Notes	11	269	280	15	351	366
Unswapped fixed-rate Bonds	(32)	21	(11)	(75)	33	(42)
Unswapped adjustable-rate Bonds	10	116	126	10	148	158
Swapped Bonds	11	27	38	40	8	48
Mandatorily redeemable capital stock	2	—	2	3	1	4
Other borrowings	—	—	—	—	—	—
Total	2	439	441	(7)	549	542
Increase (decrease) in net interest income	\$ 144	\$ (67)	\$ 77	\$ 203	\$ (115)	\$ 88

(1) Volume changes are calculated as the change in volume multiplied by the prior year rate.

(2) Rate changes are calculated as the change in rate multiplied by the prior year average balance.

(3) Changes that are not identifiable as either volume-related or rate-related, but rather are equally attributable to both volume and rate changes, have been allocated to the volume and rate categories based upon the proportion of the absolute value of the volume and rate changes.

Effect of the Use of Derivatives on Net Interest Income

The following table shows the impact on net interest income from the effect of derivatives and hedging activities. As noted above, gains (losses) on hedged items and derivatives in qualifying fair value hedge relationships are recorded in interest income or expense. In addition, for derivatives designated as a fair value hedge, the net interest settlements of interest receivables or payables related to such derivatives are recognized as adjustments to the interest income or expense of the designated hedged item. As such, all the effects on earnings of derivatives qualifying for fair value hedge accounting are reflected in net interest income. The effect on earnings from derivatives not receiving fair value hedge accounting is provided in the “Non-Interest Income (Loss)” section below.

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Advances:				
Gains (losses) on designated fair value hedges	\$ 4	\$ (1)	\$ 8	\$ —
Net interest settlements included in net interest income	10	(25)	(24)	(86)
Investment securities:				
Amortization of hedging activities in net interest income	—	—	(1)	—
Gains (losses) on designated fair value hedges	(5)	—	(6)	—
Net interest settlements included in net interest income	14	(6)	(10)	(10)
Mortgage loans:				
Amortization of derivative fair value adjustments in net interest income	—	(2)	(2)	(10)
Consolidated Obligation Bonds:				
Net interest settlements included in net interest income	(1)	—	1	1
Increase (decrease) to net interest income	<u>\$ 22</u>	<u>\$ (34)</u>	<u>\$ (34)</u>	<u>\$ (105)</u>

Most of our use of derivatives is to synthetically convert the fixed interest rates on certain Advances, investments and Consolidated Obligations to adjustable rates tied to an eligible benchmark rate (e.g., the Federal funds effective rate or SOFR). The sharp increases in short-term interest rates benefited both the three and nine months ended September 30, 2022 as the conversion of certain Advances' and investments' fixed interest rates to adjustable-coupon rates resulted in net interest settlements being received rather than paid beginning in the third quarter. The fluctuation in earnings from the use of derivatives was acceptable because it enabled us to lower market risk exposure by matching actual cash flows between assets and liabilities more closely and efficiently than would otherwise occur.

Non-Interest Income (Loss)

Non-interest income (loss) consists of certain gains (losses) on investment securities, derivatives activities, financial instruments held under the fair value option, and other non-interest earning activities. The following tables present the net effect of derivatives and hedging activities on non-interest income (loss). The effects of derivatives and hedging activities on non-interest income (loss) relate only to derivatives not qualifying for fair value hedge accounting.

(In millions)

	Advances	Investment Securities	Mortgage Loans	Bonds	Discount Notes	Balance Sheet ⁽¹⁾	Other	Total
Three Months Ended September 30, 2022								
<u>Net effect of derivatives and hedging activities</u>								
Gains (losses) on derivatives not receiving hedge accounting	\$ (3)	\$ 75	\$ (1)	\$ (36)	\$ 6	\$ 4	\$ —	\$ 45
Net interest settlements on derivatives not receiving hedge accounting	—	—	—	(1)	(18)	—	—	(19)
Price alignment amount	—	—	—	—	—	—	—	—
Net gains (losses) on derivatives	(3)	75	(1)	(37)	(12)	4	—	26
Gains (losses) on trading securities ⁽²⁾	—	(89)	—	—	—	—	—	(89)
Gains (losses) on financial instruments held under fair value option ⁽³⁾	3	—	—	42	(3)	—	—	42
Total net effect on non-interest income	<u>\$ —</u>	<u>\$ (14)</u>	<u>\$ (1)</u>	<u>\$ 5</u>	<u>\$ (15)</u>	<u>\$ 4</u>	<u>\$ —</u>	<u>\$ (21)</u>

Three Months Ended September 30, 2021

Net effect of derivatives and hedging activities

Gains (losses) on derivatives not receiving hedge accounting	\$ —	\$ 44	\$ 4	\$ (2)	\$ —	\$ —	\$ —	\$ 46
Net interest settlements on derivatives not receiving hedge accounting	—	(42)	—	2	—	—	—	(40)
Price alignment amount	—	—	—	—	—	—	—	—
Net gains (losses) on derivatives	—	2	4	—	—	—	—	6
Gains (losses) on trading securities ⁽²⁾	—	(50)	—	—	—	—	—	(50)
Gains (losses) on financial instruments held under fair value option ⁽³⁾	—	—	—	1	—	—	—	1
Total net effect on non-interest income	<u>\$ —</u>	<u>\$ (48)</u>	<u>\$ 4</u>	<u>\$ 1</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (43)</u>

(In millions)

	Advances	Investment Securities	Mortgage Loans	Bonds	Discount Notes	Balance Sheet ⁽¹⁾	Other	Total
Nine Months Ended September 30, 2022								
<u>Net effect of derivatives and hedging activities</u>								
Gains (losses) on derivatives not receiving hedge accounting	\$ (1)	\$ 300	\$ (9)	\$ (71)	\$ (36)	\$ 11	\$ —	\$ 194
Net interest settlements on derivatives not receiving hedge accounting	—	(49)	—	6	(7)	—	—	(50)
Price alignment amount	—	—	—	—	—	—	—	—
Net gains (losses) on derivatives	(1)	251	(9)	(65)	(43)	11	—	144
Gains (losses) on trading securities ⁽²⁾	—	(337)	—	—	—	—	—	(337)
Gains (losses) on financial instruments held under fair value option ⁽³⁾	1	—	—	85	35	—	—	121
Total net effect on non-interest income	\$ —	\$ (86)	\$ (9)	\$ 20	\$ (8)	\$ 11	\$ —	\$ (72)

Nine Months Ended September 30, 2021
Net effect of derivatives and hedging activities

Gains (losses) on derivatives not receiving hedge accounting	\$ 1	\$ 199	\$ 4	\$ (8)	\$ —	\$ —	\$ —	\$ 196
Net interest settlements on derivatives not receiving hedge accounting	—	(137)	—	8	—	—	—	(129)
Price alignment amount	—	—	—	—	—	—	—	—
Net gains (losses) on derivatives	1	62	4	—	—	—	—	67
Gains (losses) on trading securities ⁽²⁾	—	(205)	—	—	—	—	—	(205)
Gains (losses) on financial instruments held under fair value option ⁽³⁾	(1)	—	—	9	—	—	—	8
Total net effect on non-interest income	\$ —	\$ (143)	\$ 4	\$ 9	\$ —	\$ —	\$ —	\$ (130)

(1) Balance sheet includes synthetic basis swaps and swaptions, which are not designated as hedging a specific financial instrument.

(2) Includes only those gains (losses) on trading securities that have an assigned economic derivative; therefore, this line item may not agree to the Statement of Income.

(3) Includes only those gains or losses on financial instruments held at fair value that have an economic derivative "assigned."

The effect of derivatives and hedging activities on earnings in the three and nine months ended September 30, 2022 improved primarily because of the increase in short-term rates, which lowered the net interest settlements being paid on derivatives related to investments where the fixed interest rates were converted to adjustable-coupon rates. However, this improvement in the nine-months comparison was partially offset by higher net unrealized losses on investments and their related derivatives that we expect to hold to maturity. As noted above, the fluctuation in earnings from the use of derivatives was acceptable because it enabled us to lower market risk exposure.

In the table above, "Gains (losses) on trading securities" consist of fixed-rate U.S. Treasury and GSE obligations that have been swapped to a variable rate. Trading securities are recorded at fair value, with changes in fair value reported in non-interest income (loss). There are a number of factors that affect the fair value of these securities, including changes in interest rates, the passage of time, and volatility. By hedging these trading securities, the gains or losses on these trading securities will generally be offset by the gains or losses on the associated interest rate swaps.

Non-Interest Expense

The following table presents non-interest expense.

(In millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
<u>Non-interest expense</u>				
Compensation and benefits	\$ 12	\$ 11	\$ 39	\$ 36
Other operating expense	6	6	18	17
Finance Agency	2	2	5	5
Office of Finance	1	1	5	4
Other	5	1	11	6
Total non-interest expense	<u>\$ 26</u>	<u>\$ 21</u>	<u>\$ 78</u>	<u>\$ 68</u>

Our business is designed to support significant changes in asset levels without having to undergo material changes in staffing, operations, risk practices, or general resource needs. Accordingly, the components of non-interest expense generally remained stable for the three and nine months ended September 30, 2022 compared to the same periods of 2021. In the three and nine month periods of 2022, "Other" non-interest expense includes a voluntary AHP contribution of \$3 million. Our Board of Directors elected to make a voluntary AHP contribution in order to increase access to affordable housing throughout the Fifth District.

Segment Information

Note 11 of the Notes to Unaudited Financial Statements presents information on our two operating business segments. We manage financial operations and market risk exposure primarily at the macro level, and within the context of the entire balance sheet, rather than exclusively at the level of individual segments. Under this approach, the market risk/return profile of each segment may not match, or possibly even have the same trends as, what would occur if we managed each segment on a stand-alone basis. The tables below summarize each segment's operating results for the periods shown.

(Dollars in millions)	Traditional Member Finance	MPP	Total
Three Months Ended September 30, 2022			
Net interest income (loss)	\$ 120	\$ 21	\$ 141
Net income (loss)	\$ 71	\$ 20	\$ 91
Average assets	\$ 102,600	\$ 9,536	\$ 112,136
Assumed average capital allocation	\$ 5,125	\$ 476	\$ 5,601
Return on average assets ⁽¹⁾	0.27 %	0.83 %	0.32 %
Return on average equity ⁽¹⁾	5.50 %	16.54 %	6.43 %
Three Months Ended September 30, 2021			
Net interest income (loss)	\$ 73	\$ (9)	\$ 64
Net income (loss)	\$ 12	\$ (6)	\$ 6
Average assets	\$ 46,708	\$ 11,341	\$ 58,049
Assumed average capital allocation	\$ 3,092	\$ 751	\$ 3,843
Return on average assets ⁽¹⁾	0.10 %	(0.23)%	0.04 %
Return on average equity ⁽¹⁾	1.57 %	(3.41)%	0.60 %
Nine Months Ended September 30, 2022			
Net interest income (loss)	\$ 258	\$ 36	\$ 294
Net income (loss)	\$ 122	\$ 26	\$ 148
Average assets	\$ 82,327	\$ 9,957	\$ 92,284
Assumed average capital allocation	\$ 4,405	\$ 539	\$ 4,944
Return on average assets ⁽¹⁾	0.20 %	0.35 %	0.21 %
Return on average equity ⁽¹⁾	3.69 %	6.42 %	3.99 %
Nine Months Ended September 30, 2021			
Net interest income (loss)	\$ 241	\$ (35)	\$ 206
Net income (loss)	\$ 59	\$ (34)	\$ 25
Average assets	\$ 49,472	\$ 11,524	\$ 60,996
Assumed average capital allocation	\$ 3,187	\$ 742	\$ 3,929
Return on average assets ⁽¹⁾	0.16 %	(0.40)%	0.05 %
Return on average equity ⁽¹⁾	2.47 %	(6.14)%	0.85 %

(1) Amounts used to calculate returns are based on numbers in thousands. Accordingly, recalculations based upon the disclosed amounts in millions may not produce the same results.

Traditional Member Finance Segment

Net income improved in the three- and nine-months comparison periods primarily because of higher average balances of Advances and investments. Additionally, the rising interest rate environment benefited this segment in both comparison periods as it resulted in higher earnings from capital and increased spreads earned on MBS. However, the increase in profitability in the year-to-date comparison period was partially offset by unrealized losses on certain derivatives and other financial instruments carried at fair value.

MPP Segment

Earnings from the MPP segment improved significantly in the three and nine months ended September 30, 2022 compared to the same periods of 2021 because of higher net interest income. Net interest income increased primarily because of lower net amortization and because of an increase in the spreads earned, both driven by the significant rise in interest rates.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT RISK MANAGEMENT

Market Risk

Market Value of Equity and Duration of Equity - Entire Balance Sheet

Two key measures of long-term market risk exposure are the sensitivities of the market value of equity and the duration of equity to changes in interest rates and other variables, as presented in the following tables for various instantaneous and permanent interest rate shocks (in basis points). The mortgage assets portfolio normally accounts for almost all market risk exposure because of prepayment volatility that we cannot completely hedge while maintaining sufficient net spreads. We compiled average results using data for each month end. Given the level of rates, some down rate shocks are nonparallel scenarios, with short-term rates decreasing less than long-term rates such that no rate falls below zero.

Market Value of Equity

(Dollars in millions)	Down 300	Down 200	Down 100	Flat Rates	Up 100	Up 200	Up 300
<u>Average Results</u>							
<i>2022 Year-to-Date</i>							
Market Value of Equity	\$ 5,398	\$ 5,260	\$ 5,185	\$ 5,107	\$ 5,001	\$ 4,896	\$ 4,809
% Change from Flat Case	5.7 %	3.0 %	1.5 %	—	(2.1)%	(4.1)%	(5.8)%
<i>2021 Full Year</i>							
Market Value of Equity	\$ 3,916	\$ 3,920	\$ 3,921	\$ 3,942	\$ 3,878	\$ 3,771	\$ 3,705
% Change from Flat Case	(0.6)%	(0.6)%	(0.5)%	—	(1.6)%	(4.3)%	(6.0)%
<u>Month-End Results</u>							
<i>September 30, 2022</i>							
Market Value of Equity	\$ 5,885	\$ 5,805	\$ 5,705	\$ 5,589	\$ 5,473	\$ 5,371	\$ 5,280
% Change from Flat Case	5.3 %	3.9 %	2.1 %	—	(2.1)%	(3.9)%	(5.5)%
<i>December 31, 2021</i>							
Market Value of Equity	\$ 3,977	\$ 3,977	\$ 3,865	\$ 3,858	\$ 3,767	\$ 3,628	\$ 3,525
% Change from Flat Case	3.1 %	3.1 %	0.2 %	—	(2.4)%	(6.0)%	(8.6)%

Duration of Equity

(In years)	Down 300	Down 200	Down 100	Flat Rates	Up 100	Up 200	Up 300
<u>Average Results</u>							
2022 Year-to-Date	2.6	1.8	1.2	1.9	2.3	2.1	1.7
2021 Full Year	(0.1)	(0.2)	(0.6)	1.0	2.6	2.5	1.0
<u>Month-End Results</u>							
September 30, 2022	1.4	1.6	2.1	2.3	2.1	1.9	1.7
December 31, 2021	—	0.7	2.0	1.4	3.4	3.6	2.1

The overall market risk exposure to changing interest rates was well within policy limits during the periods presented. At September 30, 2022, market risk exposure to falling rate shocks benefited from the rapid increase in mortgage interest rates in

the first nine months of 2022 while exposure to rising rates remained stable. The duration of equity, which provides an estimate of the change in market value of equity to further changes in interest rates, remained well within policy limits.

Based on the totality of our risk analysis, we expect that overall profitability, defined as the level of ROE compared with short-term market rates, will be competitive over the long term unless interest rates increase further by large amounts in a short period of time. Substantial declines in long-term interest rates could decrease income temporarily before reverting to average levels. This temporary reduction in income would be driven by additional recognition of mortgage asset premiums as the incentive for borrowers to refinance results in faster than anticipated repayments of those mortgage assets. However, we believe the mortgage assets portfolio will continue to provide an acceptable risk-adjusted return consistent with our risk appetite philosophy.

Capital Adequacy

Retained Earnings

We must hold sufficient capital to protect against exposure to various risks, including market, credit, and operational risks. We regularly conduct a variety of measurements and assessments for capital adequacy. At September 30, 2022, our capital management policy set forth approximately \$785 million as the minimum amount of retained earnings we believe is necessary to mitigate impairment risk.

The following table presents retained earnings.

(In millions)	September 30, 2022	December 31, 2021
Unrestricted retained earnings	\$ 822	\$ 783
Restricted retained earnings ⁽¹⁾	539	510
Total retained earnings	<u>\$ 1,361</u>	<u>\$ 1,293</u>

(1) Pursuant to the FHLBank System's Joint Capital Enhancement Agreement we are not permitted to distribute as dividends.

As indicated in the table above, our current balance of retained earnings exceeds the policy minimum, which we expect will continue to be the case as we bolster capital adequacy over time by allocating a portion of earnings to the restricted retained earnings account.

Market Capitalization Ratios

We measure two sets of market capitalization ratios. One measures the market value of equity (i.e., total capital) relative to the par value of regulatory capital stock (which is GAAP capital stock and mandatorily redeemable capital stock). The other measures the market value of total capital relative to the book value of total capital, which includes all components of capital, and mandatorily redeemable capital stock. The measures provide a point-in-time indication of the FHLB's liquidation or franchise value and can also serve as a measure of realized or potential market risk exposure.

The following table presents the market value of equity to regulatory capital stock (excluding retained earnings) for several interest rate environments.

	September 30, 2022	December 31, 2021
Market Value of Equity to Par Value of Regulatory Capital Stock - Base Case (Flat Rates) Scenario	120 %	154 %
Market Value of Equity to Par Value of Regulatory Capital Stock - Down Shock ⁽¹⁾	125	154
Market Value of Equity to Par Value of Regulatory Capital Stock - Up Shock ⁽²⁾	115	145

(1) Represents down shocks of 200 basis points and 100 basis points for September 30, 2022 and December 31, 2021, respectively.

(2) Represents an up shock of 200 basis points.

A base case value below 100 percent could indicate that, in the remote event of an immediate liquidation scenario involving redemption of all capital stock, capital stock may be returned to stockholders at a value below par. This could be due to experiencing risks that lower the market value of capital and/or to having an insufficient amount of retained earnings. In the first nine months of 2022, the market capitalization ratios in the scenarios presented continued to be above our policy requirements. The decline in these ratios during the first nine months of 2022 was driven by the rapid capital growth to support Advance borrowings with a secondary factor being the increase in interest rates. The base case ratio at September 30, 2022 was

still well above 100 percent because retained earnings were 29 percent of regulatory capital stock and we maintained stable market risk exposure.

The following table presents the market value of equity to the book value of total capital and mandatorily redeemable capital stock.

	September 30, 2022	December 31, 2021
Market Value of Equity to Book Value of Capital - Base Case (Flat Rates) Scenario ⁽¹⁾	93 %	101 %
Market Value of Equity to Book Value of Capital - Down Shock ⁽¹⁾⁽²⁾	97	101
Market Value of Equity to Book Value of Capital - Up Shock ⁽¹⁾⁽³⁾	90	95

(1) Capital includes total capital and mandatorily redeemable capital stock.

(2) Represents down shocks of 200 basis points and 100 basis points for September 30, 2022 and December 31, 2021, respectively.

(3) Represents an up shock of 200 basis points.

A base-case value below 100 percent indicates that we have realized or could realize risks (especially market risk), such that the market value of total capital owned by stockholders is below the book value of total capital. The base-case ratio of 93 percent at September 30, 2022 indicates that the market value of total capital is \$390 million below the book value of total capital. In a scenario in which interest rates increase 200 basis points, the market value of total capital would be \$608 million below the book value of total capital. This indicates that in a liquidation scenario, stockholders would not receive the full sum of their total equity ownership in the FHLB. We believe the likelihood of a liquidation scenario is extremely remote; and therefore, we accept the risk of diluting equity ownership in such a scenario. The decline in these ratios was driven primarily by the sharp increase in interest rates and the associated volatility in market pricing of certain balance sheet instruments.

Credit Risk

Overview

We believe our risk management practices, discussed below, minimize residual credit risk levels. We have no loan loss reserves or impairment recorded for Credit Services, investments and derivatives. We have a minimal amount of legacy credit risk exposure in the MPP.

Credit Services

Overview: We have policies and practices to manage credit risk exposure from our secured lending activities, which include Advances and Letters of Credit. The objective of our credit risk management activities is to equalize risk exposure across members and counterparties to a zero level of expected losses. This approach is consistent with our conservative risk management principles and desire to have no residual credit risk related to Advances and Letters of Credit.

Collateral: We require each member to provide a security interest in eligible collateral before it can undertake any secured borrowing. Eligible loan collateral types include the following: single- and multi-family residential, home equity, commercial real estate, government guaranteed and farm real estate. Eligible security types include those that are government or agency backed, along with highly-rated private-label residential and commercial mortgage-backed securities. We have conservative eligibility criteria within each of the above asset types. The estimated value of pledged collateral is discounted in order to offset market, credit, and liquidity risks that may affect the collateral's realizable value in the event it must be liquidated. At September 30, 2022, total collateral pledged of \$457.5 billion resulted in total borrowing capacity of \$373.8 billion of which \$99.2 billion was used to support outstanding Advances and Letters of Credit. Borrowers often pledge collateral in excess of their collateral requirement to demonstrate access to liquidity and to have the ability to borrow additional amounts in the future. Over-collateralization by one member is not applied to another member.

Borrowing Capacity/Lendable Value: Lendable Value Rates (LVRs) represent the percent of collateral value net of the discount, or haircut, we apply for purposes of determining borrowing capacity. LVRs are determined by statistical analysis and management assumptions relating to historical price volatility, inherent credit risks, liquidation costs, and the current credit and economic environment. We apply LVR results to the estimated values of pledged assets. LVRs vary among pledged assets and members based on the member institution type, the financial strength of the member institution, the form of valuation, lien position, the issuer of bond collateral or the quality of securitized assets, the quality of the loan collateral as reflected in the manner in which it was underwritten, and the marketability of the pledged assets.

Internal Credit Ratings: We perform credit underwriting of our members and nonmember institutions and assign them an internal credit rating. These credit ratings are based on internal and third-party ratings models, credit analyses and consideration

of credit ratings from independent credit rating organizations. Credit ratings are used in conjunction with other measures of credit risk in managing secured credit risk exposure.

Member Failures, Closures, and Receiverships: There have been no member failures in 2022 through the date of this filing.

MPP

Overview: The residual amount of credit risk exposure to loans in the MPP is minimal, based on the same factors described in the 2021 Annual Report on Form 10-K. We believe that future credit losses will not harm capital adequacy and will not significantly affect profitability except under the most extreme and unlikely credit conditions.

Conventional Loan Portfolio Characteristics: The levels of loan-to-value ratios are consistent with the portfolio's excellent credit quality. At September 30, 2022, the weighted average loan-to-value ratios for conventional loans based on origination values and estimated current values were 73 percent and 48 percent, respectively. The estimated weighted average current loan-to-value ratio decreased only one percent compared to the ratio at December 31, 2021 as the increases in home values over the past two years have begun to stabilize.

Credit Performance: The table below provides an analysis of conventional loans delinquent or in the process of foreclosure, along with the national average serious delinquency rate.

(Dollars in millions)	Conventional Loan Delinquencies	
	September 30, 2022	December 31, 2021
Early stage delinquencies - unpaid principal balance ⁽¹⁾	\$ 30	\$ 33
Serious delinquencies - unpaid principal balance ⁽²⁾	\$ 12	\$ 24
Early stage delinquency rate ⁽³⁾	0.4 %	0.5 %
Serious delinquency rate ⁽⁴⁾	0.2 %	0.3 %
National average serious delinquency rate ⁽⁵⁾	1.5 %	2.3 %

(1) Includes conventional loans 30 to 89 days delinquent and not in foreclosure.

(2) Includes conventional loans that are 90 days or more past due or where the decision of foreclosure or a similar alternative such as pursuit of deed-in-lieu has been reported.

(3) Early stage delinquencies expressed as a percentage of the total conventional loan portfolio.

(4) Serious delinquencies expressed as a percentage of the total conventional loan portfolio.

(5) National average number of fixed-rate prime and subprime conventional loans that are 90 days or more past due or in the process of foreclosure is based on the most recent national delinquency data available. The September 30, 2022 rate is based on June 30, 2022 data.

Overall, the MPP has experienced a minimal amount of delinquencies, with delinquency rates continuing to be well below national averages. This further supports our view that the portfolio is comprised of high-quality, well-performing loans.

Credit Enhancements: Conventional mortgage loans are primarily supported against credit losses by some combination of credit enhancements (primary mortgage insurance (PMI) and the Lender Risk Account (LRA)). The LRA is a hold back of a portion of the initial purchase price to cover expected credit losses for a specific pool of loans. Starting after five years from the loan purchase date, we may return the hold back to Participating Financial Institutions (PFIs) if they manage credit risk to predefined acceptable levels of exposure on the pools of loans they sell to us. As a result, some pools of loans may have sufficient credit enhancements to recapture all losses while other pools of loans may not. The LRA had balances of \$245 million and \$252 million at September 30, 2022 and December 31, 2021, respectively. For more information, see Note 5 of the Notes to Unaudited Financial Statements.

Credit Losses: Residual credit risk exposure depends on the actual and potential credit performance of the loans in each pool compared to the pool's equity (on individual loans) and credit enhancements. Our available credit enhancements at September 30, 2022 were ample and able to cover nearly all of the estimated gross credit losses. As a result, estimated credit losses at September 30, 2022 were less than \$1 million. Estimated credit losses, after credit enhancements, are accounted for in the allowance for credit losses or as a charge off (i.e., a reduction to the principal of mortgage loans held for portfolio).

Separate from our allowance for credit losses analysis, we regularly analyze potential adverse scenarios of lifetime credit risk exposure for the loans in the MPP. Even under adverse macroeconomic scenarios, we expect credit losses to remain minimal.

Investments

Liquidity Investments: We purchase liquidity investments from counterparties that have a strong ability to repay principal and interest. These investments can be easily converted to cash and may be unsecured, guaranteed or supported by the U.S. government, or secured (i.e., collateralized). For unsecured liquidity investments, we invest in the debt securities of highly rated, investment-grade institutions, have appropriate and conservative limits on dollar and maturity exposure to each institution, and have strong credit underwriting practices, including active monitoring of credit quality of our counterparties and of the environment in which they operate. In addition, we believe the portion of our liquidity investments for which the investments are secured with collateral (secured resale agreements) present no credit risk exposure to us.

The following table presents the carrying value of liquidity investments outstanding in relation to the counterparties' lowest long-term credit ratings provided by Standard & Poor's, Moody's, and/or Fitch Advisory Services. For resale agreements, the ratings shown are based on ratings of the associated collateral. Our internal ratings of these investments may differ from those obtained from Standard & Poor's, Moody's, and/or Fitch Advisory Services. The historical or current ratings displayed in this table should not be taken as an indication of future ratings.

(In millions)

	September 30, 2022		
	Long-Term Rating		
	AA	A	Total
<u>Unsecured Liquidity Investments</u>			
Interest-bearing deposits	\$ —	\$ 1,050	\$ 1,050
Federal funds sold	3,283	7,860	11,143
Total unsecured liquidity investments	3,283	8,910	12,193
<u>Guaranteed/Secured Liquidity Investments</u>			
Securities purchased under agreements to resell	7,146	—	7,146
U.S. Treasury obligations	7,688	—	7,688
GSE obligations	1,605	—	1,605
Total guaranteed/secured liquidity investments	16,439	—	16,439
Total liquidity investments	<u>\$ 19,722</u>	<u>\$ 8,910</u>	<u>\$ 28,632</u>
	December 31, 2021		
	Long-Term Rating		
	AA	A	Total
<u>Unsecured Liquidity Investments</u>			
Interest-bearing deposits	\$ —	\$ 340	\$ 340
Federal funds sold	975	4,530	5,505
Total unsecured liquidity investments	975	4,870	5,845
<u>Guaranteed/Secured Liquidity Investments</u>			
Securities purchased under agreements to resell	1,282	—	1,282
U.S. Treasury obligations	9,577	—	9,577
GSE obligations	1,885	—	1,885
Total guaranteed/secured liquidity investments	12,744	—	12,744
Total liquidity investments	<u>\$ 13,719</u>	<u>\$ 4,870</u>	<u>\$ 18,589</u>

The following table presents the lowest long-term credit ratings provided by Standard & Poor's, Moody's, and/or Fitch Advisory Services of our unsecured investment credit exposure by the domicile of the counterparty or the domicile of the counterparty's immediate parent for U.S. branches and agency offices of foreign commercial banks. Our internal ratings of these investments may differ from those obtained from Standard & Poor's, Moody's, and/or Fitch Advisory Services. The historical or current ratings displayed in this table should not be taken as an indication of future ratings.

Domicile of Counterparty	September 30, 2022		
	Counterparty Rating		Total
	AA	A	
Domestic	\$ 400	\$ 1,300	\$ 1,700
U.S. branches and agency offices of foreign commercial banks:			
Canada	2,655	2,130	4,785
Australia	—	1,655	1,655
Sweden	—	1,655	1,655
Netherlands	—	1,065	1,065
Germany	—	905	905
Finland	228	—	228
United Kingdom	—	200	200
Total U.S. branches and agency offices of foreign commercial banks	2,883	7,610	10,493
Total unsecured investment credit exposure	\$ 3,283	\$ 8,910	\$ 12,193

We are prohibited by Finance Agency regulation from investing in financial instruments issued by non-U.S. entities. Furthermore, we restrict a significant portion of unsecured lending to overnight maturities, which further limits credit risk exposure.

MBS:

GSE MBS

At September 30, 2022, \$14.7 billion of MBS held were GSE securities issued by Fannie Mae and Freddie Mac, which provide credit safeguards by guaranteeing either timely or ultimate payments of principal and interest. We believe that the conservatorships of Fannie Mae and Freddie Mac lower the chance that they would not be able to fulfill their credit guarantees. In addition, based on the data available to us and our purchase practices, we believe that most of the mortgage loans backing our GSE MBS are of high quality with acceptable credit performance.

MBS Issued by Other Government Agencies

We also invest in MBS issued and guaranteed by Ginnie Mae. These investments totaled \$1.3 billion at September 30, 2022. We believe that the strength of Ginnie Mae's guarantee and backing by the full faith and credit of the U.S. government is sufficient to protect us against credit losses on these securities.

Derivatives

Credit Risk Exposure: We mitigate most of the credit risk exposure resulting from derivative transactions through collateralization or use of daily settled contracts. The table below presents the lowest long-term counterparty credit ratings provided by Standard & Poor's, Moody's, and/or Fitch Advisory Services for derivative positions to which we had credit risk exposure at September 30, 2022. The historical or current ratings displayed in this table should not be taken as an indication of future ratings.

(In millions)

	Total Notional	Net Derivatives Fair Value Before Collateral	Cash Collateral Pledged to (from) Counterparties	Net Credit Exposure to Counterparties
Nonmember counterparties:				
<u>Asset positions with credit exposure:</u>				
Uncleared derivatives:				
A-rated	\$ 210	\$ 4	\$ (3)	\$ 1
Total uncleared derivatives	210	4	(3)	1
Cleared derivatives ⁽¹⁾	48,179	59	445	504
<u>Liability positions with credit exposure:</u>				
Uncleared derivatives:				
A-rated	6,335	(43)	46	3
BBB-rated	2,447	(18)	20	2
Total uncleared derivatives	8,782	(61)	66	5
Cleared derivatives ⁽¹⁾	349	—	1	1
Total	\$ 57,520	\$ 2	\$ 509	\$ 511

(1) Represents derivative transactions cleared with LCH Ltd. and CME Clearing, the FHLB's clearinghouses. LCH Ltd. is rated AA- by Standard & Poor's, and CME Clearing is not rated, but its parent company, CME Group Inc., is rated Aa3 by Moody's and AA- by Standard & Poor's.

Our exposure to cleared derivatives is primarily associated with the requirement to post initial margin through the clearing agent to the Derivatives Clearing Organizations. We pledge cash as collateral to satisfy this initial margin requirement. However, the use of cleared derivatives mitigates credit risk exposure because a central counterparty is substituted for individual counterparties.

At September 30, 2022, the net exposure of uncleared derivatives with residual credit risk exposure was less than \$6 million. If interest rates rise or the composition of our derivatives change resulting in an increase to our gross exposure to uncleared derivatives, the contractual collateral provisions in these derivatives would limit our net exposure to acceptable levels.

Although we cannot predict if we will realize credit risk losses from any of our derivatives counterparties, we believe that all of the counterparties will be able to continue making timely interest payments and, more generally, to continue to satisfy the terms and conditions of their derivative contracts with us. As of September 30, 2022, we had a \$90 million notional amount of interest rate swaps with a subsidiary of our member, JPMorgan Chase Bank, N.A., which also had outstanding credit services with us. Due to the amount of market value collateralization, we had a de minimis amount of credit exposure to this counterparty related to interest rate swaps outstanding.

Liquidity Risk

Liquidity Overview

We strive to be in a liquidity position at all times to meet the borrowing needs of our members and to meet all current and future financial commitments. This objective is achieved by managing liquidity positions to maintain stable, reliable, and cost-effective sources of funds while taking into account market conditions, member demand, and the maturity profile of assets and liabilities. Our liquidity position complies with the FHLBank Act, Finance Agency regulations, and internal policies.

The FHLBank System's primary source of funds is the sale of Consolidated Obligations in the capital markets. Our ability to obtain funds through the sale of Consolidated Obligations at acceptable interest costs depends on the financial market's perception of the riskiness of the Obligations and on prevailing conditions in the capital markets, particularly the short-term

capital markets. The System's favorable debt ratings, the implicit U.S. government backing of our debt, and our effective risk management practices are instrumental in ensuring stable and satisfactory access to the capital markets.

We believe our liquidity position, as well as that of the System, continued to be strong during the first nine months of 2022. Our overall ability to effectively fund our operations through debt issuances remained sufficient. Investor demand for System debt was robust in the first nine months of 2022, as investors continued to prefer short-term, high-quality money market instruments. We believe the possibility of a liquidity or funding crisis in the System that would impair our ability to participate, on a cost-effective basis, in issuances of debt, service outstanding debt, maintain adequate capitalization, or pay competitive dividends is remote.

The System works collectively to manage and monitor the System-wide liquidity and funding risks. Liquidity risk includes the risk that the System could have difficulty rolling over short-term Obligations when market conditions change, also called refinancing risk. The System has a large reliance on short-term funding; therefore, it has a sharp focus on managing liquidity risk to very low levels. As shown on the unaudited Statements of Cash Flows, in the first nine months of 2022, our portion of the System's debt issuances totaled \$216.8 billion for Discount Notes and \$60.6 billion for Bonds. Access to short-term debt markets has been reliable because investors, driven by liquidity preferences and risk aversion, have sought the System's short-term debt, which has resulted in strong demand for debt maturing in one year or less.

See the Notes to Unaudited Financial Statements for more detailed information regarding maturities of certain financial assets and liabilities which are instrumental in determining the amount of liquidity risk. In addition to contractual maturities, other assumptions regarding cash flows such as estimated prepayments, embedded call optionality, and scheduled amortization are considered when managing liquidity risks.

Liquidity Management and Regulatory Requirements

We manage liquidity risk by ensuring compliance with our regulatory liquidity requirements and regularly monitoring other metrics.

The Finance Agency establishes the expectations with respect to the maintenance of sufficient liquidity without access to the capital markets for a specified number of days, which was set as a period of between 10 to 30 calendar days in the base case. Under these expectations, all Advance maturities are assumed to renew, unless the Advances relate to former members who are ineligible to borrow new Advances. The maintenance of sufficient liquidity is intended to provide additional assurance that we can continue to provide Advances and Letters of Credit to members over an extended period without access to the capital markets. As of September 30, 2022, the number of days our daily cash balances were positive was within these expectations.

The Finance Agency also provides guidance related to asset/liability maturity funding gap limits. Funding gap metrics measure the difference between assets and liabilities that are scheduled to mature during a specified period of time and are expressed as a percentage of total assets. Although subject to change depending on conditions in the financial markets, the current regulatory requirement for funding gaps is between -10 percent to -20 percent for the three-month maturity horizon and is between -25 percent to -35 percent for the one-year maturity horizon. As of September 30, 2022, we were operating within those limits.

To support our member deposits, we also must meet a statutory deposit reserve requirement. The sum of our investments in obligations of the United States, deposits in eligible banks or trust companies, and Advances with a final maturity not exceeding five years must equal or exceed the current amount of member deposits. The following table presents the components of this liquidity requirement.

(In millions)	September 30, 2022	December 31, 2021
<u>Deposit Reserve Requirement</u>		
Total Eligible Deposit Reserves	\$ 77,689	\$ 35,230
Total Member Deposits	(1,245)	(1,416)
Excess Deposit Reserves	<u>\$ 76,444</u>	<u>\$ 33,814</u>

Member Concentration Risk

We regularly assess concentration risks from business activity. We believe that the concentration of Advance activity is consistent with our risk management philosophy, and the impact of borrower concentration on market risk, credit risk, and operational risk, after considering mitigating controls, is minimal.

Operational Risks

There were no material developments regarding our operational risk exposure during the first nine months of 2022.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

There have been no material changes in the first nine months of 2022 to our critical accounting policies and estimates. Our critical accounting policies and estimates are described in detail in our 2021 Annual Report on Form 10-K.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Information required by this Item is set forth under the caption “Quantitative and Qualitative Disclosures About Risk Management” in Part I, Item 2, of this Report.

Item 4. Controls and Procedures.

DISCLOSURE CONTROLS AND PROCEDURES

The FHLB's management, including its principal executive officer and principal financial officer, evaluate the effectiveness of the FHLB's disclosure controls and procedures as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934 (the “Exchange Act”). Based upon that evaluation, these two officers each concluded that, as of September 30, 2022, the FHLB maintained effective disclosure controls and procedures designed to ensure that information required to be disclosed in the reports that it files under the Exchange Act is (1) accumulated and communicated to management as appropriate to allow timely decisions regarding disclosure and (2) recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

The FHLB's management, including its principal executive officer and principal financial officer, evaluate the FHLB's internal control over financial reporting. Based upon that evaluation, these two officers each concluded that there were no changes in the FHLB's internal control over financial reporting that occurred during the quarter ended September 30, 2022 that materially affected, or are reasonably likely to materially affect, the FHLB's internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings.

Information regarding legal proceedings is set forth in Note 13 - Commitments and Contingencies in Part I, Item 1, of this Report.

Item 1A. Risk Factors.

For a discussion of our risk factors, see Part I, Item 1A. "Risk Factors" in our 2021 Annual Report on Form 10-K. There have been no material changes from the risk factors in our 2021 Annual Report on Form 10-K.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

<u>Exhibit Number ⁽¹⁾</u>	<u>Description of exhibit</u>	<u>Document filed or furnished, as indicated below</u>
31.1	Rule 13a-14(a)/15d-14(a) Certification of Principal Executive Officer	Filed Herewith
31.2	Rule 13a-14(a)/15d-14(a) Certification of Principal Financial Officer	Filed Herewith
32	Section 1350 Certifications	Furnished Herewith
101.INS	XBRL Instance Document	The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema Document	Filed Herewith
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	Filed Herewith
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	Filed Herewith
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	Filed Herewith
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	Filed Herewith
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)	Filed Herewith

(1) Numbers coincide with Item 601 of Regulation S-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, as of the 10th day of November 2022.

FEDERAL HOME LOAN BANK OF CINCINNATI
(Registrant)

By: /s/ Andrew S. Howell
Andrew S. Howell
President and Chief Executive Officer
(principal executive officer)

By: /s/ Stephen J. Sponaugle
Stephen J. Sponaugle
Executive Vice President - Chief Financial Officer
(principal financial officer)