FEDERAL HOME LOAN BANKS

Combined Financial Report for the Quarterly Period Ended June 30, 2022

This Combined Financial Report provides financial information on the Federal Home Loan Banks. The Federal Home Loan Banks issue consolidated bonds and consolidated discount notes (collectively referred to as consolidated obligations). Consolidated obligations are joint and several obligations of all Federal Home Loan Banks, which means that each individual Federal Home Loan Bank is responsible for the payment of principal and interest on all consolidated obligations. Each Federal Home Loan Bank is a separately chartered entity with its own board of directors and management. There is no centralized, system-wide management or oversight by a single board of directors of the Federal Home Loan Banks.

Federal Home Loan Bank consolidated obligations are not obligations of the United States and are not guaranteed by the United States. No person other than the Federal Home Loan Banks will have any obligations or liability with respect to consolidated obligations.

The Securities Act of 1933, as amended, does not require the registration of consolidated obligations; therefore, no registration statement with respect to consolidated obligations has been filed with the U.S. Securities and Exchange Commission. Neither the U.S. Securities and Exchange Commission, nor the Federal Housing Finance Agency, nor any state securities commission has approved or disapproved of these consolidated obligations or determined if this report is truthful or complete.

Carefully consider the risk factors provided in this and other Combined Financial Reports of the Federal Home Loan Banks (collectively referred to as Combined Financial Reports). Neither the Combined Financial Reports nor any offering materials provided by, or on behalf of, the Federal Home Loan Banks describe all the risks of investing in consolidated obligations. Investors should consult with their financial and legal advisors about the risks of investing in consolidated obligations.

The financial information contained in this Combined Financial Report is for the quarterly period ended June 30, 2022. This Combined Financial Report should be read in conjunction with the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, issued on March 25, 2022. Combined Financial Reports are available on the Federal Home Loan Banks Office of Finance web site at fhlb-of.com. This web site address is provided as a matter of convenience only, and its contents are not made part of or incorporated by reference into this report.

Investors should direct questions about consolidated obligations or the Combined Financial Reports to the Federal Home Loan Banks Office of Finance at (703) 467-3600 or at info@fhlb-of.com.

This Combined Financial Report was issued on August 12, 2022.

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EXPLANATORY STATEMENT ABOUT FEDERAL HOME LOAN BANKS COMBINED FINANCIAL REPORT

The Federal Home Loan Banks (FHLBanks) are government-sponsored enterprises (GSEs), federally-chartered but privately capitalized and independently managed. The FHLBanks together with the Federal Home Loan Banks Office of Finance (Office of Finance) comprise the FHLBank System.

The Office of Finance is responsible for preparing the Combined Financial Reports of the FHLBanks. Each FHLBank is responsible for the financial information and underlying data it provides to the Office of Finance for inclusion in the Combined Financial Reports. The Office of Finance is responsible for combining the financial information it receives from each of the FHLBanks.

The Combined Financial Reports are intended to be used by investors in consolidated obligations (consolidated bonds and consolidated discount notes) of the FHLBanks as these are joint and several obligations of all FHLBanks. This Combined Financial Report is provided using combination accounting principles generally accepted in the United States of America. This combined presentation in no way indicates that these assets and liabilities are under joint management and control as each individual FHLBank manages its operations independently. Therefore, each FHLBank's business, risk profile, financial condition, and results of operations will vary from FHLBank to FHLBank.

Because of the FHLBank System's structure, the Office of Finance does not prepare consolidated financial statements. Consolidated financial statements are generally considered to be appropriate when a controlling financial interest rests directly or indirectly in one of the enterprises included in the consolidation, which is the case in a typical holding company structure where there is a parent company that owns, directly or indirectly, one or more subsidiaries. However, the FHLBanks do not have a parent company that controls each of the FHLBanks. Instead, each of the FHLBanks is owned by its respective members and certain former members.

Each FHLBank is a separately chartered cooperative with its own board of directors and management and is responsible for establishing its own accounting and financial reporting policies in accordance with accounting principles generally accepted in the United States of America (GAAP). Although the FHLBanks work together in an effort to achieve consistency on significant accounting policies, the FHLBanks' accounting and financial reporting policies and practices may vary because alternative policies and presentations are permitted under GAAP in certain circumstances. Statements in this report may be qualified by a term such as "generally," "primarily," "typically," or words of similar meaning to indicate that the statement is generally applicable, but may not be applicable to all FHLBanks or their transactions as a result of their different business practices and accounting and financial reporting policies under GAAP.

An investor may not be able to obtain easily a system-wide view of the FHLBanks' business, risk profile, and financial information because there is no centralized, system-wide management or centralized board of director oversight of the individual FHLBanks. This decentralized structure is not conducive to preparing disclosures from a system-wide view in the same manner as is generally expected of U.S. Securities and Exchange Commission (SEC) registrants. For example, a conventional Management's Discussion and Analysis is not provided in this Combined Financial Report; instead, this report includes a "Financial Discussion and Analysis" prepared by the Office of Finance using information provided by each FHLBank.

Each FHLBank is subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, and must file periodic reports and other information with the SEC. Each FHLBank prepares an annual financial report, filed on SEC Form 10-K, quarterly financial reports, filed on SEC Form 10-Q, and current reports, filed on SEC Form 8-K. Those reports contain additional information that is not contained in this Combined Financial Report. An investor should review those reports and other available information on individual FHLBanks to obtain additional detail on each FHLBank's business, risk profile, financial condition, results of operations, and accounting and financial reporting policies. Periodic reports and other information filed by each FHLBank with the SEC are made available on its web site and on the SEC's web site at sec.gov. References to web sites and to reports and other information filed by individual FHLBanks with the SEC are provided as a matter of convenience only, and their contents are not made part of or incorporated by reference into this report.

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FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF CONDITION
(UNAUDITED)

(dollars in millions, except par value)	June 30, 2022	December 31, 2021
Assets		
Cash and due from banks	$ 4,641	$ 3,532
Interest-bearing deposits *(Note 3)*	9,648	6,382
Securities purchased under agreements to resell *(Note 3)*	91,322	64,292
Federal funds sold *(Note 3)*	71,650	47,360
Investment securities *(Note 3)*		
Trading securities	21,982	24,354
Available-for-sale securities, net, amortized cost of $118,340 and $116,822	118,126	118,411
Held-to-maturity securities, net, fair value of $48,846 and $48,300	49,503	47,672
Total investment securities	**189,611**	**190,437**
Advances, includes $3,272 and $2,971 at fair value held under fair value option *(Note 4)*	518,883	351,278
Mortgage loans held for portfolio, net *(Note 5)*	55,753	55,497
Accrued interest receivable, net	1,234	874
Derivative assets, net *(Note 6)*	2,618	2,115
Other assets, net	1,350	1,471
Total assets	**$ 946,710**	**$ 723,238**
Liabilities		
Deposits *(Note 7)*	$ 13,298	$ 14,303
Consolidated obligations *(Note 8)*		
Discount notes, includes $61,958 and $32,769 at fair value held under fair value option	412,400	210,897
Bonds, includes $12,725 and $15,853 at fair value held under fair value option	457,347	441,024
Total consolidated obligations	**869,747**	**651,921**
Mandatorily redeemable capital stock *(Note 9)*	416	398
Accrued interest payable	1,229	830
Affordable Housing Program payable	883	899
Derivative liabilities, net *(Note 6)*	515	177
Other liabilities	5,039	5,588
Total liabilities	**891,127**	**674,116**
Commitments and contingencies *(Note 12)*		
Capital *(Note 9)*		
Capital stock		
Class B putable ($100 par value) issued and outstanding shares	32,090	24,831
Class A putable ($100 par value) issued and outstanding shares	272	234
Total capital stock	**32,362**	**25,065**
Retained earnings		
Unrestricted	17,551	17,110
Restricted	5,822	5,650
Total retained earnings	**23,373**	**22,760**
Accumulated other comprehensive income (loss) *(Note 10)*	(152)	1,297
Total capital	**55,583**	**49,122**
Total liabilities and capital	**$ 946,710**	**$ 723,238**

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

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF INCOME
(UNAUDITED)

	Three Months Ended June 30,		Six Months Ended June 30,	
(dollars in millions)	2022	2021	2022	2021
Interest income				
Advances	$ 1,411	$ 665	$ 2,045	$ 1,422
Interest-bearing deposits	37	3	42	6
Securities purchased under agreements to resell	72	2	79	7
Federal funds sold	159	11	181	23
Investment securities				
Trading securities	91	175	176	387
Available-for-sale securities	509	251	849	528
Held-to-maturity securities	176	160	316	342
Total investment securities	**776**	**586**	**1,341**	**1,257**
Mortgage loans held for portfolio	397	336	779	711
Other	1	—	1	1
Total interest income	**2,853**	**1,603**	**4,468**	**3,427**
Interest expense				
Consolidated obligations				
Discount notes	629	46	716	131
Bonds	1,121	623	1,670	1,323
Total consolidated obligations	**1,750**	**669**	**2,386**	**1,454**
Deposits	18	1	20	2
Mandatorily redeemable capital stock	7	6	12	13
Total interest expense	**1,775**	**676**	**2,418**	**1,469**
Net interest income	**1,078**	**927**	**2,050**	**1,958**
Provision (reversal) for credit losses	6	—	6	(10)
Net interest income after provision (reversal) for credit losses	**1,072**	**927**	**2,044**	**1,968**
Non-interest income				
Net gains (losses) on investment securities	(253)	(119)	(733)	(424)
Net gains (losses) on financial instruments held under fair value option	144	5	216	(47)
Net gains (losses) on derivatives	62	(68)	345	110
Gains on litigation settlements, net	1	—	11	—
Other, net	13	62	66	116
Total non-interest income (loss)	**(33)**	**(120)**	**(95)**	**(245)**
Non-interest expense				
Compensation and benefits	182	182	366	377
Other operating expenses	122	112	233	216
Federal Housing Finance Agency	20	20	43	41
Office of Finance	15	14	33	33
Other, net	24	25	40	44
Total non-interest expense	**363**	**353**	**715**	**711**
Net income before assessments	**676**	**454**	**1,234**	**1,012**
Affordable Housing Program assessments	69	46	125	103
Net income	**$ 607**	**$ 408**	**$ 1,109**	**$ 909**

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

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF COMPREHENSIVE INCOME
(UNAUDITED)

	Three Months Ended June 30,		Six Months Ended June 30,	
(dollars in millions)	2022	2021	2022	2021
Net income	**$ 607**	**$ 408**	**$ 1,109**	**$ 909**
Other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	(709)	148	(1,800)	740
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	—	2	1	4
Net unrealized gains (losses) relating to hedging activities	122	(56)	353	131
Pension and postretirement benefits	—	16	(3)	19
Total other comprehensive income (loss)	**(587)**	**110**	**(1,449)**	**894**
Comprehensive income (loss)	**$ 20**	**$ 518**	**$ (340)**	**$ 1,803**

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

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF CAPITAL

(UNAUDITED)

THREE MONTHS ENDED JUNE 30, 2022 AND 2021

	Capital Stock - Putable					
	Class B		Class A		Total	
(dollars and shares in millions)	Shares	Par Value	Shares	Par Value	Shares	Par Value
Balance, March 31, 2022	**259**	**$ 25,904**	**2**	**$ 220**	**261**	**$ 26,124**
Comprehensive income (loss)	—	—	—	—	—	—
Proceeds from issuance of capital stock	163	16,227	—	2	163	16,229
Repurchases/redemptions of capital stock	(91)	(9,129)	(3)	(329)	(94)	(9,458)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(4)	(360)	(2)	(203)	(6)	(563)
Transfers between Class B and Class A shares	(6)	(582)	6	582	—	—
Transfers to unrestricted/(from) restricted retained earnings	—	—	—	—	—	—
Dividends on capital stock						
Cash	—	—	—	—	—	—
Stock	—	30	—	—	—	30
Balance, June 30, 2022	**321**	**$ 32,090**	**3**	**$ 272**	**324**	**$ 32,362**
Balance, March 31, 2021	**263**	**$ 26,293**	**4**	**$ 376**	**267**	**$ 26,669**
Comprehensive income (loss)	—	—	—	—	—	—
Proceeds from issuance of capital stock	39	3,859	—	3	39	3,862
Repurchases/redemptions of capital stock	(41)	(4,148)	(2)	(221)	(43)	(4,369)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(3)	(225)	(2)	(150)	(5)	(375)
Transfers between Class B and Class A shares	(3)	(320)	3	320	—	—
Dividends on capital stock						
Cash	—	—	—	—	—	—
Stock	—	19	—	—	—	19
Balance, June 30, 2021	**255**	**$ 25,478**	**3**	**$ 328**	**258**	**$ 25,806**

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF CAPITAL (continued)

(UNAUDITED)

THREE MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars and shares in millions)	Retained Earnings Unrestricted	Retained Earnings Restricted	Retained Earnings Total	Accumulated Other Comprehensive Income (Loss)	Total Capital
Balance, March 31, 2022	**$ 17,315**	**$ 5,710**	**$ 23,025**	**$ 435**	**$ 49,584**
Comprehensive income (loss)	495	112	607	(587)	20
Proceeds from issuance of capital stock	—	—	—	—	16,229
Repurchases/redemptions of capital stock	—	—	—	—	(9,458)
Net shares reclassified (to)/from mandatorily redeemable capital stock	—	—	—	—	(563)
Transfers between Class B and Class A shares	—	—	—	—	—
Transfers to unrestricted/(from) restricted retained earnings	—	—	—	—	—
Dividends on capital stock					—
Cash	(229)	—	(229)	—	(229)
Stock	(30)	—	(30)	—	—
Balance, June 30, 2022	**$ 17,551**	**$ 5,822**	**$ 23,373**	**$ (152)**	**$ 55,583**
Balance, March 31, 2021	**$ 16,727**	**$ 5,505**	**$ 22,232**	**$ 1,568**	**$ 50,469**
Comprehensive income (loss)	341	67	408	110	518
Proceeds from issuance of capital stock	—	—	—	—	3,862
Repurchases/redemptions of capital stock	—	—	—	—	(4,369)
Net shares reclassified (to)/from mandatorily redeemable capital stock	—	—	—	—	(375)
Transfers between Class B and Class A shares	—	—	—	—	—
Dividends on capital stock					
Cash	(234)	—	(234)	—	(234)
Stock	(19)	—	(19)	—	—
Balance, June 30, 2021	**$ 16,815**	**$ 5,572**	**$ 22,387**	**$ 1,678**	**$ 49,871**

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

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF CAPITAL

(UNAUDITED)

SIX MONTHS ENDED JUNE 30, 2022 AND 2021

	Capital Stock - Putable					
	Class B		Class A		Total	
(dollars and shares in millions)	Shares	Par Value	Shares	Par Value	Shares	Par Value
Balance, December 31, 2021	**248**	**$ 24,831**	**2**	**$ 234**	**250**	**$ 25,065**
Comprehensive income (loss)	—	—	—	—	—	—
Proceeds from issuance of capital stock	241	24,006	—	2	241	24,008
Repurchases/redemptions of capital stock	(138)	(13,806)	(6)	(690)	(144)	(14,496)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(20)	(2,006)	(3)	(263)	(23)	(2,269)
Transfers between Class B and Class A shares	(10)	(989)	10	989	—	—
Transfers to unrestricted/(from) restricted retained earnings	—	—	—	—	—	—
Dividends on capital stock						
Cash	—	—	—	—	—	—
Stock	—	54	—	—	—	54
Balance, June 30, 2022	**321**	**$ 32,090**	**3**	**$ 272**	**324**	**$ 32,362**
Balance, December 31, 2020	**270**	**$ 26,986**	**4**	**$ 412**	**274**	**$ 27,398**
Comprehensive income (loss)	—	—	—	—	—	—
Proceeds from issuance of capital stock	72	7,159	—	4	72	7,163
Repurchases/redemptions of capital stock	(77)	(7,703)	(3)	(354)	(80)	(8,057)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(3)	(271)	(5)	(466)	(8)	(737)
Transfers between Class B and Class A shares	(7)	(732)	7	732	—	—
Dividends on capital stock						
Cash	—	—	—	—	—	—
Stock	—	39	—	—	—	39
Balance, June 30, 2021	**255**	**$ 25,478**	**3**	**$ 328**	**258**	**$ 25,806**

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF CAPITAL (continued)

(UNAUDITED)

SIX MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars and shares in millions)	Retained Earnings Unrestricted	Retained Earnings Restricted	Retained Earnings Total	Accumulated Other Comprehensive Income (Loss)	Total Capital
Balance, December 31, 2021	**$ 17,110**	**$ 5,650**	**$ 22,760**	**$ 1,297**	**$ 49,122**
Comprehensive income (loss)	921	188	1,109	(1,449)	(340)
Proceeds from issuance of capital stock	—	—	—	—	24,008
Repurchases/redemptions of capital stock	—	—	—	—	(14,496)
Net shares reclassified (to)/from mandatorily redeemable capital stock	—	—	—	—	(2,269)
Transfers between Class B and Class A shares	—	—	—	—	—
Transfers to unrestricted/(from) restricted retained earnings	16	(16)	—	—	—
Dividends on capital stock					
Cash	(442)	—	(442)	—	(442)
Stock	(54)	—	(54)	—	—
Balance, June 30, 2022	**$ 17,551**	**$ 5,822**	**$ 23,373**	**$ (152)**	**$ 55,583**
Balance, December 31, 2020	**$ 16,564**	**$ 5,434**	**$ 21,998**	**$ 784**	**$ 50,180**
Comprehensive income (loss)	771	138	909	894	1,803
Proceeds from issuance of capital stock	—	—	—	—	7,163
Repurchases/redemptions of capital stock	—	—	—	—	(8,057)
Net shares reclassified (to)/from mandatorily redeemable capital stock	—	—	—	—	(737)
Transfers between Class B and Class A shares	—	—	—	—	—
Dividends on capital stock					
Cash	(481)	—	(481)	—	(481)
Stock	(39)	—	(39)	—	—
Balance, June 30, 2021	**$ 16,815**	**$ 5,572**	**$ 22,387**	**$ 1,678**	**$ 49,871**

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

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF CASH FLOWS

(UNAUDITED)

(dollars in millions)	Six Months Ended June 30, 2022	2021
Operating activities		
Net income	$ 1,109	$ 909
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation and amortization/(accretion)	680	321
Net change in derivatives and hedging activities	9,459	2,118
Net change in fair value adjustments on trading securities	733	425
Net change in fair value adjustments on financial instruments held under fair value option	(216)	47
Other adjustments, net	29	15
Net change in		
Accrued interest receivable	(319)	168
Other assets	76	(5)
Accrued interest payable	416	47
Other liabilities	(147)	(134)
Total adjustments	10,711	3,002
Net cash provided by (used in) operating activities	**11,820**	**3,911**
Investing activities		
Net change in		
Interest-bearing deposits	(9,931)	3,321
Securities purchased under agreements to resell	(27,030)	(3,243)
Federal funds sold	(24,290)	(16,387)
Trading securities		
Proceeds from sales	6,817	1,561
Proceeds from maturities and paydowns	10,108	29,021
Purchases	(17,531)	(14,660)
Available-for-sale securities		
Proceeds from sales	319	20
Proceeds from maturities and paydowns	10,344	12,900
Purchases	(18,330)	(17,720)
Held-to-maturity securities		
Proceeds from sales	10	—
Proceeds from maturities and paydowns	7,475	10,447
Purchases	(8,431)	(3,113)
Advances		
Repaid	2,864,828	1,687,200
Originated	(3,039,137)	(1,637,764)
Mortgage loans held for portfolio		
Principal collected	4,653	12,859
Purchases	(5,078)	(6,930)
Other investing activities, net	(29)	(23)
Net cash provided by (used in) investing activities	**(245,233)**	**57,489**

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF CASH FLOWS (continued)
(UNAUDITED)

	Six Months Ended June 30,	
(dollars in millions)	2022	2021
Financing activities		
Net change in deposits and pass-through reserves, and other financing activities	$ (632)	$ 355
Net proceeds (payments) on derivative contracts with financing element	242	18
Net proceeds from issuance of consolidated obligations		
Discount notes	2,564,228	1,650,627
Bonds	183,065	233,394
Payments for maturing and retiring consolidated obligations		
Discount notes	(2,362,939)	(1,693,614)
Bonds	(156,261)	(270,258)
Proceeds from issuance of capital stock	24,008	7,163
Payments for repurchases/redemptions of capital stock	(14,496)	(8,057)
Payments for repurchases/redemptions of mandatorily redeemable capital stock	(2,251)	(895)
Cash dividends paid	(442)	(481)
Net cash provided by (used in) financing activities	**234,522**	**(81,748)**
Net increase (decrease) in cash and due from banks	1,109	(20,348)
Cash and due from banks at beginning of the period	3,532	25,125
Cash and due from banks at end of the period	**$ 4,641**	**$ 4,777**
Supplemental disclosures		
Cash activities		
Interest paid	$ 1,688	$ 1,833
Affordable Housing Program payments, net	$ 155	$ 153

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

NOTES TO COMBINED FINANCIAL STATEMENTS (Unaudited)

Background Information

These financial statements present the combined financial position and combined results of operations of the Federal Home Loan Banks (FHLBanks). The FHLBanks are government-sponsored enterprises (GSEs) that were organized under the Federal Home Loan Bank Act of 1932, as amended (FHLBank Act), to serve the public by enhancing the availability of credit for residential mortgages and targeted community development. Each FHLBank operates as a separate entity with its own management, employees, and board of directors. The FHLBanks are regulated by the Federal Housing Finance Agency (FHFA). The FHLBanks are financial cooperatives that provide a readily available, competitively-priced source of funds to their member institutions.

The Office of Finance is a joint office of the FHLBanks established to facilitate the issuance and servicing of the debt instruments of the FHLBanks, known as consolidated obligations (consolidated bonds and consolidated discount notes), and to prepare the quarterly and annual combined financial reports of the FHLBanks. As provided by the FHLBank Act and applicable regulations, consolidated obligations are backed only by the financial resources of the FHLBanks. Consolidated obligations are the primary source of funds for the FHLBanks in addition to deposits, other borrowings, and capital stock issued to members. The FHLBanks primarily use these funds to provide advances to members.

Unless otherwise stated, dollar amounts disclosed in this Combined Financial Report represent values rounded to the nearest million. Dollar amounts rounding to less than one million are not reflected in this Combined Financial Report.

Note 1 - Summary of Significant Accounting Policies

These unaudited quarterly combined financial statements do not include all disclosures associated with annual combined financial statements, and therefore should be read in conjunction with the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021. In addition, the results of operations for interim periods are not necessarily indicative of the results to be expected for the year ending December 31, 2022.

Basis of Presentation

These combined financial statements include the financial statements and records of the FHLBanks that are prepared in accordance with generally accepted accounting principles in the United States of America (GAAP). The information contained in these combined financial statements is not audited. Each FHLBank's financial statements, in the opinion of its management, contain all the necessary adjustments for a fair statement of its interim financial information.

Principles of Combination. Transactions between the FHLBanks have been eliminated in accordance with combination accounting principles similar to consolidation under GAAP. (See the *Condensed Combining Schedules* for the combining adjustments, consisting of interbank eliminations and rounding adjustments, made to the combined financial statements.)

Segment Reporting. FHFA regulations consider each FHLBank to be a segment. However, there is no single chief operating decision maker because there is no centralized, system-wide management or centralized board of director oversight of the individual FHLBanks. (See the *Condensed Combining Schedules* for segment information.)

Revisions and Reclassifications. Certain amounts have been reclassified and may not agree to previously issued Federal Home Loan Banks combined financial reports. These amounts were not deemed to be material.

Use of Estimates

The preparation of financial statements in accordance with GAAP requires each FHLBank's management to make subjective assumptions and estimates that may affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported amounts of income and expense. The most significant of these estimates include those used in conjunction with fair value estimates and derivatives and hedging activities. Actual results could differ from these estimates significantly.

Financial Instruments Meeting Netting Requirements

The FHLBanks present certain financial instruments on a net basis when they have a legal right of offset and all other requirements for netting are met (collectively referred to as the netting requirements). For these financial instruments, each of the affected FHLBanks 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 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 when this collateral is received or pledged. Likewise, there may be a delay for excess collateral to be returned. For derivative instruments that meet the netting requirements, any excess cash collateral received or pledged is recognized as a derivative liability or derivative asset. (See *Note 6 - Derivatives and Hedging Activities* for additional information regarding these agreements.)

Securities purchased under agreements to resell are also subject to netting requirements. Based on the fair value of the related collateral held, securities purchased under agreements to resell were fully collateralized for the periods presented. There were no offsetting liabilities related to these securities at June 30, 2022 or December 31, 2021.

Note 2 - Recently Issued and Adopted Accounting Guidance

The following table provides a summary of recently issued accounting standards which may have an effect on the combined financial statements.

Accounting Standards Update (ASU)	Description	Effective Date	Effect on the Combined Financial Statements or Other Significant Matters
Facilitation of the Effects of Reference Rate Reform on Financial Reporting, as amended (ASU 2020-04)	This guidance provides temporary optional guidance to ease the potential burden in accounting for reference rate reform. The new guidance provides optional expedients and exceptions for applying generally accepted accounting principles to transactions affected by reference rate reform if certain criteria are met. These transactions include: • contract modifications, • hedging relationships, and • sale and/or transfer of debt securities classified as held-to-maturity.	This guidance became effective immediately for the FHLBanks, and they may elect to apply the amendments through December 31, 2022.	The FHLBanks either elected or plan to elect the majority of the optional expedients and exceptions provided; however, the full effect on the FHLBanks' combined financial condition, combined results of operations, and combined cash flows has not yet been determined.
Fair Value Hedging - Portfolio Layer Method (ASU 2022-01)	This guidance 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: • expands the scope of the portfolio layer method to include nonprepayable assets, and • specifies eligible hedging instruments in a single-layer hedge.	The guidance becomes effective for the FHLBanks for the interim and annual periods beginning on January 1, 2023. Early adoption is permitted.	The FHLBanks are in the process of evaluating the guidance and its effect on the FHLBanks' combined financial condition, combined results of operations, and combined cash flows has not yet been determined.
Troubled Debt Restructurings and Vintage Disclosures (ASU 2022-02)	This guidance 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 FHLBanks for the interim and annual periods beginning on January 1, 2023. Early adoption is permitted.	The FHLBanks are in the process of evaluating the guidance and its effect on the FHLBanks' combined financial condition, combined results of operations, and combined cash flows has not yet been determined.

Note 3 - Investments

The FHLBanks make 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 trading, available-for-sale (AFS), or held-to-maturity (HTM).

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

The FHLBanks invest in interest-bearing deposits, securities purchased under agreements to resell, and federal funds sold to provide short-term liquidity. These investments are generally transacted with counterparties that have received a credit rating of triple-B or greater (investment grade) by a nationally recognized statistical rating organization. At June 30, 2022 and December 31, 2021, none of these investments were with counterparties rated below triple-B; and at both dates, 1% of these investments, based on amortized cost, were with counterparties that were unrated. These may differ from any internal ratings of the investments by an FHLBank, if applicable.

Federal funds sold are unsecured loans that are generally transacted on an overnight term. FHFA regulations include a limit on the amount of unsecured credit an individual FHLBank may extend to a counterparty. At June 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 June 30, 2022 and December 31, 2021. The carrying values of interest-bearing deposits and federal funds sold exclude accrued interest receivable totaling $8 million and $1 million at June 30, 2022 and December 31, 2021.

Securities purchased under agreements to resell are short-term collateralized loans 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 the relevant counterparties, each FHLBank determined that no allowance for credit losses was needed for its securities purchased under agreements to resell at June 30, 2022 and December 31, 2021. The carrying value of securities purchased under agreements to resell excludes accrued interest receivable of $4 million and less than $1 million at June 30, 2022 and December 31, 2021.

Debt Securities

The FHLBanks invest in debt securities, which are classified as trading, AFS, or HTM. Within these investments, the FHLBanks are primarily subject to credit risk related to private-label mortgage-backed securities (private-label MBS or PLMBS) that are supported by underlying mortgage or asset-backed loans. The FHLBanks are prohibited by FHFA 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 FHLBanks.

Trading Securities

Table 3.1 presents the fair value of trading securities by major security type at June 30, 2022 and December 31, 2021.

Table 3.1 - Trading Securities by Major Security Type

(dollars in millions)

Fair Value	June 30, 2022	December 31, 2021
Non-mortgage-backed securities		
Certificates of deposit	$ 640	$ 200
U.S. Treasury obligations	18,133	20,367
Other U.S. obligations	87	102
GSE and Tennessee Valley Authority obligations	2,137	2,359
Other	168	202
Total non-mortgage-backed securities	**21,165**	**23,230**
Mortgage-backed securities		
U.S. obligations single-family	2	2
GSE single-family	32	37
GSE multifamily	783	1,085
Total mortgage-backed securities	**817**	**1,124**
Total	**$ 21,982**	**$ 24,354**

Table 3.2 presents a summary of net gains (losses) on trading securities for the three and six months ended June 30, 2022 and 2021.

Table 3.2 - Net Gains (Losses) on Trading Securities

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Net unrealized gains (losses) on trading securities held at period-end	$ (248)	$ (91)	$ (691)	$ (375)
Net gains (losses) on trading securities sold/matured during the period	(5)	(29)	(42)	(50)
Net gains (losses) on trading securities	**$ (253)**	**$ (120)**	**$ (733)**	**$ (425)**

Available-for-Sale Securities

Table 3.3 presents the amortized cost and fair value of AFS securities by major security type at June 30, 2022 and December 31, 2021.

Table 3.3 - AFS Securities by Major Security Type

(dollars in millions)

	June 30, 2022				
	Amortized Cost(1)	Allowance for Credit Losses	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Non-mortgage-backed securities					
U.S. Treasury obligations	$ 28,887	$ —	$ 13	$ (102)	$ 28,798
Other U.S. obligations	2,458	—	7	(92)	2,373
GSE and Tennessee Valley Authority obligations	7,646	—	123	(35)	7,734
State or local housing agency obligations	1,846	—	—	(13)	1,833
Federal Family Education Loan Program asset-backed securities (ABS)	2,468	—	81	(10)	2,539
Other	635	—	8	(6)	637
Total non-mortgage-backed securities	**43,940**	**—**	**232**	**(258)**	**43,914**
Mortgage-backed securities					
U.S. obligations single-family	3,347	—	3	(12)	3,338
U.S. obligations multifamily	537	—	—	(18)	519
GSE single-family	4,175	—	7	(63)	4,119
GSE multifamily	64,941	—	715	(910)	64,746
Private-label	1,400	(22)	126	(14)	1,490
Total mortgage-backed securities	**74,400**	**(22)**	**851**	**(1,017)**	**74,212**
Total	**$ 118,340**	**$ (22)**	**$ 1,083**	**$ (1,275)**	**$ 118,126**

	December 31, 2021				
	Amortized Cost(1)	Allowance for Credit Losses	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Non-mortgage-backed securities					
U.S. Treasury obligations	$ 23,857	$ —	$ 37	$ (12)	$ 23,882
Other U.S. obligations	2,875	—	40	(12)	2,903
GSE and Tennessee Valley Authority obligations	10,199	—	205	(27)	10,377
State or local housing agency obligations	1,761	—	9	(5)	1,765
Federal Family Education Loan Program ABS	2,642	—	130	—	2,772
Other	724	—	11	(6)	729
Total non-mortgage-backed securities	**42,058**	**—**	**432**	**(62)**	**42,428**
Mortgage-backed securities					
U.S. obligations single-family	3,549	—	28	—	3,577
U.S. obligations multifamily	541	—	—	—	541
GSE single-family	4,866	—	46	(1)	4,911
GSE multifamily	64,194	—	1,098	(142)	65,150
Private-label	1,614	(19)	213	(4)	1,804
Total mortgage-backed securities	**74,764**	**(19)**	**1,385**	**(147)**	**75,983**
Total	**$ 116,822**	**$ (19)**	**$ 1,817**	**$ (209)**	**$ 118,411**

(1) Includes adjustments made to the cost basis of an investment for accretion, amortization, net charge-offs, and/or fair value hedge accounting adjustments, and excludes accrued interest receivable of $339 million and $247 million at June 30, 2022 and December 31, 2021.

Table 3.4 presents the AFS securities with unrealized losses by major security type and length of time that individual securities have been in a continuous unrealized loss position at June 30, 2022 and December 31, 2021.

Table 3.4 - AFS Securities in a Continuous Unrealized Loss Position

(dollars in millions)

	June 30, 2022					
	Less than 12 Months		12 months or more		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Non-mortgage-backed securities						
U.S. Treasury obligations	$ 17,176	$ (97)	$ 971	$ (5)	$ 18,147	$ (102)
Other U.S. obligations	1,333	(54)	321	(38)	1,654	(92)
GSE and Tennessee Valley Authority obligations	86	(1)	430	(34)	516	(35)
State or local housing agency obligations	1,016	(9)	480	(4)	1,496	(13)
Federal Family Education Loan Program ABS	390	(10)	—	—	390	(10)
Other	—	—	356	(6)	356	(6)
Total non-mortgage-backed securities	**20,001**	**(171)**	**2,558**	**(87)**	**22,559**	**(258)**
Mortgage-backed securities						
U.S. obligations single-family	2,410	(12)	96	—	2,506	(12)
U.S. obligations multifamily	519	(18)	—	—	519	(18)
GSE single-family	2,713	(54)	216	(9)	2,929	(63)
GSE multifamily	24,660	(748)	5,269	(162)	29,929	(910)
Private-label	259	(9)	62	(5)	321	(14)
Total mortgage-backed securities	**30,561**	**(841)**	**5,643**	**(176)**	**36,204**	**(1,017)**
Total	**$ 50,562**	**$ (1,012)**	**$ 8,201**	**$ (263)**	**$ 58,763**	**$ (1,275)**

	December 31, 2021					
	Less than 12 Months		12 months or more		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Non-mortgage-backed securities						
U.S. Treasury obligations	$ 7,438	$ (12)	$ —	$ —	$ 7,438	$ (12)
Other U.S. obligations	695	(12)	115	—	810	(12)
GSE and Tennessee Valley Authority obligations	1,193	—	562	(27)	1,755	(27)
State or local housing agency obligations	—	—	522	(5)	522	(5)
Other	—	—	389	(6)	389	(6)
Total non-mortgage-backed securities	**9,326**	**(24)**	**1,588**	**(38)**	**10,914**	**(62)**
Mortgage-backed securities						
GSE single-family	378	(1)	106	—	484	(1)
GSE multifamily	8,177	(88)	4,783	(54)	12,960	(142)
Private-label	19	—	154	(4)	173	(4)
Total mortgage-backed securities	**8,574**	**(89)**	**5,043**	**(58)**	**13,617**	**(147)**
Total	**$ 17,900**	**$ (113)**	**$ 6,631**	**$ (96)**	**$ 24,531**	**$ (209)**

Table 3.5 presents the amortized cost and fair value of AFS securities by contractual maturity at June 30, 2022 and December 31, 2021.

Table 3.5 - AFS Securities by Contractual Maturity

(dollars in millions)

	June 30, 2022		December 31, 2021	
Year of Maturity	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**
Non-mortgage-backed securities				
Due in one year or less	$ 4,571	$ 4,549	$ 7,468	$ 7,471
Due after one year through five years	20,298	20,333	15,855	15,957
Due after five years through ten years	13,631	13,613	12,986	13,094
Due after ten years	2,972	2,880	3,107	3,134
Federal Family Education Loan Program ABS(1)	2,468	2,539	2,642	2,772
Total non-mortgage-backed securities	**43,940**	**43,914**	**42,058**	**42,428**
Mortgage-backed securities(1)	**74,400**	**74,212**	**74,764**	**75,983**
Total	**$ 118,340**	**$ 118,126**	**$ 116,822**	**$ 118,411**

(1) MBS and Federal Family Education Loan Program ABS are not presented by contractual maturity because 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.

Table 3.6 presents the proceeds from sale and gross gains and losses on sale of AFS securities for the three and six months ended June 30, 2022 and 2021.

Table 3.6 - Proceeds from Sale and Gross Gains and Losses on Sale of AFS Securities

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	**2021**	**2022**	**2021**
Proceeds from sale of AFS securities	**$ 176**	**$ 20**	**$ 319**	**$ 20**
Gross gains on sale of AFS securities	$ —	$ 1	$ —	$ 1
Gross losses on sale of AFS securities	—	—	—	—
Net realized gains (losses) from sale of AFS securities	**$ —**	**$ 1**	**$ —**	**$ 1**

Held-to-Maturity Securities

Table 3.7 presents the amortized cost, net carrying value, and fair value of HTM securities by major security type at June 30, 2022 and December 31, 2021.

Table 3.7 - HTM Securities by Major Security Type

(dollars in millions)

	June 30, 2022						
	Amortized Cost(1)	Allowance for Credit Losses	OTTI Recognized in AOCI(2)	Net Carrying Value	Gross Unrecognized Holding Gains(3)	Gross Unrecognized Holding Losses(3)	Fair Value
Non-mortgage-backed securities							
U.S. Treasury obligations	$ 46	$ —	$ —	$ 46	$ —	$ —	$ 46
Other U.S. obligations	955	—	—	955	—	(8)	947
GSE and Tennessee Valley Authority obligations	1,687	—	—	1,687	31	(28)	1,690
State or local housing agency obligations	291	—	—	291	—	(15)	276
Total non-mortgage-backed securities	**2,979**	**—**	**—**	**2,979**	**31**	**(51)**	**2,959**
Mortgage-backed securities							
U.S. obligations single-family	4,054	—	—	4,054	1	(146)	3,909
GSE single-family	10,064	—	—	10,064	33	(211)	9,886
GSE multifamily	32,077	—	—	32,077	12	(326)	31,763
Private-label	334	—	(5)	329	13	(13)	329
Total mortgage-backed securities	**46,529**	**—**	**(5)**	**46,524**	**59**	**(696)**	**45,887**
Total	**$ 49,508**	**$ —**	**$ (5)**	**$ 49,503**	**$ 90**	**$ (747)**	**$ 48,846**

	December 31, 2021						
	Amortized Cost(1)	Allowance for Credit Losses	OTTI Recognized in AOCI(2)	Net Carrying Value	Gross Unrecognized Holding Gains(3)	Gross Unrecognized Holding Losses(3)	Fair Value
Non-mortgage-backed securities							
U.S. Treasury obligations	$ 47	$ —	$ —	$ 47	$ —	$ —	$ 47
Other U.S. obligations	1,509	—	—	1,509	10	—	1,519
GSE and Tennessee Valley Authority obligations	1,824	—	—	1,824	77	(6)	1,895
State or local housing agency obligations	522	—	—	522	1	(19)	504
Total non-mortgage-backed securities	**3,902**	**—**	**—**	**3,902**	**88**	**(25)**	**3,965**
Mortgage-backed securities							
U.S. obligations single-family	4,177	—	—	4,177	24	(21)	4,180
GSE single-family	11,766	—	—	11,766	179	(23)	11,922
GSE multifamily	27,429	—	—	27,429	424	(37)	27,816
Private-label	404	—	(6)	398	22	(3)	417
Total mortgage-backed securities	**43,776**	**—**	**(6)**	**43,770**	**649**	**(84)**	**44,335**
Total	**$ 47,678**	**$ —**	**$ (6)**	**$ 47,672**	**$ 737**	**$ (109)**	**$ 48,300**

(1) Amortized cost of HTM securities includes adjustments made to the cost basis of an investment for accretion, amortization, and/or net charge-offs and excludes accrued interest receivable of $62 million and $48 million as of June 30, 2022 and December 31, 2021.
(2) Represents other-than-temporary impairment (OTTI) recognized in accumulated other comprehensive income (AOCI).
(3) Gross unrecognized holding gains (losses) represent the difference between fair value and net carrying value.

Table 3.8 presents the amortized cost, net carrying value, and fair value of HTM securities by contractual maturity at June 30, 2022 and December 31, 2021.

Table 3.8 - HTM Securities by Contractual Maturity

(dollars in millions)

	June 30, 2022			December 31, 2021		
Year of Maturity	**Amortized Cost**	**Net Carrying Value(1)**	**Fair Value**	**Amortized Cost**	**Net Carrying Value(1)**	**Fair Value**
Non-mortgage-backed securities						
Due in one year or less	$ 1,057	$ 1,057	$ 1,056	$ 1,706	$ 1,706	$ 1,706
Due after one year through five years	1,235	1,235	1,220	1,142	1,142	1,169
Due after five years through ten years	403	403	404	599	599	618
Due after ten years	284	284	279	455	455	472
Total non-mortgage-backed securities	**2,979**	**2,979**	**2,959**	**3,902**	**3,902**	**3,965**
Mortgage-backed securities(2)	**46,529**	**46,524**	**45,887**	**43,776**	**43,770**	**44,335**
Total	**$ 49,508**	**$ 49,503**	**$ 48,846**	**$ 47,678**	**$ 47,672**	**$ 48,300**

(1) Net carrying value of HTM securities represents amortized cost after adjustments for non-credit-related losses recognized in AOCI and allowance for credit losses.
(2) MBS are not presented by contractual maturity because 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.

Upon adopting Facilitation of the Effects of Reference Rate Reform on Financial Reporting (ASU 2020-04), certain FHLBanks exercised a one-time election in the second quarter of 2021, under which they transferred from HTM to AFS certain securities, which had an amortized cost of $3.4 billion and unrealized gains of $11.7 million on the date of transfer. There were no such transfers that occurred during the first half of 2022.

Certain FHLBanks sold securities out of their respective HTM portfolio that were near enough to their maturity date (for example, within three months of maturity) that changes in market interest rates would not have a significant effect on the security’s fair value or had less than 15% of the acquired principal outstanding at the time of the sale. These sales are considered maturities for purposes of security classification. Table 3.9 presents the proceeds from sale and gains and losses on sale of HTM securities for the three and six months ended June 30, 2022 and 2021.

Table 3.9 - Proceeds from Sale and Gains and Losses on Sale of HTM Securities

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	**2021**	**2022**	**2021**
Proceeds from sale of HTM securities	$ —	$ —	$ 10	$ —
Amortized cost of HTM securities sold	—	—	10	—
Net realized gains (losses) from sale of HTM securities	**$ —**	**$ —**	**$ —**	**$ —**

Allowance for Credit Losses on AFS and HTM Securities

The FHLBanks evaluate AFS and HTM securities for credit losses on a quarterly basis. During the three and six months ended June 30, 2022, the FHLBanks recognized a provision for credit losses of $5 million and $3 million on AFS and HTM securities. During the three and six months ended June 30, 2021, the FHLBanks recognized a reversal of credit losses of $1 million and $6 million on AFS and HTM securities.

Table 3.10 presents a rollforward of the allowance for credit losses on debt securities for the three and six months ended June 30, 2022 and 2021.

Table 3.10 - Allowance for Credit Losses on Debt Securities

(dollars in millions)

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022		2021		2022		2021	
	AFS	HTM	AFS	HTM	AFS	HTM	AFS	HTM
Balance, at beginning of period	**$ 17**	**$ —**	**$ 18**	**$ 1**	**$ 19**	**$ —**	**$ 24**	**$ 1**
Provision (reversal) for credit losses	5	—	(1)	—	3	—	(6)	—
Reduction due to intent to sell	—	—	1	(1)	—	—	1	(1)
Charge-offs, net of recoveries	—	—	(1)	—	—	—	(2)	—
Balance, at end of period	**$ 22**	**$ —**	**$ 17**	**$ —**	**$ 22**	**$ —**	**$ 17**	**$ —**

To evaluate investment securities for credit losses at June 30, 2022 and December 31, 2021, the FHLBanks employed the following methodologies, based on the type of security:

AFS and HTM Securities (Excluding PLMBS)

The FHLBanks' AFS and HTM securities are principally certificates of deposit, U.S. Treasury and other U.S. obligations, GSE and Tennessee Valley Authority obligations, state or local housing agency obligations, and MBS issued by Ginnie Mae, Freddie Mac, and Fannie Mae that are backed by single-family or multifamily mortgage loans. The FHLBanks only purchase securities that are considered investment quality. Excluding PLMBS investments, at both June 30, 2022 and December 31, 2021, substantially all of the AFS and HTM securities, based on amortized cost, were rated single-A or above by a nationally recognized statistical rating organization, based on the lowest long-term credit rating for each security used by each individual FHLBank. These may differ from any internal ratings of the securities by an FHLBank, if applicable.

Each FHLBank evaluates its individual AFS 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 June 30, 2022 and December 31, 2021, certain of the FHLBanks' AFS securities were in an unrealized loss position. These losses are considered temporary as each FHLBank expects to recover the entire amortized cost basis on these AFS securities and neither intends to sell these securities nor considers it more likely than not that it will be required to sell these securities before its anticipated recovery of each security's remaining amortized cost basis. Furthermore, the FHLBanks had not experienced any payment defaults on these securities as of June 30, 2022 or December 31, 2021; and substantially all of these securities carry an implicit or explicit government guarantee. As a result, no allowance for credit losses was recorded on these AFS securities at June 30, 2022 and December 31, 2021.

Each FHLBank evaluates its HTM 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. At June 30, 2022 and December 31, 2021, the FHLBanks had not established an allowance for credit losses on any of these HTM securities because the securities: (1) were all highly-rated and/or had short remaining terms to maturity, (2) had not experienced, nor did the FHLBanks expect, any payment default on these securities, and (3) in the case of U.S. Treasury, GSE, or other agency obligations, carry an implicit or explicit government guarantee such that the FHLBanks consider the risk of nonpayment to be zero.

Private-label MBS

Certain FHLBanks also hold investments in private-label MBS. No FHLBank has purchased private-label MBS since 2008. Although the FHLBanks invested in private-label MBS that at the date of purchase were substantially all rated triple-A, many of these securities have subsequently experienced significant credit deterioration. At both June 30, 2022 and December 31, 2021, 9% of private-label MBS, based on amortized cost, were rated single-A, or above, by a nationally recognized statistical rating organization; and the remaining securities were either rated less than single-A, or were unrated. To determine whether an allowance for credit losses is necessary on these securities, the FHLBanks perform cash flow analyses.

Each applicable FHLBank's evaluation of credit losses includes estimating the projected cash flows that the FHLBank is likely to collect based on an assessment of available information, including the structure of the applicable security and certain assumptions such as:

- the remaining payment terms for the security;
- prepayment speeds based on underlying loan-level borrower and loan characteristics;
- expected default rates based on underlying loan-level borrower and loan characteristics;
- loss severity on the collateral supporting each FHLBank's security based on underlying loan-level borrower and loan characteristics;
- expected housing price changes; and
- expected interest-rate assumptions.

Each applicable FHLBank performed a cash flow analysis using third-party models to assess whether the entire amortized cost basis of its private-label MBS will be recovered. The projected cash flows are based on a number of assumptions and expectations, and the results of these models can vary significantly with changes in assumptions and expectations. The projected cash flows, determined based on the model approach, reflect a best estimate scenario and include a base case housing price forecast and a base case housing price recovery path. At June 30, 2022 and December 31, 2021, the allowance for credit losses was $22 million and $19 million for AFS PLMBS. There was no allowance for credit losses on HTM PLMBS at both June 30, 2022 and December 31, 2021. For certain private-label MBS where underlying collateral data is not available, alternative procedures as determined by each FHLBank are used to assess these securities for credit loss.

Note 4 - Advances

The FHLBanks offer a wide range of fixed- and variable-rate advance products with different maturities, interest rates, payment characteristics, and optionality. Fixed-rate advances generally have maturities ranging from one day to 30 years. Variable-rate advances generally have maturities ranging from less than 30 days to 20 years, where the interest rates reset periodically at a fixed spread to the London Interbank Offered Rate (LIBOR), the Secured Overnight Financing Rate (SOFR) or other specified indices, or to consolidated obligation yields.

Table 4.1 presents advances outstanding by redemption term and weighted-average interest rate at June 30, 2022 and December 31, 2021.

Table 4.1 - Advances by Redemption Term

(dollars in millions)

	June 30, 2022		December 31, 2021	
Redemption Term	**Amount(1)**	**Weighted-Average Interest Rate**	**Amount(1)**	**Weighted-Average Interest Rate**
Overdrawn demand and overnight deposit accounts	$ 200	2.83 %	$ —	—
Due in 1 year or less	288,532	1.53 %	145,099	0.62 %
Due after 1 year through 2 years	70,038	1.74 %	41,787	1.37 %
Due after 2 years through 3 years	47,106	1.60 %	40,987	1.22 %
Due after 3 years through 4 years	32,728	1.81 %	29,364	1.25 %
Due after 4 years through 5 years	31,325	2.02 %	26,868	1.31 %
Thereafter	53,716	1.98 %	65,278	1.50 %
Total principal amount	**523,645**	1.66 %	**349,383**	1.05 %
Discounts on AHP advances	(23)		(24)	
Premiums	100		85	
Discounts	(55)		(116)	
Hedging adjustments	(4,768)		1,829	
Fair value option valuation adjustments	(16)		121	
Total	**$ 518,883**		**$ 351,278**	

(1) Carrying amounts exclude accrued interest receivable of $512 million and $274 million as of June 30, 2022 and December 31, 2021.

The FHLBanks offer advances to members and housing associates that provide the right, based upon predetermined option exercise dates, to call the advance prior to maturity without incurring prepayment or termination fees (callable advances). The FHLBanks also offer certain floating-rate and/or amortizing advances that may be contractually prepaid by the borrower on specified dates without incurring prepayment or termination fees (prepayable advances). Other advances may only be prepaid by paying a fee to the FHLBank (prepayment fee) that makes the FHLBank financially indifferent to the prepayment of the advance.

Some advances contain embedded options allowing an FHLBank to offer putable and convertible advances. A member can either sell an embedded option to an FHLBank or purchase an embedded option from an FHLBank. With a putable advance to a member, an FHLBank effectively purchases a put option from the member that allows that FHLBank to put or extinguish the fixed-rate advance to the member on predetermined exercise dates. Generally, these put options are exercised when interest rates increase relative to contractual rates.

Convertible advances allow an FHLBank to convert an advance from one interest-payment term structure to another. Fixed-rate to variable-rate convertible advances have a defined lockout period after which they convert to the current market rate or another structure. A convertible advance generally carries a lower initial interest rate than a comparable-maturity fixed-rate advance without the conversion feature. Variable- to fixed-rate convertible advances have a defined lockout period during which the interest rates adjust based on a spread to LIBOR, SOFR or other specified indices, or consolidated obligation yields. At the end of the lockout period, these advances may convert to fixed-rate advances. The fixed rates on the converted advances are determined at origination.

Table 4.2 presents advances by redemption term or next call date and next put or convert date at June 30, 2022 and December 31, 2021.

Table 4.2 - Advances by Redemption Term or Next Call Date and Next Put or Convert Date

(dollars in millions)

	Redemption Term or Next Call Date(1)		Redemption Term or Next Put or Convert Date	
	June 30, 2022	December 31, 2021	June 30, 2022	December 31, 2021
Overdrawn demand and overnight deposit accounts	$ 200	$ —	$ 200	$ —
Due in 1 year or less	354,640	188,779	311,337	180,635
Due after 1 year through 2 years	39,021	32,593	70,393	42,535
Due after 2 years through 3 years	34,553	27,933	47,741	40,138
Due after 3 years through 4 years	23,646	22,944	32,631	28,769
Due after 4 years through 5 years	24,931	18,411	31,035	26,113
Thereafter	46,654	58,723	30,308	31,193
Total principal amount	**$ 523,645**	**$ 349,383**	**$ 523,645**	**$ 349,383**

(1) Also includes certain floating-rate and/or amortizing advances that may be contractually prepaid by the borrower on specified dates without incurring prepayment or termination fees.

Table 4.3 presents the redemption term for fixed-rate and variable-rate advances at June 30, 2022 and December 31, 2021.

Table 4.3 - Advances by Current Interest Rate Terms

(dollars in millions)

Redemption Term	June 30, 2022	December 31, 2021
Total fixed-rate	$ 375,829	$ 276,380
Total variable-rate	147,816	73,003
Total principal amount	**$ 523,645**	**$ 349,383**

Credit Risk Exposure and Security Terms

The FHLBanks' advances are primarily made to member financial institutions, including commercial banks and insurance companies. Each FHLBank manages its credit exposure to advances through an integrated approach that includes establishing a credit limit for each borrower. This approach includes an ongoing review of each borrower's financial condition, in conjunction with the FHLBank's collateral and lending policies to limit risk of loss, while balancing borrowers' needs for a reliable source of funding.

In addition, each FHLBank lends to eligible borrowers in accordance with federal law and FHFA regulations. Specifically, each FHLBank is required to obtain sufficient collateral to fully secure credit products up to the counterparty's total credit limit. Residential mortgage loans are the principal form of collateral for advances. An FHLBank either allows a borrower to retain physical possession of the collateral assigned to it, or requires the borrower to specifically assign or place physical possession of the collateral with the FHLBank or its safekeeping agent. Each FHLBank perfects its security interest in all pledged collateral. (See *Note 5 - Advances* on pages F-38 to F-41 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for additional information about the FHLBanks' collateral securing advances, including eligible collateral types, valuation and other risk mitigation procedures.)

Using a risk-based approach and taking into consideration each borrower's financial strength, the FHLBanks consider the types and level of collateral to be the primary indicator of credit quality on their advances. At June 30, 2022 and December 31, 2021, each FHLBank had rights to collateral on a borrower-by-borrower basis with an estimated value equal to, or greater than, its outstanding advances.

Each FHLBank continues to evaluate and make changes to its collateral guidelines, as necessary, based on current market conditions. At June 30, 2022 and December 31, 2021, none of the FHLBanks had any advances that were considered past due, on nonaccrual status, or considered impaired. In addition, there were no troubled debt restructurings (TDRs) related to advances at any FHLBank during the three and six months ended June 30, 2022 and 2021, and based on the collateral held as security, each FHLBank management's credit extension and collateral policies, and repayment history on advances, no allowance for credit losses on advances was recorded at June 30, 2022 and December 31, 2021.

Note 5 - Mortgage Loans

Mortgage Loans Held for Portfolio

Mortgage loans held for portfolio primarily consist of loans obtained through the Mortgage Purchase Program (MPP) and Mortgage Partnership Finance® (MPF®) Program and are either conventional mortgage loans or government-guaranteed or -insured mortgage loans. In addition, the FHLBank of New York implemented the Mortgage Asset Program (MAP®) in order to replace its participation in the MPF Program beginning in March 2021. Under these mortgage programs, the FHLBanks purchase single-family mortgage loans that are originated or acquired by participating financial institutions. These mortgage loans are credit-enhanced by participating financial institutions or are guaranteed or insured by Federal agencies.

Table 5.1 presents the composition of mortgage loans held for portfolio, net of the allowance for credit losses at June 30, 2022 and December 31, 2021.

Table 5.1 - Mortgage Loans Held for Portfolio

(dollars in millions)

	June 30, 2022	December 31, 2021
Fixed-rate, long-term single-family mortgage loans	$ 48,715	$ 47,897
Fixed-rate, medium-term(1) single-family mortgage loans	6,160	6,616
Total unpaid principal balance	**54,875**	**54,513**
Premiums	966	995
Discounts	(43)	(17)
Hedging adjustments	(20)	29
Total mortgage loans held for portfolio(2)	**55,778**	**55,520**
Allowance for credit losses on mortgage loans	(25)	(23)
Mortgage loans held for portfolio, net	**$ 55,753**	**$ 55,497**

(1) Medium-term is defined as a term of 15 years or less.
(2) Excludes accrued interest receivable of $240 million and $237 million at June 30, 2022 and December 31, 2021.

Table 5.2 presents mortgage loans held for portfolio by collateral/guarantee type at June 30, 2022 and December 31, 2021.

Table 5.2 - Mortgage Loans Held for Portfolio by Collateral/Guarantee Type

(dollars in millions)

	June 30, 2022	December 31, 2021
Conventional mortgage loans	$ 52,563	$ 52,042
Government-guaranteed or -insured mortgage loans	2,312	2,471
Total unpaid principal balance	**$ 54,875**	**$ 54,513**

Credit Enhancements. An FHLBank's allowance for credit losses considers the credit enhancements associated with conventional mortgage loans under the MPF Program, MPP, and MAP. Credit enhancements may include primary mortgage insurance, supplemental mortgage insurance, the credit enhancement amount plus any recoverable performance-based credit enhancement fees (for certain MPF loans), Lender Risk Account (for MPP loans), and Member Performance Account (for MAP loans). The credit risk analysis of all conventional loans is performed at the individual master commitment level to determine the credit enhancements available to recover losses on loans under each individual master commitment.

MPF Program. Participating financial institutions are paid a credit enhancement fee for assuming credit risk, and in some instances all or a portion of the credit enhancement fee may be performance-based. An FHLBank records credit enhancement fees paid to the participating financial institutions as a reduction to mortgage interest income. A participating financial institution may obtain supplemental mortgage insurance that it intends to use to cover a portion of its credit loss obligation under a master commitment.

Conventional MPF loans are evaluated for credit enhancement by use of third-party models. Each FHLBank participating in the MPF program (MPF FHLBank) and its participating financial institution share the risk of credit losses on conventional MPF loan products held for portfolio, by structuring potential losses into layers with respect to each master commitment. Credit losses in a master commitment are first absorbed by an FHLBank, up to a specified amount referred to as the First Loss Account. For certain product master commitments, the FHLBank may withhold a participating financial institution's scheduled performance credit enhancement fee in order to reimburse the FHLBank for a portion of credit losses allocated to the First Loss Account.

The First Loss Account represents the first layer or portion of credit losses that each MPF FHLBank absorbs with respect to its MPF loans after considering the borrower's equity, primary mortgage insurance, and recoverable credit enhancement fees. The participating financial institution is required to cover the next layer of losses up to an agreed-upon credit enhancement obligation amount, which may consist of a direct liability of the participating financial institution to pay credit losses up to a specified amount, a contractual obligation of a participating financial institution to provide supplemental mortgage insurance, or a combination of both. Any remaining unallocated losses are absorbed by the MPF FHLBank.

Unlike conventional MPF products held for portfolio, under the MPF Xtra, MPF Direct, MPF Government, and MPF Government MBS products, participating financial institutions are not required to provide credit enhancement and do not receive credit enhancement fees. Loans sold to the FHLBank of Chicago under the MPF Xtra and MPF Direct products are concurrently sold to third-party investors, and are not recorded on the MPF FHLBank's statement of condition.

MPP and MAP Loans. The conventional mortgage loans under the MPP are supported by a Lender Risk Account, and may also be supported by primary or supplemental mortgage insurance, in addition to the associated property as collateral. The Lender Risk Account is funded by an FHLBank participating in the MPP (MPP FHLBank) either upfront as a portion of the purchase proceeds or through a portion of the net interest remitted monthly by the borrower in an amount sufficient to cover expected losses on the pool of mortgages. The Lender Risk Account is recorded in other liabilities on the Combined Statement of Condition. To the extent available, Lender Risk Account funds are used to offset any losses that occur. Typically after five years, excess funds over required balances are returned to the participating financial institution in accordance with a step-down schedule that is established upon execution of a master commitment contract. The Lender Risk Account is released in accordance with the terms of the master commitment. Similar to the MPP's Lender Risk Account, the FHLBank of New York maintains a Member Performance Account as credit enhancement for MAP loans. At June 30, 2022 and December 31, 2021, the amount of the credit enhancements in the Lender Risk and Member Performance accounts remaining to cover future potential losses totaled $494 million and $488 million.

Payment Status of Mortgage Loans. Payment status is the key credit quality indicator for conventional mortgage loans and allows the FHLBanks to monitor borrower performance. A past due loan is one where the borrower has failed to make a full payment of principal and interest within 30 days of its due date. Other delinquency statistics include, non-accrual loans and loans in process of foreclosure. Tables 5.3 and 5.4 present the payment status for conventional mortgage loans and other delinquency statistics for all of the FHLBanks' mortgage loans at June 30, 2022 and December 31, 2021.

Table 5.3 - Credit Quality Indicator for Conventional Mortgage Loans

(dollars in millions)

	June 30, 2022		
	Conventional Mortgage Loans		
	Origination Year		
Payment Status at Amortized Cost(1)	**Prior to 2018**	**2018 to 2022**	**Total**
Past due 30-59 days	$ 125	$ 148	$ 273
Past due 60-89 days	34	27	61
Past due 90 days or more	122	96	218
Total past due mortgage loans	**281**	**271**	**552**
Total current mortgage loans	14,209	38,671	52,880
Total conventional mortgage loans	**$ 14,490**	**$ 38,942**	**$ 53,432**

	December 31, 2021		
	Conventional Mortgage Loans		
	Origination Year		
Payment Status at Amortized Cost(1)	**Prior to 2017**	**2017 to 2021**	**Total**
Past due 30-59 days	$ 120	$ 159	$ 279
Past due 60-89 days	33	34	67
Past due 90 days or more	141	182	323
Total past due mortgage loans	**294**	**375**	**669**
Total current mortgage loans	13,109	39,232	52,341
Total conventional mortgage loans	**$ 13,403**	**$ 39,607**	**$ 53,010**

(1) Amortized cost excludes accrued interest receivable.

Table 5.4 - Other Delinquency Statistics

(dollars in millions)

	June 30, 2022		
Amortized Cost	**Conventional Mortgage Loans**	**Government-Guaranteed or -Insured**	**Total**
In process of foreclosure(1)	$ 75	$ 15	$ 90
Serious delinquency rate(2)	0.42 %	1.88 %	0.48 %
Past due 90 days or more and still accruing interest	$ 31	$ 41	$ 72
Loans on non-accrual status(3)	$ 248	$ —	$ 248

	December 31, 2021		
Amortized Cost	**Conventional Mortgage Loans**	**Government-Guaranteed or -Insured**	**Total**
In process of foreclosure(1)	$ 37	$ 12	$ 49
Serious delinquency rate(2)	0.63 %	2.51 %	0.71 %
Past due 90 days or more and still accruing interest	$ 68	$ 63	$ 131
Loans on non-accrual status(3)	$ 353	$ —	$ 353

(1) Includes loans where the decision of foreclosure or a similar alternative, such as pursuit of deed-in-lieu, has been reported.
(2) Represents seriously delinquent loans as a percentage of total mortgage loans. Seriously delinquent loans are comprised of all loans past due 90 days or more and loans that are in the process of foreclosure.
(3) At June 30, 2022 and December 31, 2021, $135 million and $199 million of conventional mortgage loans on non-accrual status did not have a related allowance for credit losses because these loans were either previously charged-off to the expected recoverable value or the fair value of the underlying collateral, including any credit enhancements, is greater than the amortized cost of the loans.

Allowance for Credit Losses for Mortgage Loans

See *Note 1 - Summary of Significant Accounting Policies* on pages F-21 to F-23 and *Note 6 - Mortgage Loans* on pages F-41 to F-45 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for information on measuring credit losses on mortgage loans, placing them on non-accrual status, and charging them off when necessary.

Conventional Mortgage Loans. Loans are evaluated collectively when similar risk characteristics exists; loans that do not share risk characteristics with other pools are evaluated for expected credit losses on an individual basis. Each FHLBank determines its allowance for credit losses on conventional loans through analyses that include consideration of various loan portfolio and collateral-related characteristics, such as past performance, current conditions, and reasonable and supportable forecasts of expected economic conditions. The FHLBanks use models that employ a variety of methods, such as projected cash flows, to estimate expected credit losses over the life of the loans. These models rely on a number of inputs, such as both current and forecasted property values and interest rates as well as historical borrower behavior experience. At June 30, 2022 and December 31, 2021, the range of short-term forecasts for housing prices used by the FHLBanks varied, but the FHLBanks were generally using forecasts for 1 to 5 years before transitioning to historical trends. Each FHLBank also incorporates associated credit enhancements, if any, to determine its estimate of expected credit losses.

Certain conventional loans may be evaluated for credit losses by an FHLBank 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. An FHLBank may estimate the fair value of this collateral by applying an appropriate loss severity rate or using third party estimates or property valuation model(s). 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 FHLBanks 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.

Each FHLBank established an allowance for credit losses on its conventional mortgage loans held for portfolio. Table 5.5 presents a rollforward of the allowance for credit losses on conventional mortgage loans for the three and six months ended June 30, 2022, and 2021.

Table 5.5 - Allowance for Credit Losses on Conventional Mortgage Loans

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Balance, at beginning of period	**$ 25**	**$ 27**	**$ 23**	**$ 33**
(Charge-offs), net of recoveries	(1)	—	(1)	(1)
Provision (reversal) for credit losses	1	—	3	(5)
Balance, at end of period	**$ 25**	**$ 27**	**$ 25**	**$ 27**

Government-Guaranteed or -Insured Mortgage Loans. An FHLBank may invest in fixed-rate mortgage loans that are insured or guaranteed by the Federal Housing Administration, the Department of Veterans Affairs, the Rural Housing Service of the Department of Agriculture, and/or the Department of Housing and Urban Development. The servicer provides and maintains insurance or a guarantee from the applicable government agency. The servicer is responsible for compliance with all government agency requirements and for obtaining the benefit of the applicable guarantee or insurance with respect to defaulted government-guaranteed or -insured mortgage loans. Any losses incurred on these loans that are not recovered from the issuer or the guarantor are absorbed by the servicer. Therefore, each FHLBank only has credit risk for these loans if the servicer fails to pay for losses not covered by the guarantee or insurance, but in such instance, the FHLBank would have recourse against the servicer for such failure. Based on each FHLBank's assessment of its servicers and the collateral backing the loans, the risk of loss was immaterial and, consequently, no FHLBank recorded an allowance for credit losses for government-guaranteed or -insured mortgage loans at June 30, 2022 and December 31, 2021.

Note 6 - Derivatives and Hedging Activities

Nature of Business Activity

The FHLBanks are exposed to interest-rate risk primarily from the effect of interest rate changes on their interest-earning assets and their interest-bearing liabilities that finance these assets. The goal of each FHLBank's interest-rate risk management strategy is not to eliminate interest-rate risk, but to manage it within appropriate limits. To mitigate the risk of loss, each FHLBank has established policies and procedures, which include guidelines on the amount of exposure to interest rate changes it is willing to accept. In addition, each FHLBank monitors the risk to its interest income, net interest margin, and average maturity of interest-earning assets and interest-bearing liabilities. (See *Note 7 - Derivatives and Hedging Activities* on pages F-45 to F-54 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for a description of the application of derivatives and the types of derivatives and hedged items.)

Each FHLBank reevaluates its hedging strategies periodically and may change the hedging techniques it uses or may adopt new strategies. Each FHLBank transacts most of 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 either executed with a counterparty, referred to as uncleared derivatives, or cleared through a Futures Commission Merchant (i.e., clearing agent) with a Derivative Clearing Organization, referred to as cleared derivatives. Once a derivative transaction has been accepted for clearing by a Derivative Clearing Organization (Clearinghouse) the executing counterparty is replaced with the Clearinghouse. The FHLBanks are not derivative dealers and do not trade derivatives for short-term profit.

Financial Statement Effect and Additional Financial Information

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

Table 6.1 presents the notional amount, fair value of derivative instruments, and total derivative assets and liabilities at June 30, 2022 and December 31, 2021. 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

(dollars in millions)

	June 30, 2022			December 31, 2021		
	Notional Amount of Derivatives	Derivative Assets	Derivative Liabilities	Notional Amount of Derivatives	Derivative Assets	Derivative Liabilities
Derivatives designated as hedging instruments						
Interest-rate swaps	$ 582,374	$ 2,585	$ 12,208	$ 464,621	$ 956	$ 3,549
Derivatives not designated as hedging instruments						
Interest-rate swaps	195,147	266	407	114,741	57	199
Interest-rate swaptions	1,555	19	—	1,819	10	—
Interest-rate caps or floors	7,275	12	2	7,538	5	1
Interest-rate futures or forwards	175	1	1	213	—	—
Mortgage delivery commitments	777	3	2	1,228	2	3
Other	148	1	1	203	—	—
Total derivatives not designated as hedging instruments	**205,077**	**302**	**413**	**125,742**	**74**	**203**
Total derivatives before netting and collateral adjustments	**$ 787,451**	**2,887**	**12,621**	**$ 590,363**	**1,030**	**3,752**
Netting adjustments and cash collateral(1)		(269)	(12,106)		1,085	(3,575)
Total derivative assets and total derivative liabilities		**$ 2,618**	**$ 515**		**$ 2,115**	**$ 177**

(1) Amounts represent the application of the netting requirements that allow an FHLBank to settle positive and negative positions, and also cash collateral, including accrued interest, held or placed by that FHLBank with the same clearing agent and/or counterparty. Cash collateral posted, including accrued interest, was $12,125 million and $4,518 million at June 30, 2022 and December 31, 2021. Cash collateral received, including accrued interest, was $1,363 million and $492 million at June 30, 2022 and December 31, 2021.

Table 6.2 presents the net gains (losses) on qualifying and discontinued fair value and cash flow hedging relationships for the three and six months ended June 30, 2022 and 2021.

Table 6.2 - Net Gains (Losses) on Fair Value and Cash Flow Hedging Relationships

(dollars in millions)

	Three Months Ended June 30, 2022				
	Interest Income/Expense				Other Comprehensive Income (OCI)
	Advances	Available-for-Sale Securities	Consolidated Discount Notes	Consolidated Bonds	
Total interest income (expense) presented on the Combined Statement of Income	$ 1,411	$ 509	$ (629)	$ (1,121)	
Gains (losses) on fair value hedging relationships					
Interest rate contracts					
Derivatives(1)	$ 1,856	$ 2,280	$ (58)	$ (2,817)	
Hedged items(2)	(2,033)	(2,469)	88	3,063	
Net gains (losses) on fair value hedging relationships	**$ (177)**	**$ (189)**	**$ 30**	**$ 246**	
Gains (losses) on cash flow hedging relationships(3)					
Interest rate contracts					
Reclassified from AOCI into interest income (expense)	$ —	$ —	$ (6)	$ (2)	
Recognized in OCI					$ 114

	Three Months Ended June 30, 2021				
	Interest Income/Expense				Other Comprehensive Income (OCI)
	Advances	Available-for-Sale Securities	Consolidated Discount Notes	Consolidated Bonds	
Total interest income (expense) presented on the Combined Statement of Income	$ 665	$ 251	$ (46)	$ (623)	
Gains (losses) on fair value hedging relationships					
Interest rate contracts					
Derivatives(1)	$ (757)	$ (1,246)	$ —	$ 568	
Hedged items(2)	210	926	—	(281)	
Net gains (losses) on fair value hedging relationships	**$ (547)**	**$ (320)**	**$ —**	**$ 287**	
Gains (losses) on cash flow hedging relationships(3)					
Interest rate contracts					
Reclassified from AOCI into interest income (expense)	$ —	$ —	$ (9)	$ (1)	
Recognized in OCI					$ (66)

	Six Months Ended June 30, 2022				
	Interest Income/Expense				Other Comprehensive Income (OCI)
	Advances	Available-for-Sale Securities	Consolidated Discount Notes	Consolidated Bonds	
Total interest income (expense) presented on the Combined Statement of Income	$ 2,045	$ 849	$ (716)	$ (1,670)	
Gains (losses) on fair value hedging relationships					
Interest rate contracts					
Derivatives(1)	$ 6,024	$ 6,174	$ (73)	$ (9,505)	
Hedged items(2)	(6,566)	(6,678)	111	10,174	
Net gains (losses) on fair value hedging relationships	**$ (542)**	**$ (504)**	**$ 38**	**$ 669**	
Gains (losses) on cash flow hedging relationships(3)					
Interest rate contracts					
Reclassified from AOCI into interest income (expense)	$ —	$ —	$ (15)	$ (4)	
Recognized in OCI					$ 334

	Six Months Ended June 30, 2021				
	Interest Income/Expense				Other Comprehensive Income
	Advances	Available-for-Sale Securities	Consolidated Discount Notes	Consolidated Bonds	
Total interest income (expense) presented on the Combined Statement of Income	$ 1,422	$ 528	$ (131)	$ (1,323)	
Gains (losses) on fair value hedging relationships					
Interest rate contracts					
Derivatives(1)	$ 1,692	$ 1,434	$ —	$ (428)	
Hedged items(2)	(2,743)	(2,048)	—	920	
Net gains (losses) on fair value hedging relationships	**$ (1,051)**	**$ (614)**	**$ —**	**$ 492**	
Gains (losses) on cash flow hedging relationships(3)					
Interest rate contracts					
Reclassified from AOCI into interest income (expense)	$ —	$ —	$ (19)	$ (4)	
Recognized in OCI					$ 108

(1) Includes changes in fair value and net interest settlements and excludes the interest income (expense) of the respective hedged item.
(2) Includes changes in fair value and amortization and accretion of basis adjustments.
(3) Includes changes in fair value, net interest settlements, and amortization and accretion of hedging activities into interest income. Excludes the interest income (expense) of the respective hedged item.

For the three and six months ended June 30, 2022 and 2021, no material amounts were reclassified from AOCI into earnings as a result of discontinued cash flow hedges because the original forecasted transactions occurred by the end of the originally specified time period or within a two-month period thereafter. At June 30, 2022, $4 million of deferred net gains on derivative instruments in AOCI was expected to be reclassified to earnings during the next twelve months. At June 30, 2022, the maximum length of time over which an FHLBank was hedging its exposure to the variability in future cash flows for forecasted transactions was ten years, excluding those forecasted transactions related to the payment of variable interest on existing financial instruments.

Table 6.3 presents the cumulative basis adjustments on hedged items designated in fair value hedging relationships and the related amortized cost of the hedged items at June 30, 2022 and December 31, 2021.

Table 6.3 - Cumulative Basis Adjustments for Fair Value Hedges

(dollars in millions)

	June 30, 2022				
	Advances	**Available-for-Sale Securities**	**Mortgage Loans**	**Consolidated Discount Notes**	**Consolidated Bonds**
Amortized cost of hedged asset or liability(1)	$ 167,236	$ 89,921	$ 233	$ 62,835	$ 256,333
Fair value hedging adjustments					
Basis adjustments for active hedging relationships included in amortized cost	$ (4,817)	$ (6,344)	$ —	$ (111)	$ (11,489)
Basis adjustments for discontinued hedging relationships included in amortized cost	49	1,576	5	—	135
Total amount of fair value hedging basis adjustments	**$ (4,768)**	**$ (4,768)**	**$ 5**	**$ (111)**	**$ (11,354)**

	December 31, 2021				
	Advances	**Available-for-Sale Securities**	**Mortgage Loans**	**Consolidated Discount Notes**	**Consolidated Bonds**
Amortized cost of hedged asset or liability(1)	$ 163,515	$ 84,412	$ 265	$ 3,325	$ 216,851
Fair value hedging adjustments					
Basis adjustments for active hedging relationships included in amortized cost	$ 1,586	$ 668	$ —	$ —	$ (1,315)
Basis adjustments for discontinued hedging relationships included in amortized cost	231	1,715	6	—	136
Total amount of fair value hedging basis adjustments	**$ 1,817**	**$ 2,383**	**$ 6**	**$ —**	**$ (1,179)**

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

Table 6.4 presents net gains (losses) related to derivatives and economic hedging activities recorded in non-interest income for the three and six months ended June 30, 2022 and 2021.

Table 6.4 - Net Gains (Losses) on Derivatives and Economic Hedging Activities Recorded in Non-interest Income
(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
Derivatives not designated as hedging instruments	**2022**	**2021**	**2022**	**2021**
Economic hedges				
Interest-rate swaps	$ 58	$ 70	$ 387	$ 394
Interest-rate swaptions	(8)	(17)	7	4
Interest-rate caps or floors	1	(2)	6	(1)
Interest-rate futures or forwards	6	(2)	18	6
Net interest settlements	14	(124)	(38)	(271)
Other	5	(3)	13	3
Mortgage delivery commitments	(11)	10	(45)	(25)
Total net gains (losses) related to derivatives not designated as hedging instruments	**65**	**(68)**	**348**	**110**
Price alignment amount(1)	(3)	—	(3)	—
Net gains (losses) on derivatives	**$ 62**	**$ (68)**	**$ 345**	**$ 110**

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

Managing Credit Risk on Derivatives

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

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

Certain of the FHLBanks' uncleared derivative instruments contain provisions that require an FHLBank to post additional collateral with its counterparties if there is deterioration in that FHLBank's credit rating. If an FHLBank's credit rating is lowered by a nationally recognized statistical rating organization, that FHLBank may be required to deliver additional collateral on uncleared derivative instruments in net liability positions, unless the collateral delivery threshold is set to zero. The aggregate fair value of all uncleared derivative instruments with credit-risk-related contingent features that require an FHLBank to deliver additional collateral due to a credit downgrade and were in a net liability position (before cash collateral and related accrued interest) at June 30, 2022, was $2,912 million, for which the FHLBanks have posted collateral with a fair value of $3,133 million in the normal course of business. If each FHLBank's credit rating had been lowered from its current rating to the next lower rating that would have triggered additional collateral to be delivered, the FHLBanks would have been required to deliver less than one million dollars of additional collateral at fair value to their uncleared derivatives counterparties at June 30, 2022.

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

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. None of the FHLBanks were required to post additional initial margin by its clearing agents, based on credit considerations, at June 30, 2022.

Offsetting of Derivative Assets and Derivative Liabilities

An FHLBank 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.

Each FHLBank has analyzed the enforceability of offsetting rights incorporated in its cleared derivative transactions and determined that the exercise of those offsetting rights by a non-defaulting party under these transactions should be upheld under applicable law upon an event of default including a bankruptcy, insolvency, or similar proceeding involving the Clearinghouse or that FHLBank's clearing agent, or both. Based on this analysis, each FHLBank 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, with and without the legal right of offset, including the related collateral at June 30, 2022 and December 31, 2021.

Table 6.5 - Offsetting of Derivative Assets and Derivative Liabilities

(dollars in millions)

	June 30, 2022						
	Derivative Instruments Meeting Netting Requirements				Non-cash Collateral Not Offset		
	Gross Recognized Amount	Gross Amounts of Netting Adjustments and Cash Collateral	Derivative Instruments Not Meeting Netting Requirements(1)	Total Derivative Assets and Total Derivative Liabilities	Can Be Sold or Repledged	Cannot Be Sold or Repledged	Net Amount(2)
Derivative Assets							
Uncleared	$ 2,297	$ (1,379)	$ 3	$ 921	$ —	$ 112	$ 809
Cleared	587	1,110	—	1,697	(332)	—	2,029
Total				**$ 2,618**			**$ 2,838**
Derivative Liabilities							
Uncleared	$ 11,104	$ (11,018)	$ 2	$ 88	$ —	$ —	$ 88
Cleared	1,515	(1,088)	—	427	97	127	203
Total				**$ 515**			**$ 291**

	December 31, 2021						
	Derivative Instruments Meeting Netting Requirements				Non-cash Collateral Not Offset		
	Gross Recognized Amount	Gross Amounts of Netting Adjustments and Cash Collateral	Derivative Instruments Not Meeting Netting Requirements(1)	Total Derivative Assets and Total Derivative Liabilities	Can Be Sold or Repledged	Cannot Be Sold or Repledged	Net Amount(2)
Derivative Assets							
Uncleared	$ 715	$ (566)	$ 2	$ 151	$ —	$ 120	$ 31
Cleared	313	1,651	—	1,964	(252)	—	2,216
Total				**$ 2,115**			**$ 2,247**
Derivative Liabilities							
Uncleared	$ 3,385	$ (3,239)	$ 3	$ 149	$ —	$ 28	$ 121
Cleared	364	(336)	—	28	5	23	—
Total				**$ 177**			**$ 121**

(1) Represents derivatives that are not subject to an enforceable netting agreement (e.g., mortgage delivery commitments and certain interest-rate futures or forwards).
(2) Any over-collateralization at an FHLBank's individual clearing agent and/or counterparty level is not included in the determination of the net amount. At June 30, 2022 and December 31, 2021, the FHLBanks had additional net credit exposure of $1,386 million and $1,515 million due to instances where an FHLBank's non-cash collateral to a counterparty exceeded the FHLBank's net derivative position.

Note 7 - Deposits

The FHLBanks offer demand and overnight deposit programs to members and to qualifying non-members. In addition, certain FHLBanks offer short-term interest-bearing deposit programs to members, and in certain cases, to qualifying non-members. A member that services mortgage loans may deposit in its FHLBank funds collected in connection with the mortgage loans, pending disbursement of these funds to the owners of the mortgage loans. The FHLBanks classify these funds as other deposits. Deposits classified as demand, overnight, or other pay interest based on a daily interest rate. Term deposits pay interest based on a fixed rate determined at the issuance of the deposit.

Table 7.1 presents interest-bearing and non-interest bearing deposits at June 30, 2022 and December 31, 2021.

Table 7.1 - Deposits
(dollars in millions)

	June 30, 2022	December 31, 2021
Interest-bearing		
Demand and overnight	$ 12,461	$ 13,380
Term	435	194
Other	8	12
Total interest-bearing	**12,904**	**13,586**
Non-interest-bearing		
Demand and overnight	152	336
Other	242	381
Total non-interest-bearing	**394**	**717**
Total deposits	**$ 13,298**	**$ 14,303**

Note 8 - Consolidated Obligations

Consolidated obligations consist of consolidated bonds and consolidated discount notes, which are joint and several obligations of all FHLBanks. The FHLBanks issue consolidated obligations through the Office of Finance as their agent. In connection with each debt issuance, an FHLBank specifies the amount of debt it wants issued on its behalf. The Office of Finance tracks the amount of debt issued on behalf of each FHLBank. In addition, each FHLBank records as a liability its specific portion of consolidated obligations for which it is the primary obligor.

The FHFA and the Secretary of the Treasury oversee the issuance of FHLBank debt through the Office of Finance. Consolidated bonds may be issued to raise short-, intermediate-, or long-term funds for the FHLBanks and are not subject to any statutory or regulatory limits on their maturity. Consolidated discount notes are issued primarily to raise short-term funds and have original maturities of up to one year. These notes generally sell below their face value and are redeemed at face value when they mature.

Although each FHLBank is primarily liable for its portion of consolidated obligations, each FHLBank is also jointly and severally liable with the other FHLBanks for the payment of principal and interest on all consolidated obligations of the FHLBanks. The principal amount of the FHLBanks' outstanding consolidated obligations, including consolidated obligations held by other FHLBanks, was $882.5 billion and $652.9 billion at June 30, 2022 and December 31, 2021.

Table 8.1 presents the carrying value and principal amount of consolidated discount notes outstanding and the weighted-average interest rate at June 30, 2022 and December 31, 2021.

Table 8.1 - Consolidated Discount Notes Outstanding

(dollars in millions)

	Carrying Value	Principal Amount	Weighted-Average Interest Rate(1)
June 30, 2022	$ 412,400	$ 413,782	1.26 %
December 31, 2021	$ 210,897	$ 210,926	0.05 %

(1) Represents yield to maturity excluding concession fees.

Table 8.2 presents consolidated bonds outstanding by contractual maturity and the weighted-average interest rate at June 30, 2022 and December 31, 2021.

Table 8.2 - Consolidated Bonds Outstanding by Contractual Maturity

(dollars in millions)

	June 30, 2022		December 31, 2021	
Year of Contractual Maturity	Amount	Weighted-Average Interest Rate	Amount	Weighted-Average Interest Rate
Due in 1 year or less	$ 167,972	1.56 %	$ 186,568	0.38 %
Due after 1 year through 2 years	57,426	1.60 %	38,856	1.29 %
Due after 2 years through 3 years	75,795	1.29 %	56,852	1.03 %
Due after 3 years through 4 years	53,292	1.06 %	30,531	0.92 %
Due after 4 years through 5 years	56,085	1.51 %	67,545	0.98 %
Thereafter	58,023	2.09 %	61,474	1.88 %
Total principal amount	**468,593**	1.53 %	**441,826**	0.88 %
Net premiums	330		400	
Hedging adjustments	(11,354)		(1,179)	
Fair value option valuation adjustments	(222)		(23)	
Total	**$ 457,347**		**$ 441,024**	

Consolidated bonds outstanding were issued with either fixed-rate coupon payment terms or variable-rate coupon payment terms that are indexed to specified indices, such as SOFR. To meet the specific needs of both the FHLBanks and certain investors in consolidated obligations, both fixed-rate and variable-rate consolidated bonds may contain features that result in complex coupon payment terms and call options. When these consolidated bonds are issued, an FHLBank may enter into derivatives containing features that offset the terms and embedded options, if any, of the consolidated bond obligations.

Table 8.3 presents consolidated bonds outstanding by call features at June 30, 2022 and December 31, 2021.

Table 8.3 - Consolidated Bonds Outstanding by Call Features
(dollars in millions)

Principal Amount of Consolidated Bonds	June 30, 2022	December 31, 2021
Non-callable/non-putable	$ 199,933	$ 253,520
Callable	268,660	188,306
Total principal amount	**$ 468,593**	**$ 441,826**

Table 8.4 presents consolidated bonds outstanding by contractual maturity or next call date at June 30, 2022 and December 31, 2021.

Table 8.4 - Consolidated Bonds Outstanding by Contractual Maturity or Next Call Date
(dollars in millions)

Year of Contractual Maturity or Next Call Date	June 30, 2022	December 31, 2021
Due in 1 year or less	$ 389,529	$ 360,003
Due after 1 year through 2 years	31,897	36,397
Due after 2 years through 3 years	15,777	15,512
Due after 3 years through 4 years	9,992	9,247
Due after 4 years through 5 years	6,606	6,632
Thereafter	14,792	14,035
Total principal amount	**$ 468,593**	**$ 441,826**

Note 9 - Capital

Each FHLBank is subject to three capital requirements under its capital plan and the FHFA rules and regulations. Regulatory capital does not include AOCI, but does include mandatorily redeemable capital stock.

1. *Risk-based capital.* Each FHLBank must maintain at all times permanent capital, defined as Class B stock and retained earnings, in an amount at least equal to the sum of its credit risk, market risk, and operational risk capital requirements, all of which are calculated in accordance with the rules and regulations of the FHFA.

2. *Total regulatory capital.* Each FHLBank must maintain at all times a total capital-to-assets ratio of at least four percent. Total regulatory capital is the sum of permanent capital, the amounts paid-in for Class A stock, any general loss allowance, if consistent with GAAP and not established for specific assets, and other amounts from sources determined by the FHFA as available to absorb losses.

3. *Leverage capital.* Each FHLBank must maintain at all times a leverage capital-to-assets ratio of at least five percent. Leverage capital is defined as the sum of permanent capital weighted 1.5 times and all other components of total capital.

The FHFA may require an FHLBank to maintain greater minimum capital levels than are required based on FHFA rules and regulation. At June 30, 2022, each FHLBank was in compliance with FHFA regulatory capital requirements.

Table 9.1 presents the risk-based capital requirements at June 30, 2022.

Table 9.1 - Risk-Based Capital Requirements at June 30, 2022

(dollars in millions)

	Risk-Based Capital	
FHLBank	Minimum Requirement	Actual
Boston	$ 437	$ 3,175
New York	843	6,910
Pittsburgh	395	3,515
Atlanta	622	5,689
Cincinnati	996	5,748
Indianapolis	1,218	3,508
Chicago	1,436	7,119
Des Moines	541	6,351
Dallas	655	4,469
Topeka	573	2,746
San Francisco	764	6,649
Combined(1)	8,480	55,878

(1) Based on FHFA rules and regulations, risk-based capital requirements apply to individual FHLBanks, and there are no minimum risk-based capital requirements at a combined level. The combined risk-based capital amounts are for analysis only and are calculated based on the sum of the individual FHLBanks' risk-based capital amounts. The sum of the individual FHLBank amounts may not agree to the combined amount due to combining adjustments.

Table 9.2 presents the regulatory capital requirements at June 30, 2022.

Table 9.2 - Regulatory Capital Requirements at June 30, 2022

(dollars in millions)

	Regulatory Capital Ratio		Regulatory Capital	
FHLBank	Minimum Requirement	Actual	Minimum Requirement	Actual
Boston	4.00 %	5.12 %	$ 2,483	$ 3,175
New York	4.00 %	5.96 %	4,639	6,910
Pittsburgh	4.00 %	5.67 %	2,482	3,515
Atlanta	4.00 %	4.81 %	4,728	5,689
Cincinnati	4.00 %	5.58 %	4,122	5,748
Indianapolis	4.00 %	5.46 %	2,571	3,508
Chicago	4.00 %	6.77 %	4,206	7,119
Des Moines	4.00 %	6.76 %	3,759	6,351
Dallas	4.00 %	5.75 %	3,109	4,469
Topeka	4.00 %	5.25 %	2,300	3,019
San Francisco	4.00 %	7.59 %	3,504	6,649
Combined(1)		5.93 %	37,903	56,151

(1) Based on FHFA rules and regulations, regulatory capital requirements apply to individual FHLBanks, and there are no minimum regulatory capital requirements at a combined level. The combined regulatory capital ratio and amounts are for analysis only. The combined regulatory capital ratio is calculated based on the combined regulatory capital as a percentage of combined total assets, and the combined regulatory capital amounts are calculated based on the sum of the individual FHLBanks' regulatory capital amounts. The sum of the individual FHLBank amounts may not agree to the combined amount due to combining adjustments.

Table 9.3 presents the leverage capital requirements at June 30, 2022.

Table 9.3 - Leverage Capital Requirements at June 30, 2022
(dollars in millions)

	Leverage Capital Ratio		Leverage Capital	
FHLBank	Minimum Requirement	Actual	Minimum Requirement	Actual
Boston	5.00 %	7.67 %	$ 3,103	$ 4,763
New York	5.00 %	8.94 %	5,798	10,365
Pittsburgh	5.00 %	8.50 %	3,102	5,273
Atlanta	5.00 %	7.22 %	5,910	8,533
Cincinnati	5.00 %	8.37 %	5,153	8,623
Indianapolis	5.00 %	8.19 %	3,213	5,262
Chicago	5.00 %	10.16 %	5,258	10,678
Des Moines	5.00 %	10.14 %	4,698	9,526
Dallas	5.00 %	8.63 %	3,886	6,704
Topeka	5.00 %	7.64 %	2,875	4,392
San Francisco	5.00 %	11.38 %	4,380	9,973
Combined(1)		8.88 %	47,376	84,091

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(1) Based on FHFA rules and regulations, leverage capital requirements apply to individual FHLBanks, and there are no minimum leverage capital requirements at a combined level. The combined leverage capital ratio and amounts are for analysis only. The combined leverage capital ratio is calculated based on the combined leverage capital as a percentage of combined total assets, and the combined leverage capital amounts are calculated based on the sum of the individual FHLBanks' leverage capital amounts. The sum of the individual FHLBank amounts may not agree to the combined amount due to combining adjustments.

Capital Stock

Each FHLBank is a cooperative whose member financial institutions own most of the FHLBank's capital stock. Former members (including certain non-members that own FHLBank capital stock as a result of merger or acquisition, relocation, charter termination, voluntary termination, or involuntary termination of an FHLBank member) own the remaining capital stock to support business transactions still carried on an FHLBank's statement of condition. Shares of capital stock cannot be purchased or sold except between an FHLBank and its members at its $100 per share par value, as mandated by each FHLBank's capital plan. Members can redeem Class A stock by giving six-months' written notice, and members can redeem Class B stock by giving five-years' written notice, subject to certain restrictions. An FHLBank's board of directors may declare and pay dividends in either cash or capital stock, assuming the FHLBank is in compliance with FHFA rules.

Restricted Retained Earnings

The Joint Capital Enhancement Agreement, as amended (Capital Agreement), is intended to enhance the capital position of each FHLBank. The Capital Agreement provides that each FHLBank will, on a quarterly basis, allocate 20% of its net income to a separate restricted retained earnings account until the balance of that account, calculated as of the last day of each calendar quarter, equals at least one percent of that FHLBank's average balance of outstanding consolidated obligations for the calendar quarter. These restricted retained earnings are not available to pay dividends. The FHLBank of San Francisco had restricted retained earnings that exceeded one percent of its average balance of outstanding consolidated obligations. Accordingly, no further allocation of income into restricted retained earnings was required for that FHLBank during the six months ended June 30, 2022. Additionally, the Capital Agreement provides that amounts in restricted retained earnings in excess of 150% of an FHLBank's restricted retained earnings minimum (i.e., one percent of that FHLBank's average balance of outstanding consolidated obligations calculated as of the last day of each calendar quarter) may be released from restricted retained earnings. As a result of the FHLBank of San Francisco exceeding this threshold during the three months ended March 31, 2022, $16 million was reclassified from restricted retained earnings to unrestricted retained earnings during that period. No amounts were reclassified during the three months ended June 30, 2022, or the six months ended June 30, 2021.

Mandatorily Redeemable Capital Stock

An FHLBank generally reclassifies capital stock subject to redemption from capital to the mandatorily redeemable capital stock liability upon expiration of a grace period, if applicable, after a member exercises a written redemption right, or gives notice of intent to withdraw from membership, or attains non-member status by merger or acquisition, relocation, charter termination, or involuntary termination from membership. Shares of capital stock meeting these definitions are reclassified to mandatorily redeemable capital stock at fair value. Dividends related to capital stock classified as mandatorily redeemable capital stock are accrued at the expected dividend rate and reported as interest expense on the Combined Statement of Income. For the three and six months ended June 30, 2022, dividends on mandatorily redeemable capital stock of $7 million and $12 million were recorded as interest expense. For the three and six months ended June 30, 2021, dividends on mandatorily redeemable capital stock of $6 million and $13 million were recorded as interest expense.

A member may cancel or revoke its written notice of redemption or its notice of withdrawal from membership prior to the end of the applicable redemption period. Each FHLBank's capital plan provides the terms for cancellation fees that may be incurred by the member upon cancellation.

Table 9.4 presents a rollforward of capital stock subject to mandatory redemption for the three and six months ended June 30, 2022 and 2021. Payment is contingent on, among other things, each FHLBank's waiting period and the FHLBank's ability to meet its minimum regulatory capital requirements. These amounts have been classified as a liability on the Combined Statement of Condition.

Table 9.4 - Rollforward of Mandatorily Redeemable Capital Stock

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Balance, beginning of year	$ 960	$ 667	$ 398	$ 772
Capital stock subject to mandatory redemption reclassified from capital	563	375	2,269	737
Redemption/repurchase of mandatorily redeemable capital stock	(1,107)	(428)	(2,251)	(895)
Balance, end of year	**$ 416**	**$ 614**	**$ 416**	**$ 614**

Table 9.5 presents the amount of mandatorily redeemable capital stock by contractual year of redemption at June 30, 2022 and December 31, 2021. The year of redemption in the table is the end of the appropriate redemption period applicable to each FHLBank's capital plan. An FHLBank is not required to redeem membership stock until either five years or six months, depending on the type of capital stock issuable under its capital plan, after the membership is terminated or the FHLBank receives notice of withdrawal. However, for certain membership terminations such as mergers, consolidations, terminations related to insolvency, or out-of-district relocations, the FHLBank may recalculate the former member's stock requirement following that termination and the stock may be deemed excess stock subject to repurchase at the FHLBank's discretion. An FHLBank is not required to redeem activity-based stock until the later of the expiration of the notice of redemption or until the activity to which the capital stock relates no longer remains outstanding. If activity-based stock becomes excess stock as a result of an activity no longer remaining outstanding, an FHLBank may repurchase those shares, at its sole discretion, subject to the statutory and regulatory restrictions on excess capital stock redemption.

Table 9.5 - Mandatorily Redeemable Capital Stock by Contractual Year of Redemption
(dollars in millions)

	June 30, 2022	December 31, 2021
Year 1	$ 13	$ 25
Year 2	30	29
Year 3	13	12
Year 4	271	25
Year 5	65	282
Past contractual redemption date due to remaining activity(1)	24	25
Total	**$ 416**	**$ 398**

(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.

Excess Capital Stock

Excess capital stock is defined as the amount of stock held by a member (or former member) in excess of that institution's minimum stock ownership requirement. FHFA rules limit the ability of an FHLBank to create member excess capital stock under certain circumstances. An FHLBank may not pay dividends in the form of capital stock or issue new excess capital stock to members if that FHLBank's excess capital stock exceeds one percent of its total assets or if the issuance of excess capital stock would cause that FHLBank's excess capital stock to exceed one percent of its total assets. At June 30, 2022, each of the FHLBanks of Cincinnati, Indianapolis, and Dallas had excess capital stock outstanding totaling more than one percent of its total assets.

Capital Classification Determination

The FHFA determines each FHLBank's capital classification on at least a quarterly basis. If an FHLBank is determined to be other than adequately capitalized, that FHLBank becomes subject to additional supervisory authority by the FHFA. Before implementing a reclassification, the Director of the FHFA is required to provide that FHLBank with written notice of the proposed action and an opportunity to submit a response. Each FHLBank was classified by the FHFA as adequately capitalized as of the date of the FHFA's most recent notification to each FHLBank.

Note 10 - Accumulated Other Comprehensive Income (Loss)

Table 10.1 presents a summary of changes in accumulated other comprehensive income (loss) for the three and six months ended June 30, 2022 and 2021.

Table 10.1 - Accumulated Other Comprehensive Income (Loss)

(dollars in millions)

	Net Unrealized Gains (Losses) on AFS Securities (Note 3)	Net Non-Credit Portion of OTTI Gains (Losses) on HTM Securities (Note 3)	Net Unrealized Gains (Losses) Relating to Hedging Activities (Note 6)	Pension and Postretirement Benefits	Total Accumulated Other Comprehensive Income (Loss)
Balance, March 31, 2022	**$ 517**	**$ (5)**	**$ 38**	**$ (115)**	**$ 435**
Other comprehensive income before reclassifications					
Unrealized gains (losses)	(709)	—	114	—	(595)
Accretion of non-credit loss	—	—	—	—	—
Reclassifications from accumulated other comprehensive income (loss) to net income					
Amortization on hedging activities	—	—	8	—	8
Amortization - pension and postretirement	—	—	—	—	—
Net current period other comprehensive income (loss)	**(709)**	**—**	**122**	**—**	**(587)**
Balance, June 30, 2022	**$ (192)**	**$ (5)**	**$ 160**	**$ (115)**	**$ (152)**
Balance, March 31, 2021	**$ 1,968**	**$ (11)**	**$ (226)**	**$ (163)**	**$ 1,568**
Other comprehensive income before reclassifications					
Unrealized gains (losses)	149	—	(66)	—	83
Accretion of non-credit loss	—	2	—	—	2
Reclassifications from accumulated other comprehensive income (loss) to net income					
Reclassification of realized net (gains) losses included in net income	(1)	—	—	—	(1)
Amortization on hedging activities	—	—	10	—	10
Amortization - pension and postretirement	—	—	—	16	16
Net current period other comprehensive income (loss)	**148**	**2**	**(56)**	**16**	**110**
Balance, June 30, 2021	**$ 2,116**	**$ (9)**	**$ (282)**	**$ (147)**	**$ 1,678**

	Net Unrealized Gains (Losses) on AFS Securities (Note 3)	Net Non-Credit Portion of OTTI Gains (Losses) on HTM Securities (Note 3)	Net Unrealized Gains (Losses) Relating to Hedging Activities (Note 6)	Pension and Postretirement Benefits	Total Accumulated Other Comprehensive Income (Loss)
Balance, December 31, 2021	**$ 1,608**	**$ (6)**	**$ (193)**	**$ (112)**	**$ 1,297**
Other comprehensive income before reclassifications					
Unrealized gains (losses)	(1,800)	—	334	—	(1,466)
Accretion of non-credit loss	—	1	—	—	1
Reclassifications from accumulated other comprehensive income (loss) to net income					
Amortization on hedging activities	—	—	19	—	19
Amortization - pension and postretirement	—	—	—	(3)	(3)
Net current period other comprehensive income (loss)	**(1,800)**	**1**	**353**	**(3)**	**(1,449)**
Balance, June 30, 2022	**$ (192)**	**$ (5)**	**$ 160**	**$ (115)**	**$ (152)**
Balance, December 31, 2020	**$ 1,376**	**$ (13)**	**$ (413)**	**$ (166)**	**$ 784**
Other comprehensive income before reclassifications					
Unrealized gains (losses)	741	—	108	—	849
Accretion of non-credit loss	—	4	—	—	4
Reclassifications from accumulated other comprehensive income (loss) to net income					
Reclassification of realized net (gains) losses included in net income	(1)	—	—	—	(1)
Amortization on hedging activities	—	—	23	—	23
Amortization - pension and postretirement	—	—	—	19	19
Net current period other comprehensive income (loss)	**740**	**4**	**131**	**19**	**894**
Balance, June 30, 2021	**$ 2,116**	**$ (9)**	**$ (282)**	**$ (147)**	**$ 1,678**

Note 11 - Fair Value

The fair value amounts recorded on the Combined Statement of Condition and presented in the note disclosures for the periods presented have been determined by the FHLBanks using available market and other pertinent information and reflect each FHLBank'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). Although each FHLBank uses its best judgment in estimating the fair value of its financial instruments, there are inherent limitations in any valuation technique. Therefore, the fair values may not be indicative of the amounts that would have been realized in market transactions at June 30, 2022 and December 31, 2021. Additionally, these values do not represent an estimate of the overall market value of the FHLBanks as going concerns, which would take into account future business opportunities and the net profitability of assets and liabilities.

Fair Value Hierarchy

GAAP establishes a fair value hierarchy and requires an entity to maximize the use of significant observable inputs and minimize the use of significant unobservable inputs when measuring fair value. The inputs are evaluated and an overall level for the fair value measurement is determined. This overall level is an indication of market observability of the fair value measurement for the asset or liability. An entity must disclose the level within the fair value hierarchy in which the measurements are classified.

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 or 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. Valuations are derived from techniques that use significant assumptions not observable in the market, which include pricing models, discounted cash flow models, or similar techniques.

Each FHLBank reviews its fair value hierarchy classifications on a quarterly basis. Changes in the observability of the valuation inputs may result in a reclassification of certain assets or liabilities. The FHLBanks had no transfers of assets or liabilities into or out of Level 3 of the fair value hierarchy during the three and six months ended June 30, 2022 and 2021.

Table 11.1 presents the carrying value, fair value, and fair value hierarchy of financial assets and liabilities of the FHLBanks at June 30, 2022 and December 31, 2021. The FHLBanks record trading securities, AFS securities, derivative assets, derivative liabilities, certain advances, certain consolidated obligations, and certain other assets at fair value on a recurring basis, and on occasion certain mortgage loans held for portfolio and certain other assets at fair value on a non-recurring basis. The FHLBanks record all other financial assets and liabilities at amortized cost. Refer to Table 11.2 for further details about the financial assets and liabilities held at fair value on either a recurring or non-recurring basis.

Table 11.1 - Fair Value Summary
(dollars in millions)

	June 30, 2022					
		Fair Value				
Financial Instruments	**Carrying Value(1)**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Netting Adjustment and Cash Collateral(2)**
Assets						
Cash and due from banks	$ 4,641	$ 4,641	$ 4,641	$ —	$ —	$ —
Interest-bearing deposits	9,648	9,648	4,157	5,491	—	—
Securities purchased under agreements to resell	91,322	91,322	—	91,322	—	—
Federal funds sold	71,650	71,650	—	71,650	—	—
Trading securities	21,982	21,982	7,712	14,270	—	—
Available-for-sale securities	118,126	118,126	—	115,463	2,663	—
Held-to-maturity securities	49,503	48,846	—	48,277	569	—
Advances(3)	518,883	517,883	—	517,883	—	—
Mortgage loans held for portfolio	55,753	51,461	—	51,345	116	—
Mortgage loans held for sale(4)	34	34	—	34	—	—
Accrued interest receivable	1,234	1,234	—	1,234	—	—
Derivative assets, net	2,618	2,618	—	2,887	—	(269)
Other assets	363	362	260	102	—	—
Liabilities						
Deposits	13,298	13,298	—	13,298	—	—
Consolidated obligations						
Discount notes(5)	412,400	412,219	—	412,219	—	—
Bonds(6)	457,347	450,738	—	450,738	—	—
Total consolidated obligations	**869,747**	**862,957**	**—**	**862,957**	**—**	**—**
Mandatorily redeemable capital stock	416	416	416	—	—	—
Accrued interest payable	1,229	1,229	—	1,229	—	—
Derivative liabilities, net	515	515	—	12,621	—	(12,106)
Other liabilities	35	33	—	33	—	—

	December 31, 2021					
		Fair Value				
Financial Instruments	Carrying Value(1)	Total	Level 1	Level 2	Level 3	Netting Adjustment and Cash Collateral(2)
Assets						
Cash and due from banks	$ 3,532	$ 3,532	$ 3,532	$ —	$ —	$ —
Interest-bearing deposits	6,382	6,382	2,688	3,694	—	—
Securities purchased under agreements to resell	64,292	64,292	—	64,292	—	—
Federal funds sold	47,360	47,360	—	47,360	—	—
Trading securities	24,354	24,354	5,821	18,533	—	—
Available-for-sale securities	118,411	118,411	—	115,546	2,865	—
Held-to-maturity securities	47,672	48,300	—	47,643	657	—
Advances(3)	351,278	352,483	—	352,483	—	—
Mortgage loans held for portfolio	55,497	56,262	—	56,087	175	—
Mortgage loans held for sale(4)	54	54	—	54	—	—
Accrued interest receivable	874	874	—	874	—	—
Derivative assets, net	2,115	2,115	—	1,030	—	1,085
Other assets	414	415	311	104	—	—
Liabilities						
Deposits	14,303	14,303	—	14,303	—	—
Consolidated obligations						
Discount notes(5)	210,897	210,889	—	210,889	—	—
Bonds(6)	441,024	442,491	—	442,491	—	—
Total consolidated obligations	**651,921**	**653,380**	**—**	**653,380**	**—**	**—**
Mandatorily redeemable capital stock	398	398	398	—	—	—
Accrued interest payable	830	830	—	830	—	—
Derivative liabilities, net	177	177	—	3,752	—	(3,575)
Other liabilities	65	66	30	36	—	—

(1) For certain financial instruments, the amounts represent net carrying value, which includes an allowance for credit losses.
(2) Amounts represent the application of the netting requirements that allow an FHLBank to settle positive and negative positions, and also cash collateral and related accrued interest held or placed by that FHLBank with the same clearing agent and/or counterparty.
(3) Includes $3,272 million and $2,971 million of advances recorded under fair value option at June 30, 2022 and December 31, 2021.
(4) Represents mortgage loans held for sale recorded under fair value option, included in other assets, net on the Combined Statement of Condition.
(5) Includes $61,958 million and $32,769 million of consolidated discount notes recorded under fair value option at June 30, 2022 and December 31, 2021.
(6) Includes $12,725 million and $15,853 million of consolidated bonds recorded under fair value option at June 30, 2022 and December 31, 2021.

Summary of Valuation Methodologies and Primary Inputs

A description of the valuation methodologies and primary inputs is disclosed in Note 14 - Fair Value, pages F-70 to F-73, of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021. There were no significant changes in these valuation methodologies and primary inputs during the six months ended June 30, 2022.

Fair Value Measurements

Table 11.2 presents the fair value of assets and liabilities that are recorded on a recurring or non-recurring basis at June 30, 2022 and December 31, 2021, by level within the fair value hierarchy. The FHLBanks measure certain mortgage loans at fair value on a non-recurring basis due to the recognition of a credit loss. Real estate owned is measured using fair value when the asset’s fair value less costs to sell is lower than its carrying amount.

Table 11.2 - Fair Value Measurements
(dollars in millions)

	June 30, 2022				
	Total	Level 1	Level 2	Level 3	Netting Adjustment and Cash Collateral(1)
Recurring fair value measurements - Assets					
Trading securities					
Certificates of deposit	$ 640	$ —	$ 640	$ —	$ —
U.S. Treasury obligations	18,133	7,712	10,421	—	—
Other U.S. obligations	87	—	87	—	—
GSE and Tennessee Valley Authority obligations	2,137	—	2,137	—	—
Other non-MBS	168	—	168	—	—
U.S. obligations single-family MBS	2	—	2	—	—
GSE single-family MBS	32	—	32	—	—
GSE multifamily MBS	783	—	783	—	—
Total trading securities	**21,982**	**7,712**	**14,270**	**—**	**—**
Available-for-sale securities					
U.S. Treasury obligations	28,798	—	28,798	—	—
Other U.S. obligations	2,373	—	2,373	—	—
GSE and Tennessee Valley Authority obligations	7,734	—	7,734	—	—
State or local housing agency obligations	1,833	—	660	1,173	—
Federal Family Education Loan Program ABS	2,539	—	2,539	—	—
Other non-MBS	637	—	637	—	—
U.S. obligations single-family MBS	3,338	—	3,338	—	—
U.S. obligations multifamily MBS	519	—	519	—	—
GSE single-family MBS	4,119	—	4,119	—	—
GSE multifamily MBS	64,746	—	64,746	—	—
Private-label MBS	1,490	—	—	1,490	—
Total available-for-sale securities	**118,126**	**—**	**115,463**	**2,663**	**—**
Advances(2)	3,272	—	3,272	—	—
Mortgage loans held for sale(2)	34	—	34	—	—
Derivative assets, net					
Interest-rate related	2,615	—	2,884	—	(269)
Mortgage delivery commitments	3	—	3	—	—
Total derivative assets, net	**2,618**	**—**	**2,887**	**—**	**(269)**
Other assets	329	260	69	—	—
Total recurring assets at fair value	**$ 146,361**	**$ 7,972**	**$ 135,995**	**$ 2,663**	**$ (269)**
Recurring fair value measurements - Liabilities					
Consolidated Obligations					
Discount notes(2)	$ 61,958	$ —	$ 61,958	$ —	$ —
Bonds(2)	12,725	—	12,725	—	—
Total consolidated obligations	**74,683**	**—**	**74,683**	**—**	**—**
Derivative liabilities, net					
Interest-rate related	513	—	12,619	—	(12,106)
Mortgage delivery commitments	2	—	2	—	—
Total derivative liabilities, net	**515**	**—**	**12,621**	**—**	**(12,106)**
Total recurring liabilities at fair value	**$ 75,198**	**$ —**	**$ 87,304**	**$ —**	**$ (12,106)**
Non-recurring fair value measurements - Assets(3)					
Mortgage loans held for portfolio	$ 29	$ —	$ —	$ 29	
Real estate owned	1	—	—	1	
Total non-recurring assets at fair value	**$ 30**	**$ —**	**$ —**	**$ 30**	

	December 31, 2021				
	Total	Level 1	Level 2	Level 3	Netting Adjustment and Cash Collateral(1)
Recurring fair value measurements - Assets					
Trading securities					
Certificates of deposit	$ 200	$ —	$ 200	$ —	$ —
U.S. Treasury obligations	20,367	5,821	14,546	—	—
Other U.S. obligations	102	—	102	—	—
GSE and Tennessee Valley Authority obligations	2,359	—	2,359	—	—
Other non-MBS	202	—	202	—	—
U.S. obligations single-family MBS	2	—	2	—	—
GSE single-family MBS	37	—	37	—	—
GSE multifamily MBS	1,085	—	1,085	—	—
Total trading securities	**24,354**	**5,821**	**18,533**	**—**	**—**
Available-for-sale securities					
U.S. Treasury obligations	23,882	—	23,882	—	—
Other U.S. obligations	2,903	—	2,903	—	—
GSE and Tennessee Valley Authority obligations	10,377	—	10,377	—	—
State or local housing agency obligations	1,765	—	704	1,061	—
Federal Family Education Loan Program ABS	2,772	—	2,772	—	—
Other non-MBS	729	—	729	—	—
U.S. obligations single-family MBS	3,577	—	3,577	—	—
U.S. obligations multifamily MBS	541	—	541	—	—
GSE single-family MBS	4,911	—	4,911	—	—
GSE multifamily MBS	65,150	—	65,150	—	—
Private-label MBS	1,804	—	—	1,804	—
Total available-for-sale securities	**118,411**	**—**	**115,546**	**2,865**	**—**
Advances(2)	2,971	—	2,971	—	—
Mortgage loans held for sale(2)	54	—	54	—	—
Derivative assets, net					
Interest-rate related	2,113	—	1,028	—	1,085
Mortgage delivery commitments	2	—	2	—	—
Total derivative assets, net	**2,115**	**—**	**1,030**	**—**	**1,085**
Other assets	379	311	68	—	—
Total recurring assets at fair value	**$ 148,284**	**$ 6,132**	**$ 138,202**	**$ 2,865**	**$ 1,085**
Recurring fair value measurements - Liabilities					
Consolidated Obligations					
Discount notes(2)	$ 32,769	$ —	$ 32,769	$ —	$ —
Bonds(2)	15,853	—	15,853	—	—
Total consolidated obligations	**48,622**	**—**	**48,622**	**—**	**—**
Derivative liabilities, net					
Interest-rate related	174	—	3,749	—	(3,575)
Mortgage delivery commitments	3	—	3	—	—
Total derivative liabilities, net	**177**	**—**	**3,752**	**—**	**(3,575)**
Total recurring liabilities at fair value	**$ 48,799**	**$ —**	**$ 52,374**	**$ —**	**$ (3,575)**
Non-recurring fair value measurements - Assets(3)					
Mortgage loans held for portfolio	$ 52	$ —	1	$ 51	
Real estate owned	1	—	—	1	
Total non-recurring assets at fair value	**$ 53**	**$ —**	**$ 1**	**$ 52**	

(1) Amounts represent the application of the netting requirements that allow an FHLBank to settle positive and negative positions, and also cash collateral and related accrued interest held or placed by that FHLBank with the same clearing agent and/or counterparty.
(2) Represents financial instruments recorded under fair value option at June 30, 2022 and December 31, 2021.
(3) The fair value information presented is as of the date the fair value adjustment was recorded during the period.

Level 3 Disclosures for All Assets and Liabilities that are Measured at Fair Value on a Recurring Basis

Table 11.3 presents a rollforward of assets and liabilities measured at fair value on a recurring basis and classified as Level 3 during the three and six months ended June 30, 2022 and 2021.

Table 11.3 - Rollforward of Level 3 Assets and Liabilities

(dollars in millions)

	Three Months Ended June 30, 2022		Three Months Ended June 30, 2021	
	State and Local Housing Agency Obligations	Private-Label MBS	State and Local Housing Agency Obligations	Private-Label MBS
Balance, at beginning of period	$ 1,059	$ 1,639	$ 109	$ 2,162
Total gains (losses) included in earnings				
Interest income	—	17	—	19
(Provision) reversal for credit losses on available-for-sale securities	—	(5)	—	1
Total gains (losses) included in other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	1	(58)	1	20
Purchases, issuances, sales, and settlements				
Purchases	308	—	—	—
Sales and maturities	—	—	(22)	—
Settlements	(195)	(103)	(2)	(155)
Transfers from held-to-maturity securities to available-for-sale securities	—	—	901	—
Balance, at end of period	**$ 1,173**	**$ 1,490**	**$ 987**	**$ 2,047**
Total amount of unrealized gains (losses) for the period included in OCI relating to assets held at the end of the period	$ —	$ (59)	$ (1)	$ 21
Total amount of gains (losses) for the period included in earnings attributable to the change in unrealized gains/losses relating to assets held at the end of period	$ —	$ 12	$ —	$ 19

	Six Months Ended June 30, 2022		Six Months Ended June 30, 2021	
	State and Local Housing Agency Obligations	Private-Label MBS	State and Local Housing Agency Obligations	Private-Label MBS
Balance, at beginning of period	$ 1,061	$ 1,804	$ 123	$ 2,288
Total gains (losses) included in earnings				
Interest income	—	33	—	38
(Provision) reversal for credit losses on available-for-sale securities	—	(3)	—	6
Other income (loss)	—	28	—	—
Total gains (losses) included in other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	(1)	(97)	3	27
Purchases, issuances, sales, and settlements				
Purchases	308	—	—	—
Sales and maturities	—		(38)	—
Settlements	(195)	(291)	(2)	(312)
Transfers from held-to-maturity securities to available-for-sale securities	—	16	901	—
Balance, at end of period	**$ 1,173**	**$ 1,490**	**$ 987**	**$ 2,047**
Total amount of unrealized gains (losses) for the period included in OCI relating to assets held at the end of the period	$ (1)	$ (97)	$ —	$ 27
Total amount of gains (losses) for the period included in earnings attributable to the change in unrealized gains/losses relating to assets held at the end of period	$ —	$ 30	$ —	$ 43

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 entities to display the fair value of those assets and liabilities for which the entity has chosen to use fair value on the face of the statement 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. Interest income and interest expense on advances and consolidated obligations at fair value are recognized solely on the contractual amount of interest due or unpaid. Any transaction fees or costs are immediately recognized into non-interest income or non-interest expense.

The FHLBanks of New York, Cincinnati, Chicago, Des Moines, and San Francisco (Electing FHLBanks) have each elected the fair value option for certain financial instruments when a hedge relationship does 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 when an economic derivative is adjusted for changes in fair value, but the related hedged item is not.

Table 11.4 presents net gains (losses) recognized in earnings related to financial assets and liabilities for which the fair value option was elected during the three and six months ended June 30, 2022 and 2021.

Table 11.4 - Fair Value Option - Financial Assets and Liabilities

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
Net Gains (Losses) from Changes in Fair Value Recognized in Earnings	**2022**	**2021**	**2022**	**2021**
Advances	$ (51)	$ (2)	$ (140)	$ (60)
Mortgage loans held for sale(1)	(4)	—	(7)	(2)
Consolidated discount notes	110	—	141	2
Consolidated bonds	89	7	222	13
Total net gains (losses)	**$ 144**	**$ 5**	**$ 216**	**$ (47)**

(1) Included in other assets, net on the Combined Statement of Condition.

For instruments for which the fair value option has been elected, the related contractual interest income, contractual interest expense, and the discount amortization on fair value option discount notes are recorded as part of net interest income on the Combined Statement of Income. The remaining changes in fair value for instruments for which the fair value option has been elected are recorded as net gains (losses) on financial instruments held under fair value option on the Combined Statement of Income, except for changes in fair value related to instrument specific credit risk, which are recorded in AOCI on the Combined Statement of Condition. Each of the Electing FHLBanks determined that none of the remaining changes in fair value were related to instrument specific credit risk during the six months ended June 30, 2022 and 2021. In determining that there has been no change in instrument specific credit risk period to period, the Electing FHLBanks primarily considered the following factors:

- The FHLBanks are federally chartered GSEs, and as a result of this status, the FHLBanks' 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.

- Each FHLBank is jointly and severally liable with the other FHLBanks for the payment of principal and interest on all consolidated obligations of each of the FHLBanks.

Table 11.5 presents the difference between the aggregate fair value and the aggregate unpaid principal balance outstanding for advances, mortgage loans held for sale, and consolidated obligations for which the fair value option has been elected at June 30, 2022 and December 31, 2021.

Table 11.5 - Aggregate Fair Value and Aggregate Unpaid Balance
(dollars in millions)

	June 30, 2022			December 31, 2021		
	Aggregate Fair Value	Aggregate Unpaid Principal Balance	Aggregate Fair Value Over/(Under) Aggregate Unpaid Principal Balance	Aggregate Fair Value	Aggregate Unpaid Principal Balance	Aggregate Fair Value Over/(Under) Aggregate Unpaid Principal Balance
Advances	$ 3,272	$ 3,288	$ (16)	$ 2,971	$ 2,850	$ 121
Mortgage loans held for sale(1)	34	35	(1)	54	52	2
Consolidated discount notes	61,958	62,418	(460)	32,769	32,781	(12)
Consolidated bonds	12,725	12,947	(222)	15,853	15,876	(23)

(1) Included in other assets, net on the Combined Statement of Condition.

Note 12 - Commitments and Contingencies

Off-Balance Sheet Commitments

Table 12.1 represents off-balance sheet commitments at June 30, 2022 and December 31, 2021. Each FHLBank has deemed it unnecessary to record any liabilities for credit losses on these commitments at June 30, 2022 and December 31, 2021.

Table 12.1 - Off-Balance Sheet Commitments
(dollars in millions)

	June 30, 2022			December 31, 2021
Notional amount	Expire Within One Year	Expire After One Year	Total	Total
Standby letters of credit notional amount(1)	$ 127,977	$ 21,613	$ 149,590	$ 151,156
Unsettled consolidated discount notes, principal amount	6,325	—	6,325	1,350
Commitments for standby bond purchases	506	2,130	2,636	2,654
Unsettled consolidated bonds, principal amount	2,248	—	2,248	3,590
Unused lines of credit - advances	2,091	—	2,091	2,145
Commitments to fund additional advances	1,846	68	1,914	2,112
Commitments to purchase mortgage loans	651	—	651	969
Other	3	—	3	4

(1) Excludes unconditional commitments to issue standby letters of credit of $379 million and $415 million at June 30, 2022 and December 31, 2021.

Standby Letters of Credit. An FHLBank issues standby letters of credit on behalf of its members to support certain obligations of the members (or member's customers) to third-party beneficiaries. These standby letters of credit are generally subject to the same collateralization and borrowing limits that are applicable to advances. Standby letters of credit may be offered to assist members and non-member housing associates in facilitating residential housing finance, community lending, and asset-liability management, and to provide liquidity. In particular, members often use standby letters of credit as collateral for deposits from federal, state, and local government agencies. Standby letters of credit are executed for members for a fee. If an FHLBank is required to make payment for a beneficiary's draw, the member either reimburses the FHLBank for the amount drawn or, subject to the applicable FHLBank's discretion, the amount drawn may be converted into a collateralized advance to the member. However, standby letters of credit usually expire without being drawn upon. At June 30, 2022, standby letters of credit have original expiration periods of up to 26 years, expiring no later than 2047. The carrying value of guarantees related to standby letters of credit are recorded in other liabilities and were $99 million and $89 million at June 30, 2022 and December 31, 2021.

Each FHLBank monitors the creditworthiness of its members that have standby letters of credit. In addition, standby letters of credit are subject to the same collateralization and borrowing limits that apply to advances and are fully collateralized at the time of issuance.

Standby Bond-Purchase Agreements. Certain FHLBanks have entered into standby bond-purchase agreements with state housing authorities within their district whereby these FHLBanks agree to provide liquidity for a fee. If required, the affected FHLBanks will purchase and hold the state housing authority's bonds until the designated marketing agent can find a suitable investor or the state housing authority repurchases the bond according to a schedule established by the standby bond-purchase agreement. Each standby bond-purchase agreement dictates the specific terms that would require the affected FHLBank to purchase the bond and typically allows the FHLBank to terminate the agreement upon the occurrence of a default event of the issuer. The standby bond-purchase commitments entered into by these FHLBanks have original expiration periods of up to seven years, currently expiring no later than 2027, although some are renewable at the option of the affected FHLBank. At both June 30, 2022 and December 31, 2021, the FHLBanks had standby bond-purchase commitments with 13 state housing authorities. During the six months ended June 30, 2022 and 2021, the FHLBanks were not required to purchase any bonds under these agreements.

Pledged Collateral

Certain FHLBanks pledged securities, as collateral, related to derivatives. (See *Note 6 - Derivatives and Hedging Activities* for additional information about the FHLBanks' pledged collateral and other credit-risk-related contingent features.)

Legal Proceedings

The FHLBanks are subject to legal proceedings arising in the normal course of business. The FHLBanks would record an accrual for a loss contingency when it is probable that a loss has been incurred and the amount can be reasonably estimated. After consultation with legal counsel, management of each FHLBank does not anticipate that the ultimate liability, if any, arising out of these matters will have a material effect on its FHLBank's financial condition, results of operations, or cash flows.

Note 13 - Subsequent Events

Subsequent events have been evaluated from July 1, 2022, through the time of this Combined Financial Report publication. No significant subsequent events were identified, except for the declaration of dividends or repurchase or redemption of excess capital stock, which generally occur in the normal course of business unless there are regulatory or self-imposed restrictions.

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FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CONDITION (unaudited)

JUNE 30, 2022

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
Assets							
Cash and due from banks	$ 4,641	$ (1)	$ 66	$ 164	$ 371	$ 882	$ 2,885
Investments, net	362,231	(114)	28,255	32,920	21,324	43,861	36,508
Advances	518,883	(1)	30,318	80,062	35,244	72,320	55,771
Mortgage loans held for portfolio, net	55,753	1	2,897	2,175	4,658	131	7,400
Other assets, net	5,202	(703)	528	642	452	997	493
Total assets	**$ 946,710**	**$ (818)**	**$ 62,064**	**$ 115,963**	**$ 62,049**	**$ 118,191**	**$ 103,057**
Liabilities							
Deposits	$ 13,298	$ (10)	$ 1,066	$ 1,492	$ 737	$ 2,225	$ 1,225
Consolidated obligations							
Discount notes	412,400	(1)	25,096	49,519	24,831	51,749	57,078
Bonds	457,347	(107)	32,722	57,551	32,701	57,498	37,923
Total consolidated obligations	**869,747**	**(108)**	**57,818**	**107,070**	**57,532**	**109,247**	**95,001**
Mandatorily redeemable capital stock	416	(1)	11	8	22	—	20
Other liabilities	7,666	(698)	221	630	261	1,077	1,116
Total liabilities	**891,127**	**(817)**	**59,116**	**109,200**	**58,552**	**112,549**	**97,362**
Capital							
Capital stock							
Class B putable ($100 par value) issued and outstanding	32,090	2	1,557	4,939	2,063	3,442	4,414
Class A putable ($100 par value) issued and outstanding	272	—	—	—	—	—	—
Total capital stock	**32,362**	**2**	**1,557**	**4,939**	**2,063**	**3,442**	**4,414**
Retained earnings							
Unrestricted	17,551	(2)	1,230	1,109	965	1,619	793
Restricted	5,822	—	377	854	465	627	521
Total retained earnings	**23,373**	**(2)**	**1,607**	**1,963**	**1,430**	**2,246**	**1,314**
Accumulated other comprehensive income (loss)	(152)	(1)	(216)	(139)	4	(46)	(33)
Total capital	**55,583**	**(1)**	**2,948**	**6,763**	**3,497**	**5,642**	**5,695**
Total liabilities and capital	**$ 946,710**	**$ (818)**	**$ 62,064**	**$ 115,963**	**$ 62,049**	**$ 118,191**	**$ 103,057**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CONDITION (unaudited, continued)

JUNE 30, 2022

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
Assets						
Cash and due from banks	$ 60	$ 49	$ 50	$ 30	$ 31	$ 54
Investments, net	25,434	41,717	32,753	37,053	19,367	43,153
Advances	30,507	52,811	52,731	36,376	29,523	43,221
Mortgage loans held for portfolio, net	7,730	9,953	7,940	3,986	8,019	863
Other assets, net	535	624	494	270	559	311
Total assets	**$ 64,266**	**$ 105,154**	**$ 93,968**	**$ 77,715**	**$ 57,499**	**$ 87,602**
Liabilities						
Deposits	$ 908	$ 655	$ 1,528	$ 1,677	$ 781	$ 1,014
Consolidated obligations						
Discount notes	19,587	31,525	50,185	29,623	20,076	53,132
Bonds	39,462	64,519	35,130	40,944	32,928	26,076
Total consolidated obligations	**59,049**	**96,044**	**85,315**	**70,567**	**53,004**	**79,208**
Mandatorily redeemable capital stock	46	273	17	14	1	5
Other liabilities	787	1,296	803	825	717	631
Total liabilities	**60,790**	**98,268**	**87,663**	**73,083**	**54,503**	**80,858**
Capital						
Capital stock						
Class B putable ($100 par value) issued and outstanding	2,251	2,445	3,876	2,798	1,549	2,754
Class A putable ($100 par value) issued and outstanding	—	—	—	—	272	—
Total capital stock	**2,251**	**2,445**	**3,876**	**2,798**	**1,821**	**2,754**
Retained earnings						
Unrestricted	912	3,661	1,810	1,369	887	3,198
Restricted	299	740	648	288	311	692
Total retained earnings	**1,211**	**4,401**	**2,458**	**1,657**	**1,198**	**3,890**
Accumulated other comprehensive income (loss)	14	40	(29)	177	(23)	100
Total capital	**3,476**	**6,886**	**6,305**	**4,632**	**2,996**	**6,744**
Total liabilities and capital	**$ 64,266**	**$ 105,154**	**$ 93,968**	**$ 77,715**	**$ 57,499**	**$ 87,602**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CONDITION

DECEMBER 31, 2021

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
Assets							
Cash and due from banks	$ 3,532	$ (2)	$ 205	$ 22	$ 428	$ 879	$ 168
Investments, net	308,471	(119)	16,372	30,802	18,098	31,821	29,392
Advances	351,278	2	12,340	71,536	14,124	45,415	23,055
Mortgage loans held for portfolio, net	55,497	1	3,120	2,320	4,676	149	7,588
Other assets, net	4,460	(3)	508	678	325	482	415
Total assets	**$ 723,238**	**$ (121)**	**$ 32,545**	**$ 105,358**	**$ 37,651**	**$ 78,746**	**$ 60,618**
Liabilities							
Deposits	$ 14,303	$ (13)	$ 884	$ 1,321	$ 1,088	$ 2,054	$ 1,416
Consolidated obligations							
Discount notes	210,897	1	2,275	42,197	10,494	25,506	29,838
Bonds	441,024	(112)	26,613	54,829	23,106	46,186	24,602
Total consolidated obligations	**651,921**	**(111)**	**28,888**	**97,026**	**33,600**	**71,692**	**54,440**
Mandatorily redeemable capital stock	398	1	14	2	22	1	21
Other liabilities	7,494	1	228	563	207	404	945
Total liabilities	**674,116**	**(122)**	**30,014**	**98,912**	**34,917**	**74,151**	**56,822**
Capital							
Capital stock							
Class B putable ($100 par value) issued and outstanding	24,831	(2)	954	4,501	1,227	2,383	2,490
Class A putable ($100 par value) issued and outstanding	234	—	—	—	—	—	—
Total capital stock	**25,065**	**(2)**	**954**	**4,501**	**1,227**	**2,383**	**2,490**
Retained earnings							
Unrestricted	17,110	1	1,180	1,104	941	1,613	783
Restricted	5,650	—	368	827	457	615	510
Total retained earnings	**22,760**	**1**	**1,548**	**1,931**	**1,398**	**2,228**	**1,293**
Accumulated other comprehensive income (loss)	1,297	2	29	14	109	(16)	13
Total capital	**49,122**	**1**	**2,531**	**6,446**	**2,734**	**4,595**	**3,796**
Total liabilities and capital	**$ 723,238**	**$ (121)**	**$ 32,545**	**$ 105,358**	**$ 37,651**	**$ 78,746**	**$ 60,618**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CONDITION (continued)

DECEMBER 31, 2021

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
Assets						
Cash and due from banks	$ 868	$ 45	$ 295	$ 543	$ 26	$ 55
Investments, net	23,601	38,583	33,442	34,653	16,058	35,768
Advances	27,498	48,049	44,111	24,637	23,484	17,027
Mortgage loans held for portfolio, net	7,616	9,843	7,578	3,491	8,135	980
Other assets, net	422	434	426	164	318	291
Total assets	**$ 60,005**	**$ 96,954**	**$ 85,852**	**$ 63,488**	**$ 48,021**	**$ 54,121**
Liabilities						
Deposits	$ 1,367	$ 1,034	$ 1,847	$ 1,590	$ 946	$ 769
Consolidated obligations						
Discount notes	12,116	24,563	22,348	11,003	6,569	23,987
Bonds	42,362	63,373	55,205	44,514	37,630	22,716
Total consolidated obligations	**54,478**	**87,936**	**77,553**	**55,517**	**44,199**	**46,703**
Mandatorily redeemable capital stock	50	247	29	7	1	3
Other liabilities	554	985	585	2,440	160	422
Total liabilities	**56,449**	**90,202**	**80,014**	**59,554**	**45,306**	**47,897**
Capital						
Capital stock						
Class B putable ($100 par value) issued and outstanding	2,246	2,149	3,364	2,193	1,265	2,061
Class A putable ($100 par value) issued and outstanding	—	—	—	—	234	—
Total capital stock	**2,246**	**2,149**	**3,364**	**2,193**	**1,499**	**2,061**
Retained earnings						
Unrestricted	890	3,558	1,773	1,291	852	3,124
Restricted	287	703	617	267	291	708
Total retained earnings	**1,177**	**4,261**	**2,390**	**1,558**	**1,143**	**3,832**
Accumulated other comprehensive income (loss)	133	342	84	183	73	331
Total capital	**3,556**	**6,752**	**5,838**	**3,934**	**2,715**	**6,224**
Total liabilities and capital	**$ 60,005**	**$ 96,954**	**$ 85,852**	**$ 63,488**	**$ 48,021**	**$ 54,121**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES
STATEMENTS OF INCOME (unaudited)

THREE MONTHS ENDED JUNE 30, 2022 and 2021

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
June 30, 2022							
Interest income							
Advances	$ 1,411	$ —	$ 72	$ 236	$ 84	$ 172	$ 121
Investments	1,044	(6)	81	134	65	87	106
Mortgage loans held for portfolio	397	1	21	17	34	1	50
Other interest income	1	—	—	—	—	—	—
Total interest income	**2,853**	**(5)**	**174**	**387**	**183**	**260**	**277**
Interest expense							
Consolidated obligations - Discount notes	629	—	26	79	36	80	84
Consolidated obligations - Bonds	1,121	—	78	158	77	106	119
Other interest expense	25	(4)	—	3	3	3	3
Total interest expense	**1,775**	**(4)**	**104**	**240**	**116**	**189**	**206**
Net interest income	**1,078**	**(1)**	**70**	**147**	**67**	**71**	**71**
Provision (reversal) for credit losses	6	1	—	—	2	—	—
Net interest income after provision (reversal) for credit losses	**1,072**	**(2)**	**70**	**147**	**65**	**71**	**71**
Non-interest income (loss)	(33)	(5)	4	(15)	—	—	—
Non-interest expense	363	(6)	28	47	24	41	26
Affordable Housing Program assessments	69	1	5	9	4	3	4
Net income	**$ 607**	**$ (2)**	**$ 41**	**$ 76**	**$ 37**	**$ 27**	**$ 41**
June 30, 2021							
Interest income							
Advances	$ 665	$ (1)	$ 48	$ 123	$ 31	$ 96	$ 36
Investments	602	2	27	106	38	33	79
Mortgage loans held for portfolio	336	(1)	23	18	31	2	39
Other interest income	—	(3)	—	—	—	—	—
Total interest income	**1,603**	**(3)**	**98**	**247**	**100**	**131**	**154**
Interest expense							
Consolidated obligations - Discount notes	46	(1)	1	15	1	2	2
Consolidated obligations - Bonds	623	3	53	89	58	35	86
Other interest expense	7	—	—	—	1	—	—
Total interest expense	**676**	**2**	**54**	**104**	**60**	**37**	**88**
Net interest income	**927**	**(5)**	**44**	**143**	**40**	**94**	**66**
Provision (reversal) for credit losses	—	—	—	(2)	—	—	—
Net interest income after provision (reversal) for credit losses	**927**	**(5)**	**44**	**145**	**40**	**94**	**66**
Non-interest income (loss)	(120)	(6)	(13)	(10)	(4)	4	(41)
Non-interest expense	353	(9)	24	52	22	35	25
Affordable Housing Program assessments	46	(3)	1	8	2	7	—
Net income	**$ 408**	**$ 1**	**$ 6**	**$ 75**	**$ 12**	**$ 56**	**$ —**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF INCOME (unaudited, continued)

THREE MONTHS ENDED JUNE 30, 2022 and 2021

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
June 30, 2022						
Interest income						
Advances	$ 67	$ 169	$ 184	$ 111	$ 78	$ 117
Investments	74	118	105	90	59	131
Mortgage loans held for portfolio	51	69	56	28	56	13
Other interest income	—	1	—	—	—	—
Total interest income	**192**	**357**	**345**	**229**	**193**	**261**
Interest expense						
Consolidated obligations - Discount notes	26	51	94	42	28	83
Consolidated obligations - Bonds	100	147	124	83	79	50
Other interest expense	3	5	2	3	2	2
Total interest expense	**129**	**203**	**220**	**128**	**109**	**135**
Net interest income	**63**	**154**	**125**	**101**	**84**	**126**
Provision (reversal) for credit losses	—	—	1	(1)	—	3
Net interest income after provision (reversal) for credit losses	**63**	**154**	**124**	**102**	**84**	**123**
Non-interest income (loss)	(2)	5	25	(6)	(8)	(31)
Non-interest expense	25	58	39	23	20	38
Affordable Housing Program assessments	4	10	11	7	5	6
Net income	**$ 32**	**$ 91**	**$ 99**	**$ 66**	**$ 51**	**$ 48**
June 30, 2021						
Interest income						
Advances	$ 29	$ 67	$ 121	$ 29	$ 31	$ 55
Investments	44	95	41	28	26	83
Mortgage loans held for portfolio	40	60	50	18	52	4
Other interest income	—	3	—	—	—	—
Total interest income	**113**	**225**	**212**	**75**	**109**	**142**
Interest expense						
Consolidated obligations - Discount notes	2	10	3	7	1	3
Consolidated obligations - Bonds	52	59	117	17	40	14
Other interest expense	1	3	1	—	1	—
Total interest expense	**55**	**72**	**121**	**24**	**42**	**17**
Net interest income	**58**	**153**	**91**	**51**	**67**	**125**
Provision (reversal) for credit losses	—	1	1	—	2	(2)
Net interest income after provision (reversal) for credit losses	**58**	**152**	**90**	**51**	**65**	**127**
Non-interest income (loss)	(10)	(10)	(1)	6	(9)	(26)
Non-interest expense	29	55	36	26	19	39
Affordable Housing Program assessments	2	9	6	3	4	7
Net income	**$ 17**	**$ 78**	**$ 47**	**$ 28**	**$ 33**	**$ 55**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES
STATEMENTS OF INCOME (unaudited)

SIX MONTHS ENDED JUNE 30, 2022 and 2021

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
June 30, 2022							
Interest income							
Advances	$ 2,045	$ —	$ 107	$ 349	$ 111	$ 235	$ 169
Investments	1,643	(4)	128	227	100	119	177
Mortgage loans held for portfolio	779	—	43	33	66	3	99
Other interest income	1	—	—	—	—	—	—
Total interest income	**4,468**	**(4)**	**278**	**609**	**277**	**357**	**445**
Interest expense							
Consolidated obligations - Discount notes	716	(1)	27	97	39	87	95
Consolidated obligations - Bonds	1,670	—	122	240	124	128	194
Other interest expense	32	(2)	—	3	3	3	4
Total interest expense	**2,418**	**(3)**	**149**	**340**	**166**	**218**	**293**
Net interest income	**2,050**	**(1)**	**129**	**269**	**111**	**139**	**152**
Provision (reversal) for credit losses	6	(1)	—	—	3	—	—
Net interest income after provision (reversal) for credit losses	**2,044**	**—**	**129**	**269**	**108**	**139**	**152**
Non-interest income (loss)	(95)	(15)	5	(28)	—	6	(37)
Non-interest expense	715	(14)	57	93	46	75	52
Affordable Housing Program assessments	125	2	8	15	6	7	6
Net income	**$ 1,109**	**$ (3)**	**$ 69**	**$ 133**	**$ 56**	**$ 63**	**$ 57**
June 30, 2021							
Interest income							
Advances	$ 1,422	$ —	$ 105	$ 263	$ 81	$ 183	$ 79
Investments	1,293	(1)	69	230	80	72	170
Mortgage loans held for portfolio	711	1	48	37	63	5	83
Other interest income	1	(2)	—	—	—	—	—
Total interest income	**3,427**	**(2)**	**222**	**530**	**224**	**260**	**332**
Interest expense							
Consolidated obligations - Discount notes	131	—	3	45	4	7	7
Consolidated obligations - Bonds	1,323	6	115	183	120	80	183
Other interest expense	15	2	—	—	3	—	—
Total interest expense	**1,469**	**8**	**118**	**228**	**127**	**87**	**190**
Net interest income	**1,958**	**(10)**	**104**	**302**	**97**	**173**	**142**
Provision (reversal) for credit losses	(10)	—	(1)	(3)	(1)	—	—
Net interest income after provision (reversal) for credit losses	**1,968**	**(10)**	**105**	**305**	**98**	**173**	**142**
Non-interest income (loss)	(245)	(11)	(29)	(43)	6	8	(73)
Non-interest expense	711	(16)	46	99	48	71	48
Affordable Housing Program assessments	103	—	3	16	6	11	2
Net income	**$ 909**	**$ (5)**	**$ 27**	**$ 147**	**$ 50**	**$ 99**	**$ 19**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF INCOME (unaudited, continued)

SIX MONTHS ENDED JUNE 30, 2022 and 2021

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
June 30, 2022						
Interest income						
Advances	$ 102	$ 256	$ 295	$ 149	$ 116	$ 156
Investments	111	193	153	153	90	196
Mortgage loans held for portfolio	99	134	109	52	111	30
Other interest income	—	1	—	—	—	—
Total interest income	**312**	**584**	**557**	**354**	**317**	**382**
Interest expense						
Consolidated obligations - Discount notes	30	63	108	52	30	89
Consolidated obligations - Bonds	151	203	223	107	116	62
Other interest expense	3	9	2	3	2	2
Total interest expense	**184**	**275**	**333**	**162**	**148**	**153**
Net interest income	**128**	**309**	**224**	**192**	**169**	**229**
Provision (reversal) for credit losses	—	1	3	—	—	—
Net interest income after provision (reversal) for credit losses	**128**	**308**	**221**	**192**	**169**	**229**
Non-interest income (loss)	(9)	15	25	(27)	(17)	(13)
Non-interest expense	51	116	76	47	40	76
Affordable Housing Program assessments	7	21	17	11	11	14
Net income	**$ 61**	**$ 186**	**$ 153**	**$ 107**	**$ 101**	**$ 126**
June 30, 2021						
Interest income						
Advances	$ 65	$ 143	$ 252	$ 65	$ 66	$ 120
Investments	101	148	98	87	60	179
Mortgage loans held for portfolio	80	123	103	36	105	27
Other interest income	—	3	—	—	—	—
Total interest income	**246**	**417**	**453**	**188**	**231**	**326**
Interest expense						
Consolidated obligations - Discount notes	6	25	8	16	3	7
Consolidated obligations - Bonds	106	123	243	41	87	36
Other interest expense	2	6	1	—	1	—
Total interest expense	**114**	**154**	**252**	**57**	**91**	**43**
Net interest income	**132**	**263**	**201**	**131**	**140**	**283**
Provision (reversal) for credit losses	—	1	—	—	2	(8)
Net interest income after provision (reversal) for credit losses	**132**	**262**	**201**	**131**	**138**	**291**
Non-interest income (loss)	(23)	(23)	1	4	(15)	(47)
Non-interest expense	57	116	76	51	37	78
Affordable Housing Program assessments	5	13	13	8	9	17
Net income	**$ 47**	**$ 110**	**$ 113**	**$ 76**	**$ 77**	**$ 149**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES
STATEMENTS OF COMPREHENSIVE INCOME (unaudited)

THREE MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
June 30, 2022							
Net income	**$ 607**	**$ (2)**	**$ 41**	**$ 76**	**$ 37**	**$ 27**	**$ 41**
Other comprehensive income							
Net unrealized gains (losses) on available-for-sale securities	(709)	1	(151)	(95)	(26)	(8)	(9)
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	—	(1)	—	—	—	—	—
Net unrealized gains (losses) relating to hedging activities	122	(1)	24	45	—	—	—
Pension and postretirement benefits	—	—	—	—	—	1	—
Total other comprehensive income (loss)	**(587)**	**(1)**	**(127)**	**(50)**	**(26)**	**(7)**	**(9)**
Comprehensive income (loss)	**$ 20**	**$ (3)**	**$ (86)**	**$ 26**	**$ 11**	**$ 20**	**$ 32**
June 30, 2021							
Net income	**$ 408**	**$ 1**	**$ 6**	**$ 75**	**$ 12**	**$ 56**	**$ —**
Other comprehensive income							
Net unrealized gains (losses) on available-for-sale securities	148	(2)	37	30	(8)	—	9
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	2	—	—	2	—	—	—
Net unrealized gains (losses) relating to hedging activities	(56)	(4)	(12)	(17)	—	—	—
Pension and postretirement benefits	16	(2)	2	2	2	1	1
Total other comprehensive income (loss)	**110**	**(8)**	**27**	**17**	**(6)**	**1**	**10**
Comprehensive income (loss)	**$ 518**	**$ (7)**	**$ 33**	**$ 92**	**$ 6**	**$ 57**	**$ 10**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES
STATEMENTS OF COMPREHENSIVE INCOME (unaudited, continued)

THREE MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
June 30, 2022						
Net income	**$ 32**	**$ 91**	**$ 99**	**$ 66**	**$ 51**	**$ 48**
Other comprehensive income						
Net unrealized gains (losses) on available-for-sale securities	(46)	(162)	(50)	(28)	(55)	(80)
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	—	—	—	1	—	—
Net unrealized gains (losses) relating to hedging activities	—	25	—	29	—	—
Pension and postretirement benefits	1	—	—	—	—	(2)
Total other comprehensive income (loss)	**(45)**	**(137)**	**(50)**	**2**	**(55)**	**(82)**
Comprehensive income (loss)	**$ (13)**	**$ (46)**	**$ 49**	**$ 68**	**$ (4)**	**$ (34)**
June 30, 2021						
Net income	**$ 17**	**$ 78**	**$ 47**	**$ 28**	**$ 33**	**$ 55**
Other comprehensive income						
Net unrealized gains (losses) on available-for-sale securities	5	54	(2)	(24)	22	27
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	—	—	—	—	—	—
Net unrealized gains (losses) relating to hedging activities	—	(9)	—	(14)	—	—
Pension and postretirement benefits	9	1	—	—	—	—
Total other comprehensive income (loss)	**14**	**46**	**(2)**	**(38)**	**22**	**27**
Comprehensive income (loss)	**$ 31**	**$ 124**	**$ 45**	**$ (10)**	**$ 55**	**$ 82**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF COMPREHENSIVE INCOME (unaudited)

SIX MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
June 30, 2022							
Net income	**$ 1,109**	**$ (3)**	**$ 69**	**$ 133**	**$ 56**	**$ 63**	**$ 57**
Other comprehensive income							
Net unrealized gains (losses) on available-for-sale securities	(1,800)	(2)	(292)	(290)	(105)	(31)	(47)
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	1	—	—	—	—	—	—
Net unrealized gains (losses) relating to hedging activities	353	(1)	47	136	—	—	—
Pension and postretirement benefits	(3)	—	—	1	—	1	1
Total other comprehensive income (loss)	**(1,449)**	**(3)**	**(245)**	**(153)**	**(105)**	**(30)**	**(46)**
Comprehensive income (loss)	**$ (340)**	**$ (6)**	**$ (176)**	**$ (20)**	**$ (49)**	**$ 33**	**$ 11**
June 30, 2021							
Net income	**$ 909**	**$ (5)**	**$ 27**	**$ 147**	**$ 50**	**$ 99**	**$ 19**
Other comprehensive income							
Net unrealized gains (losses) on available-for-sale securities	740	—	36	(23)	(12)	—	12
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	4	—	—	3	—	—	—
Net unrealized gains (losses) relating to hedging activities	131	(2)	(6)	66	—	—	—
Pension and postretirement benefits	19	—	2	4	2	4	1
Total other comprehensive income (loss)	**894**	**(2)**	**32**	**50**	**(10)**	**4**	**13**
Comprehensive income (loss)	**$ 1,803**	**$ (7)**	**$ 59**	**$ 197**	**$ 40**	**$ 103**	**$ 32**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF COMPREHENSIVE INCOME (unaudited, continued)

SIX MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
June 30, 2022						
Net income	**$ 61**	**$ 186**	**$ 153**	**$ 107**	**$ 101**	**$ 126**
Other comprehensive income						
Net unrealized gains (losses) on available-for-sale securities	(120)	(380)	(111)	(97)	(96)	(229)
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	—	—	—	1	—	—
Net unrealized gains (losses) relating to hedging activities	—	81	—	90	—	—
Pension and postretirement benefits	1	(3)	(2)	—	—	(2)
Total other comprehensive income (loss)	**(119)**	**(302)**	**(113)**	**(6)**	**(96)**	**(231)**
Comprehensive income (loss)	**$ (58)**	**$ (116)**	**$ 40**	**$ 101**	**$ 5**	**$ (105)**
June 30, 2021						
Net income	**$ 47**	**$ 110**	**$ 113**	**$ 76**	**$ 77**	**$ 149**
Other comprehensive income						
Net unrealized gains (losses) on available-for-sale securities	78	252	50	132	51	164
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	—	—	—	1	—	—
Net unrealized gains (losses) relating to hedging activities	—	32	—	41	—	—
Pension and postretirement benefits	10	(4)	—	—	—	—
Total other comprehensive income (loss)	**88**	**280**	**50**	**174**	**51**	**164**
Comprehensive income (loss)	**$ 135**	**$ 390**	**$ 163**	**$ 250**	**$ 128**	**$ 313**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CAPITAL (unaudited)

THREE MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
Balance, March 31, 2022	**$ 49,584**	**$ (3)**	**$ 2,412**	**$ 6,330**	**$ 2,756**	**$ 4,859**	**$ 4,273**
Comprehensive income (loss)	20	(3)	(86)	26	11	20	32
Proceeds from issuance of capital stock	16,229	2	1,939	1,895	1,606	2,680	1,433
Repurchases/redemptions of capital stock	(9,458)	3	(1,303)	(1,200)	(864)	(1,894)	—
Net shares reclassified (to)/ from mandatorily redeemable capital stock	(563)	—	(9)	(236)	—	—	(19)
Dividends of capital stock	30	(1)	—	—	—	—	—
Dividends							
Cash	(229)	—	(5)	(52)	(12)	(23)	(24)
Stock	(30)	1	—	—	—	—	—
Balance, June 30, 2022	**$ 55,583**	**$ (1)**	**$ 2,948**	**$ 6,763**	**$ 3,497**	**$ 5,642**	**$ 5,695**
Balance, March 31, 2021	**$ 50,469**	**$ 13**	**$ 2,717**	**$ 7,238**	**$ 2,855**	**$ 4,741**	**$ 4,045**
Comprehensive income (loss)	518	(7)	33	92	6	57	10
Proceeds from issuance of capital stock	3,862	(2)	59	739	200	290	629
Repurchases/redemptions of capital stock	(4,369)	1	(158)	(1,186)	(326)	(384)	(598)
Net shares reclassified (to)/ from mandatorily redeemable capital stock	(375)	2	(2)	—	—	(1)	(61)
Dividends of capital stock	19	—	—	—	—	—	—
Dividends							
Cash	(234)	1	(5)	(63)	(18)	(27)	(12)
Stock	(19)	—	—	—	—	—	—
Balance, June 30, 2021	**$ 49,871**	**$ 8**	**$ 2,644**	**$ 6,820**	**$ 2,717**	**$ 4,676**	**$ 4,013**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES
STATEMENTS OF CAPITAL (unaudited, continued)

THREE MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
Balance, March 31, 2022	**$ 3,374**	**$ 6,643**	**$ 5,945**	**$ 4,062**	**$ 2,779**	**$ 6,154**
Comprehensive income (loss)	(13)	(46)	49	68	(4)	(34)
Proceeds from issuance of capital stock	130	576	1,725	1,113	916	2,214
Repurchases/redemptions of capital stock	(1)	(262)	(1,370)	(611)	(399)	(1,557)
Net shares reclassified (to)/ from mandatorily redeemable capital stock	—	(1)	(2)	—	(296)	—
Dividends of capital stock	—	—	—	5	26	—
Dividends						
Cash	(14)	(24)	(42)	—	—	(33)
Stock	—	—	—	(5)	(26)	—
Balance, June 30, 2022	**$ 3,476**	**$ 6,886**	**$ 6,305**	**$ 4,632**	**$ 2,996**	**$ 6,744**
Balance, March 31, 2021	**$ 3,546**	**$ 6,542**	**$ 6,012**	**$ 3,720**	**$ 2,691**	**$ 6,349**
Comprehensive income (loss)	31	124	45	(10)	55	82
Proceeds from issuance of capital stock	20	105	782	354	359	327
Repurchases/redemptions of capital stock	—	(112)	(808)	(272)	(233)	(293)
Net shares reclassified (to)/ from mandatorily redeemable capital stock	—	(5)	(80)	—	(225)	(3)
Dividends of capital stock	—	—	—	3	16	—
Dividends						
Cash	(14)	(21)	(41)	—	—	(34)
Stock	—	—	—	(3)	(16)	—
Balance, June 30, 2021	**$ 3,583**	**$ 6,633**	**$ 5,910**	**$ 3,792**	**$ 2,647**	**$ 6,428**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES
STATEMENTS OF CAPITAL (unaudited)

SIX MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
Balance, December 31, 2021	**$ 49,122**	**$ 1**	**$ 2,531**	**$ 6,446**	**$ 2,734**	**$ 4,595**	**$ 3,796**
Comprehensive income (loss)	(340)	(6)	(176)	(20)	(49)	33	11
Proceeds from issuance of capital stock	24,008	2	2,061	3,012	2,160	3,523	3,344
Repurchases/redemptions of capital stock	(14,496)	1	(1,449)	(2,316)	(1,324)	(2,441)	—
Net shares reclassified (to)/ from mandatorily redeemable capital stock	(2,269)	1	(9)	(258)	—	(23)	(1,420)
Dividends of capital stock	54	—	—	—	—	—	—
Dividends							
Cash	(442)	—	(10)	(101)	(24)	(45)	(36)
Stock	(54)	—	—	—	—	—	—
Balance, June 30, 2022	**$ 55,583**	**$ (1)**	**$ 2,948**	**$ 6,763**	**$ 3,497**	**$ 5,642**	**$ 5,695**
Balance, December 31, 2020	**$ 50,180**	**$ 13**	**$ 2,782**	**$ 7,256**	**$ 3,041**	**$ 5,260**	**$ 3,930**
Comprehensive income (loss)	1,803	(7)	59	197	40	103	32
Proceeds from issuance of capital stock	7,163	1	98	1,410	367	648	1,005
Repurchases/redemptions of capital stock	(8,057)	—	(283)	(1,910)	(692)	(1,277)	(866)
Net shares reclassified (to)/ from mandatorily redeemable capital stock	(737)	1	(2)	—	—	(1)	(62)
Dividends of capital stock	39	—	—	—	—	—	—
Dividends							
Cash	(481)	—	(10)	(133)	(39)	(57)	(26)
Stock	(39)	—	—	—	—	—	—
Balance, June 30, 2021	**$ 49,871**	**$ 8**	**$ 2,644**	**$ 6,820**	**$ 2,717**	**$ 4,676**	**$ 4,013**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES
STATEMENTS OF CAPITAL (unaudited, continued)

SIX MONTHS ENDED JUNE 30, 2022 AND 2021

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
Balance, December 31, 2021	**$ 3,556**	**$ 6,752**	**$ 5,838**	**$ 3,934**	**$ 2,715**	**$ 6,224**
Comprehensive income (loss)	(58)	(116)	40	101	5	(105)
Proceeds from issuance of capital stock	167	863	2,712	1,520	1,555	3,089
Repurchases/redemptions of capital stock	(162)	(510)	(2,197)	(914)	(820)	(2,364)
Net shares reclassified (to)/ from mandatorily redeemable capital stock	—	(57)	(3)	(9)	(459)	(32)
Dividends of capital stock	—	—	—	8	46	—
Dividends						
Cash	(27)	(46)	(85)	—	—	(68)
Stock	—	—	—	(8)	(46)	—
Balance, June 30, 2022	**$ 3,476**	**$ 6,886**	**$ 6,305**	**$ 4,632**	**$ 2,996**	**$ 6,744**
Balance, December 31, 2020	**$ 3,450**	**$ 6,289**	**$ 5,740**	**$ 3,557**	**$ 2,668**	**$ 6,194**
Comprehensive income (loss)	135	390	163	250	128	313
Proceeds from issuance of capital stock	26	273	1,501	685	821	328
Repurchases/redemptions of capital stock	—	(270)	(1,333)	(700)	(386)	(340)
Net shares reclassified (to)/ from mandatorily redeemable capital stock	—	(6)	(80)	—	(584)	(3)
Dividends of capital stock	—	—	—	7	32	—
Dividends						
Cash	(28)	(43)	(81)	—	—	(64)
Stock	—	—	—	(7)	(32)	—
Balance, June 30, 2021	**$ 3,583**	**$ 6,633**	**$ 5,910**	**$ 3,792**	**$ 2,647**	**$ 6,428**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CASH FLOWS (unaudited)

SIX MONTHS ENDED JUNE 30, 2022

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
Operating activities							
Net cash provided by (used in) operating activities	**$ 11,820**	**$ 3**	**$ 1,194**	**$ 1,483**	**$ 725**	**$ 876**	**$ 1,186**
Investing activities							
Net change/net proceeds and payments in							
Loans to FHLBanks	—	700	—	—	—	(500)	—
Investments	(70,470)	(3)	(14,023)	(3,680)	(4,400)	(12,691)	(7,872)
Advances	(174,309)	2	(18,130)	(9,891)	(21,374)	(27,844)	(33,048)
Mortgage loans held for portfolio	(425)	1	217	140	7	19	160
Other investing activities	(29)	(3)	—	(3)	—	(5)	(1)
Net cash provided by (used in) investing activities	**(245,233)**	**697**	**(31,936)**	**(13,434)**	**(25,767)**	**(41,021)**	**(40,761)**
Financing activities							
Net change in deposits and pass-through reserves, and other financing activities	(632)	2	182	143	(349)	173	(188)
Net change in loans from FHLBanks	—	(700)	—	—	—	—	—
Net proceeds (payments) on derivative contracts with financing element	242	—	95	(1)	—	(3)	—
Net proceeds from issuance of consolidated obligations							
Discount notes	2,564,228	—	121,904	379,572	152,234	388,822	164,158
Bonds	183,065	1	10,444	21,023	15,456	25,942	30,513
Payments for maturing and retiring consolidated obligations							
Discount notes	(2,362,939)	(3)	(99,096)	(372,253)	(137,918)	(362,612)	(136,943)
Bonds	(156,261)	(1)	(3,516)	(16,734)	(5,250)	(13,187)	(17,135)
Proceeds from issuance of capital stock	24,008	2	2,061	3,012	2,160	3,523	3,344
Payments for repurchases/ redemptions of capital stock	(14,496)	1	(1,449)	(2,316)	(1,324)	(2,441)	—
Payments for repurchases/ redemptions of mandatorily redeemable capital stock	(2,251)	(1)	(12)	(252)	—	(24)	(1,421)
Cash dividends paid	(442)	—	(10)	(101)	(24)	(45)	(36)
Net cash provided by (used in) financing activities	**234,522**	**(699)**	**30,603**	**12,093**	**24,985**	**40,148**	**42,292**
Net increase (decrease) in cash and due from banks	1,109	1	(139)	142	(57)	3	2,717
Cash and due from banks at beginning of the period	3,532	(2)	205	22	428	879	168
Cash and due from banks at end of the period	**$ 4,641**	**$ (1)**	**$ 66**	**$ 164**	**$ 371**	**$ 882**	**$ 2,885**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CASH FLOWS (unaudited, continued)

SIX MONTHS ENDED JUNE 30, 2022

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
Operating activities						
Net cash provided by (used in) operating activities	**$ 935**	**$ 1,065**	**$ 1,224**	**$ 1,325**	**$ 698**	**$ 1,106**
Investing activities						
Net change/net proceeds and payments in						
Loans to FHLBanks	—	—	—	—	(200)	—
Investments	(3,545)	(5,058)	170	(6,484)	(4,074)	(8,810)
Advances	(3,535)	(5,824)	(9,407)	(12,154)	(6,335)	(26,769)
Mortgage loans held for portfolio	(172)	(136)	(385)	(503)	97	130
Other investing activities	(2)	(8)	(5)	(2)	2	(2)
Net cash provided by (used in) investing activities	**(7,254)**	**(11,026)**	**(9,627)**	**(19,143)**	**(10,510)**	**(35,451)**
Financing activities						
Net change in deposits and pass-through reserves, and other financing activities	(321)	(379)	(242)	80	(137)	404
Net change in loans from FHLBanks	—	—	—	—	500	200
Net proceeds (payments) on derivative contracts with financing element	(1)	—	—	168	(9)	(7)
Net proceeds from issuance of consolidated obligations						
Discount notes	369,386	435,410	276,308	53,659	123,800	98,975
Bonds	10,678	12,781	13,157	11,695	18,973	12,402
Payments for maturing and retiring consolidated obligations						
Discount notes	(361,928)	(428,474)	(248,457)	(35,071)	(110,298)	(69,886)
Bonds	(12,277)	(9,649)	(33,023)	(13,830)	(23,288)	(8,371)
Proceeds from issuance of capital stock	167	863	2,712	1,520	1,555	3,089
Payments for repurchases/ redemptions of capital stock	(162)	(510)	(2,197)	(914)	(820)	(2,364)
Payments for repurchases/ redemptions of mandatorily redeemable capital stock	(4)	(31)	(15)	(2)	(459)	(30)
Cash dividends paid	(27)	(46)	(85)	—	—	(68)
Net cash provided by (used in) financing activities	**5,511**	**9,965**	**8,158**	**17,305**	**9,817**	**34,344**
Net increase (decrease) in cash and due from banks	(808)	4	(245)	(513)	5	(1)
Cash and due from banks at beginning of the period	868	45	295	543	26	55
Cash and due from banks at end of the period	**$ 60**	**$ 49**	**$ 50**	**$ 30**	**$ 31**	**$ 54**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CASH FLOWS (unaudited)

SIX MONTHS ENDED JUNE 30, 2021

(dollars in millions)	Combined	Combining Adjustments	Boston	New York	Pittsburgh	Atlanta	Cincinnati
Operating activities							
Net cash provided by (used in) operating activities	**$ 3,911**	**$ (1)**	**$ 156**	**$ 502**	**$ 196**	**$ 492**	**$ 300**
Investing activities							
Net change/net proceeds and payments in							
Investments	2,147	(2)	(3,030)	2,221	(4,556)	6,486	4
Advances	49,436	2	3,589	11,530	9,902	4,512	1,629
Mortgage loans held for portfolio	5,929	1	447	369	94	41	1,772
Other investing activities	(23)	—	—	(8)	(2)	(2)	(1)
Net cash provided by (used in) investing activities	**57,489**	**1**	**1,006**	**14,112**	**5,438**	**11,037**	**3,404**
Financing activities							
Net change in deposits and pass-through reserves, and other financing activities	355	(2)	(118)	(223)	18	626	10
Net proceeds (payments) on derivative contracts with financing element	18	1	30	(2)	—	(3)	—
Net proceeds from issuance of consolidated obligations							
Discount notes	1,650,627	—	153,008	296,370	82,453	292,915	99,552
Bonds	233,394	1	10,009	33,828	12,130	25,300	19,762
Consolidated obligation bonds transferred from other FHLBanks	—	(174)	—	174	—	—	—
Payments for maturing and retiring consolidated obligations							
Discount notes	(1,693,614)	(3)	(157,518)	(311,801)	(76,848)	(295,973)	(105,865)
Bonds	(270,258)	—	(7,756)	(34,169)	(23,434)	(35,580)	(20,058)
Consolidated obligation bonds transferred to other FHLBanks	—	174	(174)	—	—	—	—
Proceeds from issuance of capital stock	7,163	1	98	1,410	367	648	1,005
Payments for repurchases/ redemptions of capital stock	(8,057)	—	(283)	(1,910)	(692)	(1,277)	(866)
Payments for repurchases/ redemptions of mandatorily redeemable capital stock	(895)	—	(1)	(1)	(80)	(1)	(67)
Cash dividends paid	(481)	—	(10)	(133)	(39)	(57)	(26)
Net cash provided by (used in) financing activities	**(81,748)**	**(2)**	**(2,715)**	**(16,457)**	**(6,125)**	**(13,402)**	**(6,553)**
Net increase (decrease) in cash and due from banks	(20,348)	(2)	(1,553)	(1,843)	(491)	(1,873)	(2,849)
Cash and due from banks at beginning of the period	25,125	1	2,050	1,896	1,036	2,905	2,984
Cash and due from banks at end of the period	**$ 4,777**	**$ (1)**	**$ 497**	**$ 53**	**$ 545**	**$ 1,032**	**$ 135**

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CASH FLOWS (unaudited, continued)

SIX MONTHS ENDED JUNE 30, 2021

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
Operating activities						
Net cash provided by (used in) operating activities	**$ 154**	**$ 296**	**$ 348**	**$ 553**	**$ 297**	**$ 618**
Investing activities						
Net change/net proceeds and payments in						
Investments	(1,850)	(1,004)	1,744	(5,035)	978	6,191
Advances	3,462	105	724	7,358	112	6,511
Mortgage loans held for portfolio	631	228	671	200	841	634
Other investing activities	(3)	(6)	—	(3)	2	—
Net cash provided by (used in) investing activities	**2,240**	**(677)**	**3,139**	**2,520**	**1,933**	**13,336**
Financing activities						
Net change in deposits and pass-through reserves, and other financing activities	223	(161)	(90)	39	(141)	174
Net proceeds (payments) on derivative contracts with financing element	(8)	—	—	47	(11)	(36)
Net proceeds from issuance of consolidated obligations						
Discount notes	85,206	300,754	134,226	18,678	150,600	36,865
Bonds	22,130	21,133	29,738	27,497	20,804	11,062
Consolidated obligation bonds transferred from other FHLBanks	—	—	—	—	—	—
Payments for maturing and retiring consolidated obligations						
Discount notes	(87,373)	(303,665)	(138,468)	(29,474)	(151,152)	(35,474)
Bonds	(23,001)	(20,704)	(29,809)	(22,827)	(26,332)	(26,588)
Consolidated obligation bonds transferred to other FHLBanks	—	—	—	—	—	—
Proceeds from issuance of capital stock	26	273	1,501	685	821	328
Payments for repurchases/ redemptions of capital stock	—	(270)	(1,333)	(700)	(386)	(340)
Payments for repurchases/ redemptions of mandatorily redeemable capital stock	(18)	(37)	(97)	(7)	(584)	(2)
Cash dividends paid	(28)	(43)	(81)	—	—	(64)
Net cash provided by (used in) financing activities	**(2,843)**	**(2,720)**	**(4,413)**	**(6,062)**	**(6,381)**	**(14,075)**
Net increase (decrease) in cash and due from banks	(449)	(3,101)	(926)	(2,989)	(4,151)	(121)
Cash and due from banks at beginning of the period	1,812	3,541	978	3,178	4,570	174
Cash and due from banks at end of the period	**$ 1,363**	**$ 440**	**$ 52**	**$ 189**	**$ 419**	**$ 53**

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SELECTED FINANCIAL DATA

(dollars in millions)	2022 June 30,	2022 March 31,	2021 December 31,	2021 September 30,	2021 June 30,
Selected Statement of Condition Data at					
Investments(1)	$ 362,231	$ 324,240	$ 308,471	$ 294,696	$ 302,288
Advances	518,883	374,570	351,278	350,041	370,352
Mortgage loans held for portfolio	55,753	55,484	55,497	56,101	56,541
Total assets	**946,710**	**762,192**	**723,238**	**712,089**	**738,171**
Deposits	13,298	14,107	14,303	15,550	15,576
Consolidated obligations					
Discount notes	412,400	241,996	210,897	204,424	231,720
Bonds	457,347	449,166	441,024	437,414	435,797
Total consolidated obligations	**869,747**	**691,162**	**651,921**	**641,838**	**667,517**
Mandatorily redeemable capital stock	416	960	398	391	614
Capital					
Total capital stock(2)	**32,362**	**26,124**	**25,065**	**24,814**	**25,806**
Retained earnings	23,373	23,025	22,760	22,568	22,387
Accumulated other comprehensive income (loss)	(152)	435	1,297	1,419	1,678
Total capital	**55,583**	**49,584**	**49,122**	**48,801**	**49,871**
Selected Statement of Income Data for the quarter ended					
Net interest income	$ 1,078	$ 972	$ 895	$ 894	$ 927
Provision (reversal) for credit losses	6	—	1	(6)	—
Net interest income after provision (reversal) for credit losses	**1,072**	**972**	**894**	**900**	**927**
Non-interest income (loss)	(33)	(62)	(32)	(81)	(120)
Non-interest expense	363	352	377	344	353
Affordable Housing Program assessments	69	56	50	48	46
Net income	**$ 607**	**$ 502**	**$ 435**	**$ 427**	**$ 408**
Selected Other Data for the quarter ended					
Cash and stock dividends	$ 259	$ 237	$ 243	$ 246	$ 253
Dividend payout ratio(3)	42.67 %	47.21 %	55.86 %	57.61 %	62.01 %
Return on average equity (annualized)(4)(5)	4.56 %	4.05 %	3.50 %	3.40 %	3.22 %
Return on average assets (annualized)	0.28 %	0.27 %	0.24 %	0.23 %	0.21 %
Average equity to average assets(5)	6.14 %	6.63 %	6.75 %	6.74 %	6.63 %
Net interest margin(6)	0.50 %	0.53 %	0.49 %	0.49 %	0.49 %
Selected Other Data at					
GAAP capital-to-asset ratio	5.87 %	6.51 %	6.79 %	6.85 %	6.76 %
Regulatory capital-to-assets ratio(7)	5.93 %	6.57 %	6.67 %	6.71 %	6.61 %

(1) Investments consist of interest-bearing deposits, securities purchased under agreements to resell, federal funds sold, trading securities, available-for-sale securities (AFS), and held-to-maturity securities (HTM).
(2) FHLBank capital stock is redeemable at the request of a member subject to the statutory redemption periods and other conditions and limitations. (See *Note 9 - Capital* to the accompanying combined financial statements for additional information on the statutory redemption periods and other conditions and limitations.)
(3) Dividend payout ratio is equal to dividends declared in the period expressed as a percentage of net income in the period. This ratio may not be as relevant to the combined balances because there are no shareholders at the FHLBank System-wide level.
(4) Return on average equity is equal to net income expressed as a percentage of average total capital.
(5) Mandatorily redeemable capital stock is not included in the calculations of return on average equity or average equity to average assets.
(6) Net interest margin is equal to net interest income represented as a percentage of average interest-earning assets.
(7) The regulatory capital-to-assets ratio is calculated based on the FHLBanks' regulatory capital as a percentage of total assets. (See *Note 9 - Capital* to the accompanying combined financial statements for a definition and discussion of regulatory capital.)

FINANCIAL DISCUSSION AND ANALYSIS OF COMBINED FINANCIAL CONDITION AND COMBINED RESULTS OF OPERATIONS

Investors should read this financial discussion and analysis of combined financial condition and combined results of operations together with the combined financial statements and the accompanying notes in this Combined Financial Report of the Federal Home Loan Banks (FHLBanks). Each FHLBank discusses its financial condition and results of operations in its periodic reports filed with the SEC. The results of operations for interim periods are not necessarily indicative of the results to be expected for the year ending December 31, 2022, or for any future period. The unaudited combined financial statements, included in this Combined Financial Report, should be read in conjunction with the audited combined financial statements for the year ended December 31, 2021, included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021.

Each FHLBank's Annual Report on SEC Form 10-K and Quarterly Report on SEC Form 10-Q contain, as required by applicable SEC rules, a "Management's Discussion and Analysis of Financial Condition and Results of Operations," commonly called MD&A. The SEC notes that one of the principal objectives of MD&A is "to provide a narrative explanation of a company's financial statements that enables investors to see the company through the eyes of management." Because there is no centralized management of the FHLBanks that can provide a system-wide "eyes of management" view of the FHLBanks as a whole, this Combined Financial Report does not contain a conventional MD&A. Instead, a "Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations" is prepared by the Office of Finance using information provided by each FHLBank. This Financial Discussion and Analysis does not generally include a separate discussion of how each FHLBank's operations affect the combined financial condition and combined results of operations. That level of information about each FHLBank is addressed in each respective FHLBank's periodic reports filed with the SEC. (See *Explanatory Statement about Federal Home Loan Banks Combined Financial Report* and *Supplemental Information - Individual Federal Home Loan Bank Selected Financial Data and Financial Ratios*.)

The combined financial statements include the financial results of the FHLBanks. (See *Condensed Combining Schedules* to the accompanying combined financial statements for information regarding each FHLBank's results.) Transactions between the FHLBanks have been eliminated in accordance with combination accounting principles similar to consolidation under GAAP.

Unless otherwise stated, dollar amounts disclosed in this Combined Financial Report represent values rounded to the nearest million. Dollar amounts rounding to less than one million are not reflected in this Combined Financial Report.

Forward-Looking Information

Statements contained in this report, including statements describing the objectives, projections, estimates, or predictions of the future of the FHLBanks and the Office of Finance, may be "forward-looking statements." These statements may use forward-looking terminology, such as "anticipates," "believes," "could," "estimates," "expects," "intends," "projects," "plans," "may," "should," "will," "would," "likely," "possible," or their negatives or other variations on these terms. Investors should note that forward-looking statements, by their nature, involve risks or uncertainties, including those set forth in the *Risk Factors* on pages 28 to 40 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021. Therefore, the actual results could differ materially from those expressed or implied in these forward-looking statements or could affect the extent to which a particular objective, projection, estimate, or prediction is realized.

These forward-looking statements involve risks and uncertainties including, but not limited to, the following:

- changes in the general economy, money and capital markets, the rate of inflation (or deflation), employment rates, housing market activity and housing prices, the size and volatility of the residential mortgage market, and uncertainty regarding the global economy;

- levels and volatility of market prices, interest rates, and indices, including those that could affect the value of investments or collateral held by the FHLBanks;

- changes in monetary and fiscal policies;

- changes in liquidity in the financial markets;

- natural disasters, pandemics or other widespread health emergencies, terrorist attacks, civil unrest, geopolitical instability or conflicts (including the outbreak of hostilities between Russia and Ukraine), trade disruptions, economic or other sanctions, or other unanticipated or catastrophic events, including the economic and financial disruptions and uncertainties and operational challenges created by the COVID-19 pandemic and related developments;

- political events, including legislative, regulatory, judicial, or other developments that affect the FHLBanks, their members, counterparties, dealers of consolidated obligations, or investors in consolidated obligations, such as changes in the Federal Home Loan Bank Act of 1932, as amended (FHLBank Act), or in regulations that affect FHLBank operations, housing finance and government-sponsored enterprise (GSE) reform, and Federal Housing Finance Agency (FHFA) actions;

- changes to, and replacement of, the London Interbank Offered Rate (LIBOR) benchmark interest rate, and the use and acceptance of the Secured Overnight Financing Rate (SOFR), or any alternative reference rate;

- competitive forces, including other sources of funding available to FHLBank members and other entities borrowing funds in the capital markets;

- disruptions in the credit and debt markets and the effect on the FHLBanks' funding costs, sources, and availability;

- demand for FHLBank advances resulting from changes in FHLBank members' deposit flows and credit demands, or from changes in liquidity in the financial markets;

- loss of members and repayment of advances made to those members due to institutional failures, consolidations, voluntary withdrawals, or involuntary terminations from FHLBank membership, and changes in the financial health of members;

- changes in domestic and foreign investor demand for consolidated obligations, including short-term funding, or the terms of derivative transactions and similar transactions, including changes in the relative attractiveness of consolidated obligations as compared to other investment opportunities, changes in the availability of other investment opportunities, changes in support from dealers of consolidated obligations, and changes resulting from any modification of the credit ratings of the U.S. government or the FHLBanks;

- the availability of acceptable institutional counterparties for business transactions, including derivative transactions used to manage interest-rate risk;

- the ability to introduce new products and services and successfully manage the risks associated with those products and services, including new types of collateral used to secure advances;

- the pace of technological change and the ability to develop, secure, and support technology and information systems to effectively manage the risks, including information security; and

- the effect of new accounting guidance, including the development of supporting systems and related internal controls.

Neither the FHLBanks nor the Office of Finance undertakes any obligation to publicly update or revise any forward-looking statements contained in this Combined Financial Report, whether as a result of new information, future events, changed circumstances, or any other reason.

Executive Summary

This executive summary highlights selected information and may not contain all the information that is important to readers of this Combined Financial Report. For a more complete understanding of events, trends, and uncertainties, this executive summary should be read together with the Financial Discussion and Analysis section in its entirety and the FHLBanks' combined financial statements and related notes.

Overview

The FHLBanks are GSEs, federally-chartered, but privately capitalized and independently managed. The FHLBanks together with the Office of Finance, a joint office of the FHLBanks, comprise the FHLBank System. Each of the FHLBanks and the Office of Finance operates under the supervisory and regulatory framework of the FHFA.

The FHLBanks are cooperative institutions, meaning that their stockholders are also the FHLBanks' primary customers. FHLBank capital stock is not publicly traded; it is purchased by members from, and redeemed or repurchased by, an FHLBank at the stated par value of $100 per share. The FHLBanks expand and contract in asset size as the needs of member financial institutions and their communities change over time.

Each FHLBank's primary business is to serve as a financial intermediary between the capital markets and its members. This intermediation process involves raising funds by issuing debt, known as consolidated obligations, in the capital markets and lending those proceeds to member institutions in the form of secured loans, known as advances. Each FHLBank's funding is principally obtained from consolidated obligations issued through the Office of Finance on behalf of the FHLBanks. Consolidated obligations are joint and several obligations of each FHLBank. FHLBank debt issuance is generally driven by members' needs for advances.

The FHLBanks seek to maintain a balance between their public policy mission and their goal of providing adequate returns on member capital. The FHLBanks strive to achieve this balance by providing value to their members through advances, mortgage loan purchases, other services, and dividend payments. The FHLBanks' primary sources of earnings are the net interest spread between the yield on interest-earning assets and the average rate on interest-bearing liabilities, combined with earnings on invested capital. Due to the FHLBanks' cooperative structures, the FHLBanks generally earn a narrow net interest spread.

External Credit Ratings

The FHLBanks' ability to raise funds in the capital markets at narrow spreads to the U.S. Treasury yield curve is due largely to the FHLBanks' status as GSEs, which is reflected in their consolidated obligations receiving the same credit rating as the government bond credit rating of the United States, even though the consolidated obligations are not obligations of the United States and are not guaranteed by the United States. S&P Global Ratings (S&P),

Moody's Investors Service (Moody's), or other rating organizations could downgrade or upgrade the credit rating of the U.S. government and GSEs, including the FHLBanks and their consolidated obligations. In addition to ratings on the FHLBanks' consolidated obligations, each FHLBank is rated individually by S&P and Moody's. Investors should note that a rating issued by a nationally recognized statistical rating organization is not a recommendation to buy, sell, or hold securities, and that the ratings may be revised or withdrawn by the rating organization at any time. Investors should evaluate the rating of each nationally recognized statistical rating organization independently. Investors should not take the historical or current ratings of the FHLBanks or their consolidated obligations as an indication of future ratings for the FHLBanks and their consolidated obligations. (See *External Credit Ratings* for more information.)

Business Environment

The primary external factors that affect the FHLBanks' combined financial condition and results of operations include (1) the general state of the economy and financial markets, (2) conditions in the U.S. housing markets, (3) interest rate levels and volatility, and (4) the legislative and regulatory environment.

COVID-19 Pandemic. In March 2020, the President of the United States declared the COVID-19 pandemic a national emergency. The full duration of the pandemic, given the emergence of new variants, is uncertain. So also is the full effect of governmental and public responses on the global and U.S. economies and on the FHLBanks. The extraordinary governmental response to the pandemic resulted in significantly higher financial market liquidity, as compared to levels before the pandemic. (See *Risk Factors* on pages 28 to 40 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for additional information on potential risks to the FHLBanks, including those from the COVID-19 pandemic.)

Economy and Financial Markets. The FHLBanks' results of operations are influenced by the overall economy and financial markets, and, in particular, by FHLBank members' demand for advances and the FHLBanks' ability to maintain sufficient access to diverse sources of funding at relatively favorable costs. The FHLBanks' flexibility in utilizing various funding tools, in combination with their diverse investor base and their status as GSEs, has helped ensure reliable market access and demand for consolidated obligations throughout fluctuating market environments and regulatory changes affecting dealers of and investors in consolidated obligations.

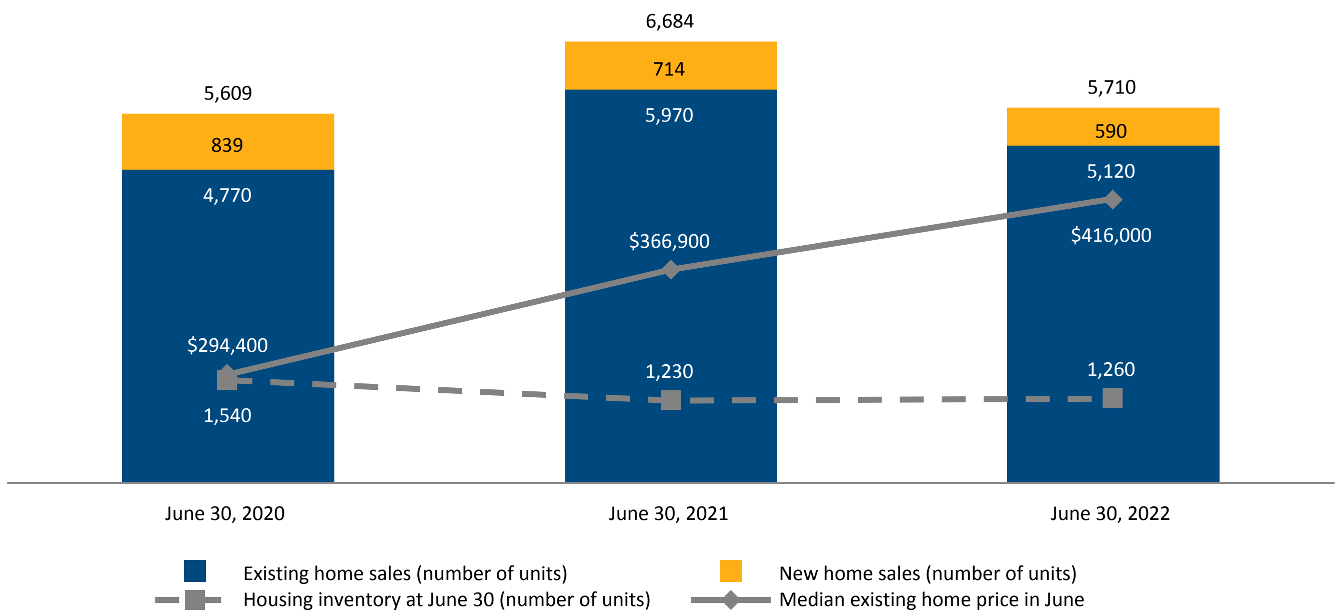
In July 2022, the Bureau of Labor Statistics reported that the U.S. unemployment rate was 3.6% in June 2022, down from 3.9% in December 2021. The Bureau of Labor Statistics also reported that the unadjusted U.S. consumer price index increased 9.1% for the twelve-month period ended June 30, 2022, compared to an increase of 5.4% for the twelve-month period ended June 30, 2021.

U.S. real gross domestic product decreased at an annual rate of 0.9% in the second quarter of 2022, according to the advance estimate reported by the Bureau of Economic Analysis, compared to decreasing at an annual rate of 1.6% in the first quarter of 2022, and increasing at an annual rate of 6.7% in the second quarter of 2021, as revised by the Bureau of Economic Analysis.

In late February 2022, Russia invaded Ukraine, which led to increased price volatility across financial markets, including the U.S. Treasury market. Although volatility initially increased in the market for the FHLBanks' consolidated obligations, the demand for consolidated obligation has remained strong. The implications for the U.S. economy remain uncertain, but the invasion and related events (including sanctions) are creating additional upward pressure on inflation and weighing on global economic activity.

Conditions in U.S. Housing Markets. Conditions in the U.S. housing markets primarily affect the FHLBanks through the creation of demand for, and yield on, advances and mortgage loans, as well as the yield on investments in mortgage-backed securities (MBS). Figure 1 presents U.S. home sales, inventory, and prices for the most recent three years. The seasonally adjusted annual rate of U.S. home sales declined in June 2022, compared to June 2021, driven by higher home prices and an increase in mortgage interest rates. Housing inventory in the U.S remained low.

Figure 1 - U.S. Home Sales, Inventory, and Prices
(units in thousands and home prices in whole dollars)



Source: National Association of REALTORS® for existing home sales, housing inventory, and median existing home price.
Source: U.S. Census Bureau and the Department of Housing and Urban Development for new home sales.

Interest Rate Levels and Volatility. The level and volatility of interest rates affect FHLBank member demand for advances. In addition, credit spreads and the shape of the yield curve affect investor demand for consolidated obligations. These factors, driven in part by federal monetary and fiscal policies, also affect the FHLBanks' combined results of operations, primarily affecting net interest income and the valuation of certain assets and liabilities.

On March 15, 2020, the Federal Reserve's Federal Open Market Committee lowered the federal funds rate in an unscheduled meeting, to a target range of 0.0% to 0.25%, noting that the COVID-19 pandemic had harmed communities and disrupted economic activity in many countries, including the United States. At its meetings in June and July 2022, the Federal Open Market Committee stated that inflation has remained elevated, reflecting supply and demand imbalances related to the pandemic, higher food and energy prices, and broader price pressures, and it raised the target range of the federal funds rate by 0.75% in both June and July. The increase in July 2022 represented the fourth increase of the target range of the federal funds rate in 2022, totaling 2.25% of increases in aggregate, to a target range of 2.25% to 2.5%. The Federal Open Market Committee stated that it anticipates that ongoing increases in the target range will be appropriate. The Federal Open Market Committee noted that the Russian invasion of Ukraine and related events are creating additional upward pressure on inflation and weighing on global economic activity. The Federal Open Market Committee also stated that it will continue with its previously announced plan of reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities.

Generally, investor demand for the FHLBanks' consolidated obligations has remained strong, with market participants favoring discount notes during the six months ended June 30, 2022. The FHLBanks continued to meet their funding needs during the six months ended June 30, 2022.

Table 1 presents the three-month and six-month averages and period-end rates for certain key interest rates. Average interest rates were significantly higher during both the three and six months ended June 30, 2022, compared to the three and six months ended June 30, 2021, as the Federal Reserve began raising short-term interest rates in March 2022. At June 30, 2022, both short- and long-term interest rates were significantly higher, compared to rates at December 31, 2021, which affected the fair values of certain assets and liabilities. The prevailing expectation of increasing interest rates from historically low levels will likely continue to be a significant factor driving the FHLBanks' results of operations and financial condition in 2022.

Table 1 - Key Interest Rates

	Three-Month Average		Six-Month Average		Period End	
	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021	June 30, 2022	December 31, 2021
Federal Funds Effective	0.76 %	0.07 %	0.44 %	0.07 %	1.58 %	0.07 %
SOFR	0.71 %	0.02 %	0.40 %	0.03 %	1.50 %	0.05 %
Overnight LIBOR	0.77 %	0.07 %	0.44 %	0.07 %	1.58 %	0.06 %
1-week Overnight Indexed Swap	0.84 %	0.07 %	0.49 %	0.07 %	1.59 %	0.08 %
3-month LIBOR	1.54 %	0.16 %	1.02 %	0.18 %	2.29 %	0.21 %
3-month U.S. Treasury yield	1.07 %	0.02 %	0.69 %	0.03 %	1.67 %	0.04 %
2-year U.S. Treasury yield	2.72 %	0.17 %	2.09 %	0.15 %	2.96 %	0.73 %
10-year U.S. Treasury yield	2.93 %	1.58 %	2.44 %	1.45 %	3.02 %	1.51 %

Source: Bloomberg

Table 2 presents the average funding spreads of newly-issued consolidated obligations relative to three-month Treasury and SOFR indices, as well as the ending spreads. For the three and six months ended June 30, 2022, the cost of newly-issued consolidated obligations increased, as measured by the average indicative spreads to three-month Treasury indices, compared to the three and six months ended June 30, 2021. For the three and six months ended June 30, 2022, the cost of newly-issued consolidated obligations with tenors of five years or more increased, as measured by the average indicative spreads to SOFR indices, compared to the three and six months ended June 30, 2021, while the cost of newly-issued consolidated obligations with tenors of two years or less decreased.

Table 2 - Funding Spreads to Three-Month Treasury and SOFR Indices

(in basis points)

	Three-Month Average		Six-Month Average		Ending Spread	
Borrowing Term	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021	June 30, 2022	December 31, 2021
Treasury						
3-months	12.8	1.5	8.1	1.7	26.1	1.5
2-years	5.0	1.5	4.4	1.4	11.0	1.5
5-years	7.2	2.4	7.3	2.8	9.0	7.0
10-years	42.3	9.2	37.1	10.5	41.0	24.0
SOFR						
3-months	(12.0)	0.5	(6.1)	1.3	(17.5)	(1.3)
2-years	1.0	6.4	4.0	6.4	5.0	2.7
5-years	27.6	15.3	25.4	14.4	31.5	19.6
10-years	61.0	34.1	54.9	32.3	59.2	41.0

Source: Funding spreads are derived using Office of Finance indications compared to Treasury and SOFR indices.

Legislative and Regulatory Environment. Potential legislative and regulatory changes, as well as other rules and regulations issued by the FHFA, could adversely affect the FHLBanks, FHLBank members, counterparties, and dealers of and investors in consolidated obligations. The FHLBanks' business operations, funding costs, rights, obligations, and the environment in which the FHLBanks carry out their mission could be significantly affected by these changes. (See *Legislative and Regulatory Developments* for more information.)

FHLBanks' Financial Highlights

Combined Financial Condition. The FHLBanks' assets expand and contract as the needs of member financial institutions and their communities change over time. Total assets were $946.7 billion at June 30, 2022, an increase of 31% from $723.2 billion at December 31, 2021.

- Advances totaled $518.9 billion at June 30, 2022, an increase of 48% from $351.3 billion at December 31, 2021, resulting primarily from an increase in short-term fixed-rate advances, driven by depository member demand for liquidity due to such factors as slowing deposit growth and an expectation of higher interest rates. Although advances increased substantially during the six months ended June 30, 2022, advances remained lower than levels prior to the COVID-19 pandemic. Commercial banks and insurance companies (excluding captive insurance companies) represented the largest segments of borrowers, with 48% and 26% of the total principal amount of advances outstanding at June 30, 2022, compared to 34% each at December 31, 2021. The top 10 advance borrowers, by holding company, represented 24% of the total principal amount of advances outstanding at June 30, 2022, compared to 26% at December 31, 2021. The FHLBanks protect against credit risk on advances by collateralizing all advances. At June 30, 2022, each FHLBank had rights to collateral with an estimated value greater than the related outstanding advances.

- Investments were $362.2 billion at June 30, 2022, an increase of 17% from $308.5 billion at December 31, 2021, as the FHLBanks grew their investment portfolios to maintain liquidity in response to the growth in advances and to continue to meet the credit needs of members. The FHLBanks maintain investment portfolios to provide funds to meet the credit needs of their members, maintain liquidity, and earn interest income.

- Mortgage loans held for portfolio were generally flat at June 30, 2022, totaling $55.8 billion. An FHLBank may purchase mortgage loans to support its housing mission, provide an additional source of liquidity to its members, diversify its investments, and generate additional earnings.

Total liabilities were $891.1 billion at June 30, 2022, an increase of 32% compared to $674.1 billion at December 31, 2021.

- Consolidated obligations totaled $869.7 billion at June 30, 2022, an increase of 33% from $651.9 billion at December 31, 2021, in line with the increase in total assets and consisting of a 96% increase in consolidated discount notes and a 4% increase in consolidated bonds. Consolidated obligations are the principal funding source used by the FHLBanks to make advances and to purchase mortgage loans and investments. The future amounts and types of consolidated obligations issued depend primarily on the demand for the FHLBanks' advances.

Total GAAP capital was $55.6 billion at June 30, 2022, an increase of 13% from $49.1 billion at December 31, 2021. The GAAP capital-to-assets ratio was 5.87% and the regulatory capital-to-assets ratio was 5.93% at June 30, 2022, compared to 6.79% and 6.67% at December 31, 2021. Each FHLBank was in compliance with FHFA regulatory capital requirements at June 30, 2022.

- Capital stock was $32.4 billion at June 30, 2022, an increase of 29% from $25.1 billion at December 31, 2021, due principally to the net issuance of activity-based capital stock, driven by the increase in advances, partially offset by the reclassification of capital stock to mandatorily redeemable capital stock.

- Retained earnings grew to $23.4 billion at June 30, 2022, an increase of 3% from $22.8 billion at December 31, 2021, resulting principally from net income of $1,109 million, partially offset by dividends of $496 million.

Combined Results of Operations. Net income was $607 million and $1,109 million for the three and six months ended June 30, 2022, increases of 49% and 22%, compared to the three and six months ended June 30, 2021, resulting primarily from higher net interest income and lower losses in non-interest income.

Net interest income was $1,078 million for the three months ended June 30, 2022, an increase of $151 million, or 16%, compared to the three months ended June 30, 2021. Net interest margin was 0.50% and 0.49% for the three months ended June 30, 2022 and 2021. Net interest income was $2,050 million for the six months ended June 30, 2022, an increase of $92 million, or 5%, compared to the six months ended June 30, 2021. Net interest margin was 0.51% for both the six months ended June 30, 2022 and 2021.

- Interest income was $2,853 million and $4,468 million for the three and six months ended June 30, 2022, increases of $1,250 million and $1,041 million, or 78% and 30%, compared to the three and six months ended June 30, 2021, driven by increases in average yields on interest-earning assets. Although significantly higher interest rates were the primary factor affecting interest income, higher average balances of advances were also a contributing factor.

- Interest expense was $1,775 million and $2,418 million for the three and six months ended June 30, 2022, increases of $1,099 million and $949 million, or 163% and 65%, compared to the three and six months ended June 30, 2021, driven by higher average rates on consolidated obligations. The significantly higher interest rates were the primary factor affecting interest expense, and higher average balances of consolidated obligations were also a contributing factor.

The future level of net interest income of the FHLBanks will depend, in part, upon the level and volatility of interest rates, demand for advances, cost of consolidated obligations, changes in fiscal and monetary policies, as well as the state of the overall U.S. economy and financial markets.

Non-interest income was a loss of $33 million and a loss of $95 million for the three and six months ended June 30, 2022, resulting primarily from changes in the fair value of investment securities, derivatives, and financial instruments held under fair value option, driven by increases in interest rates. Non-interest income was a loss of $120 million and a loss of $245 million for the three and six months ended June 30, 2021.

Non-interest expense was $363 million and $715 million for the three and six months ended June 30, 2022, increases of $10 million and $4 million, or 3% and 1%, compared to the three and six months ended June 30, 2021.

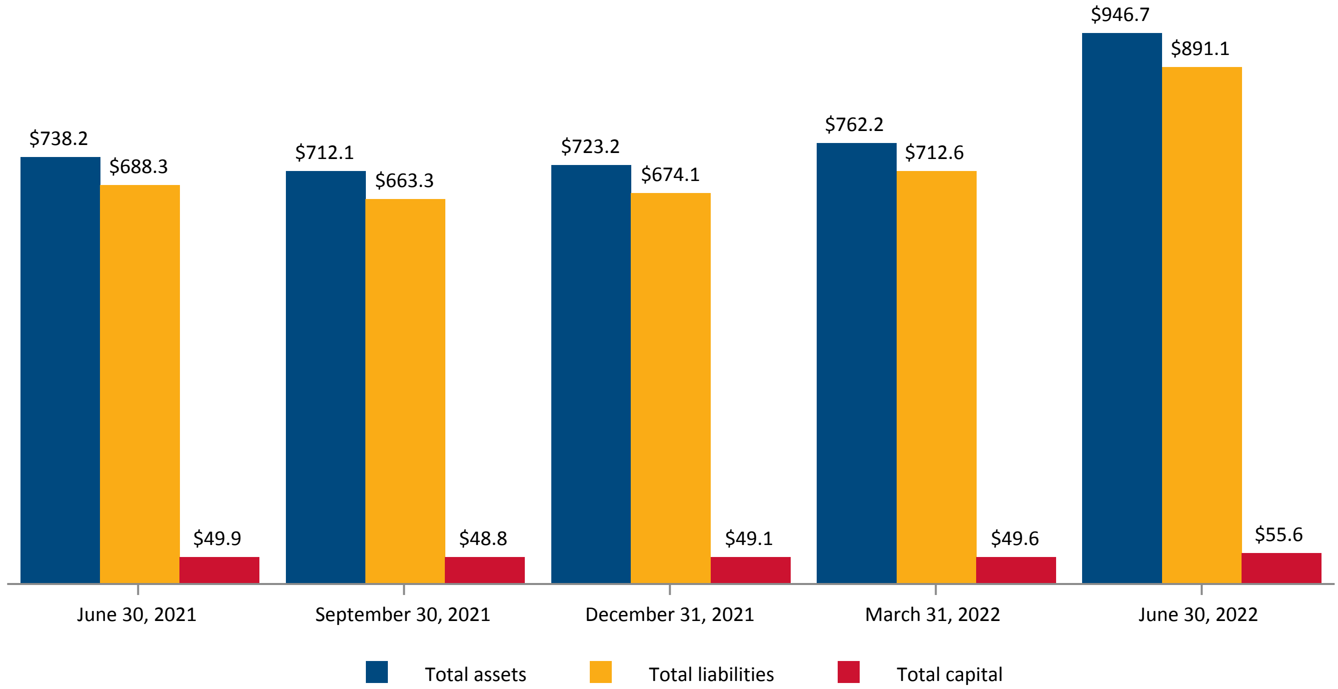
Affordable Housing Program assessments result from individual FHLBank income subject to assessment. Affordable Housing Program assessments were $69 million and $125 million for the three and six months ended June 30, 2022, increases of $23 million and $22 million, or 50% and 21%, compared to the three and six months ended June 30, 2021.

See *Combined Financial Condition* and *Combined Results of Operations* for further information.

Combined Financial Condition

The FHLBanks' asset composition includes cash and due from banks, investments, advances, mortgage loans held for portfolio, and other assets. The FHLBanks' liability composition includes deposits, consolidated discount notes, consolidated bonds, mandatorily redeemable capital stock, and other liabilities. The FHLBanks' capital composition includes capital stock, retained earnings, and accumulated other comprehensive income (loss) (AOCI). The FHLBanks' assets expand and contract as the needs of member financial institutions and their communities change over time. As of June 30, 2022, total assets increased 31%, total liabilities increased 32%, and total GAAP capital increased 13%, compared to December 31, 2021. Figure 2 presents the total assets, liabilities, and capital for the most recent five quarters.

Figure 2 - Total Assets, Liabilities, and Capital
(dollars in billions)



Figures 3 and 4 present the total assets and total liabilities and capital composition at June 30, 2022.

Figure 3 - Total Assets
(dollars in billions)

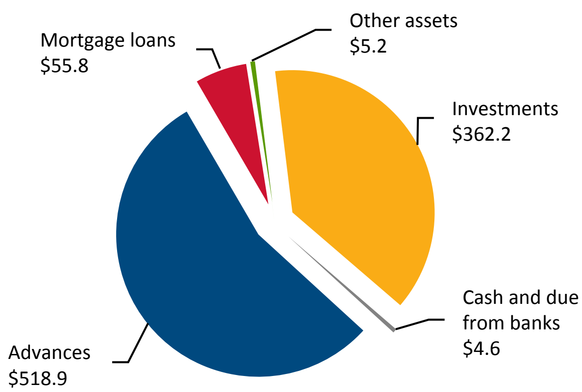
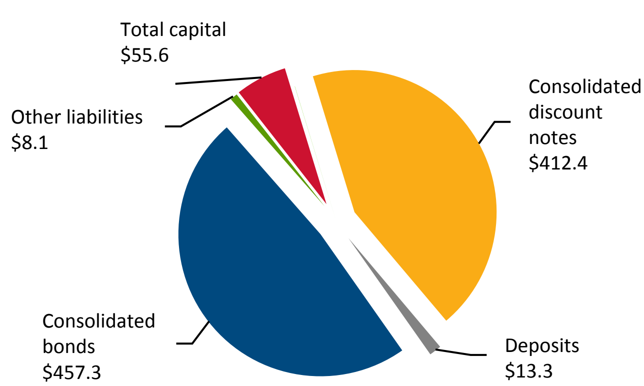


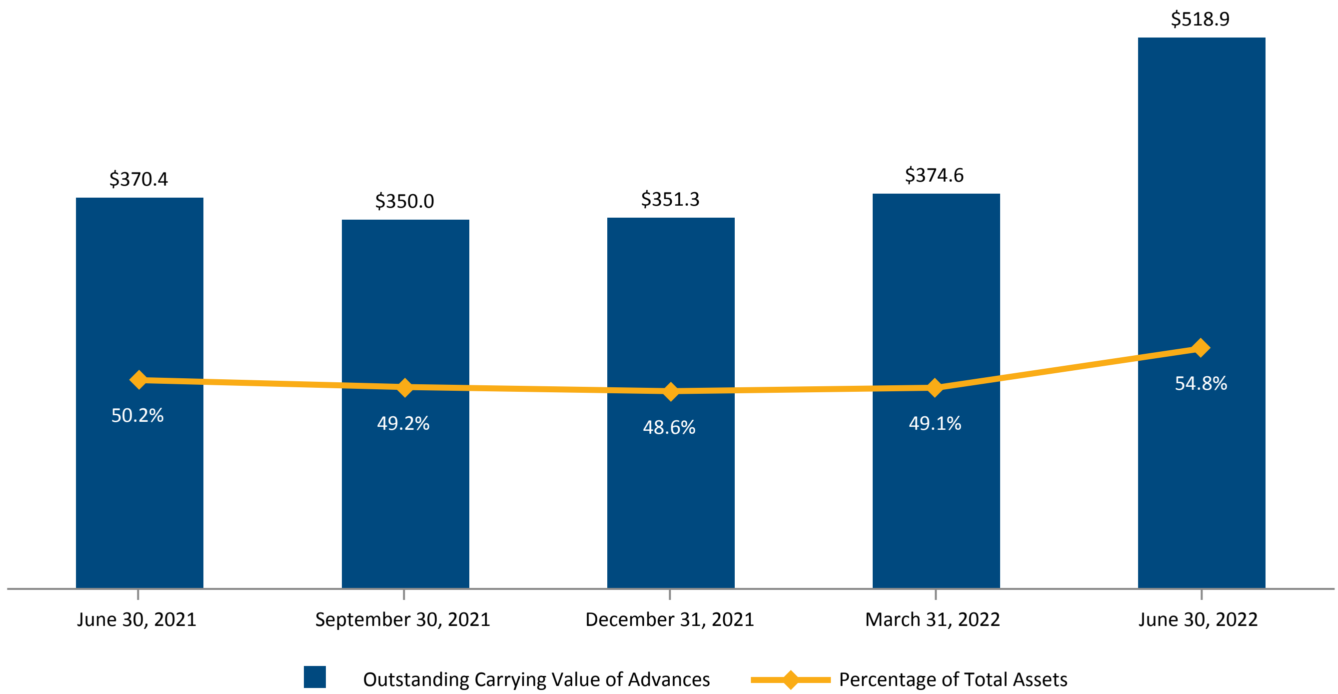
Figure 4 - Total Liabilities and Capital
(dollars in billions)



Advances

The FHLBanks provide funding to members and housing associates through secured loans (advances), which may be used for residential mortgages, community investments, and other services for housing and community development. Each FHLBank makes advances based on the security of mortgage loans and other types of eligible collateral pledged by, and the creditworthiness and financial condition of, the borrowing institutions. Figure 5 presents advances for the most recent five quarters.

Figure 5 - Advances Outstanding (Carrying Value)
(dollars in billions)



The outstanding carrying value of advances totaled $518.9 billion at June 30, 2022, an increase of $167.6 billion, or 48%, from $351.3 billion at December 31, 2021, resulting primarily from an increase in short-term advances, principally fixed-rate. The FHLBanks' assets expand and contract as the needs of member financial institutions and their communities change over time and the future demand for advances will depend on many factors, including but not limited to, changes in interest rates, government liquidity programs, changes in fiscal and monetary policies, as well as the state of the overall U.S. economy and financial markets. Advances increased substantially during the six months ended June 30, 2022, driven by depository member demand for liquidity due to such factors as slowing deposit growth and an expectation of higher interest rates as the Federal Open Market Committee stated that it anticipates that ongoing increases in the target range of the federal funds rate will be appropriate. The Federal Reserve reported that deposits at commercial banks declined by 1.1 percent and 2.3 percent during the months of May and June 2022, compared to deposit growth of 8.8 percent and 4.7 percent during the fourth quarter of 2021 and the first quarter of 2022. Although advances increased substantially during the six months ended June 30, 2022, advances remained below pre-pandemic levels.

The percentage of members with outstanding advances was 46% at both June 30, 2022 and December 31, 2021. Figures 6 and 7 present the principal amount of advances by product type and by redemption term for the most recent five quarters.

Figure 6 - Advances by Product Type (dollars in billions)

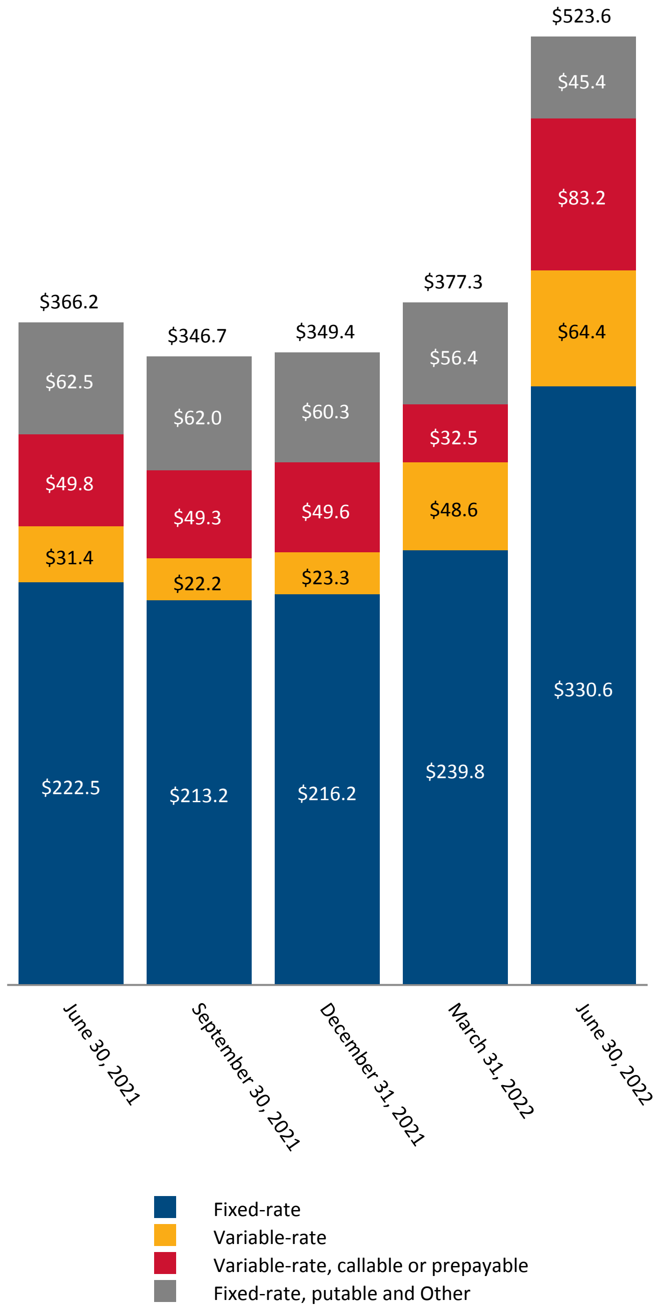


Figure 7 - Advances by Redemption Term (dollars in billions)

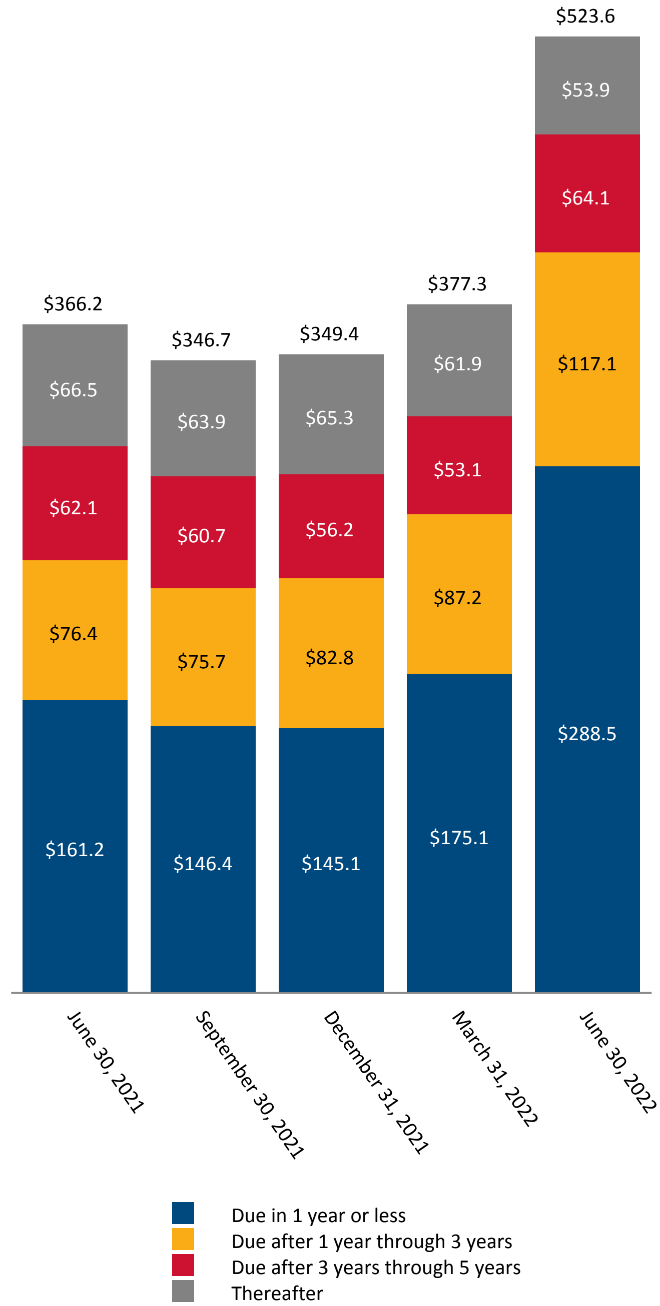


Table 3 presents advances outstanding by product type and redemption term, some of which include advances that contain embedded put or call options. A member can either sell an embedded option to an FHLBank or purchase an embedded option from an FHLBank. (See *Note 4 - Advances* to the accompanying combined financial statements for additional information on putable and callable advances and their potential effects on advance redemptions.)

Table 3 - Types of Advances by Redemption Term

(dollars in millions)

	June 30, 2022		December 31, 2021		Change	
	Amount	Percentage	Amount	Percentage	Amount	Percentage
Fixed-rate						
Due in 1 year or less	$ 226,299	43.2 %	$ 119,061	34.1 %	$ 107,238	90.1 %
Due after 1 year through 3 years	54,504	10.4 %	48,628	13.9 %	5,876	12.1 %
Due after 3 years through 5 years	31,404	6.0 %	30,520	8.7 %	884	2.9 %
Due after 5 years through 15 years	17,211	3.3 %	16,847	4.8 %	364	2.2 %
Thereafter	1,149	0.2 %	1,152	0.3 %	(3)	(0.3)%
Total principal amount	**330,567**	**63.1 %**	**216,208**	**61.8 %**	**114,359**	52.9 %
Fixed-rate, putable						
Due in 1 year or less	751	0.1 %	300	0.1 %	451	150.3 %
Due after 1 year through 3 years	1,967	0.4 %	2,977	0.9 %	(1,010)	(33.9)%
Due after 3 years through 5 years	1,690	0.3 %	2,330	0.7 %	(640)	(27.5)%
Due after 5 years through 15 years	21,646	4.1 %	27,555	7.9 %	(5,909)	(21.4)%
Thereafter	—	—	—	—	—	—
Total principal amount	**26,054**	**4.9 %**	**33,162**	**9.6 %**	**(7,108)**	(21.4)%
Variable-rate						
Due in 1 year or less	40,461	7.7 %	16,428	4.7 %	24,033	146.3 %
Due after 1 year through 3 years	11,632	2.2 %	3,304	0.9 %	8,328	252.1 %
Due after 3 years through 5 years	11,000	2.1 %	2,084	0.6 %	8,916	427.8 %
Due after 5 years through 15 years	1,353	0.3 %	1,530	0.4	(177)	(11.6)%
Thereafter	—	—	—	—	—	—
Total principal amount	**64,446**	**12.3 %**	**23,346**	**6.6 %**	**41,100**	176.0 %
Variable-rate, callable or prepayable(1)						
Due in 1 year or less	17,818	3.4 %	6,220	1.8 %	11,598	186.5 %
Due after 1 year through 3 years	43,319	8.3 %	22,191	6.4 %	21,128	95.2 %
Due after 3 years through 5 years	15,459	3.0 %	14,866	4.3 %	593	4.0 %
Due after 5 years through 15 years	6,217	1.2 %	5,814	1.7 %	403	6.9 %
Thereafter	357	0.1 %	557	0.2 %	(200)	(35.9)%
Total principal amount	**83,170**	**16.0 %**	**49,648**	**14.4 %**	**33,522**	67.5 %
Other(2)						
Due in 1 year or less	3,203	0.6 %	3,090	0.9 %	113	3.7 %
Due after 1 year through 3 years	5,722	1.1 %	5,674	1.6 %	48	0.8 %
Due after 3 years through 5 years	4,500	0.9 %	6,432	1.8 %	(1,932)	(30.0)%
Due after 5 years through 15 years	5,655	1.1 %	11,690	3.3 %	(6,035)	(51.6)%
Thereafter	128	—	133	—	(5)	(3.8)%
Total principal amount	**19,208**	**3.7 %**	**27,019**	**7.6 %**	**(7,811)**	(28.9)%
Overdrawn and overnight deposit accounts	200	—	—	—	200	—
Total principal amount advances	**523,645**	**100.0 %**	**349,383**	**100.0 %**	**$ 174,262**	49.9 %
Other adjustments, net(3)	(4,762)		1,895			
Total advances	**$ 518,883**		**$ 351,278**			

(1) Prepayable advances are those advances that may be contractually prepaid by the borrower on specified dates without incurring prepayment or termination fees.
(2) Includes hybrid, fixed-rate amortizing/mortgage matched, convertible, fixed-rate callable or prepayable, and other advances.
(3) Consists of hedging and fair value option valuation adjustments and unamortized premiums, discounts, and commitment fees.

Table 4 presents the principal amount of advances indexed to a variable interest rate at June 30, 2022 and December 31, 2021. (See *Quantitative and Qualitative Disclosures about Market Risk* for more information on the transition from LIBOR and the use of SOFR as an alternative market benchmark.)

Table 4 - Advances Indexed to a Variable Interest Rate[(1)]

(dollars in millions)

	June 30, 2022	December 31, 2021
SOFR	$ 72,069	$ 13,755
Consolidated obligation yields	33,658	24,377
LIBOR	8,118	15,142
Other	34,347	20,918
Total principal amount of advances indexed to a variable interest rate	**$ 148,192**	**$ 74,192**

(1) Includes fixed-rate advances that have cap/floor optionality linked to an interest-rate Index.

Table 5 presents cash flows related to advance originations and advance repayments. During the three and six months ended June 30, 2022, advance originations exceeded repayments, resulting in higher advances outstanding. Both the advance originations and advance repayments increased during the three and six months ended June 30, 2022, compared to the three and six months ended June 30, 2021, resulting primarily from an increase in short-term fixed-rate advances, driven by depository member demand for liquidity due to such factors as slowing deposit growth and an expectation of higher interest rates.

Table 5 - Advance Originations and Repayments

(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2022	2021	Change	2022	2021	Change
Advances originated	$ 2,102,878	$ 872,916	$ 1,229,962	$ 3,039,137	$ 1,637,764	$ 1,401,373
Advances repaid	1,956,502	901,830	1,054,672	2,864,828	1,687,200	1,177,628
Net change	**$ 146,376**	**$ (28,914)**		**$ 174,309**	**$ (49,436)**	

The FHLBanks make advances primarily to their members. At June 30, 2022, advances to depository members (commercial banks, savings institutions, and credit unions) grew by 72% compared to December 31, 2021. Table 6 presents the principal amount of advances by type of borrower and member.

Table 6 - Advances by Type of Borrower and Member

(dollars in millions)

	June 30, 2022		December 31, 2021	
	Principal Amount	Number of Members	Principal Amount	Number of Members
Commercial bank members	$ 249,589	1,829	$ 118,271	1,908
Insurance company members	134,419	237	117,237	223
Savings institution members	65,109	362	58,903	373
Credit union members	59,926	565	40,711	486
Community development financial institution members	278	30	290	29
Total	**509,321**	**3,023**	**335,412**	**3,019**
Non-members(1)	13,165		12,383	
Housing associates	1,159		1,588	
Total principal amount	**$ 523,645**		**$ 349,383**	
Total members		**6,535**		**6,577**

(1) Includes $11.3 billion of principal amount of advances outstanding to captive insurance companies at both June 30, 2022 and December 31, 2021, which had their memberships terminated no later than February 19, 2021.

Figures 8 and 9 present the percentage of principal amount of advances by type of borrower and percentage of member borrowers by type of member at June 30, 2022. Commercial banks and insurance companies (excluding captive insurance companies) represented the largest segments of borrowers, with 48% and 26% of the total principal amount of advances outstanding at June 30, 2022, compared to 34% each at December 31, 2021.

Figure 8 - Percentage of Principal Amount of Advances by Type of Borrower

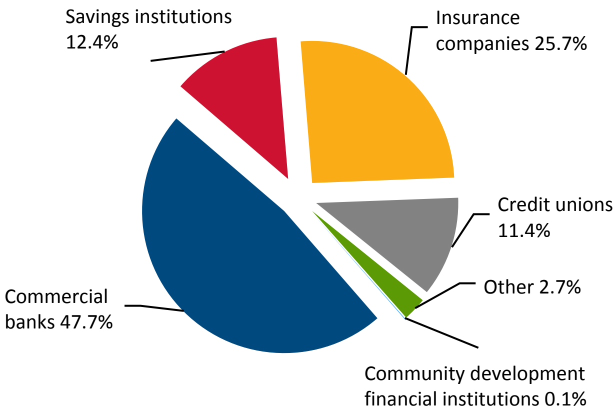


Figure 9 - Percentage of Member Borrowers by Type of Member

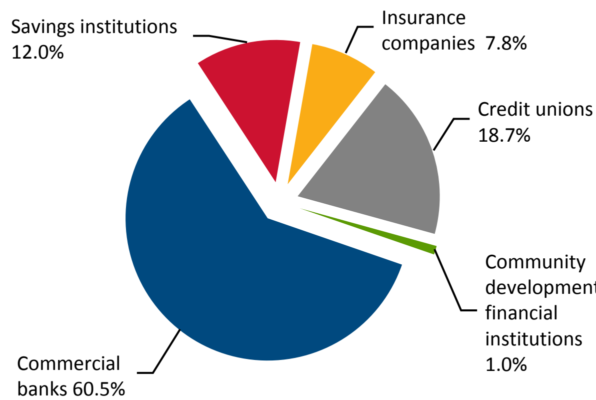


Table 7 presents the FHLBanks' top 10 advance borrowers by holding company on a combined basis based on the principal amount of advances outstanding at June 30, 2022. The percentage of total advances for each holding company was computed by dividing the principal amount of advances by subsidiaries of that holding company by the principal amount of total combined advances. These percentage concentrations do not represent borrowing concentrations in an individual FHLBank. The top 10 advance borrowers by holding company represented 24% of the total principal amount of advances outstanding at June 30, 2022, compared to 26% at December 31, 2021.

Table 7 - Top 10 Advance Borrowers by Holding Company at June 30, 2022
(dollars in millions)

Holding Company Name(1)	FHLBank Districts(2)	Principal Amount	Percentage of Total Principal Amount of Advances
MetLife, Inc.	New York	$ 16,000	3.1 %
TIAA	New York, Atlanta	15,286	2.9 %
U.S. Bancorp	Cincinnati, Des Moines	14,773	2.8 %
Ally Financial Inc.	Pittsburgh	13,075	2.5 %
New York Community Bancorp, Inc.	New York	12,850	2.5 %
Citizens Bank, National Association	Boston	12,019	2.3 %
JPMorgan Chase & Co.	Chicago, Des Moines, San Francisco	11,084	2.1 %
First Republic Bank	San Francisco	11,000	2.1 %
Capital One Financial Corporation	Atlanta	10,500	2.0 %
The PNC Financial Services Group, Inc.	Pittsburgh	10,000	1.9 %
		$ 126,587	**24.2 %**

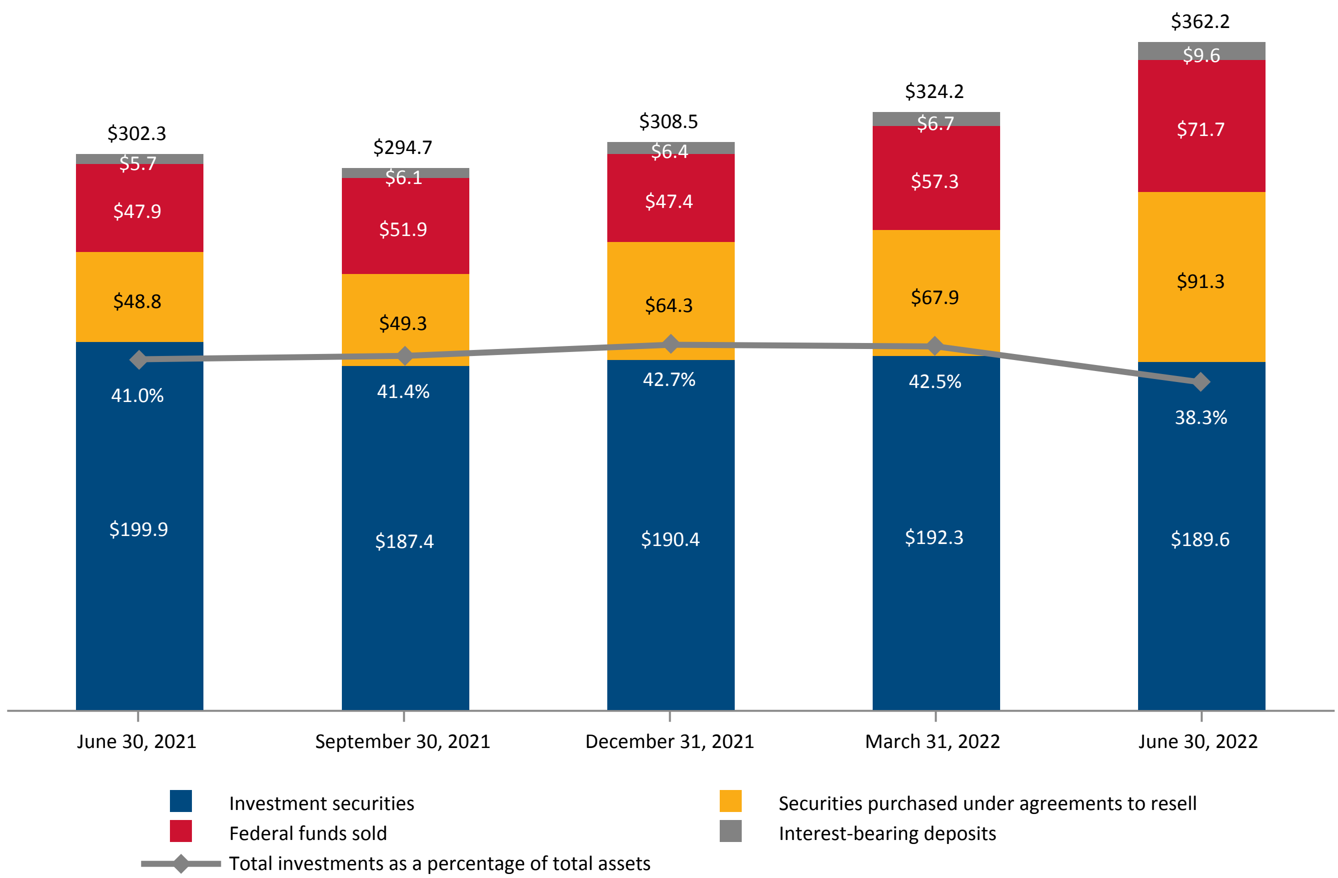
(1) Holding company information was obtained from the Federal Reserve System's web site, the National Information Center (NIC), and SEC filings. The NIC is a central repository of data about banks and other institutions for which the Federal Reserve System has a supervisory, regulatory, or research interest, including both domestic and foreign banking organizations operating in the United States.

(2) At June 30, 2022, each holding company had subsidiaries with advance borrowings in these FHLBank districts.

Investments

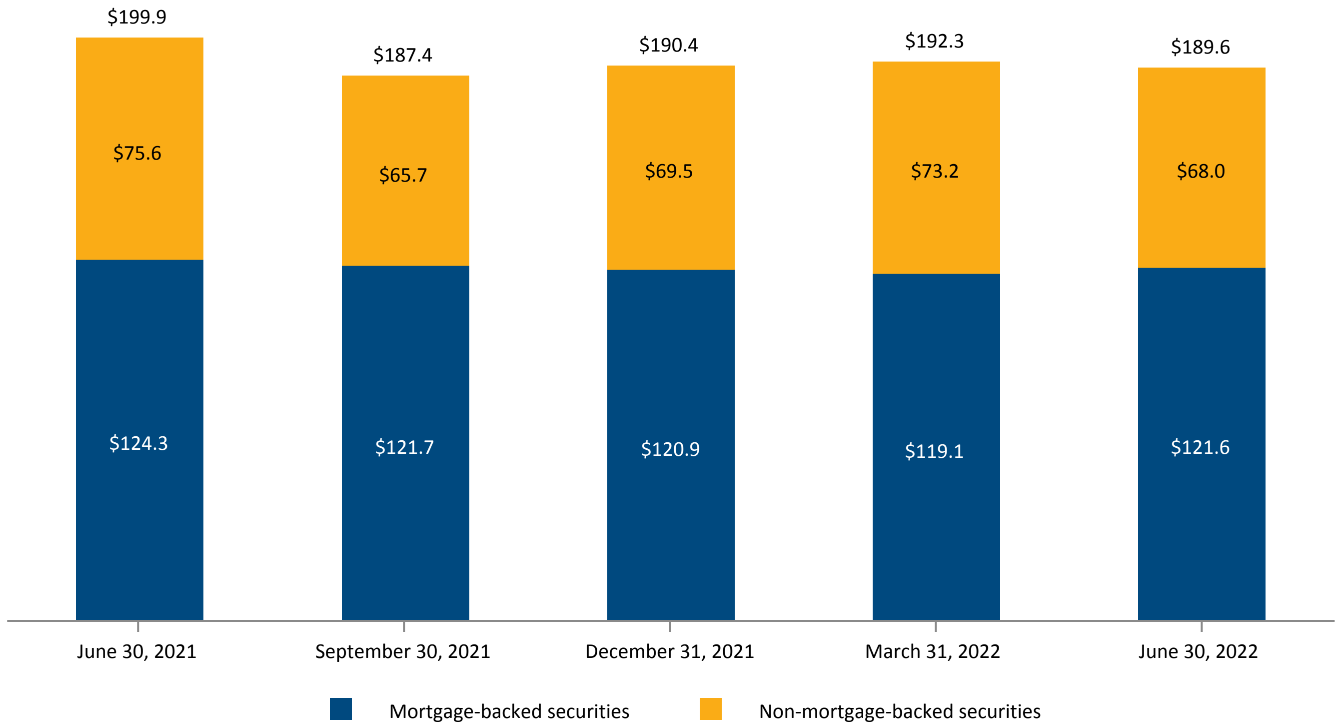
The FHLBanks maintain investment portfolios for liquidity purposes and to generate additional earnings. The income from these investment portfolios also bolsters the FHLBanks' capacity to support affordable housing and community investment. The FHLBanks invest in investment-quality securities to mitigate credit risk inherent in these portfolios. FHFA regulations prohibit the FHLBanks from investing in certain types of securities and limit the FHLBanks' investment in MBS and asset-backed securities (ABS). (See *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Risk Management - Credit Risk - Investments* on pages 109 to 110 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for additional information regarding the regulatory restrictions on investments.) Figure 10 presents total investments for the most recent five quarters.

Figure 10 - Total Investments (Carrying Value)
(dollars in billions)



Total investments, net was $362.2 billion at June 30, 2022, an increase of $53.8 billion, or 17%, from $308.5 billion at December 31, 2021, driven primarily by growth in liquidity investments. The increase in liquidity investments was concentrated in securities purchased under agreements to resell and federal funds sold, which allowed the FHLBanks to maintain liquidity in response to the increased demand for advances and to continue to meet the credit needs of members. The FHLBanks classify investment securities as held-to-maturity (HTM), available-for-sale (AFS), or trading securities. Figure 11 presents the composition of investment securities by product type for the most recent five quarters.

Figure 11 - Investment Securities by Product Type (Carrying Value)
(dollars in billions)



The FHLBanks maintain short-term investment portfolios, the proceeds of which may provide funds to meet the credit needs of their members and to maintain liquidity. These portfolios may include:

- interest-bearing deposits;
- securities purchased under agreements to resell;
- federal funds sold;
- certificates of deposit;
- U.S. Treasury obligations;
- Other U.S. obligations; and
- GSE obligations.

The yield earned on these short-term investments is highly correlated with short-term market interest rates. At June 30, 2022, the FHLBanks continued to maintain significant short-term investment balances as part of their ongoing investment strategy and to satisfy liquidity needs. (See *Liquidity and Capital Resources* for further discussion related to liquidity management.)

The FHLBanks maintain long-term investment portfolios as an additional source of liquidity and to earn interest income. These investments generally provide the FHLBanks with higher returns than those available on short-term investments. These portfolios may include:

- U.S. Treasury obligations;
- Other U.S. obligations;
- GSE obligations;
- Agency obligations; and
- Other MBS and ABS.

Table 8 presents the composition of investments, including investment securities, at June 30, 2022 and December 31, 2021.

Table 8 - Total Investments

(dollars in millions)

Net Carrying Value	June 30, 2022	December 31, 2021	Change
Interest-bearing deposits	$ 9,648	$ 6,382	$ 3,266
Securities purchased under agreements to resell	91,322	64,292	27,030
Federal funds sold	71,650	47,360	24,290
Total Investment Securities by Major Security Type			
Investment securities non-mortgage-backed securities			
Certificates of deposit	640	200	440
U.S. Treasury obligations	46,977	44,296	2,681
Other U.S. obligations	3,415	4,514	(1,099)
GSE and Tennessee Valley Authority obligations	11,558	14,560	(3,002)
State or local housing agency obligations	2,124	2,287	(163)
Federal Family Education Loan Program ABS	2,539	2,772	(233)
Other	805	931	(126)
Total investment securities non-mortgage-backed securities	**68,058**	**69,560**	**(1,502)**
Investment securities mortgage-backed securities			
U.S. obligations single-family	7,394	7,756	(362)
U.S. obligations multifamily	519	541	(22)
GSE single-family	14,215	16,714	(2,499)
GSE multifamily	97,606	93,664	3,942
Private-label	1,819	2,202	(383)
Total investment securities mortgage-backed securities	**121,553**	**120,877**	**676**
Total investment securities	**189,611**	**190,437**	**(826)**
Total investments	**$ 362,231**	**$ 308,471**	**$ 53,760**

The interest-rate and prepayment risks associated with investment securities are managed through a combination of debt issuance and derivatives. (See Note 6 - Derivatives and Hedging Activities to the accompanying combined financial statements for additional information.) Figure 12 summarizes the interest-rate payment terms of investment securities by product type for the most recent five quarters, with trading securities presented at fair value and AFS and HTM securities presented at amortized cost.

Figure 12 - Interest-Rate Payment Terms of Investment Securities by Product Type (dollars in billions)

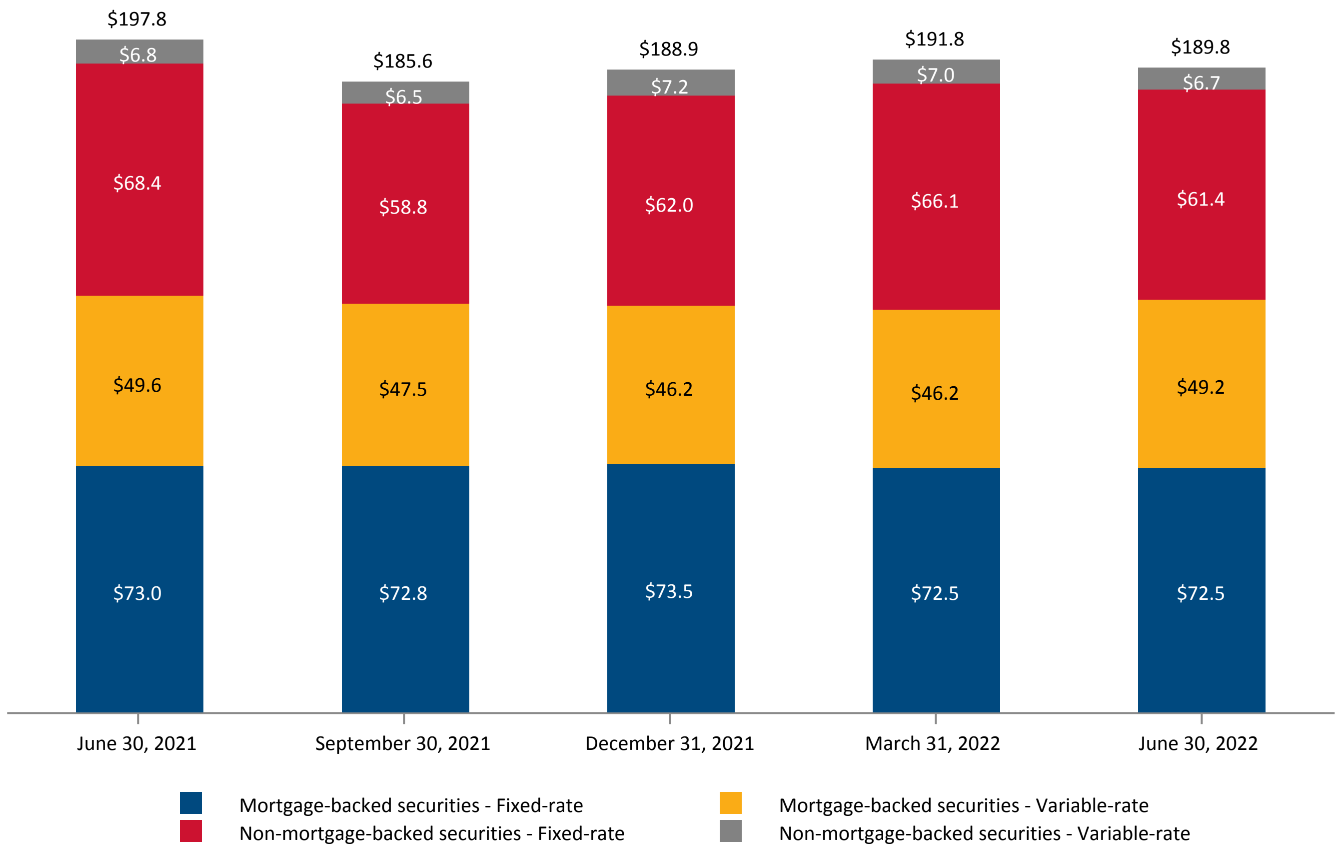


Table 9 presents the interest-rate payment terms of investment securities at June 30, 2022 and December 31, 2021.

Table 9 - Interest-Rate Payment Terms of Investment Securities

(dollars in millions)

	June 30, 2022	December 31, 2021
Trading Securities at Fair Value		
Trading non-mortgage-backed securities		
Fixed-rate	$ 21,165	$ 23,230
Variable-rate	—	—
Total trading non-mortgage-backed securities	**21,165**	**23,230**
Trading mortgage-backed securities		
Fixed-rate	783	1,085
Variable-rate	34	39
Total trading mortgage-backed securities	**817**	**1,124**
Total trading securities	**$ 21,982**	**$ 24,354**
Available-for-Sale Securities at Amortized Cost		
Available-for-sale non-mortgage-backed securities		
Fixed-rate	$ 38,326	$ 36,260
Variable-rate	5,614	5,798
Total available-for-sale non-mortgage-backed securities	**43,940**	**42,058**
Available-for-sale mortgage-backed securities		
Fixed-rate	58,932	58,948
Variable-rate	15,468	15,816
Total available-for-sale mortgage-backed securities	**74,400**	**74,764**
Total available-for-sale securities	**$ 118,340**	**$ 116,822**
Held-to-Maturity Securities at Amortized Cost		
Held-to-maturity non-mortgage-backed securities		
Fixed-rate	$ 1,948	$ 2,508
Variable-rate	1,031	1,394
Total held-to-maturity non-mortgage-backed securities	**2,979**	**3,902**
Held-to-maturity mortgage-backed securities		
Fixed-rate	12,785	13,447
Variable-rate	33,744	30,329
Total held-to-maturity mortgage-backed securities	**46,529**	**43,776**
Total held-to-maturity securities	**$ 49,508**	**$ 47,678**

Table 10 presents the principal amount of variable-rate investment securities by interest-rate index at June 30, 2022 and December 31, 2021. (See *Quantitative and Qualitative Disclosures about Market Risk* for more information on the transition from LIBOR and the use of SOFR as an alternative market benchmark.)

Table 10 - Variable-Rate Investment Securities by Interest-Rate Index

(dollars in millions)

	June 30, 2022			December 31, 2021		
	Non-mortgage-backed securities	Mortgage-backed securities	Total	Non-mortgage-backed securities	Mortgage-backed securities	Total
LIBOR	$ 4,319	$ 34,188	$ 38,507	$ 5,089	$ 39,338	$ 44,427
SOFR	1,094	14,585	15,679	861	6,679	7,540
Other(1)	1,231	252	1,483	1,235	293	1,528
Total principal amount of variable-rate investment securities	**$ 6,644**	**$ 49,025**	**$ 55,669**	**$ 7,185**	**$ 46,310**	**$ 53,495**

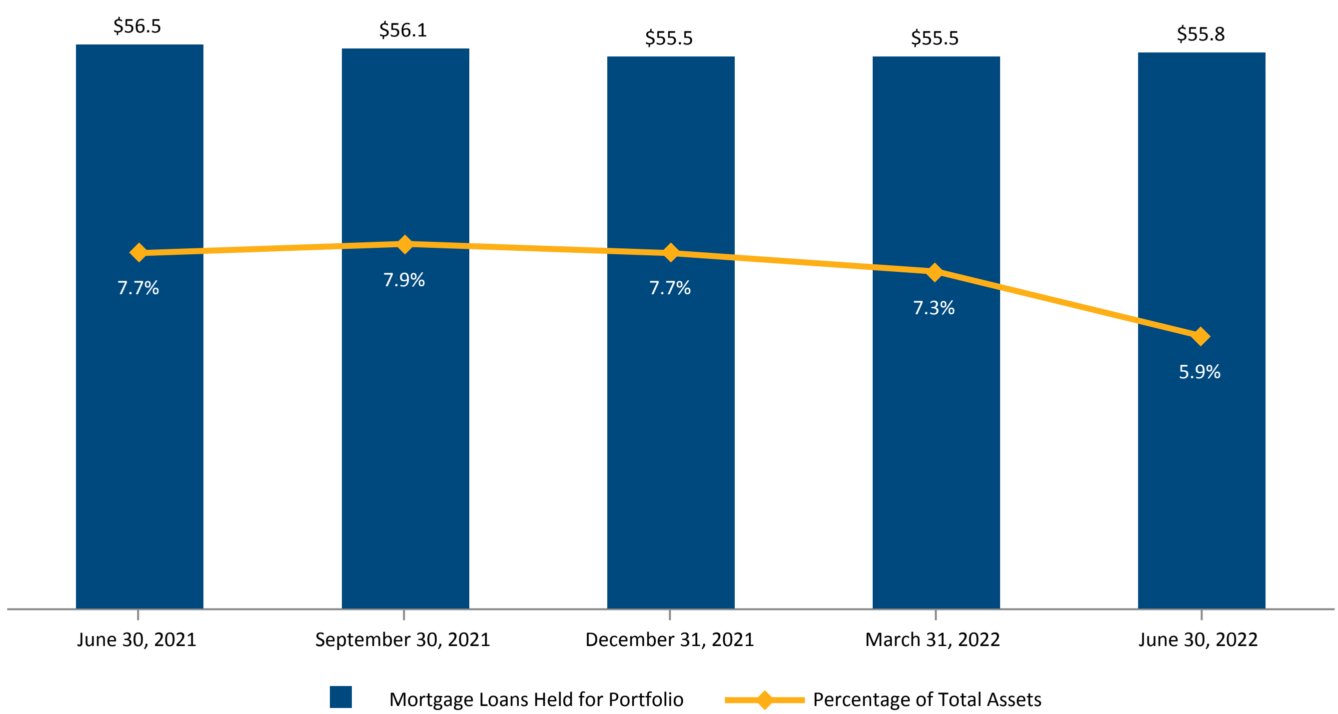
(1) Consists primarily of investments indexed to Treasury rates.

Limits on Certain Investments. FHFA regulations prohibit an FHLBank from purchasing MBS/ABS if its investment in these securities exceeds 300% of that FHLBank's previous month-end regulatory capital on the day it intends to purchase the securities. During the six months ended June 30, 2022, each of the FHLBanks was in compliance with this regulatory requirement at the time of its respective securities purchases. On a combined basis, the FHLBanks' percentage of MBS/ABS (net of regulatory excluded MBS) was 227% of total combined regulatory capital at June 30, 2022.

Mortgage Loans Held for Portfolio

An FHLBank may purchase fixed-rate mortgage loans to support the FHLBank's housing mission, provide an additional source of liquidity to FHLBank members, diversify its investments, and generate additional earnings. The two primary programs are the Mortgage Purchase Program (MPP) and the Mortgage Partnership Finance® (MPF®) Program. In addition, the FHLBank of New York implemented the Mortgage Asset Program (MAP®) in order to replace its participation in the MPF Program beginning in March 2021. (See *Risk Management - Credit Risk - Mortgage Loans Held for Portfolio* for more information.) Figure 13 presents mortgage loans held for portfolio (designated as held for investment for accounting purposes) for the most recent five quarters.

Figure 13 - Mortgage Loans Held for Portfolio (Carrying Value)
(dollars in billions)



Mortgage loans, excluding the allowance for credit losses, were $55.8 billion at June 30, 2022, generally flat compared to December 31, 2021. Periodically, each FHLBank evaluates the allowance for credit losses for its mortgage loans based on its policies and procedures to determine if an allowance for credit losses is necessary. The allowance for credit losses on mortgage loans was $25 million at June 30, 2022, an increase of $2 million from $23 million at December 31, 2021. The FHLBanks utilize credit enhancements on conventional mortgage loans held for portfolio, which help to mitigate expected credit losses.

Table 11 presents mortgage loans held for portfolio outstanding at June 30, 2022 and December 31, 2021.

Table 11 - Mortgage Loans Held for Portfolio
(dollars in millions)

	June 30, 2022	December 31, 2021	Change
Mortgage loans held for portfolio	$ 55,778	$ 55,520	$ 258
Allowance of credit losses on mortgage loans	(25)	(23)	(2)
Mortgage loans held for portfolio, net	**$ 55,753**	**$ 55,497**	**$ 256**

Table 12 presents metrics and ratios of mortgage loans held for portfolio.

Table 12 - Mortgage Loans Held for Portfolio - Metrics and Ratios
(dollars in millions)

	June 30, 2022	December 31, 2021
Average loans outstanding during the period (UPB)(1)	$ 54,828	$ 56,498
Mortgage loans held for portfolio (UPB)	54,875	54,513
Non-accrual loans (UPB)	245	350
Allowance of credit losses on mortgage loans held for portfolio	25	23
(Charge-offs), net of recoveries(1)	(1)	1
Ratio of charge-offs, net of recoveries to average loans outstanding during the period(1)	— %	— %
Ratio of allowance for credit losses to mortgage loans held for portfolio	0.05 %	0.04 %
Ratio of non-accrual loans to mortgage loans held for portfolio	0.45 %	0.64 %
Ratio of allowance for credit losses to non-accrual loans	10.20 %	6.57 %

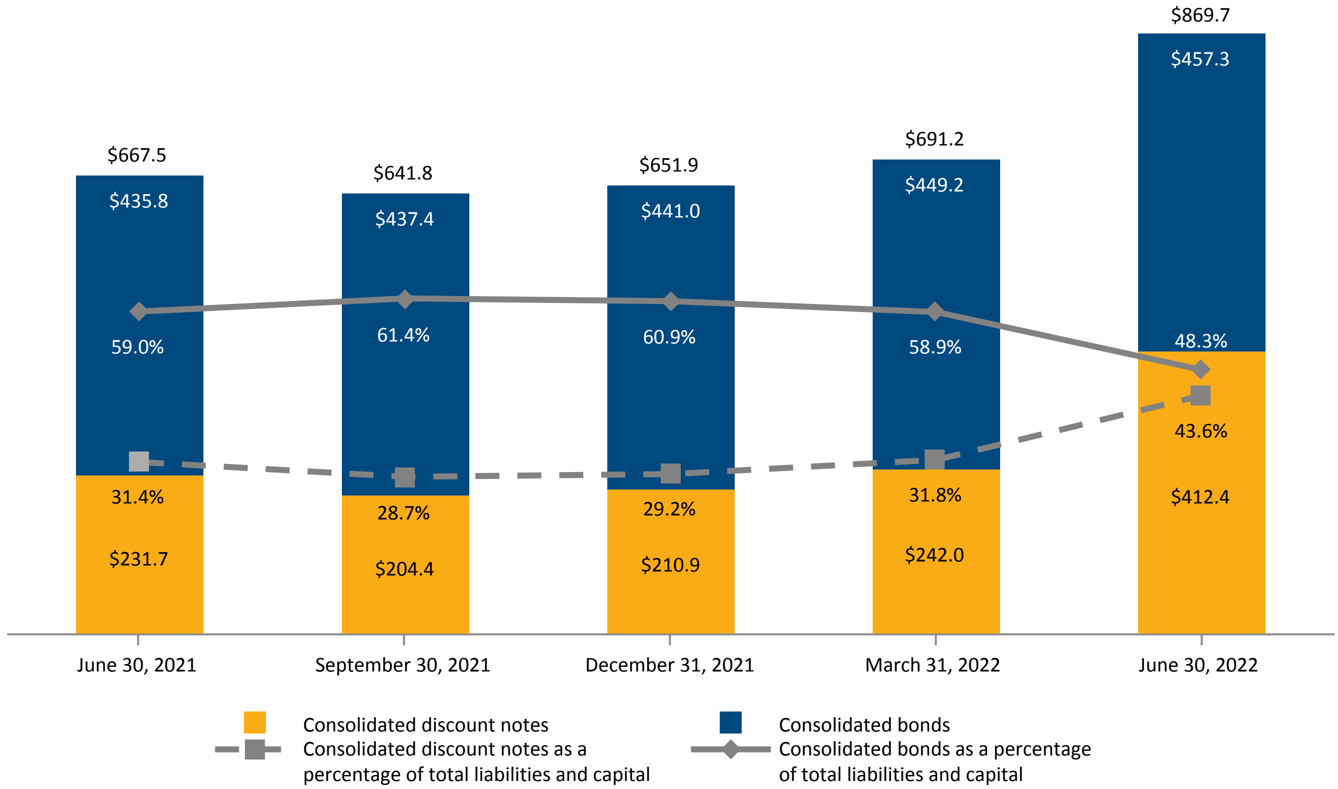
(1) Represents the six months ended June 30, 2022 and the year ended December 31, 2021.

MPF Xtra® Conventional Mortgage Loans. In addition to mortgage loans purchased by the FHLBanks and held for portfolio, the FHLBank of Chicago also purchases eligible conventional loans from participating financial institutions (PFIs) located in its district, and in other MPF FHLBank districts under the MPF Xtra® product. Upon purchase from the PFIs, the FHLBank of Chicago concurrently sells the mortgage loans to Fannie Mae. During the six months ended June 30, 2022 and 2021, the FHLBank of Chicago purchased and concurrently delivered $1.0 billion and $4.5 billion in UPB of these loans to Fannie Mae. (See *Business - Mortgage Loans* on page 11, and *Legislative and Regulatory Developments* on pages 100 to 101, of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for more information about MPF Xtra® mortgage loans.)

Consolidated Obligations

Consolidated obligations consist of consolidated bonds and consolidated discount notes, which are joint and several obligations of all FHLBanks. The FHLBanks issue consolidated obligations through the Office of Finance as their agent. Consolidated obligations are the principal funding source used by the FHLBanks to make advances and to purchase mortgage loans and investments. The outstanding balance and types of consolidated obligations issued will fluctuate based on the funding requirements of the FHLBanks. The future amounts and types of consolidated obligations issued depend primarily on the demand for advances and could also be affected by changes in fiscal and monetary policies, as well as the state of the overall U.S. economy and financial markets. Figure 14 presents consolidated bonds and consolidated discount notes for the most recent five quarters.

Figure 14 - Consolidated Obligations Outstanding (Carrying Value)
(dollars in billions)



The carrying value of consolidated obligations totaled $869.7 billion at June 30, 2022, an increase of $217.8 billion, or 33%, from $651.9 billion at December 31, 2021, in line with the increase in total assets. The increase in consolidated obligations was comprised of a 96% increase in consolidated discount notes and a 4% increase in consolidated bonds.

Consolidated bonds may be issued to raise short-, intermediate-, or long-term funds. Consolidated bonds are issued with either fixed-rate coupon payment terms or variable-rate coupon payment terms that are indexed to specified indices, such as SOFR, and have maturities ranging from three months to 30 years. The carrying value of consolidated bonds was $457.3 billion at June 30, 2022, an increase of $16.3 billion, or 4%, from $441.0 billion at December 31, 2021. In addition to the increase in the carrying value of consolidated bonds at June 30, 2022, there was a change in the mix of consolidated bonds. The principal amount of fixed-rate, callable bonds rose to $219.8 billion at June 30, 2022, from $156.6 billion at December 31, 2021, an increase of $63.2 billion, or 40%, while the principal amount of fixed-rate, non-callable bonds declined to $103.1 billion at June 30, 2022, from $170.5 billion at December 31, 2021, a decrease of $67.4 billion, or 40%, as investor preferences shifted from fixed-rate, non-callable bonds to fixed-rate, callable bonds. Consolidated bonds represented 53% and 68% of total consolidated obligations outstanding at June 30, 2022 and December 31, 2021.

Consolidated discount notes are issued to provide short-term funding and have a maturity range of one day to one year. They are generally issued below face value and mature at face value. A significant portion of consolidated discount note activity typically results from the refinancing of maturing discount notes. The carrying value of consolidated discount notes was $412.4 billion at June 30, 2022, an increase of $201.5 billion, or 96%, from $210.9 billion at December 31, 2021, driven by an increase in short-term advance activity and investor preference. Consolidated discount notes represented 47% and 32% of total consolidated obligations outstanding at June 30, 2022 and December 31, 2021.

Figures 15 and 16 present the principal amount of consolidated obligations by product type and by contractual maturity for the most recent five quarters.

Figure 15 - Consolidated Obligations by Product Type (dollars in billions)

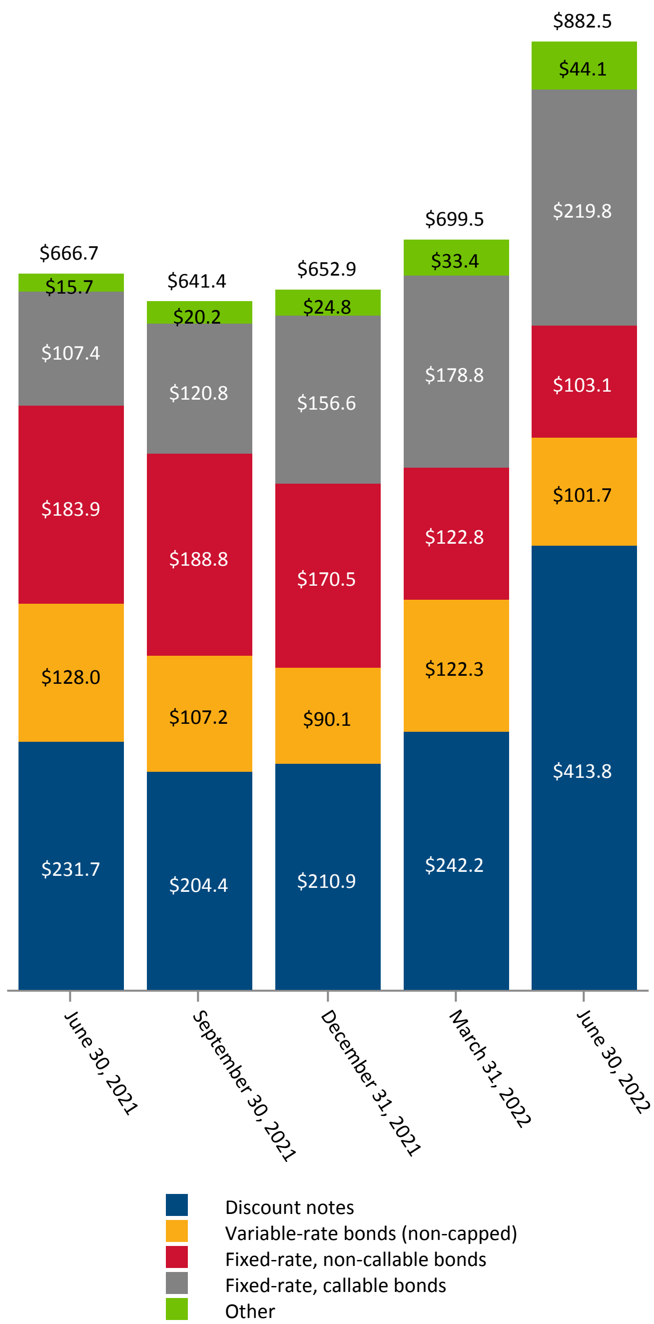


Figure 16 - Consolidated Obligations by Contractual Maturity (dollars in billions)

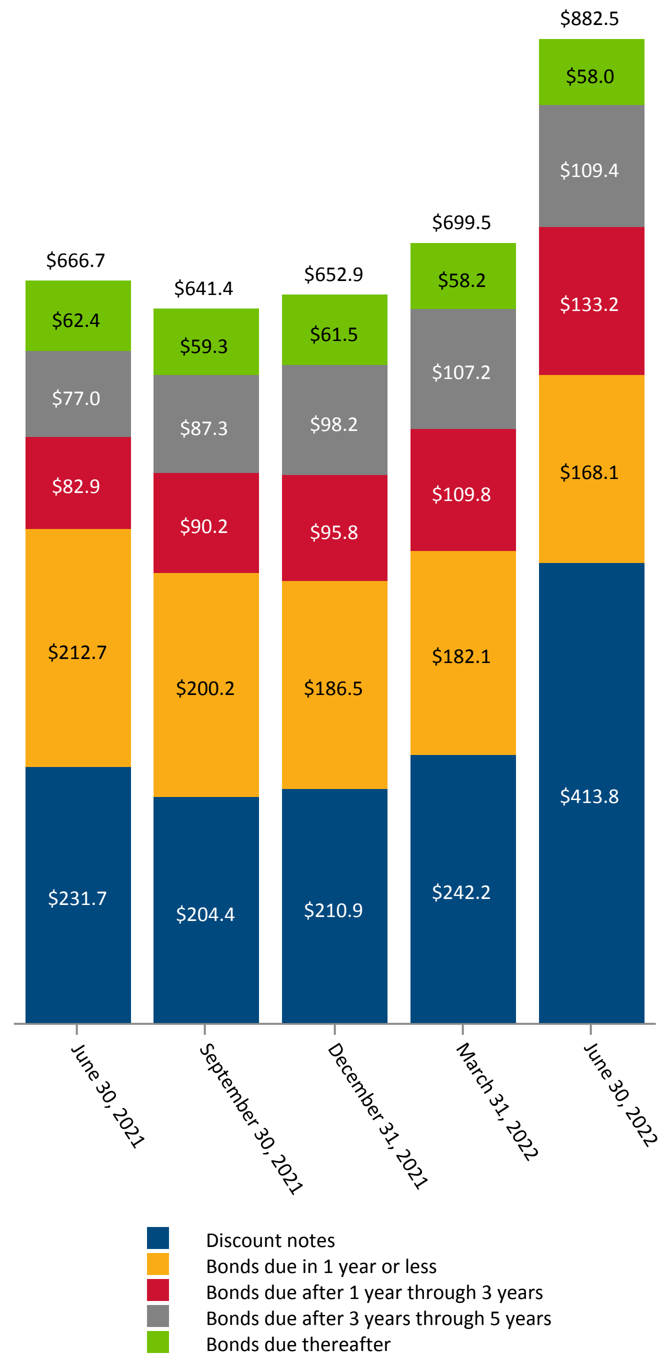


Table 13 presents the composition of consolidated obligations by product type and by contractual maturity at June 30, 2022 and December 31, 2021.

Table 13 - Types of Consolidated Obligations by Contractual Maturity

(dollars in millions)

	June 30, 2022		December 31, 2021		Change	
	Amount	Percentage	Amount	Percentage	Amount	Percentage
Consolidated Discount Notes						
Overnight	$ 7,130	0.8 %	$ 2,050	0.3 %	$ 5,080	247.8 %
Due after 1 day through 30 days	136,960	15.5 %	75,231	11.5 %	61,729	82.1 %
Due after 30 days through 90 days	172,472	19.5 %	102,276	15.7 %	70,196	68.6 %
Due after 90 days through 1 year	97,220	11.0 %	31,369	4.8 %	65,851	209.9 %
Total principal amount	**413,782**	**46.8 %**	**210,926**	**32.3 %**	**202,856**	96.2 %
Consolidated Bonds						
Fixed-rate, non-callable						
Due in 1 year or less	37,500	4.2 %	101,114	15.5 %	(63,614)	(62.9)%
Due after 1 year through 3 years	38,080	4.4 %	40,859	6.3 %	(2,779)	(6.8)%
Due after 3 years through 5 years	12,936	1.5 %	14,597	2.2 %	(1,661)	(11.4)%
Due after 5 years through 15 years	13,882	1.6 %	13,245	2.0 %	637	4.8 %
Thereafter	675	0.1 %	640	0.1 %	35	5.5 %
Total principal amount	**103,073**	**11.8 %**	**170,455**	**26.1 %**	**(67,382)**	(39.5)%
Fixed-rate, callable						
Due in 1 year or less	23,885	2.7 %	2,365	0.4 %	21,520	909.9 %
Due after 1 year through 3 years	83,190	9.5 %	46,892	7.2 %	36,298	77.4 %
Due after 3 years through 5 years	76,921	8.7 %	67,865	10.4 %	9,056	13.3 %
Due after 5 years through 15 years	32,656	3.7 %	36,350	5.6 %	(3,694)	(10.2)%
Thereafter	3,122	0.5 %	3,094	0.4 %	28	0.9 %
Total principal amount	**219,774**	**25.1 %**	**156,566**	**24.0 %**	**63,208**	40.4 %
Variable-rate (non-capped)						
Due in 1 year or less	98,200	11.1 %	82,939	12.7 %	15,261	18.4 %
Due after 1 year through 3 years	2,470	0.3 %	6,230	1.0 %	(3,760)	(60.4)%
Due after 3 years through 5 years	888	0.1 %	788	0.1 %	100	12.7 %
Due after 5 years through 15 years	150	—	150	—	—	—
Thereafter	—	—	—	—	—	—
Total principal amount	**101,708**	**11.5 %**	**90,107**	**13.8 %**	**11,601**	12.9 %
Step-up/step-down, callable						
Due in 1 year or less	8,372	0.9 %	—	—	8,372	—
Due after 1 year through 3 years	9,247	1.0 %	1,837	0.3 %	7,410	403.4 %
Due after 3 years through 5 years	16,100	1.8 %	14,518	2.2 %	1,582	10.9 %
Due after 5 years through 15 years	7,428	0.8 %	7,995	1.2 %	(567)	(7.1)%
Thereafter	25	—	25	—	—	—
Total principal amount	**41,172**	**4.5 %**	**24,375**	**3.7 %**	**16,797**	68.9 %
Other						
Due in 1 year or less	120	—	125	—	(5)	(4.0)%
Due after 1 year through 3 years	235	—	—	—	235	—
Due after 3 years through 5 years	2,532	0.3 %	308	0.1 %	2,224	722.1 %
Due after 5 years through 15 years	85	—	—	—	85	—
Thereafter	—	—	—	—	—	—
Total principal amount	**2,972**	**0.3 %**	**433**	**0.1 %**	**2,539**	586.4 %
Total principal amount consolidated bonds	**468,699**	**53.2 %**	**441,936**	**67.7 %**	**26,763**	6.1 %
Total principal amount	**882,481**	**100.0 %**	**652,862**	**100.0 %**	**$ 229,619**	35.2 %
Other adjustments, net(1)	(12,734)		(941)			
Total consolidated obligations	**$ 869,747**		**$ 651,921**			

(1) Consists of hedging and fair value option valuation adjustments, unamortized premiums and discounts, and combining adjustments.

Table 14 presents the principal amount of variable-rate consolidated bonds by interest-rate index at June 30, 2022 and December 31, 2021. (See *Quantitative and Qualitative Disclosures about Market Risk* for more information on the transition from LIBOR and the use of SOFR as an alternative market benchmark.)

Table 14 - Variable-Rate Consolidated Bonds by Interest-Rate Index

(dollars in millions)

	June 30, 2022	December 31, 2021
SOFR	$ 101,708	$ 89,857
LIBOR	—	250
Total principal amount of variable-rate consolidated bonds	**$ 101,708**	**$ 90,107**

Table 15 presents cash flows related to consolidated obligations. During the three and six months ended June 30, 2022, proceeds exceeded payments, resulting in higher consolidated obligations outstanding compared to December 31, 2021. The volume of both net proceeds and total payments of consolidated obligations increased during the three and six months ended June 30, 2022, compared to the three and six months ended June 30, 2021, due primarily to an increase in the issuance of consolidated discount notes, driven by an increase in short-term advance activity and investor preference.

Table 15 - Net Proceeds and Payments for Consolidated Obligations

(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2022	2021	Change	2022	2021	Change
Net proceeds from issuance of consolidated obligations						
Discount notes	$ 1,549,918	$ 694,360	$ 855,558	$ 2,564,228	$ 1,650,627	$ 913,601
Bonds	80,931	109,305	(28,374)	183,065	233,394	(50,329)
Net proceeds	**1,630,849**	**803,665**	**$ 827,184**	**2,747,293**	**1,884,021**	**$ 863,272**
Payments for maturing and retiring consolidated obligations						
Discount notes	1,379,733	707,394	$ 672,339	2,362,939	1,693,614	$ 669,325
Bonds	69,566	125,865	(56,299)	156,261	270,258	(113,997)
Total payments	**1,449,299**	**833,259**	**$ 616,040**	**2,519,200**	**1,963,872**	**$ 555,328**
Net change	**$ 181,550**	**$ (29,594)**		**$ 228,093**	**$ (79,851)**	

Consolidated bonds often have investor-determined features. The decision to issue a consolidated bond using a particular structure is based on the desired amount of funding and the ability of the FHLBank(s) receiving the proceeds of the consolidated bond issued to hedge the risks. This strategy of issuing consolidated obligations while simultaneously entering into derivative transactions enables an FHLBank to offer a wider range of attractively-priced advances to its members and may allow an FHLBank to reduce its funding costs. The continued attractiveness of this strategy depends on yield relationships between the FHLBanks' consolidated obligations and the derivatives markets. If conditions change, an FHLBank may alter the types or terms of the consolidated obligations that it issues. The increase in funding alternatives available to the FHLBanks through negotiated debt/swap transactions is beneficial to the FHLBanks because it may diversify the investor base, reduce funding costs, and/or provide additional asset/liability management tools.

Table 16 presents the bond types the FHLBanks issued for their bond funding needs. The types of consolidated bonds issued can fluctuate based on comparative changes in their cost levels, supply and demand conditions, advance demand, and the FHLBanks' individual balance sheet management strategies. During the three and six months ended June 30, 2022, the total issuance of consolidated bonds decreased compared to the three and six months ended June 30, 2021. During the three and six months ended June 30, 2022, the primary driver for the change in issuance mix compared to the three and six months ended June 30, 2021, was the significant decline in the issuance of fixed-rate, non-callable consolidated bonds, due primarily to an increase in the issuance of consolidated discount notes, driven by an increase in short-term advance activity and investor preference.

Table 16 - Percentage of Total Consolidated Bonds Issued by Bond Type

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Single-index, variable-rate(1)	20.4 %	20.5 %	42.5 %	20.2 %
Fixed-rate, callable	52.4 %	33.9 %	36.4 %	38.3 %
Step-up/step-down(2)	13.4 %	7.2 %	10.6 %	6.5 %
Fixed-rate, non-callable	13.8 %	38.4 %	10.5 %	35.0 %
Total	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**

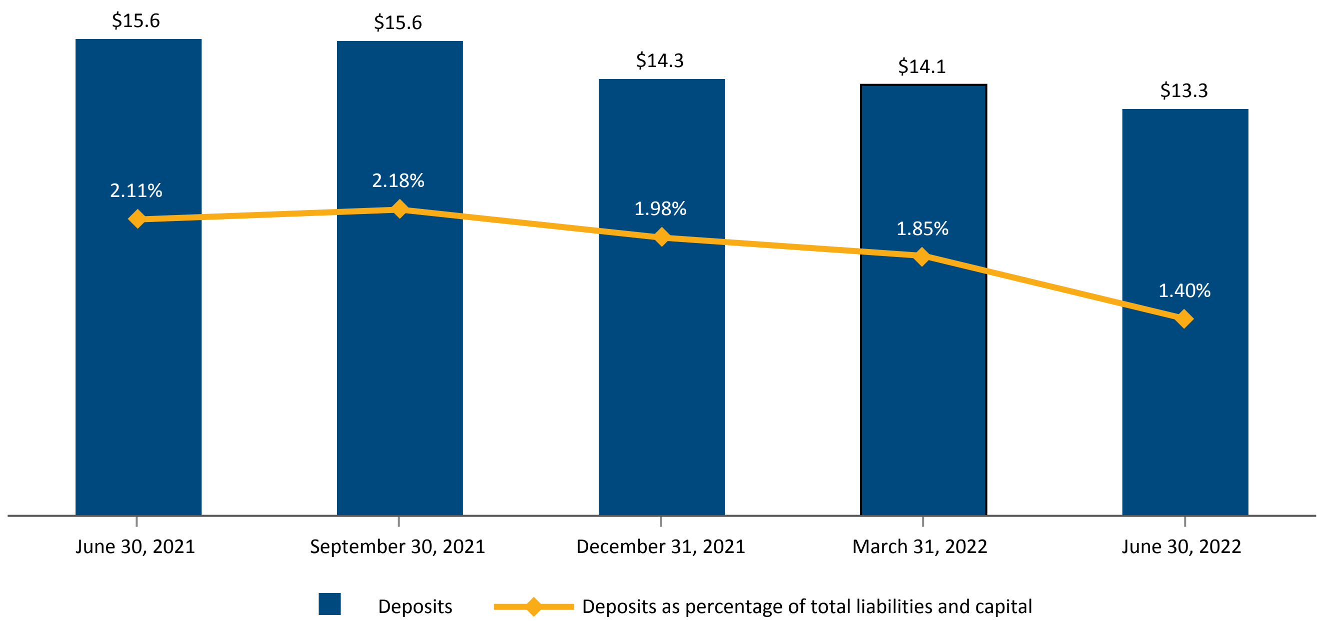
(1) Includes SOFR-linked consolidated bonds of $16.5 billion and $77.7 billion, which both represented 100% of the single-index variable-rate consolidated bonds issued during the three and six months ended June 30, 2022. Includes SOFR-linked consolidated bonds of $21.6 billion and $45.0 billion, which represented 97% and 95% of the single-index variable-rate consolidated bonds issued during the three and six months ended June 30, 2021.

(2) Primarily consists of callable step-up bonds.

Deposits

The FHLBanks offer demand and overnight deposit programs to members and to qualifying non-members. In addition, certain FHLBanks offer short-term interest-bearing deposit programs to members, and in certain cases, to qualifying non-members. Figure 17 presents deposits for the most recent five quarters.

Figure 17 - Deposits
(dollars in billions)



Deposits represent a relatively small portion of the FHLBanks' funding, totaling $13.3 billion at June 30, 2022, a decrease of $1.0 billion, or 7%, from December 31, 2021. All FHLBank deposits are uninsured and deposit balances vary depending on market factors, such as the attractiveness of the FHLBanks' deposit pricing relative to the rates available on alternative money market instruments, FHLBank members' investment preferences with respect to the maturity of their investments, and FHLBank members' liquidity. Interest-bearing demand and overnight deposits represented 94% of deposits at both June 30, 2022 and December 31, 2021, with the remaining deposits primarily being term deposits and non-interest-bearing deposits. Interest-bearing demand and overnight deposits pay interest based on a daily interest rate. Term deposits pay interest based on a fixed rate determined at the issuance of the deposit.

Capital

GAAP capital consists of capital stock, retained earnings, and accumulated other comprehensive income (loss). Figure 18 presents GAAP capital and the GAAP capital-to-assets ratio for the most recent five quarters.

Figure 18 - GAAP Capital (dollars in billions)

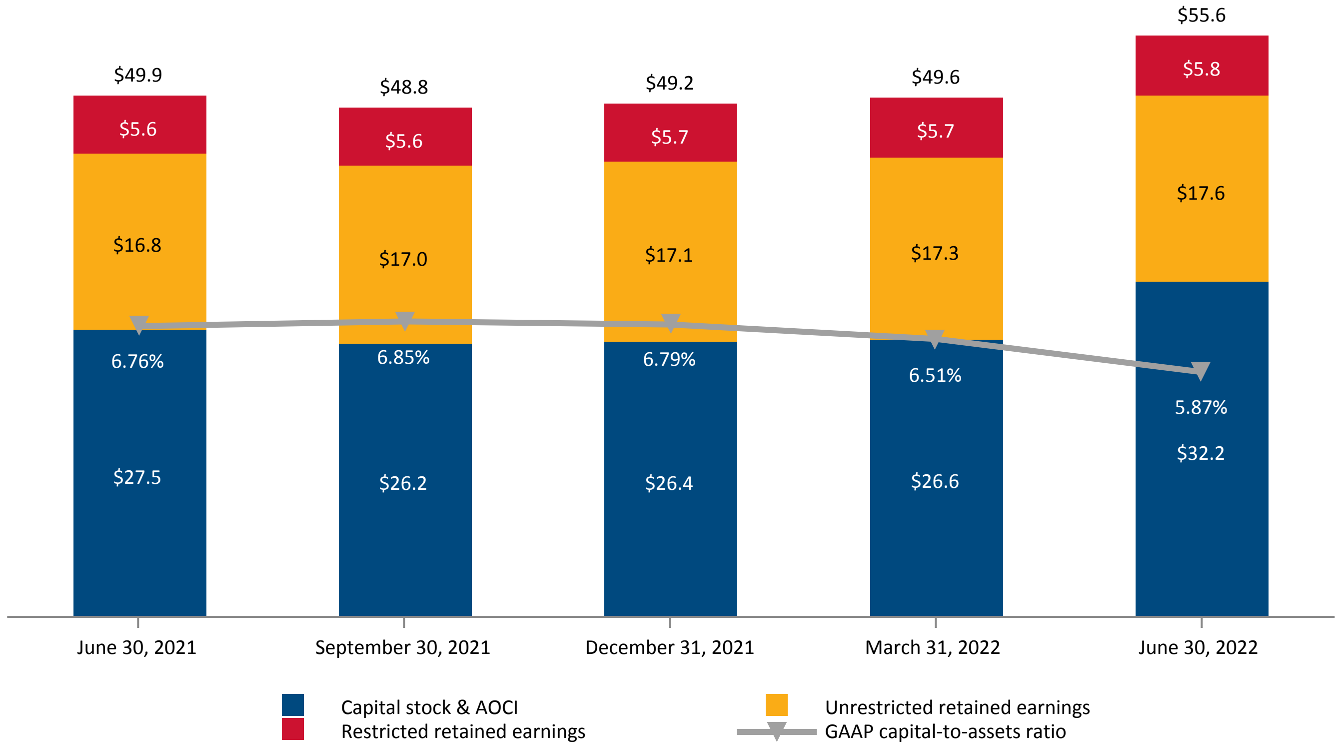


Table 17 - Total Capital and Capital-to-Assets Ratios
(dollars in millions)

	June 30, 2022	December 31, 2021	Change
Capital stock	$ 32,362	$ 25,065	$ 7,297
Retained earnings:			
Unrestricted	17,551	17,110	441
Restricted(1)	5,822	5,650	172
Total retained earnings	**23,373**	**22,760**	**613**
AOCI	(152)	1,297	(1,449)
Total GAAP capital	**55,583**	**49,122**	**6,461**
Exclude: AOCI	152	(1,297)	1,449
Add: Mandatorily redeemable capital stock	416	398	18
Total combined regulatory capital(2)	**$ 56,151**	**$ 48,223**	**$ 7,928**
Total assets	**$ 946,710**	**$ 723,238**	**$ 223,472**
Combined GAAP capital-to-assets ratio	5.87 %	6.79 %	(0.92)%
Combined regulatory capital-to-assets ratio(3)	5.93 %	6.67 %	(0.74)%

(1) Restricted retained earnings was established through the Capital Agreement, as amended, and is intended to enhance the capital position of each FHLBank. (See *Note 9 - Capital* to the accompanying combined financial statements for additional information about the Capital Agreement and restricted retained earnings.)
(2) Regulatory capital requirements apply to individual FHLBanks, and the combined amounts are for analysis only. The sum of the individual FHLBank regulatory capital amounts does not agree to the total combined regulatory capital due to combining adjustments.
(3) The combined regulatory capital-to-assets ratio is calculated based on the FHLBanks' combined regulatory capital as a percentage of combined total assets. (See *Note 9 - Capital* to the accompanying combined financial statements for a definition and discussion of regulatory capital.)

GAAP Capital. Total GAAP capital was $55.6 billion at June 30, 2022, an increase of $6.5 billion, or 13%, from $49.1 billion at December 31, 2021, due primarily to an increase in capital stock, partially offset by a decrease in AOCI. The combined GAAP capital-to-assets ratio was 5.87% at June 30, 2022, a decrease of 92 basis points from 6.79% at December 31, 2021.

Capital Stock. Capital stock was $32.4 billion at June 30, 2022, an increase of $7.3 billion, or 29%, from $25.1 billion at December 31, 2021, due principally to the net issuance of activity-based capital stock, driven by the increase in advances, partially offset by the reclassification of capital stock to mandatorily redeemable capital stock.

Retained Earnings. Retained earnings grew to $23.4 billion at June 30, 2022, an increase of $0.6 billion, or 3%, from $22.8 billion at December 31, 2021, resulting principally from net income of $1.1 billion, partially offset by dividends of $0.5 billion. Unrestricted retained earnings were $17.6 billion at June 30, 2022, an increase of $0.4 billion, or 3%, from $17.1 billion at December 31, 2021. Restricted retained earnings were $5.8 billion at June 30, 2022, an increase of $0.2 billion, or 3%, compared to December 31, 2021.

Accumulated Other Comprehensive Income (Loss). AOCI was a loss of $0.2 billion at June 30, 2022, a decrease of $1.4 billion, or 112%, from a gain of $1.3 billion at December 31, 2021, primarily consisting of net unrealized losses on MBS classified as AFS securities, partially offset by net unrealized gains relating to hedging activities.

Figures 19 and 20 present the components of capital as a percentage of total GAAP capital at June 30, 2022 and December 31, 2021.

Figure 19 - Capital Components as a Percentage of Total GAAP Capital at June 30, 2022

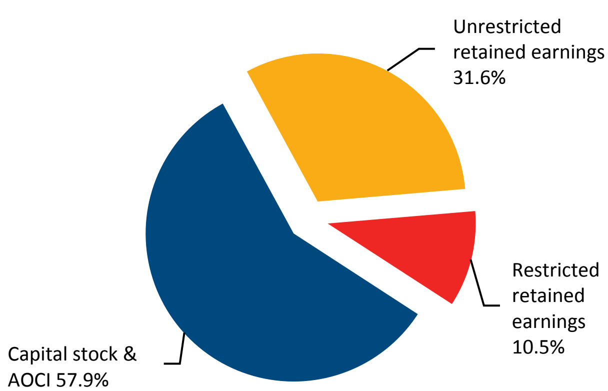
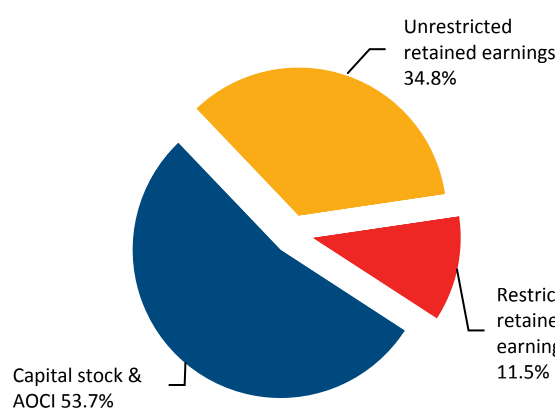


Figure 20 - Capital Components as a Percentage of Total GAAP Capital at December 31, 2021



Regulatory Capital. Total combined regulatory capital was $56.2 billion at June 30, 2022, an increase of $7.9 billion, or 16%, from $48.2 billion at December 31, 2021, due primarily to an increase in capital stock.

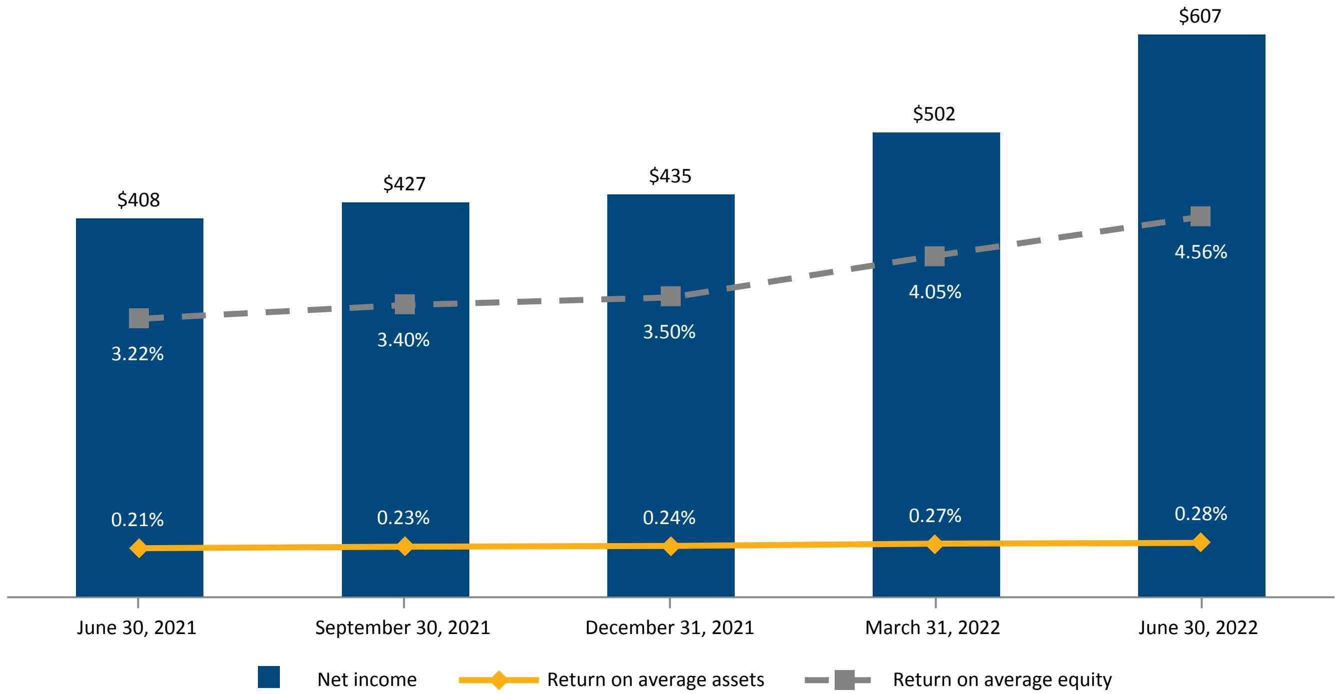
Combined Results of Operations

Net Income

The primary source of each FHLBank's earnings is net interest income, which is the interest income on advances, mortgage loans, and investments, less the interest expense on consolidated obligations, deposits, and mandatorily redeemable capital stock. The expenses of the FHLBanks, other than interest expense, primarily consist of employee compensation and benefits, other operating expenses, and Affordable Housing Program assessments.

The FHLBanks may also recognize non-interest gains and losses, such as gains and losses on derivatives and hedging activities and gains and losses on investment securities. Due to the FHLBanks' cooperative structure, the FHLBanks generally earn a narrow net interest spread. Accordingly, the FHLBanks' net income is relatively small compared to total assets and total liabilities. Figure 21 presents net income, return on average assets, and return on average equity for the most recent five quarters.

Figure 21 - Net Income
(dollars in millions)



Net income was $607 million and $1,109 million for the three and six months ended June 30, 2022, increases of 49% and 22% compared to the three and six months ended June 30, 2021, resulting primarily from higher net interest income and lower losses in non-interest income.

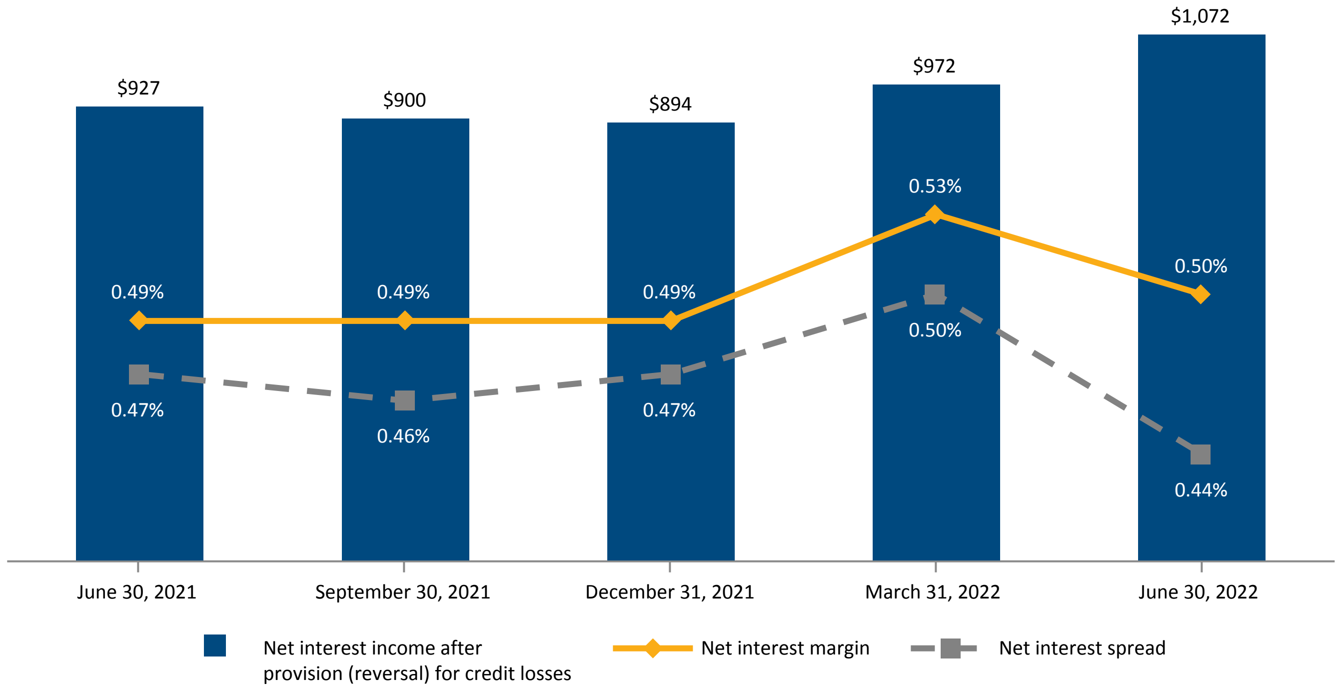
Table 18 - Changes in Net Income
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2022	2021	Change	2022	2021	Change
Net interest income after provision (reversal) for credit losses	$ 1,072	$ 927	$ 145	$ 2,044	$ 1,968	$ 76
Non-interest income (loss)	(33)	(120)	87	(95)	(245)	150
Non-interest expense	363	353	10	715	711	4
Affordable Housing Program assessments	69	46	23	125	103	22
Net income	**$ 607**	**$ 408**	**$ 199**	**$ 1,109**	**$ 909**	**$ 200**

Net Interest Income after Provision (Reversal) for Credit Losses

The primary source of each FHLBank's earnings is net interest income, which is the interest income on advances, mortgage loans, and investments, less the interest expense on consolidated obligations, deposits, and mandatorily redeemable capital stock. The net interest income of the FHLBanks is affected by several external factors, including changes in interest rates, liquidity levels and demand for advances from member institutions, the general state of the economy, and fiscal and monetary policies. The future level of net interest income of the FHLBanks will depend, in part, upon the level and volatility of interest rates, demand for advances, cost of consolidated obligations, changes in fiscal and monetary policies, as well as the state of the overall U.S. economy and financial markets. Figure 22 presents net interest income after provision (reversal) for credit losses, net interest margin, and net interest spread for the most recent five quarters.

Figure 22 - Net Interest Income after Provision (Reversal) for Credit Losses (dollars in millions)



Net interest income after provision (reversal) for credit losses was $1,072 million and $2,044 million for the three and six months ended June 30, 2022, increases of 16% and 4% compared to the three and six months ended June 30, 2021.

Table 19 - Net Interest Income after Provision (Reversal) for Credit Losses
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2022	2021	Change	2022	2021	Change
Interest income						
Advances	$ 1,411	$ 665	$ 746	$ 2,045	$ 1,422	$ 623
Investments and other	1,045	602	443	1,644	1,294	350
Mortgage loans held for portfolio	397	336	61	779	711	68
Total interest income	**2,853**	**1,603**	**1,250**	**4,468**	**3,427**	**1,041**
Interest expense						
Consolidated obligations - Discount notes	629	46	583	716	131	585
Consolidated obligations - Bonds	1,121	623	498	1,670	1,323	347
Total consolidated obligations	**1,750**	**669**	**1,081**	**2,386**	**1,454**	**932**
Deposits and mandatorily redeemable capital stock	25	7	18	32	15	17
Total interest expense	**1,775**	**676**	**1,099**	**2,418**	**1,469**	**949**
Net interest income	**1,078**	**927**	**151**	**2,050**	**1,958**	**92**
Provision (reversal) for credit losses	6	—	6	6	(10)	16
Net interest income after provision (reversal) for credit losses	**$ 1,072**	**$ 927**	**$ 145**	**$ 2,044**	**$ 1,968**	**$ 76**

Table 20 presents average balances of and average yields/rates on the major categories of interest-earning assets and interest-bearing liabilities, net interest spread, and net interest margin. Due to the FHLBanks' cooperative structure, the FHLBanks generally earn a narrow net interest spread.

Table 20 - Analysis of Interest Income/Expense and Average Yield/Rate

(dollars in millions)

	Three Months Ended June 30,					
	2022			2021		
	Average Balance	Interest Income/ Expense	Average Yield/ Rate	Average Balance	Interest Income/ Expense	Average Yield/ Rate
Assets						
Interest-bearing deposits and other	$ 17,516	$ 38	0.87 %	$ 9,815	$ 3	0.12 %
Securities purchased under agreements to resell	33,712	72	0.86 %	19,628	2	0.04 %
Federal funds sold	80,205	159	0.80 %	65,933	11	0.07 %
Investment securities(1)(2)	189,919	776	1.64 %	198,010	586	1.19 %
Advances	485,883	1,411	1.16 %	403,988	665	0.66 %
Mortgage loans(3)	55,677	397	2.86 %	57,757	336	2.33 %
Total interest-earning assets	**862,912**	**2,853**	**1.33 %**	**755,131**	**1,603**	**0.85 %**
Other non-interest-earning assets	7,939			7,374		
Fair-value adjustment on investment securities(2)	(1,161)			3,783		
Total assets	**$ 869,690**			**$ 766,288**		
Liabilities and Capital						
Consolidated obligations - Discount notes	$ 339,204	629	0.74 %	$ 251,095	46	0.07 %
Consolidated obligations - Bonds	446,121	1,121	1.01 %	439,067	623	0.57 %
Deposits and mandatorily redeemable capital stock	14,270	25	0.70 %	16,686	7	0.17 %
Total interest-bearing liabilities	**799,595**	**1,775**	**0.89 %**	**706,848**	**676**	**0.38 %**
Non-interest-bearing liabilities	16,665			8,617		
Total liabilities	**816,260**			**715,465**		
Capital	53,430			50,823		
Total liabilities and capital	**$ 869,690**			**$ 766,288**		
Net interest income		**$ 1,078**			**$ 927**	
Net interest spread			0.44%			0.47%
Net interest margin			0.50%			0.49%
Total interest-earning assets to total interest-bearing liabilities	107.92 %			106.83 %		

	Six Months Ended June 30,					
	2022			2021		
	Average Balance	Interest Income/ Expense	Average Yield/ Rate	Average Balance	Interest Income/ Expense	Average Yield/ Rate
Assets						
Interest-bearing deposits and other	$ 14,901	$ 43	0.58 %	$ 10,545	$ 7	0.13 %
Securities purchased under agreements to resell	28,652	79	0.56 %	24,155	7	0.06 %
Federal funds sold	76,337	181	0.48 %	64,663	23	0.07 %
Investment securities(1)(2)	189,891	1,341	1.42 %	203,848	1,257	1.24 %
Advances	440,583	2,045	0.94 %	410,492	1,422	0.70 %
Mortgage loans(3)	55,607	779	2.83 %	59,366	711	2.42 %
Total interest-earning assets	**805,971**	**4,468**	**1.12 %**	**773,069**	**3,427**	**0.89 %**
Other non-interest-earning assets	7,496			7,835		
Fair-value adjustment on investment securities(2)	273			4,089		
Total assets	**$ 813,740**			**$ 784,993**		
Liabilities and Capital						
Consolidated obligations - Discount notes	$ 286,445	716	0.50 %	$ 257,747	131	0.10 %
Consolidated obligations - Bonds	446,235	1,670	0.75 %	450,721	1,323	0.59 %
Deposits and mandatorily redeemable capital stock	15,055	32	0.43 %	16,565	15	0.18 %
Total interest-bearing liabilities	**747,735**	**2,418**	**0.65 %**	**725,033**	**1,469**	**0.41 %**
Non-interest-bearing liabilities	14,164			9,369		
Total liabilities	**761,899**			**734,402**		
Capital	51,841			50,591		
Total liabilities and capital	**$ 813,740**			**$ 784,993**		
Net interest income		**$ 2,050**			**$ 1,958**	
Net interest spread			0.47 %			0.48 %
Net interest margin			0.51 %			0.51 %
Total interest-earning assets to total interest-bearing liabilities	107.79 %			106.63 %		

(1) Investment securities consist of Trading, AFS, and HTM securities.
(2) The average balances of AFS securities and HTM securities are reflected at amortized cost. (See *Note 3 - Investments* to the accompanying combined financial statements for additional information.)
(3) Non-accrual loans are included in the average balances used to determine average yield/rate.

Changes in both average interest rates and average balances of interest-earning assets and interest-bearing liabilities have a direct influence on changes in net interest income, net interest margin, and net interest spread. Table 21 presents changes in interest income and interest expense due to rate-related and volume-related factors. Changes in interest income and interest expense not identifiable as either rate-related or volume-related, but rather attributable to both rate and volume changes, have been allocated to the rate and volume categories based on the proportion of the absolute value of the rate and volume changes.

Table 21 - Rate and Volume Analysis

(dollars in millions)

	Three Months Ended June 30, 2022 vs. 2021			Six Months Ended June 30, 2022 vs. 2021		
	Volume	Rate	Total	Volume	Rate	Total
Interest Income						
Interest-bearing deposits and other	$ 4	$ 31	$ 35	$ 4	$ 32	$ 36
Securities purchased under agreements to resell	2	68	70	1	71	72
Federal funds sold	2	146	148	5	153	158
Investment securities(1)	(25)	215	190	(90)	174	84
Advances	158	588	746	109	514	623
Mortgage loans	(12)	73	61	(47)	115	68
Total interest income	**129**	**1,121**	**1,250**	**(18)**	**1,059**	**1,041**
Interest Expense						
Consolidated obligations - Discount notes	20	563	583	16	569	585
Consolidated obligations - Bonds	10	488	498	(13)	360	347
Deposits and mandatorily redeemable capital stock	(1)	19	18	(1)	18	17
Total interest expense	**29**	**1,070**	**1,099**	**2**	**947**	**949**
Changes in net interest income	**$ 100**	**$ 51**	**$ 151**	**$ (20)**	**$ 112**	**$ 92**

(1) Investment securities consist of Trading, AFS, and HTM securities.

Net interest income was $1,078 million and $2,050 million for the three and six months ended June 30, 2022, increases of 16% and 5% compared to the three and six months ended June 30, 2021. Net interest margin was 0.50% and 0.51% for the three and six months ended June 30, 2022, generally in line with net interest margin for the three and six months ended June 30, 2021.

- Interest income was $2,853 million and $4,468 million for the three and six months ended June 30, 2022, increases of 78% and 30% compared to the three and six months ended June 30, 2021, driven by increases in the average yields on interest-earning assets. The average yields on interest-earning assets were 1.33% and 1.12% for the three and six months ended June 30, 2022, increases of 48 and 23 basis points compared to the three and six months ended June 30, 2021. Although significantly higher interest rates were the primary factor affecting interest income, higher average balances of advances were also a contributing factor. The average balances of advances were $485.9 billion and $440.6 billion for the three and six months ended June 30, 2022, increases of 20% and 7% compared to the three and six months ended June 30, 2021.

- Interest expense was $1,775 million and $2,418 million for the three and six months ended June 30, 2022, increases of 163% and 65% compared to the three and six months ended June 30, 2021, driven by the higher average rates on consolidated obligations. The average rates on consolidated obligations were 0.89% and 0.66% for the three and six months ended June 30, 2022, increases of 50 and 25 basis points compared to the three and six months ended June 30, 2021. The significantly higher interest rates were the primary factor affecting interest expense, and higher average balances of consolidated obligations were also a contributing factor. The average balances of consolidated obligations were $785.3 billion and $732.7 billion for the three and six months ended June 30, 2022, increases of 14% and 3% compared to the three and six months ended June 30, 2021.

Factors Affecting Net Interest Income.

Advances. Interest income on advances was $1,411 million and $2,045 million for the three and six months ended June 30, 2022, increases of 112% and 44% compared to the three and six months ended June 30, 2021, resulting from increases in both the average yields on, and the average balances of, advances. The average yields on advances were 1.16% and 0.94% for the three and six months ended June 30, 2022, increases of 50 and 24 basis points compared to the three and six months ended June 30, 2021. The increases in the average yields on advances were the result of higher interest rates on advances and the effect of derivatives and hedging activities on interest income from advances, driven by the higher interest-rate environment, partially offset by the decrease in prepayment fees on advances. (See *Table 22* for additional information regarding the effect of derivatives and hedging activities on net interest income.) The average balances of advances were $485.9 billion and $440.6 billion for the three and six months ended June 30, 2022, increases of 20% and 7% compared to the three and six months ended June 30, 2021, driven by depository member demand for liquidity due to such factors as slowing deposit growth and an expectation of higher interest rates. Although the average balances of advances increased for the three and six months ended June 30, 2022, the average balances of advances remained below pre-pandemic levels.

Mortgage Loans. Interest income on mortgage loans was $397 million and $779 million for the three and six months ended June 30, 2022, increases of 18% and 10% compared to the three and six months ended June 30, 2021, resulting primarily from increases in the average yields on mortgage loans, partially offset by decreases in the average balances of mortgage loans. The average yields on mortgage loans were 2.86% and 2.83% for the three and six months ended June 30, 2022, increases of 53 and 41 basis points compared to the three and six months ended June 30, 2021, resulting primarily from higher interest rates on mortgage loans and lower premium amortization due to lower mortgage loan prepayment activity in the higher interest-rate environment. The average balances of mortgage loans were $55.7 billion and $55.6 billion for the three and six months ended June 30, 2022, decreases of 4% and 6% compared to the three and six months ended June 30, 2021, due to reduced mortgage loan purchase volume.

Total Investments. Interest income on total investments was $1,045 million and $1,644 million for the three and six months ended June 30, 2022, increases of 74% and 27% compared to the three and six months ended June 30, 2021, resulting primarily from increases in the average yields on total investments. The average yields on total investments were 1.30% and 1.07% for the three and six months ended June 30, 2022, increases of 48 and 21 basis points compared to the three and six months ended June 30, 2021. The increases in the average yields on total investments were the result of higher interest rates on investments and the effect of derivatives and hedging activities on interest income from investment securities in the higher interest-rate environment, and the reduction in amortization of premiums on MBS due to lower prepayments. (See *Table 22* for additional information regarding the effect of derivatives and hedging activities on net interest income and *Liquidity and Capital Resources* for more discussion regarding the FHLBanks' liquidity requirements.)

Consolidated Obligations. Interest expense on consolidated obligations was $1,750 million and $2,386 million for the three and six months ended June 30, 2022, increases of 162% and 64% compared to the three and six months ended June 30, 2021, due primarily to the higher average rates on consolidated obligations. The average rates on consolidated obligations were 0.89% and 0.66% for the three and six months ended June 30, 2022, increases of 50 and 25 basis points compared to the three and six months ended June 30, 2021. The increases in the average rates on consolidated obligations were due primarily to higher interest rates on consolidated discount notes and consolidated bonds and the effect of derivatives and hedging activities on interest expense from consolidated obligations in the higher interest-rate environment. (See *Table 22* for additional information regarding the effect of derivatives and hedging activities on net interest income.) Although significantly higher interest-rates were the primary factor affecting interest expense, higher average balances of consolidated obligations were also a contributing factor during the three and six months ended June 30, 2022. The average balances of consolidated obligations were $785.3 billion and $732.7 billion for the three and six months ended June 30, 2022, increases of 14% and 3% compared to the three and six months ended June 30, 2021, principally resulting from increases in the average balances of advances.

Effect of Derivatives and Hedging Activities on Net Interest Income.

Net interest income includes components related to the effect of derivatives and hedging activities resulting from the FHLBanks' hedging strategies. If a hedging relationship is designated and qualifies for hedge accounting treatment, the net interest settlements of interest receivables or payables related to derivatives designated in fair value or cash flow hedge relationships are recognized as adjustments to interest income or expense of the designated hedged item. When hedge accounting is discontinued, the cumulative basis adjustment on the hedged item is amortized or accreted into net interest income over the remaining life of the hedged item using a level-yield methodology. In addition, changes in fair value of the derivative and the hedged item for designated fair value hedges are recorded in net interest income in the same line as the hedged item. (See *Note 6 - Derivatives and Hedging Activities* to the accompanying combined financial statements for additional information on the effect of derivatives and hedging activities.) Table 22 presents the effect of derivatives and hedging activities on net interest income.

Table 22 - Effect of Derivatives and Hedging Activities on Net Interest Income

(dollars in millions)

	Three Months Ended June 30, 2022					
	Advances	Investment Securities	Mortgage Loans(1)	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	$ (181)	$ (46)	$ (1)	$ (2)	$ —	$ (230)
Net gains (losses) on derivatives and hedged items	182	43	—	9	6	240
Net interest settlements on derivatives	(178)	(186)	—	237	13	(114)
Total effect on net interest income	**$ (177)**	**$ (189)**	**$ (1)**	**$ 244**	**$ 19**	**$ (104)**

	Three Months Ended June 30, 2021					
	Advances	Investment Securities	Mortgage Loans(1)	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	$ (45)	$ (33)	$ (8)	$ (2)	$ —	$ (88)
Net gains (losses) on derivatives and hedged items	3	12	—	(4)	—	11
Net interest settlements on derivatives	(505)	(299)	—	292	(20)	(532)
Total effect on net interest income	**$ (547)**	**$ (320)**	**$ (8)**	**$ 286**	**$ (20)**	**$ (609)**

	Six Months Ended June 30, 2022					
	Advances	Investment Securities	Mortgage Loans(1)	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	$ (235)	$ (121)	$ (4)	$ (3)	$ —	$ (363)
Net gains (losses) on derivatives and hedged items	251	97	—	23	8	379
Net interest settlements on derivatives	(558)	(480)	—	645	1	(392)
Total effect on net interest income	**$ (542)**	**$ (504)**	**$ (4)**	**$ 665**	**$ 9**	**$ (376)**

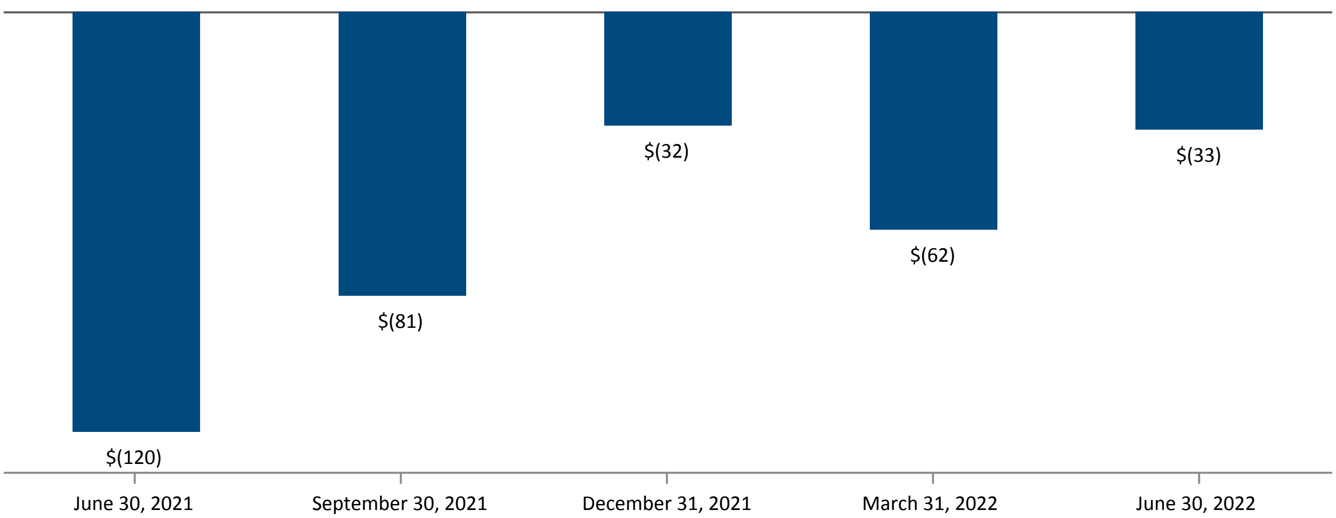
	Six Months Ended June 30, 2021					
	Advances	Investment Securities	Mortgage Loans(1)	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	$ (107)	$ (75)	$ (17)	$ (5)	$ —	$ (204)
Net gains (losses) on derivatives and hedged items	93	51	—	4	—	148
Net interest settlements on derivatives	(1,037)	(590)	—	489	(41)	(1,179)
Total effect on net interest income	**$ (1,051)**	**$ (614)**	**$ (17)**	**$ 488**	**$ (41)**	**$ (1,235)**

(1) Includes standalone mortgage delivery commitments.

Non-Interest Income

Non-interest income consists of realized and unrealized gains (losses) on investment securities, derivatives activities, financial instruments held under fair value option, and other non-interest-earning activities. Figure 23 presents non-interest income for the most recent five quarters.

Figure 23 - Non-Interest Income (dollars in millions)



Non-interest income was a loss of $33 million and a loss of $95 million for the three and six months ended June 30, 2022, resulting primarily from changes in the fair value of investment securities, derivatives, and financial instruments held under fair value option, driven by increases in interest rates. Non-interest income was a loss of $120 million and a loss of $245 million for the three and six months ended June 30, 2021.

Table 23 - Changes in Non-Interest Income
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2022	2021	Change	2022	2021	Change
Net gains (losses) on investment securities	$ (253)	$ (119)	$ (134)	$ (733)	$ (424)	$ (309)
Net gains (losses) on financial instruments held under fair value option	144	5	139	216	(47)	263
Net gains (losses) on derivatives	62	(68)	130	345	110	235
Gains on litigation settlements, net	1	—	1	11	—	11
Other, net	13	62	(49)	66	116	(50)
Total non-interest income (loss)	**$ (33)**	**$ (120)**	**$ 87**	**$ (95)**	**$ (245)**	**$ 150**

Gains (Losses) on Investment Securities. The FHLBanks classify investment securities as AFS, HTM, or trading securities. The realized gains (losses) from the sale of AFS and HTM securities are recognized in current period earnings. Trading securities are recorded at fair value, with changes in fair value reflected in non-interest income. A number of factors affect the fair value of investment securities, such as the current and projected levels of interest rates, credit spreads, and volatility, as well as the passage of time. Net losses on investment securities were $253 million and $733 million for the three and six months ended June 30, 2022, compared to net losses of $119 million and $424 million for the three and six months ended June 30, 2021, due primarily to fair value losses on U.S. Treasury obligations classified as trading securities, driven by increases in interest rates.

Gains (Losses) on Financial Instruments Held under Fair Value Option. Certain FHLBanks elect the fair value option for certain financial assets and certain financial liabilities, and these FHLBanks recognize the changes in fair value on these assets and liabilities as unrealized gains and losses in current period earnings. The use of the fair value option allows these FHLBanks to mitigate potential income statement volatility that can arise when an economic derivative is adjusted for changes in fair value, but the related hedged item is not. Net gains on financial instruments held under fair value options were $144 million and $216 million for the three and six months ended June 30, 2022, compared to a net gain of $5 million for the three months ended June 30, 2021, and a net loss of $47 million for the six months ended June 30, 2021, resulting primarily from increases in the fair value of consolidated obligations held under the fair value option, partially offset by decreases in the fair value of advances held under the fair value option. These changes in fair value of both consolidated obligations and advances were driven by increases in interest rates. (See *Table 24* and *Note 11 - Fair Value* to the accompanying combined financial statements for additional information regarding the gains (losses) on financial instruments held under fair value option.)

Gains (Losses) on Derivatives. Gains (losses) on derivatives are primarily comprised of the change in fair value of economic hedges, which are derivatives hedging specific or non-specific underlying assets, liabilities, or firm commitments that do not qualify, or were not designated, for fair value or cash flow hedge accounting. Gains (losses) on derivatives fluctuate with changes in market conditions and are based on a wide range of factors, including current and projected levels of interest rates, credit spreads, and volatility, as well as the passage of time.

Net gains on derivatives were $62 million and $345 million for the three and six months ended June 30, 2022, compared to a net loss of $68 million for the three months ended June 30, 2021, and a net gain of $110 million for the six months ended June 30, 2021. The net gains for the three and six months ended June 30, 2022, were due primarily to fair value gains on economic hedges which hedge investment securities and advances, partially offset by economic hedges which hedge consolidated obligations. Table 24 presents the effect of derivatives on non-interest income.

Table 24 - Effect of Derivatives on Non-Interest Income
(dollars in millions)

	Three Months Ended June 30, 2022							
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives								
Gains (losses) related to derivatives not designated as hedging instruments	$ 42	$ 216	$ 13	$ (94)	$ (110)	$ 6	$ (8)	$ 65
Price alignment amount	—	—	—	—	—	—	(3)	(3)
Total net gains (losses) on derivatives	**42**	**216**	**13**	**(94)**	**(110)**	**6**	**(11)**	**62**
Net gains (losses) on trading securities(1)	—	(248)	—	—	—	—	—	(248)
Net gains (losses) on financial instruments under fair value option	(51)	—	(4)	89	110	—	—	144
Total effect on non-interest income	**$ (9)**	**$ (32)**	**$ 9**	**$ (5)**	**$ —**	**$ 6**	**$ (11)**	**$ (42)**

	Three Months Ended June 30, 2021							
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives								
Gains (losses) related to derivatives not designated as hedging instruments	$ (17)	$ (49)	$ (7)	$ 5	$ (1)	$ (4)	$ 5	$ (68)
Price alignment amount	—	—	—	—	—	—	—	—
Total net gains (losses) on derivatives	**(17)**	**(49)**	**(7)**	**5**	**(1)**	**(4)**	**5**	**(68)**
Net gains (losses) on trading securities(1)	—	(121)	—	—	—	—	—	(121)
Net gains (losses) on financial instruments under fair value option	(2)	—	—	7	—	—	—	5
Total effect on non-interest income	**$ (19)**	**$ (170)**	**$ (7)**	**$ 12**	**$ (1)**	**$ (4)**	**$ 5**	**$ (184)**

	Six Months Ended June 30, 2022							
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives								
Gains (losses) related to derivatives not designated as hedging instruments	$ 140	$ 599	$ 18	$ (252)	$ (137)	$ 8	$ (28)	$ 348
Price alignment amount	—	—	—	—	—	—	(3)	(3)
Total net gains (losses) on derivatives	**140**	**599**	**18**	**(252)**	**(137)**	**8**	**(31)**	**345**
Net gains (losses) on trading securities(1)	—	(714)	—	—	—	—	—	(714)
Net gains (losses) on financial instruments under fair value option	(140)	—	(7)	222	141	—	—	216
Total effect on non-interest income	**$ —**	**$ (115)**	**$ 11**	**$ (30)**	**$ 4**	**$ 8**	**$ (31)**	**$ (153)**

	Six Months Ended June 30, 2021							
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives								
Gains (losses) related to derivatives not designated as hedging instruments	$ 40	$ 94	$ (11)	$ (4)	$ 1	$ —	$ (10)	$ 110
Price alignment amount	—	—	—	—	—	—	—	—
Total net gains (losses) on derivatives	**40**	**94**	**(11)**	**(4)**	**1**	**—**	**(10)**	**110**
Net gains (losses) on trading securities(1)	—	(420)	—	—	—	—	—	(420)
Net gains (losses) on financial instruments under fair value option	(60)	—	(2)	13	2	—	—	(47)
Total effect on non-interest income	**$ (20)**	**$ (326)**	**$ (13)**	**$ 9**	**$ 3**	**$ —**	**$ (10)**	**$ (357)**

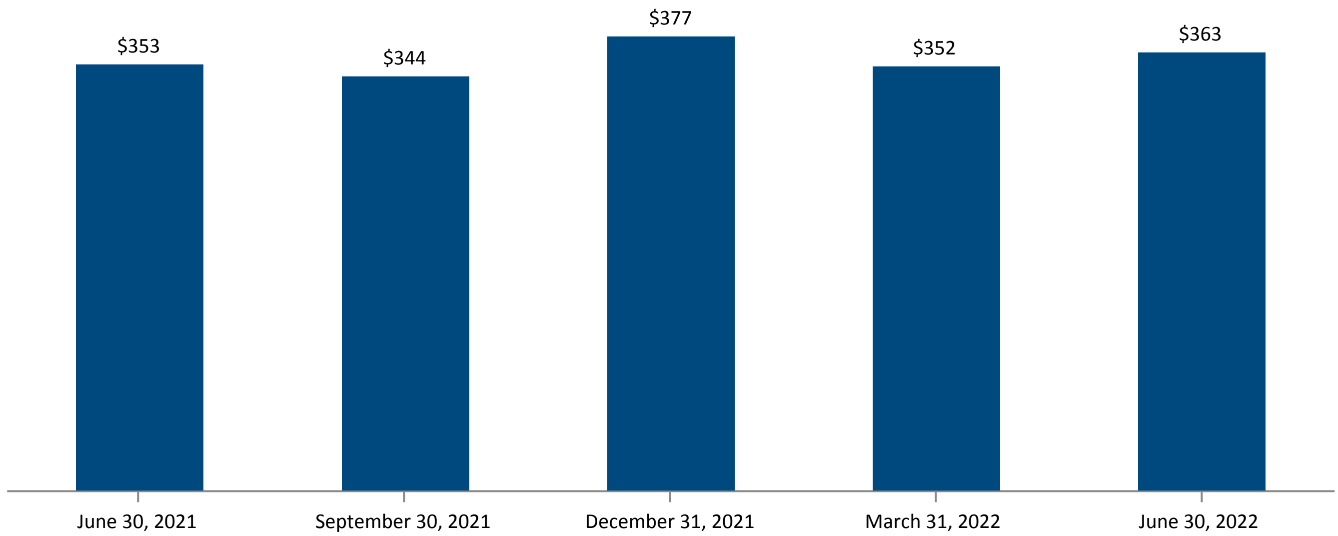
(1) Includes only those gains (losses) on trading securities that have been economically hedged.

Other, net. Other, net non-interest income was $13 million and $66 million for the three and six months ended June 30, 2022, compared to $62 million and $116 million for the three and six months ended June 30, 2021. The decreases in other, net were due primarily to fair value losses on grantor/rabbi trust investments during the three months ended June 30, 2022, driven by increases in interest rates.

Non-Interest Expense

Non-interest expense consists of compensation and benefits, other operating expenses, FHFA expenses, Office of Finance expenses, and other expenses. Figure 24 presents non-interest expense for the most recent five quarters.

Figure 24 - Non-Interest Expense
(dollars in millions)



Non-interest expense was $363 million and $715 million for the three and six months ended June 30, 2022, increases of 3% and 1% compared to the three and six months ended June 30, 2021.

Table 25 - Changes in Non-Interest Expense
(dollars in millions)

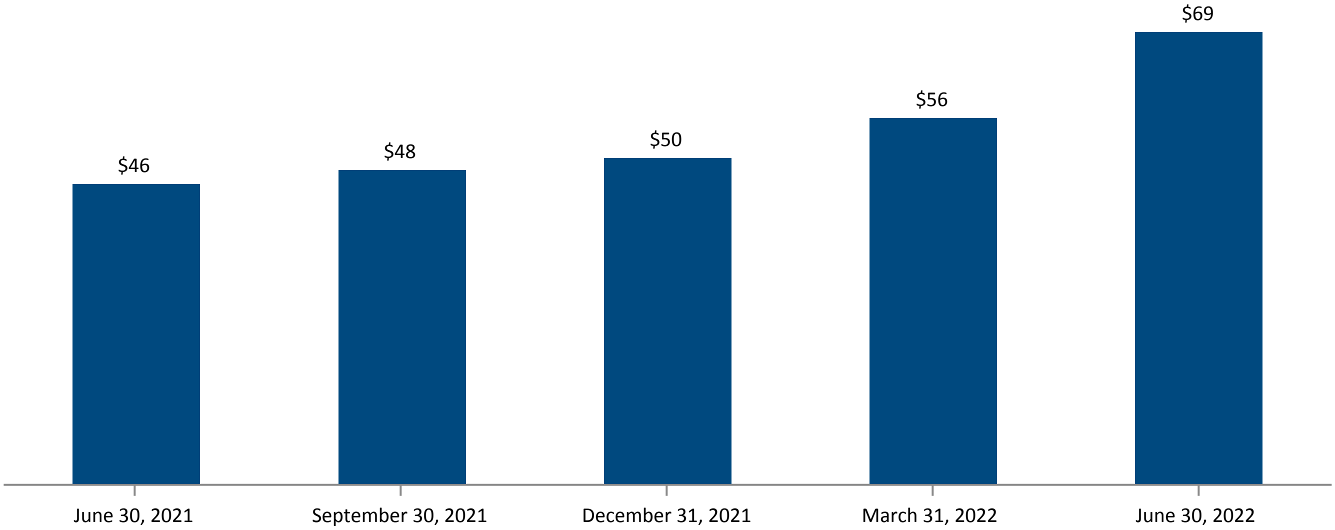
	Three Months Ended June 30,			Six Months Ended June 30,		
	2022	2021	Change	2022	2021	Change
Compensation and benefits	$ 182	$ 182	$ —	$ 366	$ 377	$ (11)
Other operating expenses	122	112	10	233	216	17
Federal Housing Finance Agency	20	20	—	43	41	2
Office of Finance	15	14	1	33	33	—
Other, net	24	25	(1)	40	44	(4)
Total non-interest expense	**$ 363**	**$ 353**	**$ 10**	**$ 715**	**$ 711**	**$ 4**

Affordable Housing Program (AHP) Assessments

Each FHLBank is required, by statute, to contribute to its AHP the greater of 10% of its annual 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. In addition to the required AHP assessment, an FHLBank's board of directors may elect to make voluntary contributions to the AHP. For purposes of the AHP calculation, each FHLBank's income subject to assessment is defined as the individual FHLBank's net income before assessments, plus interest expense related to mandatorily redeemable capital stock. (See *Legislative and Regulatory Developments - Other Legislative Matter - Affordable Housing and Community Investment* on page 103 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for information about proposed legislation that may affect the FHLBanks' Affordable Housing Programs.)

AHP helps members provide subsidized and other low-cost funding, as well as grants, to create affordable rental and homeownership opportunities. Figure 25 presents AHP assessments for the most recent five quarters.

Figure 25 - Affordable Housing Program Assessments
(dollars in millions)



Comprehensive Income

Comprehensive income is comprised of net income and other comprehensive income. Other comprehensive income is reported on the Combined Statement of Comprehensive Income and presents the net change in the accumulated other comprehensive income (loss) balances.

Other comprehensive income was a loss of $587 million and a loss of $1,449 million for the three and six months ended June 30, 2022, compared to a gain of $110 million and a gain of $894 million for the three and six months ended June 30, 2021, primarily consisting of net unrealized losses on MBS classified as AFS securities, partially offset by net unrealized gains relating to hedging activities.

Table 26 - Comprehensive Income

(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2022	2021	Change	2022	2021	Change
Net income	$ 607	$ 408	$ 199	$ 1,109	$ 909	$ 200
Other comprehensive income						
Changes in fair value of AFS securities						
Net unrealized gains (losses) on AFS securities	(709)	148	(857)	(1,800)	740	(2,540)
Changes in non-credit other-than-temporary impairment losses						
Accretion of non-credit portion on HTM securities	—	2	(2)	1	4	(3)
Net unrealized gains (losses) relating to hedging activities	122	(56)	178	353	131	222
Other	—	16	(16)	(3)	19	(22)
Total other comprehensive income (loss)	**(587)**	**110**	**(697)**	**(1,449)**	**894**	**(2,343)**
Comprehensive income (loss)	**$ 20**	**$ 518**	**$ (498)**	**$ (340)**	**$ 1,803**	**$ (2,143)**

Changes in Fair Value of AFS securities. Changes in the fair value of AFS securities are recorded in other comprehensive income. The net change in unrealized gains (losses) on AFS securities is due primarily to changes in interest rates, credit spreads, the passage of time, and volatility.

Changes in Non-Credit Other-than-Temporary Impairment Losses. Changes in non-credit other-than-temporary impairment losses are comprised of the accretion of the non-credit portion on HTM securities.

Net Unrealized Gains (Losses) Relating to Hedging Activities. Net unrealized gains (losses) relating to hedging activities is comprised of changes in the fair value of a derivative that is designated and qualifies as a cash flow hedge until earnings are affected by the variability of the cash flows of the hedged transaction and the amounts are reclassified to interest income or interest expense. The FHLBanks' gains (losses) on hedging activities fluctuate with volatility in the overall interest-rate environment and with the positions taken by the FHLBanks to hedge their risk exposure using cash flow hedges.

Liquidity and Capital Resources

Liquidity

Each FHLBank is required to maintain liquidity in accordance with the FHLBank Act, FHFA regulations and guidance, and policies established by its management and board of directors. Each FHLBank seeks to be in a position to meet the credit and liquidity needs of its members and to meet all current and future financial commitments of the FHLBank. Each FHLBank seeks to achieve this objective 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 the assets and liabilities of the FHLBank.

The FHLBanks may not be able to predict future trends in member credit needs because member credit needs are driven by complex interactions among a number of factors, including members' mortgage loan originations, other loan portfolio growth, deposit growth, and the attractiveness of advances compared to other wholesale borrowing alternatives. Each FHLBank monitors current trends and anticipates future debt issuance needs to fund its members' credit needs and investment opportunities of the FHLBank. An FHLBank's ability to expand its balance sheet and corresponding liquidity requirements in response to its members' increased credit needs is correlated to its members' requirements for advances and mortgage loans. Alternatively, in response to reduced member credit needs, an FHLBank may allow its consolidated obligations to mature without replacement, or repurchase and retire outstanding consolidated obligations, allowing its balance sheet to shrink. Over time, the FHLBanks historically have had comparatively stable access to funding through a diverse investor base.

Sources of Liquidity. The FHLBanks' primary sources of liquidity are proceeds from the issuance of consolidated obligations, as well as cash and investment holdings that are primarily high-quality, short-, and intermediate-term financial instruments. The FHLBanks' consolidated obligations are not obligations of the United States and are not guaranteed by the United States, but have historically received the same credit rating as the government bond credit rating of the United States. S&P, Moody's, or other rating organizations could downgrade or upgrade the credit ratings of the U.S. government and GSEs, including the FHLBanks and their consolidated obligations. Investors should note that a rating issued by a nationally recognized statistical rating organization is not a recommendation to buy, sell, or hold securities, and that the ratings may be revised or withdrawn at any time. Investors should evaluate the rating of each nationally recognized statistical rating organization independently. As of July 31, 2022, the FHLBanks' consolidated obligations were rated AA+/A-1+ and Aaa/P-1 (with outlook stable) by S&P and Moody's. Investors should not take the historical or current ratings of the FHLBanks and their consolidated obligations as an indication of future ratings for the FHLBanks or their consolidated obligations.

Other sources of liquidity include advance repayments, payments collected on mortgage loans, proceeds from the issuance of capital stock, and deposits from members. In addition, by law, the Secretary of the Treasury is authorized to purchase up to $4 billion aggregate principal amount of consolidated obligations of the FHLBanks. This authority may be exercised only if alternative means cannot be effectively employed to permit the FHLBanks to continue to supply reasonable amounts of funds to the mortgage market, and the ability to supply such funds is substantially impaired because of monetary stringency and a high level of interest rates. Any funds borrowed from the U.S. Treasury shall be repaid by the FHLBanks at the earliest practicable date.

Uses of Liquidity. The FHLBanks' primary uses of liquidity are advance originations and consolidated obligation payments. Other uses of liquidity are mortgage loan and investment purchases, dividend payments, and other contractual payments. An FHLBank also maintains liquidity to redeem or repurchase excess capital stock, at its discretion, upon the request of a member or under an FHLBank's capital plan.

See *Combined Financial Condition - Advances* for advance originations and repayments and *Combined Financial Condition - Consolidated Obligations* for net proceeds and payments for consolidated obligations.

FHLBank Funding and Debt Issuance. Changes or disruptions in the capital markets could limit the FHLBanks' ability to issue consolidated obligations. During the six months ended June 30, 2022, the FHLBanks maintained continual access to funding. The FHLBanks' funding was generally driven by member demand and was achieved primarily through the issuance of consolidated discount notes during the six months ended June 30, 2022. The average funding spreads of newly-issued consolidated obligations relative to benchmark indices generally increased during the three and six months ended June 30, 2022, compared to the three and six months ended June 30, 2021; however, spreads relative to SOFR for newly-issued consolidated obligations with tenors of two years or less decreased in both periods.

Refinancing Risk and Investor Concentration Risk. There are inherent risks in utilizing short-term funding to support longer-dated assets and the FHLBanks may be exposed to refinancing risk and investor concentration risk. Refinancing risk includes the risk that the FHLBanks could have difficulty rolling over short-term obligations when market conditions change or investor confidence in short-term consolidated obligations declines. In managing and monitoring the amounts of financial assets that require refinancing, the FHLBanks consider their contractual maturities, as well as certain assumptions regarding expected cash flows (i.e., estimated prepayments, embedded call optionality, and scheduled amortizations). Investor concentration risk includes the risk that a market-driven or regulatory disruption to certain investor classes could lead to significant investor outflows causing unfavorable market conditions for consolidated obligations. (See the notes to the accompanying combined financial statements for additional information regarding contractual maturities of certain financial assets and financial liabilities and Risk Factors - Liquidity Risk on pages 37 to 38 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for more information on refinancing risk and investor concentration risk.)

Interest-Rate Risk. The FHLBanks may use a portion of the short-term consolidated obligations issued to fund both short- and long-term variable-rate assets. However, funding longer-term variable-rate assets with shorter-term liabilities generally does not expose the FHLBanks to interest-rate risk because the rates on the variable-rate assets reset similarly to the liabilities (either through rate resets or re-issuance of the obligations). The FHLBanks measure and monitor interest-rate risk with commonly used methods and metrics, which include the calculations of market value of equity, duration of equity, and duration gap. (See *Quantitative and Qualitative Disclosures about Market Risk* for additional discussion and analysis regarding the FHLBanks' sensitivity to interest rate changes and the use of derivatives to manage their exposure to interest-rate risk.)

Asset/Liability Maturity Profile. Each FHLBank is focused on maintaining an adequate amount of liquidity, and the FHLBanks work collectively to manage system-wide liquidity and funding needs. The FHLBanks are committed to prudent risk management practices and jointly monitor the FHLBank system risks, including by tracking the funding gap, which is a measure of the difference in the projected cash flows from their financial assets and financial liabilities. External factors, including FHLBank member borrowing needs, supply and demand in the debt markets, and other factors may affect the amount of liquidity and the balance between the cash flows for financial assets and financial liabilities. However, due to the FHLBanks' status as GSEs, they have traditionally had ready access to funding at relatively favorable rates.

Regulatory Liquidity Requirements. To protect the FHLBanks against temporary disruptions in access to the debt markets in response to a rise in capital markets volatility, the FHFA requires each FHLBank to:

- have available at all times an amount greater than or equal to its members' current deposits invested in advances with maturities not to exceed five years, deposits in banks or trust companies, and obligations of the U.S. Treasury;
- maintain, in the aggregate, unpledged qualifying assets in an amount at least equal to the amount of its participation in total consolidated obligations outstanding; and
- maintain a base case amount of liquidity.

Each FHLBank also maintains a contingency funding plan designed to enable it to address liquidity shortfalls in times of need, such as operational disruptions at an FHLBank and/or the Office of Finance, or short-term capital market disruptions.

During the six months ended June 30, 2022, each of the FHLBanks was in compliance with the FHFA's liquidity requirements, including the FHFA's Advisory Bulletin on liquidity and the FHFA's funding gap guidance for three-month and one-year maturity horizons.

Capital Resources

The FHLBanks' ability to expand their balance sheets as member credit needs increase is based, in part, on the capital stock requirements for advances. In addition, FHFA regulations stipulate that each FHLBank must comply with three limits on capital. Although each FHLBank's minimum total regulatory capital-to-assets ratio requirement is 4.0%, each FHLBank strives to maintain a level of retained earnings to support its regulatory capital compliance, stable dividend payments to members, and business growth. At June 30, 2022, each FHLBank was in compliance with its statutory minimum capital requirements. In addition, the FHFA issued an Advisory Bulletin to state its supervisory expectations that each FHLBank maintain a ratio of at least two percent of capital stock to total assets. At June 30, 2022, each FHLBank was in compliance with this guidance. (See *Note 9 - Capital* to the accompanying combined financial statements for additional information regarding minimum regulatory capital requirements.)

Management and the board of directors of each FHLBank review the capital structure of that FHLBank on a periodic basis to ensure the capital structure supports the risk associated with its assets and addresses applicable regulatory and supervisory matters. In addition, an individual FHLBank may, at its discretion, institute a higher capital requirement to meet internally-established thresholds or to address supervisory matters, limit dividend payments, or restrict excess capital stock repurchases as part of its retained earnings policies.

Joint Capital Enhancement Agreement. The Joint Capital Enhancement Agreement, as amended (Capital Agreement), is intended to enhance the capital position of each FHLBank. The Capital Agreement provides that each FHLBank will, on a quarterly basis, allocate 20% of its net income to a separate restricted retained earnings account until the balance of that account, calculated as of the last day of each calendar quarter, equals at least one percent of that FHLBank's average balance of outstanding consolidated obligations for the calendar quarter. These restricted retained earnings are not available to pay dividends. The FHLBank of San Francisco had restricted retained earnings that exceeded one percent of its average balance of outstanding consolidated obligations. Accordingly, no further allocation of income into restricted retained earnings was required for that FHLBank during the six months ended June 30, 2022. Additionally, the Capital Agreement provides that amounts in restricted retained earnings in excess of 150% of an FHLBank's restricted retained earnings minimum (i.e., one percent of that FHLBank's average balance of outstanding consolidated obligations calculated as of the last day of each calendar quarter) may be released from restricted retained earnings. As a result of the FHLBank of San Francisco exceeding this threshold during the three months ended March 31, 2022, $16 million was reclassified from restricted retained earnings to unrestricted retained earnings during that period. No amounts were reclassified during the three months ended June 30, 2022, or the six months ended June 30, 2021.

Critical Accounting Estimates

The preparation of financial statements in accordance with GAAP requires each FHLBank's management to make a number of judgments, estimates, and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities (if applicable), and the reported amounts of income and expense during the reported periods. Although each FHLBank's management believes that its judgments, estimates, and assumptions are reasonable, actual results may differ from these estimates.

In the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, certain accounting estimates and assumptions were identified as critical because they are generally considered by each FHLBank's management to be the most critical to an understanding of its financial statements and the financial data it provides to the Office of Finance for preparing the Combined Financial Reports. These estimates and assumptions consist of those used in conjunction with fair value estimates and derivatives and hedging activities. For a description of accounting policies related to these estimates and assumptions, see *Note 1 - Summary of Significant Accounting Policies* on pages F-14 to F-28 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021.

There have been no significant changes to the critical accounting estimates disclosed in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021. For a detailed discussion of Critical Accounting Estimates, see *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Critical Accounting Estimates* on pages 96 to 99 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021. Each FHLBank describes its critical accounting estimates in its periodic reports filed with the SEC.

Recent Accounting Developments

See *Note 2 - Recently Issued and Adopted Accounting Guidance* to the accompanying combined financial statements for a discussion regarding the effect of recently issued accounting guidance on the FHLBanks' combined financial condition, combined results of operations, or combined cash flows.

Legislative and Regulatory Developments

Certain legislative and regulatory actions and developments are summarized in this section. (See *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Legislative and Regulatory Developments* in the Federal Home Loan Banks Combined Financial Reports for the year ended December 31, 2021 (pages 100 to 103) and the quarterly period ended March 31, 2022 (page 42), for a description of certain legislative and regulatory developments that occurred prior to the publication of those reports.)

Amendment to Financial Industry Regulatory Authority, Inc. Rule 4210: Margining of Covered Agency Transactions. On July 29, 2022, the Financial Industry Regulatory Authority, Inc. (FINRA) amended FINRA Rule 4210, further extending the implementation date of the margining requirements for covered agency transactions from October 26, 2022 until April 24, 2023. Once the margining requirements are effective, the FHLBanks may be required to collateralize their transactions that are covered agency transactions, which include to be announced transactions (TBAs). These collateralization requirements could have the effect of reducing the overall profitability of engaging in covered agency transactions, including TBAs. Further, the collateralization requirements would expose the FHLBanks to credit risk from their counterparties for such transactions.

Proposed Rule Implementing the Adjustable Interest Rate (LIBOR) Act. On July 28, 2022, the Federal Reserve Board published a proposed rule that would implement the Adjustable Interest Rate (LIBOR) Act. The proposed rule would provide default rules for certain contracts (covered contracts) that reference LIBOR, are governed by U.S. law, do not mature on or before the LIBOR replacement date, and lack adequate provisions to identify a replacement rate for LIBOR. The proposed rule identifies separate Federal Reserve Board-selected replacement rates for derivative transactions, covered GSE contracts, and all other covered contracts. The proposed rule defines covered GSE contracts to include FHLBank advances. The FHLBanks are reviewing the proposed rule, but are unable to determine the extent to which the rule will be adopted as proposed or the effect the final rule may have on them.

FHFA's Planned Review and Analysis of the FHLBank System. On July 20, 2022, FHFA Director Sandra L. Thompson provided testimony to the U.S. House Committee on Financial Services, indicating that the FHFA intends to conduct a review and analysis of the FHLBank System so as to ensure that the FHLBank System is positioned to continue to serve the needs of today and tomorrow. The FHFA plans to engage a variety of stakeholders, in addition to holding public listening sessions throughout the country, as part of the review and analysis. The review and analysis could examine matters ranging from the FHLBanks' membership base, operational efficiency, and effectiveness to more foundational questions about their mission, purpose, and organization. The FHLBanks are unable to determine at this time what actions, if any, may be implemented as a result of the FHFA's review and analysis or their potential effect on the FHLBanks.

External Credit Ratings

Since June 30, 2022, no changes to external credit ratings have occurred with regard to the FHLBanks or their consolidated obligations. At July 31, 2022, consolidated obligations were rated AA+/A-1+ by S&P and Aaa/P-1 by Moody's, with outlook stable. S&P, Moody's, or other rating organizations could downgrade or upgrade the credit ratings of the U.S. government and GSEs, including the FHLBanks and their consolidated obligations. Investors should note that a rating issued by a nationally recognized statistical rating organization is not a recommendation to buy, sell, or hold securities, and that the ratings may be revised or withdrawn at any time. Investors should evaluate the rating of each nationally recognized statistical rating organization independently. Investors should not take the historical or current ratings of the FHLBanks and their consolidated obligations as an indication of future ratings for the FHLBanks or their consolidated obligations. Table 27 presents each FHLBank's long-term credit rating, short-term credit rating, and outlook at July 31, 2022.

Table 27 - FHLBanks' Long-Term Credit Ratings, Short-Term Credit Ratings, and Outlook at July 31, 2022

	S&P		Moody's	
FHLBank	Long-Term/ Short-Term Rating	Outlook	Long-Term/ Short-Term Rating	Outlook
Boston	AA+/A-1+	Stable	Aaa/P-1	Stable
New York	AA+/A-1+	Stable	Aaa/P-1	Stable
Pittsburgh	AA+/A-1+	Stable	Aaa/P-1	Stable
Atlanta	AA+/A-1+	Stable	Aaa/P-1	Stable
Cincinnati	AA+/A-1+	Stable	Aaa/P-1	Stable
Indianapolis	AA+/A-1+	Stable	Aaa/P-1	Stable
Chicago	AA+/A-1+	Stable	Aaa/P-1	Stable
Des Moines	AA+/A-1+	Stable	Aaa/P-1	Stable
Dallas	AA+/A-1+	Stable	Aaa/P-1	Stable
Topeka	AA+/A-1+	Stable	Aaa/P-1	Stable
San Francisco	AA+/A-1+	Stable	Aaa/P-1	Stable

Risk Management

The fundamental business of each FHLBank is to provide a readily available, competitively-priced source of funds, in a wide range of maturities, to meet the borrowing demands of its members and housing associates. The principal sources of funds for these activities are the proceeds from the issuance of consolidated obligations and, to a lesser extent, capital and deposits from members. Lending and investing funds, and engaging in derivative transactions, can potentially expose the FHLBanks to a number of risks, including market risk and credit risk.

(See *Quantitative and Qualitative Disclosures about Market Risk* for a discussion of market risk.) The FHLBanks are also subject to liquidity, operational, and business risks. (See *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Risk Management* on pages 121 to 123, and *Risk Factors* on pages 28 to 40, of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for more information on these risks.)

Credit Risk

Advances. Each FHLBank manages its credit exposure to advances through an integrated approach that provides for the ongoing review of the financial condition of its borrowers coupled with collateral and lending policies and procedures designed to limit its risk of loss while balancing its borrowers' needs for a reliable source of funding. Each FHLBank uses a methodology to evaluate its borrowers, based on financial, regulatory, and other qualitative information, including examination reports. Each FHLBank reviews its borrowers' financial condition on an ongoing basis using current information and makes changes to its collateral guidelines to mitigate the credit risk on advances. As of June 30, 2022, the management of each FHLBank believed it had adequate policies and procedures in place to manage its credit risk on advances effectively.

The FHLBanks protect against credit risk on advances by collateralizing all advances. Advances and other credit product obligations to an FHLBank are fully secured with eligible collateral, the value of which is discounted to account for liquidation and other risks, if applicable, and to protect the FHLBanks from credit loss. Collateral that is determined to contain a low level of risk, such as U.S government obligations, is discounted at a lower rate than collateral that carries a higher level of risk, such as commercial real estate mortgage loans. Eligible collateral values are determined by the market value for securities collateral, and the market value or unpaid principal balance for all loan collateral. For collateral which market prices are not readily available, the FHLBanks may use internal or external valuation models or methodologies to determine the fair value of the collateral. These valuation models incorporate assumptions related to factors that may affect collateral values, such as market liquidity, discount rates, potential prepayments, and liquidation and servicing costs in the event of default, among others, which may be adjusted in response to changes in economic and market conditions in order to produce reliable results. The FHLBanks also have policies and procedures for validating the reasonableness of their collateral valuations. In addition, collateral verifications and on-site reviews are performed by the FHLBanks based on the risk profile of the borrower. As a result of stressed market conditions experienced at times during the COVID-19 pandemic, the FHLBanks have taken additional steps to monitor the credit risk on advances. These steps include increased frequency of collateral valuation and identifying, analyzing, and monitoring borrowers with higher risk profiles. At June 30, 2022, each FHLBank had rights to collateral with an estimated value greater than the related outstanding advances. (See *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Risk Management - Credit Risk - Advances* on pages 104 to 109 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for information on eligible collateral and effective lending values, and *Note 4 - Advances* to the accompanying combined financial statements for more information about advances.)

Residential mortgage loans are the principal form of collateral for advances. Collateral eligible to secure new or renewed advances includes:

- one-to-four family and multifamily mortgage loans (delinquent for no more than 90 days) and securities representing such mortgages;
- loans and securities issued, 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 FHLBank;

- certain other collateral that is real estate-related, such as commercial real estate loans, provided it meets certain eligibility requirements; and

- certain qualifying securities representing undivided equity interests in eligible advance collateral.

To support small and community banks during the COVID-19 pandemic, beginning in 2020, the FHFA permitted the FHLBanks to accept PPP loans as collateral for advances, subject to certain conditions.

As of June 30, 2022, there were 97 individual FHLBank borrowers (96 FHLBank members and 1 non-member) that each held advances of at least $1.0 billion. When a non-member financial institution acquires some or all of the assets and liabilities of an FHLBank member, including outstanding advances and FHLBank capital stock, an FHLBank may allow those advances to remain outstanding to that non-member financial institution. In addition, members that voluntarily or involuntarily terminate membership, such as captive insurers, can be non-members with advances outstanding. Non-members would be required to meet all of that FHLBank's credit and collateral requirements, including requirements regarding creditworthiness and collateral borrowing capacity.

A borrower's total credit obligation to an FHLBank could include outstanding advances, notional amount of letters of credit, collateralized derivative contracts, and credit enhanced obligations on mortgage loans sold to the FHLBank. Eligible collateral values include market values for securities and the unpaid principal balance for all other collateral pledged by the blanket lien, listing, or delivery method. The collateralization ratio for borrowers with at least $1.0 billion in advances outstanding was 3.1 at June 30, 2022, which represented the total of these 97 individual FHLBank borrowers' eligible collateral divided by these borrowers' advances and other credit products outstanding. The collateralization ratio for all borrowers was 3.8 at June 30, 2022. However, individual borrower credit obligations to the FHLBanks are not cross-collateralized between borrowers.

Table 28 presents advances, other credit products (which primarily includes notional amount of letters of credit), and collateral outstanding for borrowers with at least $1.0 billion of advances outstanding as compared to all borrowers.

Table 28 - Advances, Other Credit Products, and Collateral Outstanding at June 30, 2022
(dollars in millions)

	Borrowers with at Least $1.0 Billion of Advances Outstanding	All Borrowers	Percentage
Advances outstanding, principal amount	$ 362,255	$ 523,645	69.2 %
Other credit products	$ 44,900	$ 140,882	31.9 %
Collateral outstanding	$ 1,246,856	$ 2,526,659	49.3 %

Based on the financial condition of the borrower, each FHLBank classifies each borrower by the method of pledging collateral into one of three collateral categories: (1) blanket lien status; (2) listing (specific identification) status; or (3) delivery (possession) status. The blanket lien status is the least restrictive collateral status, and is generally assigned to lower risk institutions pledging collateral. Under the blanket lien status, an individual FHLBank allows a borrower to retain possession of eligible collateral pledged to that FHLBank, provided the borrower executes a written security agreement and agrees to hold the collateral for the benefit of that FHLBank. Origination of new advances or renewal of advances must only be supported by certain eligible collateral categories. A blanket lien is typically accepted by the FHLBanks only for loan collateral; most securities collateral must be delivered to an FHLBank, or an FHLBank-approved third-party custodian, and pledged for the benefit of that FHLBank.

An FHLBank may require borrowers to provide a detailed listing of eligible advance collateral being pledged to the FHLBank due to their high usage of FHLBank credit products, the type of assets being pledged, or the credit condition of the borrower. Under the listing status, the borrower retains physical possession of specific collateral pledged to an FHLBank, but the borrower provides listings of loans pledged to its FHLBank with detailed loan information, such as loan amount, payments, maturity date, interest rate, loan-to-value, collateral type, and FICO® scores. From a borrower's perspective, the benefit of listing collateral relative to a blanket lien security agreement is that, in some cases, the discount or haircut applicable to that collateral may be lower than that for blanket lien collateral. From an FHLBank's perspective, the benefit of listing collateral is that it provides more detailed loan information to arrive at a more precise valuation.

Under the delivery status, an FHLBank requires the borrower to place physical possession of eligible collateral with the FHLBank or a third-party custodian to sufficiently secure all outstanding obligations. Typically, an FHLBank would take physical possession or control of collateral if the financial condition of the borrower was deteriorating or if the borrower exceeded certain credit product usage triggers. However, an FHLBank may require insurance company borrowers, and certain other borrowers, to place physical possession of all pledged eligible collateral with the FHLBank or deposit it with a custodian or control agent in order to establish control over the pledged collateral. Delivery of collateral may also be required if there is a regulatory action against the borrower by its regulator that would indicate inadequate controls or other conditions that would be of concern to that FHLBank.

Table 29 presents information on a combined basis regarding the type of collateral securing advances and other credit products outstanding.

Table 29 - Type of Collateral Securing Advances and Other Credit Products Outstanding at June 30, 2022

(dollars in millions)

	Blanket Lien		Listing		Delivery		Total	
Collateral Type	**Amount**	**Percentage**	**Amount**	**Percentage**	**Amount**	**Percentage**	**Amount**	**Percentage**
Single-family mortgage loans(1)	$ 548,383	21.7%	$ 668,758	26.6%	$ 4,218	0.2%	$ 1,221,359	48.5%
Commercial real estate loans	374,254	14.8%	124,423	4.9%	45,246	1.8%	543,923	21.5%
Multifamily mortgage loans	83,513	3.3%	124,553	4.9%	23,472	0.9%	231,538	9.1%
U.S. agency MBS and CMOs	n/a	n/a	n/a	n/a	187,511	7.5%	187,511	7.5%
Home equity loans and lines of credit	53,301	2.1%	60,506	2.4%	6	—	113,813	4.5%
Other real estate loans	63,555	2.5%	13,228	0.5%	4,206	0.2%	80,989	3.2%
Commercial MBS	n/a	n/a	n/a	n/a	33,615	1.3%	33,615	1.3%
CFI loans	29,741	1.2%	1,041	—	7	—	30,789	1.2%
U.S. obligations	n/a	n/a	n/a	n/a	26,705	1.1%	26,705	1.1%
U.S. agency securities (excluding MBS)	n/a	n/a	n/a	n/a	18,515	0.7%	18,515	0.7%
Private-label MBS and CMOs	n/a	n/a	n/a	n/a	12,801	0.5%	12,801	0.5%
Other(2)	543	—	1,038	—	23,520	0.9%	25,101	0.9%
Total collateral	**$ 1,153,290**	**45.6%**	**$ 993,547**	**39.3%**	**$ 379,822**	**15.1%**	**$ 2,526,659**	**100.0%**

(1) Includes Federal Housing Administration and Department of Veterans Affairs loans.
(2) Includes PPP loans.
n/a Collateral is not pledged using this pledging method.

Figures 26 and 27 present the percentage of collateral securing advances and other credit products by type and the percentage of collateral securing advances and other credit products by pledging method at June 30, 2022.

Figure 26 - Percentage of Collateral Securing Advances and Other Credit Products by Type

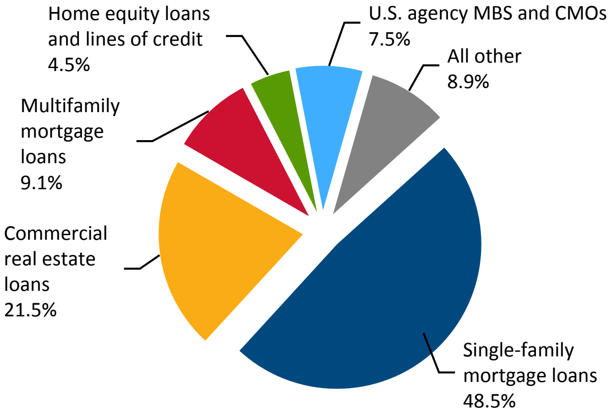
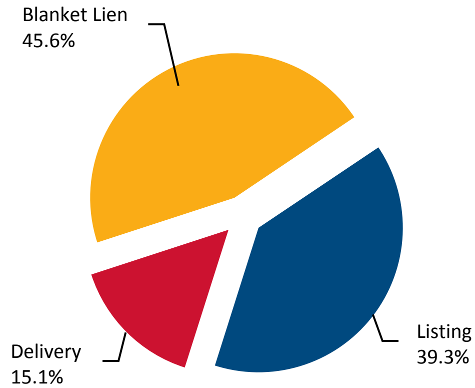


Figure 27 - Percentage of Collateral Securing Advances and Other Credit Products by Pledging Method



Investments. The FHLBanks are subject to credit risk on investments consisting of investment securities, interest-bearing deposits, securities purchased under agreements to resell, and federal funds sold. These investments are generally transacted with government agencies and large financial institutions that are considered by an individual FHLBank to be of investment quality. FHFA regulation defines investment quality as a determination by an FHLBank, with respect to a security, that there is adequate financial backing so that full and timely payment of principal and interest on such a security is expected, and the FHLBank determines that there is minimal risk that the timely payment of principal and interest would not occur because of adverse changes in economic and financial conditions during the projected life of the security.

The FHLBanks maintain short-term investment portfolios, the proceeds of which may provide funds to meet the credit needs of their members and to maintain liquidity. Within this portfolio of short-term investments, the FHLBanks may have unsecured credit exposure on certain investments.

The FHLBanks maintain long-term investment portfolios as an additional source of liquidity and to earn interest income. These investments generally provide the FHLBanks with higher returns than those available on short-term investments. Within this portfolio of long-term investments, the FHLBanks are subject to credit risk related to private-label mortgage-backed securities that are either directly or indirectly supported by underlying mortgage loans as well as certain credit protections or enhancements.

Regulatory Restrictions on Investments. To minimize credit risk on investments, the FHLBanks are prohibited by FHFA regulations from investing in certain security types. (See *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Risk Management - Credit Risk - Investments* on pages 109 to 110 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for additional information about regulatory restrictions on the FHLBanks' investments.)

Investment Quality and Ratings. The FHLBanks seek to reduce the credit risk by investing in investment-quality securities. The FHLBanks consider a variety of credit quality factors when analyzing potential investments, including collateral performance, marketability, asset class or sector considerations, local and regional economic conditions, credit ratings based on the nationally recognized statistical rating organization(s), or the financial health of the underlying issuer. Although the FHLBanks invested in private-label mortgage-backed securities that at the date of purchase were substantially all rated triple-A, many of these securities have incurred credit losses based on economic conditions and housing market trends since the FHLBanks originally purchased them. Figure 28 presents the composition of total investments by credit rating at June 30, 2022.

Figure 28 - Total Investments by Credit Rating

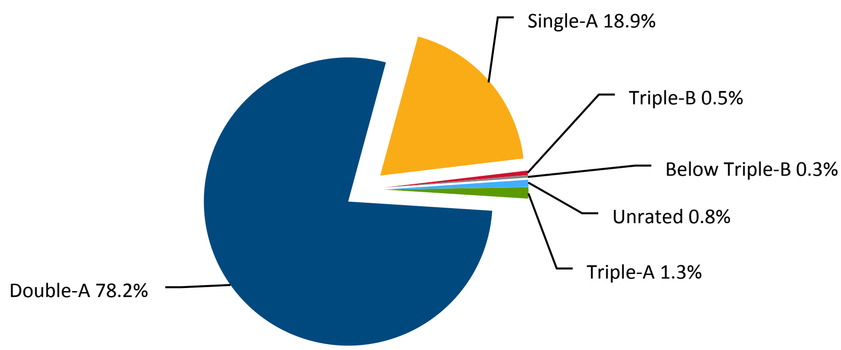


Table 30 presents the credit ratings of investments held by the FHLBanks as of June 30, 2022, using the lowest long-term credit rating for each security owned by an individual FHLBank based on the nationally recognized statistical rating organization(s) used by that FHLBank. The internal ratings of an individual FHLBank may differ from those obtained from the nationally recognized statistical rating organization(s) and other FHLBank internal ratings. Investors should not take the historical or current ratings displayed in this table as an indication of future ratings.

Table 30 - Investment Ratings

(dollars in millions)

	June 30, 2022(1)(2)						
Carrying Value, Net	**Triple-A**	**Double-A**	**Single-A**	**Triple-B**	**Below Triple-B**	**Unrated**	**Total**
Interest-bearing deposits	$ —	$ 400	$ 8,965	$ 283	$ —	$ —	$ 9,648
Securities purchased under agreements to resell	2,600	77,277	9,345	—	—	2,100	91,322
Federal funds sold	—	20,327	49,692	1,631	—	—	71,650
Investment securities by major security type							
Non-mortgage backed securities							
Certificates of deposit	—	150	490	—	—	—	640
U.S. Treasury obligations	—	46,977	—	—	—	—	46,977
Other U.S. obligations	—	3,415	—	—	—	—	3,415
GSE and Tennessee Valley Authority obligations	—	11,558	—	—	—	—	11,558
State or local housing agency obligations	586	1,536	1	1	—	—	2,124
Federal Family Education Loan Program ABS	—	2,539	—	—	—	—	2,539
Other	759	45	—	—	—	1	805
Total non-mortgage-backed securities	**1,345**	**66,220**	**491**	**1**	**—**	**1**	**68,058**
Mortgage-backed securities							
U.S. obligations single-family	—	7,394	—	—	—	—	7,394
U.S. obligations multifamily	—	519	—	—	—	—	519
GSE single-family	5	14,205	3	—	2	—	14,215
GSE multifamily	683	96,923	—	—	—	—	97,606
Private-label	—	41	115	69	944	650	1,819
Total mortgage-backed securities	**688**	**119,082**	**118**	**69**	**946**	**650**	**121,553**
Total investment securities	**2,033**	**185,302**	**609**	**70**	**946**	**651**	**189,611**
Total investments	**$ 4,633**	**$ 283,306**	**$ 68,611**	**$ 1,984**	**$ 946**	**$ 2,751**	**$ 362,231**

(1) Does not reflect any changes in ratings, outlook, or watch status occurring after June 30, 2022.
(2) Net carrying values do not include related accrued interest and are presented after any allowance for credit losses.

Short-term Investments. The FHLBanks maintain short-term investment portfolios, the proceeds of which may provide funds to meet the credit needs of their members and to maintain liquidity. The FHLBank Act and FHFA regulations set liquidity requirements for the FHLBanks, and an individual FHLBank's board of directors may also adopt additional liquidity policies. In addition, each FHLBank maintains a contingency funding plan in the event of operational disruptions at either the FHLBanks or the Office of Finance. (See *Liquidity and Capital Resources* for a discussion of the FHLBanks' liquidity management.)

Within the portfolio of short-term investments, the FHLBanks are subject to credit risk from unsecured credit exposures with private counterparties. Each FHLBank manages its own credit risk independently. The FHLBanks' unsecured credit investments may have maturities ranging between overnight and nine months, and generally include the following types:

- Interest-bearing deposits. Primarily consists of unsecured deposits that earn interest.

- Federal funds sold. Unsecured loans of reserve balances at the Federal Reserve Banks between financial institutions that are made on an overnight and term basis.

- Certificates of deposit. Unsecured negotiable promissory notes issued by banks and payable to the bearer on demand.

Table 31 presents the FHLBanks' unsecured credit exposure with private counterparties by investment type. At June 30, 2022, the FHLBanks had aggregate unsecured credit exposure from investments of $1 billion or more to each of 18 private counterparties. The aggregate unsecured credit exposure to these counterparties represented 91% of the FHLBanks' total unsecured investment credit exposure to private counterparties. The unsecured investment credit exposure presented in Table 31 does not reflect the average or maximum exposure during the period, as the balances presented reflect the balances at period end.

Table 31 - Unsecured Credit Exposure by Investment Type

(dollars in millions)

Carrying Value(1)(2)	June 30, 2022	December 31, 2021
Interest-bearing deposits	$ 9,648	$ 6,382
Federal funds sold	71,650	47,360
Certificates of deposit	640	200
Total	**$ 81,938**	**$ 53,942**

(1) Excludes unsecured investment credit exposure to U.S. government, U.S. government agencies, government instrumentalities, government-sponsored enterprises, and supranational entities, and does not include related accrued interest.
(2) May include unsecured investment credit exposure to members.

Each FHLBank actively monitors its credit exposures and the credit quality of its counterparties, including an assessment of each counterparty's financial performance, capital adequacy, sovereign support, and the current market perceptions of the counterparties. General macroeconomic, political, and market conditions may also be considered when deciding on unsecured exposure. As a result, the FHLBanks may limit or suspend existing exposures.

FHFA regulations include limits on the amount of unsecured credit an individual FHLBank may extend to a counterparty or to a group of affiliated counterparties. The limit on the amount of unsecured credit extended to a counterparty is calculated by multiplying the eligible capital by the maximum capital exposure limit applicable to the counterparty. Under these regulations, the level of eligible capital is determined as the lesser of an individual FHLBank's total regulatory capital or the eligible amount of Tier 1 capital or regulatory capital of the counterparty. The maximum capital exposure limit is based on the counterparty's overall FHFA credit rating and ranges from 1%

to 15%. Extensions of unsecured credit by an individual FHLBank to a counterparty arise from on-balance sheet transactions, off-balance sheet commitments, and derivative transactions. (See *Credit Risk - Derivative Counterparties* for additional information related to derivatives exposure.)

FHFA regulations also permit the FHLBanks to extend additional unsecured credit for sales of federal funds with a maturity of one day or less and sales of federal funds subject to a continuing contract that renews automatically. An FHLBank's total unsecured exposure to a counterparty may not exceed twice the regulatory limit for term exposures, or a total of 2% to 30% of the eligible amount of capital, based on the counterparty's credit rating. As of June 30, 2022, each of the FHLBanks was in compliance with the regulatory limits established for unsecured credit.

The FHLBanks are prohibited by FHFA regulations from investing in financial instruments issued by non-U.S. entities, other than those issued by U.S. branches and agency offices of foreign commercial banks. The FHLBanks' unsecured credit exposures to U.S. branches and agency offices of foreign commercial banks include the risk that, as a result of political or economic conditions in a country, the counterparty may be unable to meet its contractual repayment obligations. The FHLBanks' unsecured credit exposures to domestic counterparties and U.S. subsidiaries of foreign commercial banks include the risk that these counterparties have extended credit to foreign counterparties. As of June 30, 2022, an FHLBank held full faith and credit U.S. guaranteed securities with foreign issuers totaling $287 million. Other than these investments, the FHLBanks were in compliance with the FHFA regulation as of June 30, 2022.

As of June 30, 2022, the FHLBanks' unsecured investment credit exposure to U.S. branches and agency offices of foreign commercial banks was comprised of federal funds sold and certificates of deposit. As of June 30, 2022, 88% of the FHLBanks' unsecured investments in federal funds sold and 61% of the FHLBanks' unsecured investments in certificates of deposit were to U.S. branches and agency offices of foreign commercial banks.

Figures 29 and 30 present total unsecured investment credit exposure by credit rating and by contractual maturity at June 30, 2022.

Figure 29 - Total Unsecured Investment Credit Exposure by Credit Rating

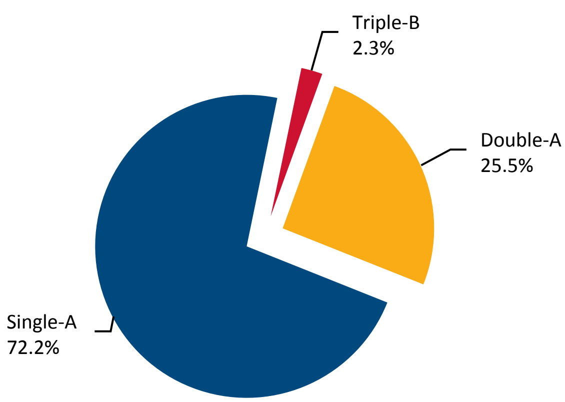


Figure 30 - Total Unsecured Investment Credit Exposure by Contractual Maturity

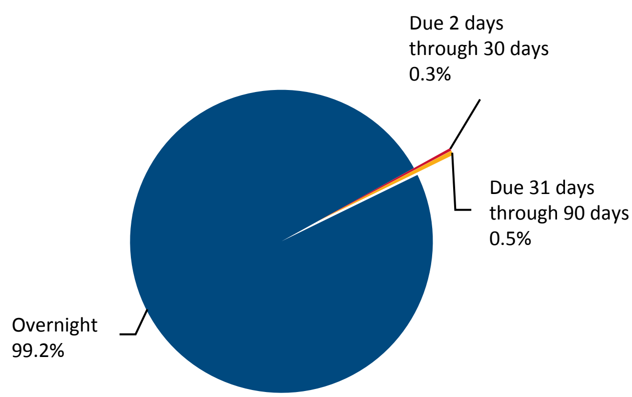


Table 32 presents the lowest long-term credit ratings of the unsecured investment credit exposures presented by the domicile of the counterparty or the domicile of the counterparty's immediate parent for U.S. branches and agency offices of foreign commercial banks based on the nationally recognized statistical rating organization(s) used by the individual FHLBank holding the investment. This table does not reflect the foreign sovereign government's credit rating. The internal ratings of an individual FHLBank may differ from those obtained from the nationally recognized statistical rating organization(s) and other FHLBank internal ratings. Investors should not take the historical or current ratings displayed in this table as an indication of future ratings.

Table 32 - Ratings of Unsecured Investment Credit Exposure by Domicile of Counterparty at June 30, 2022[(1)]
(dollars in millions)

	Investment Grade			
Carrying Value(2)	**Double-A**	**Single-A**	**Triple-B**	**Total**
Domestic	$ 650	$ 15,190	$ 1,914	$ 17,754
U.S. subsidiaries of foreign commercial banks	—	750	—	750
Total domestic and U.S. subsidiaries of foreign commercial banks	**650**	**15,940**	**1,914**	**18,504**
U.S. branches and agency offices of foreign commercial banks				
Canada	6,885	17,086	—	23,971
Australia	4,882	7,448	—	12,330
Finland	6,160	—	—	6,160
Netherlands	—	5,590	—	5,590
Germany	1,400	2,670	—	4,070
United Kingdom	—	3,615	—	3,615
France	—	2,538	—	2,538
Sweden	150	2,355	—	2,505
Switzerland	—	1,000	—	1,000
Norway	750	—	—	750
Chile	—	705	—	705
Belgium	—	200	—	200
Total U.S. branches and agency offices of foreign commercial banks	**20,227**	**43,207**	**—**	**63,434**
Total unsecured investment credit exposure	**$ 20,877**	**$ 59,147**	**$ 1,914**	**$ 81,938**

(1) Does not reflect any changes in ratings, outlook, or watch status occurring after June 30, 2022.
(2) Excludes unsecured investment credit exposure to U.S. government, U.S. government agencies, government instrumentalities, government-sponsored enterprises, and supranational entities, and does not include related accrued interest.

Table 33 presents the contractual maturity of the FHLBanks' 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. The FHLBanks also reduce the credit risk on investments by generally investing in investments that have short-term maturities. At June 30, 2022, 99% of the carrying value of the total unsecured investments held by the FHLBanks had overnight maturities.

Table 33 - Contractual Maturity of Unsecured Investment Credit Exposure by Domicile of Counterparty at June 30, 2022

(dollars in millions)

Carrying Value(1)	Overnight	Due 2 days through 30 days	Due 31 days through 90 days	Total
Domestic	$ 17,754	$ —	$ —	$ 17,754
U.S. subsidiaries of foreign commercial banks	500	—	250	750
Total domestic and U.S. subsidiaries of foreign commercial banks	**18,254**	**—**	**250**	**18,504**
U.S. branches and agency offices of foreign commercial banks				
Canada	23,971	—	—	23,971
Australia	12,330	—	—	12,330
Finland	6,160	—	—	6,160
Netherlands	5,590	—	—	5,590
Germany	3,830	240	—	4,070
United Kingdom	3,615	—	—	3,615
France	2,538	—	—	2,538
Sweden	2,355	—	150	2,505
Switzerland	1,000	—	—	1,000
Norway	750	—	—	750
Chile	705	—	—	705
Belgium	200	—	—	200
Total U.S. branches and agency offices of foreign commercial banks	**63,044**	**240**	**150**	**63,434**
Total unsecured investment credit exposure	**$ 81,298**	**$ 240**	**$ 400**	**$ 81,938**

(1) Excludes unsecured investment credit exposure to U.S. government, U.S. government agencies, government instrumentalities, government-sponsored enterprises, and supranational entities and does not include related accrued interest.

Mortgage Loans Held for Portfolio. The FHFA's Acquired Member Asset (AMA) regulation permits the FHLBanks to purchase and hold specified mortgage loans from their members. Each FHLBank has established or participated in the Acquired Member Asset programs such as the MPF Program and MPP as services to their members. The FHLBank of San Francisco discontinued purchasing new mortgage loans in the MPF Program during 2021. In addition, the FHLBank of New York implemented the MAP in order to replace its participation in the MPF Program beginning in March 2021. Members and eligible housing associates may apply to become a participating financial institution (PFI) of their respective FHLBank. The mortgage loans purchased under these programs may carry more credit risk than advances, even though the respective member or housing associate provides credit enhancement and bears a portion of the credit risk.

The FHFA's AMA regulation on credit risk sharing allows an FHLBank to utilize its choice of model and methodology to determine the credit enhancement for AMA loan assets and pool loans. The assets delivered must be credit enhanced by the members up to an FHLBank determined "AMA investment-grade" instead of a specific nationally recognized statistical rating organization's ratings.

Management at each FHLBank believes that it has adequate policies and procedures in place to manage credit risk on mortgage loans appropriately. (See *Note 5 - Mortgage Loans* to the accompanying combined financial statements for additional information about mortgage loan payment status, allowance for credit losses, and other delinquency statistics.)

See Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Risk Management - Credit Risk - Mortgage Loans Held for Portfolio on pages 115 to 119 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for additional information on credit risk of mortgage loans held for portfolio, including loss allocation structures, mortgage insurance, and state concentrations of MPF Program, MPP, and MAP loans.

Derivative Counterparties. Each FHLBank transacts most of its derivatives with large banks and major broker-dealers. Derivative transactions may be either executed with a counterparty, referred to as uncleared derivatives, or cleared through a Futures Commission Merchant (i.e., clearing agent) with a Derivative Clearing Organization, referred to as cleared derivatives.

Each FHLBank is subject to credit risk due to the risk of non-performance by counterparties to its derivative transactions. The amount of credit risk on derivatives depends on the extent to which netting procedures, collateral requirements, and other credit enhancements are used and are effective in mitigating the risk. Each FHLBank manages credit risk through credit analysis, collateral management, and other credit enhancements. The FHLBanks are also required to follow the requirements set forth by applicable regulation.

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

Uncleared Derivatives. Each FHLBank is subject to the risk of non-performance by the counterparties to its uncleared derivative transactions. An FHLBank generally requires collateral on uncleared derivative transactions. Unless the collateral delivery threshold is set to zero, the amount of net unsecured credit exposure that is permissible with respect to each counterparty may depend on the credit rating of that counterparty. A counterparty generally must deliver collateral if the total market value of the FHLBank's exposure to that counterparty rises above a specific threshold. As a result of these risk mitigation initiatives, the management of each FHLBank did not anticipate any credit losses on its uncleared derivative transactions as of June 30, 2022.

Cleared Derivatives. Each FHLBank is subject to the risk of non-performance by the Derivative Clearing Organization(s) (Clearinghouse) and the clearing agents. The requirement that an FHLBank posts initial and variation margin through the clearing agent, to the Clearinghouse, exposes an FHLBank to credit risk in the event that the clearing agent or the Clearinghouse fails to meet its obligations. However, the use of cleared derivatives is intended to mitigate an FHLBank's overall credit risk exposure because a central counterparty is substituted for individual counterparties and collateral/payment is posted daily for changes in the value of cleared derivatives through a clearing agent. The management of each FHLBank did not anticipate any credit losses on its cleared derivatives as of June 30, 2022.

Table 34 presents the derivative positions with non-member counterparties and member institutions to which the FHLBanks had credit exposure at June 30, 2022. The ratings presented in this table represent the lowest long-term counterparty credit rating available for each counterparty of an individual FHLBank, based on the nationally recognized statistical rating organization(s) used by that FHLBank. Investors should not take the historical or current ratings displayed in this table as an indication of future ratings.

Table 34 - Derivative Counterparty Credit Exposure at June 30, 2022
(dollars in millions)

Credit Rating(1)	Notional Amount	Net Derivatives Fair Value Before Collateral	Cash Collateral Pledged To (From) Counterparties	Non-cash Collateral Pledged To (From) Counterparties	Net Credit Exposure to Counterparties
Non-member counterparties					
Asset positions with credit exposure					
Uncleared derivatives					
Single-A	$ 7,053	$ 47	$ (42)	$ —	$ 5
Cleared derivatives(2)	1,824	5	3	25	33
Liability positions with credit exposure					
Uncleared derivatives					
Single-A	198,748	(6,857)	7,589	(111)	621
Triple-B	53,213	(2,257)	2,424	—	167
Cleared derivatives(2)	481,365	(763)	2,167	1,978	3,382
Total derivative positions with credit exposure to non-member counterparties	**742,203**	**(9,825)**	**12,141**	**1,892**	**4,208**
Member institutions(3)	425	3	—	—	3
Consolidated obligation bond firm commitment	400	1	12	—	13
Total	**$ 743,028**	**$ (9,821)**	**$ 12,153**	**$ 1,892**	**$ 4,224**

(1) This table does not reflect any changes in rating, outlook, or watch status occurring after June 30, 2022.
(2) Represents derivative transactions cleared with LCH Ltd. and CME Clearing, the FHLBanks' clearinghouses. LCH Ltd. is rated AA- by S&P and CME Clearing is not rated, but its parent company, CME Group Inc., is rated Aa3 by Moody's and AA- by S&P.
(3) Member institutions include mortgage delivery commitments and derivatives with members where an FHLBank is acting as an intermediary. Collateral held with respect to derivatives with member institutions where an FHLBank is acting as an intermediary represents the amount of eligible collateral physically held by or on behalf of the FHLBank or collateral assigned to the FHLBank, as evidenced by a written security agreement, and held by the member institution for the benefit of that FHLBank.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Each FHLBank is responsible for establishing its own risk management philosophies, practices, and policies. Each FHLBank describes its risk management policies for its business, including quantitative and qualitative disclosures about its market risk, in its periodic reports filed with the SEC. (See *Explanatory Statement about Federal Home Loan Banks Combined Financial Report*.)

Each FHLBank has established policies and procedures to evaluate, manage, and mitigate market risks. The FHFA has established regulations governing the risk management practices of the FHLBanks. The FHLBanks must file periodic compliance reports with the FHFA. The FHFA conducts annual on-site examinations, interim on-site visits, and off-site analyses of each of the FHLBanks and the Office of Finance.

Interest-Rate Risk

Interest-rate risk is the risk that relative and absolute changes in interest rates may adversely affect an institution's financial condition and results of operations. The goal of an interest-rate risk management strategy is not necessarily to eliminate interest-rate risk, but to manage it by setting, and operating within, an appropriate framework and limits. The FHLBanks generally manage interest-rate risk by acquiring and maintaining a portfolio of assets and liabilities and entering into related derivative transactions to limit the expected mismatches in duration and market value of equity sensitivity. The FHLBanks measure and monitor interest-rate risk with commonly used methods, which include the calculations of market value of equity, duration of equity, and duration gap. (See *Quantitative and Qualitative Disclosures about Market Risk* on pages 124 to 133 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for additional information.)

Transition from LIBOR to an Alternative Reference Rate

In July 2017, the United Kingdom's Financial Conduct Authority, which regulates LIBOR, announced that after 2021 it would no longer persuade or compel banks to submit rates for the calculation of LIBOR. In March 2021, the Financial Conduct Authority further announced that LIBOR would either cease to be provided by any administrator or no longer be representative immediately after December 31, 2021 (or, in the case of some more frequently used U.S. dollar LIBOR settings, immediately after June 30, 2023). Under those announcements, the one-week and two-month U.S. dollar LIBOR settings and all non-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 Financial Conduct Authority does not expect these remaining U.S. dollar 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 response to the announcement by the Financial Conduct Authority in July 2017, the Federal Reserve Board and the Federal Reserve Bank of New York convened the Alternative Reference Rates Committee to identify a set of alternative reference interest rates for possible use as market benchmarks. This committee has proposed SOFR as its recommended alternative to U.S. dollar LIBOR, and the Federal Reserve Bank of New York began publishing SOFR rates in the second quarter of 2018. SOFR is based on a broad segment of the overnight Treasury repurchase market and is intended to be a measure of the cost of borrowing cash overnight collateralized by Treasury securities.

Many of the FHLBanks' financial instruments are indexed to LIBOR, with exposure extending past June 30, 2023. The FHLBanks have been evaluating and planning for the eventual replacement of the LIBOR benchmark interest rate, including the possibility of SOFR as the dominant replacement. As a result, each of the FHLBanks and the Office of Finance has developed and implemented a LIBOR transition plan, which addresses considerations such as LIBOR exposure, fallback language, operational preparedness, and balance sheet management. As a result of implementing these plans, the FHLBanks have significantly reduced their LIBOR exposure on financial instruments, in particular consolidated obligations. The last of the FHLBanks' consolidated obligations indexed to LIBOR matured during January 2022.

In assessing their exposure to LIBOR, the FHLBanks have developed inventories of affected financial instruments and identified contracts that may require adding or adjusting the fallback language, including advances, investment securities, consolidated bonds, and derivatives. In addition, the FHLBanks have added or adjusted fallback language related to a majority of their advances to members and added or adjusted fallback language applicable to their consolidated bonds. In October 2020, LCH Ltd. and CME Clearing, the FHLBanks' clearinghouses, transitioned the rate for discounting all U.S. dollar interest rate cleared swaps to SOFR. The FHLBanks have also adhered to the ISDA 2020 Interbank Offered Rate Fallbacks Protocol and will work with its counterparties, as necessary, to address its over-the-counter derivative agreements referencing U.S. dollar LIBOR as a part of its LIBOR transition efforts. The FHLBanks continue to monitor the market-wide efforts to address fallback language related to derivatives and investment securities, as well as fallback language for new activities and issuances of financial instruments.

Market activity in SOFR-indexed financial instruments continues and during the six months ended June 30, 2022 and 2021, the FHLBanks issued $77.7 billion and $45.0 billion in SOFR-linked consolidated bonds. The FHLBanks have implemented the Overnight Index Swap (OIS) as an alternative interest-rate hedging strategy for certain financial instruments rather than use LIBOR when entering into new derivative transactions. In addition, a SOFR-based derivative market has emerged and the FHLBanks use SOFR-based derivatives to manage interest-rate risk. The FHLBanks offer SOFR-linked advances to their members, and during the six months ended June 30, 2022 and 2021, the FHLBanks issued $67.7 billion and $8.4 billion in SOFR-linked advances.

In September 2019, the FHFA issued a supervisory letter to the FHLBanks providing LIBOR transition guidance. The supervisory letter states that by March 31, 2020, the FHLBanks should no longer enter into new financial assets, liabilities, and derivatives that reference LIBOR and mature after December 31, 2021, for all product types except investments. By December 31, 2019, the FHLBanks should stop purchasing investments that reference LIBOR and mature after December 31, 2021. On March 16, 2020, the FHFA extended to June 30, 2020, the FHLBanks' ability to enter into LIBOR-based instruments that mature after December 31, 2021, except for investments and option embedded products. Furthermore, in July 2021, the FHFA issued a supervisory letter to the FHLBanks providing its expectations regarding the use of alternative reference rates in connection with the FHLBanks' LIBOR transition, including outlining considerations that the FHLBanks should address before selecting an alternative reference rate. The supervisory letter requires the FHLBanks to provide advance notice to the FHFA of plans to use an alternative reference rate not already being used by the FHLBanks.

See Risk Factors - Business Risk - Legislative and Regulatory on pages 30 to 32 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for additional information on how changes to and the replacement of the LIBOR benchmark interest rate could adversely affect the FHLBanks' businesses, financial condition and results of operations.

At June 30, 2022, the FHLBanks had LIBOR exposure related to advances, investment securities, and derivatives with interest rates indexed to LIBOR. Table 35 presents LIBOR-indexed variable-rate financial instruments and interest-rate swaps with LIBOR exposure at June 30, 2022.

Table 35 - Financial Instruments and Interest-Rate Swaps with LIBOR Exposure

(dollars in millions)

	June 30, 2022			
	LIBOR Tenors That Cease or Will no Longer be Representative Immediately After June 30, 2023			
	Due/Terminates in 2022	Due/Terminates through June 30, 2023	Due/Terminates thereafter	Total
Assets with LIBOR exposure				
Advances by redemption term (principal amount)	$ 577	$ 494	$ 7,047	$ 8,118
Investment securities by contractual maturity (principal amount)(1)				
Non-mortgage-backed securities	300	58	3,961	4,319
Mortgage-backed securities	20	181	33,987	34,188
Total investment securities	**320**	**239**	**37,948**	**38,507**
LIBOR-indexed interest-rate swaps notional amount (receive leg)				
Cleared	4,324	4,841	36,803	45,968
Uncleared	749	1,611	18,355	20,715
Total interest-rate swaps	**5,073**	**6,452**	**55,158**	**66,683**
Total principal/notional amount	**$ 5,970**	**$ 7,185**	**$ 100,153**	**$ 113,308**
Liabilities with LIBOR exposure				
LIBOR-indexed interest-rate swaps notional amount (pay leg)				
Cleared	$ 4,750	$ 3,926	$ 3,009	$ 11,685
Uncleared	159	442	780	1,381
Total interest-rate swaps notional amount	**$ 4,909**	**$ 4,368**	**$ 3,789**	**$ 13,066**

(1) MBS and Federal Family Education Loan Program ABS 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.

In addition to LIBOR-indexed interest-rate swaps included in Table 35, the FHLBanks have other derivatives with LIBOR exposure at June 30, 2022. Table 36 presents the notional amount of other derivatives with LIBOR exposure at June 30, 2022.

Table 36 - Notional Amount of Other Derivatives with LIBOR Exposure

(dollars in millions)

	June 30, 2022			
	LIBOR Tenors That Cease or Will no Longer be Representative Immediately After June 30, 2023			
	Due/Terminates in 2022	Due/Terminates through June 30, 2023	Due/Terminates thereafter	Total
Interest-rate swaptions	$ —	$ —	$ 355	$ 355
Interest-rate caps or floors	70	340	6,865	7,275
Total notional amount of other derivatives with LIBOR exposure	**$ 70**	**$ 340**	**$ 7,220**	**$ 7,630**

Market Value of Equity and Duration of Equity

Each FHLBank has an internal modeling system for measuring its duration of equity; therefore, individual FHLBank measurements may not be directly comparable. Generally, duration of equity equals the market value-weighted duration of assets minus the market value-weighted duration of liabilities (factoring in the effect of derivatives), divided by the market value of equity. Each FHLBank reports the results of its duration of equity calculations to the FHFA each quarter. However, not all FHLBanks manage to the duration of equity risk measure. The capital adequacy rules of the FHFA require each FHLBank to hold permanent capital in an amount sufficient to cover the sum of its credit, market, and operational risk-based capital requirements, which are defined by applicable regulations. (See *Note 9 - Capital* to the accompanying combined financial statements for additional information.) Each FHLBank has implemented a market-risk model that calculates the market-risk component of this requirement.

Table 37 presents each FHLBank that includes quantitative market value of equity and duration of equity information in its individual 2022 Second Quarter SEC Form 10-Q.

Table 37 - Individual FHLBank's Market Value of Equity and Duration of Equity Disclosures

FHLBank	Market Value of Equity	Duration of Equity
Boston	(1)	(1)
New York	✓	✓
Pittsburgh	(2)	✓
Atlanta	✓	✓
Cincinnati	✓	✓
Indianapolis	✓	✓
Chicago	(3)	✓
Des Moines	✓	(4)
Dallas	✓	(5)
Topeka	(6)	✓
San Francisco	✓	(7)

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(1) The FHLBank of Boston monitors and measures market value of equity, duration of equity, and duration gap, as described in its 2022 Second Quarter SEC Form 10-Q. In addition, the FHLBank of Boston also monitors adjusted market value of equity, adjusted duration of equity, and adjusted duration gap. See the FHLBank of Boston's 2022 Second Quarter SEC Form 10-Q for additional information.
(2) The FHLBank of Pittsburgh monitors and measures market value of equity to par value of capital stock, as described in its 2022 Second Quarter SEC Form 10-Q. In addition, the FHLBank of Pittsburgh also monitors return on equity spread volatility relative to a return on equity spread volatility limit, established and approved by its board of directors.
(3) The FHLBank of Chicago disclosed the dollar loss limits on changes in market value of equity under parallel interest rate shocks in its 2022 Second Quarter SEC Form 10-Q.
(4) Although the FHLBank of Des Moines measures and monitors duration of equity, it disclosed in its 2022 Second Quarter SEC Form 10-Q projected 24 month income as a key interest-rate risk measure.
(5) The FHLBank of Dallas monitors and measures duration of equity and duration gap, as described in its 2022 Second Quarter SEC Form 10-Q.
(6) The FHLBank of Topeka measures and monitors market value of equity (MVE); however, the FHLBank of Topeka measures market value risk in terms of its MVE in relation to its total regulatory capital stock outstanding instead of to its book value of equity. As described in its 2022 Second Quarter SEC Form 10-Q, the FHLBank of Topeka believes this is a reasonable metric because, as a cooperative, the metric reflects the market value of the FHLBank of Topeka relative to the book value of its capital stock.
(7) The FHLBank of San Francisco does not disclose duration of equity, rather it discloses a comparable metric, "Market Value of Capital Sensitivity" as a key market risk measure.

Table 38 presents the duration of equity reported by each FHLBank to the FHFA in accordance with the FHFA's guidance, which prescribes that down and up interest-rate shocks equal 200 basis points. However, the applicable guidance restricts the down rate from assuming a negative interest rate. Therefore, each FHLBank adjusts the down rate accordingly in periods of very low levels of interest rates.

Table 38 - Duration of Equity

(in years)

	June 30, 2022			December 31, 2021		
FHLBank	**Down**	**Base**	**Up**	**Down**	**Base**	**Up**
Boston	0.5	1.9	2.9	5.4	1.1	3.6
New York	(1.2)	(0.4)	0.4	1.9	(1.6)	0.1
Pittsburgh	(0.2)	0.8	1.2	3.0	(0.4)	1.3
Atlanta	(0.5)	0.8	1.6	4.2	0.5	2.4
Cincinnati	0.7	1.8	1.8	0.7	1.4	3.6
Indianapolis	0.3	1.2	0.7	0.9	(1.3)	0.6
Chicago	(2.7)	(0.3)	0.5	1.1	0.4	1.5
Des Moines	0.5	1.5	1.6	3.6	0.2	1.8
Dallas	(2.2)	(0.7)	0.3	(4.5)	0.2	1.6
Topeka	3.3	2.2	1.6	1.5	(0.4)	0.6
San Francisco	0.6	1.1	1.4	0.2	0.5	1.6

Duration Gap

A related measure of interest-rate risk is duration gap, which is the difference between the estimated durations (market value sensitivity) of assets and liabilities, and reflects the extent to which estimated maturity and repricing cash flows for assets and liabilities are matched. Duration gap determines the sensitivity of assets and liabilities to interest-rate changes. Each FHLBank has an internal modeling system for measuring its duration gap; therefore, individual FHLBank measurements may not be directly comparable. Duration generally indicates the expected change in an instrument's market value resulting from an increase or a decrease in interest rates. Higher duration numbers, whether positive or negative, indicate greater volatility in the market value of equity in response to changing interest rates. Duration gap numbers in Table 39 include the effect of derivative transactions.

Table 39 - Duration Gap

(in months)

FHLBank	**June 30, 2022**	**December 31, 2021**
Boston	1.1	1.0
New York	(0.7)	(1.6)
Pittsburgh	0.1	(1.2)
Atlanta	0.4	0.1
Cincinnati	0.1	—
Indianapolis	0.4	(1.3)
Chicago	(0.3)	0.4
Des Moines	1.3	0.2
Dallas	(0.8)	(0.1)
Topeka	1.3	(0.3)
San Francisco	0.9	0.4

Use of Derivatives to Manage Interest-Rate Risk

An FHLBank enters into derivatives to manage interest-rate risk, prepayment risk, and other exposure inherent in otherwise unhedged assets and funding positions. An FHLBank attempts to use derivatives to reduce interest-rate exposure in the most cost-efficient manner. Derivatives are also used to manage the effective maturity, repricing frequency, or option characteristics of financial instruments to achieve risk-management objectives. (See *Note 6 - Derivatives and Hedging Activities* to the accompanying combined financial statements for a discussion of managing interest-rate risk exposure and *Financial Discussion and Analysis - Combined Results of Operations* for the effect of derivatives and hedging activities on net interest income and non-interest income resulting from the FHLBanks' hedging strategies.)

Table 40 presents the notional amount of the pay and receive leg of interest-rate swaps by interest-rate index at June 30, 2022 and December 31, 2021. The pay and receive legs are equal as both sides of the derivative transaction are being presented. (See *Quantitative and Qualitative Disclosures about Market Risk* for more information on the transition from LIBOR and the use of SOFR as an alternative market benchmark.)

Table 40 - Notional Amount of Interest-Rate Swaps by Interest-Rate Index
(dollars in millions)

	June 30, 2022		December 31, 2021	
	Pay Leg	Receive Leg	Pay Leg	Receive Leg
Interest-Rate Index				
SOFR OIS	$ 383,967	$ 181,491	$ 207,664	$ 112,439
Fixed	302,785	469,432	279,145	292,103
Federal Funds OIS	77,703	59,915	68,456	74,337
LIBOR	13,066	66,683	24,097	100,483
Total notional amount of interest-rate swaps	**$ 777,521**	**$ 777,521**	**$ 579,362**	**$ 579,362**

In addition to the interest-rate swaps included in Table 40, the FHLBanks have other derivatives at June 30, 2022 and December 31, 2021. Table 41 presents the notional amount of other derivatives at June 30, 2022 and December 31, 2021.

Table 41 - Notional Amount of Other Derivatives
(dollars in millions)

	June 30, 2022	December 31, 2021
Interest-rate caps or floors	$ 7,275	$ 7,538
Interest-rate swaptions	1,555	1,819
Mortgage delivery commitments	777	1,228
Interest-rate futures or forwards	175	213
Other	148	203
Total notional amount of other derivatives	**$ 9,930**	**$ 11,001**

CONTROLS AND PROCEDURES

FHLBanks

The management of each FHLBank is required under applicable laws and regulations to establish and maintain effective disclosure controls and procedures as well as effective internal control over financial reporting, as such disclosure controls and procedures and internal control over financial reporting relate to that FHLBank only. Each FHLBank's management assessed the effectiveness of its individual internal control over financial reporting as of December 31, 2021, based on the criteria established in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management of each FHLBank concluded, as of December 31, 2021, that its individual internal control over financial reporting was effective based on the criteria established in *Internal Control-Integrated Framework.* Additionally, the independent registered public accounting firm of each FHLBank opined that the individual FHLBank maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021. (See *Part II. Item 8 - Financial Statements and Supplementary Data* or *Item 9A - Controls and Procedures* of each FHLBank's 2021 SEC Form 10-K for its *Management's Report on Internal Control over Financial Reporting*.)

The management of each FHLBank concluded that its disclosure controls and procedures were effective at a reasonable assurance level as of the end of the period covered by its 2022 Second Quarter SEC Form 10-Q. Additionally, each FHLBank indicated that there were no changes to its internal control over financial reporting during the quarter ended June 30, 2022, that materially affected, or are reasonably likely to materially affect, its internal control over financial reporting. (See *Part I. Item 4 - Controls and Procedures* of each FHLBank's 2022 Second Quarter SEC Form 10-Q.)

Office of Finance Controls and Procedures over the Combined Financial Reporting Combining Process

The Office of Finance is not responsible for the preparation, accuracy, or adequacy of the information or financial data provided by the FHLBanks to the Office of Finance for use in preparing the combined financial reports, or for the quality or effectiveness of the disclosure controls and procedures or internal control over financial reporting of the FHLBanks as they relate to that information and financial data. Each FHLBank is responsible for establishing and maintaining disclosure controls and procedures and internal control over financial reporting with respect to the information and financial data provided to the Office of Finance. Although the Office of Finance is not an SEC registrant, FHFA regulations require that the combined financial report form and content generally be consistent with SEC Regulations S-K and S-X, as interpreted by the FHFA. The Office of Finance is not required to establish and maintain, and in light of the nature of its role has not established and maintained, disclosure controls and procedures and internal control over financial reporting in the same manner as those maintained by each FHLBank. The Office of Finance has established controls and procedures concerning the FHLBanks' submission of information and financial data to the Office of Finance, the process of combining the financial statements and other financial information of the individual FHLBanks, and the review of that information.

The Office of Finance does not independently verify the financial information submitted by each FHLBank that comprise the combined financial statements, the condensed combining schedules, and other disclosures included in this Combined Financial Report. Instead, the Office of Finance relies on each FHLBank management's certification and representation regarding the accuracy and completeness, in all material respects, of its data submitted to the Office of Finance for use in preparing this Combined Financial Report.

Audit Committee Charter

The charter of the audit committee of the Office of Finance's board of directors is available on the Office of Finance's web site at fhlb-of.com. This web site address is provided as a matter of convenience only, and its contents are not made part of or incorporated by reference into this report.

LEGAL PROCEEDINGS

The FHLBanks are subject to various pending legal proceedings arising in the normal course of business. The FHLBanks and the Office of Finance do not believe they are a party to, or subject to, any pending legal proceedings where the ultimate liability of the FHLBanks, if any, arising out of these proceedings is likely to have a material effect on the results of operations, financial condition, or liquidity of the FHLBanks on a combined basis or that are otherwise material to the FHLBanks on a combined basis.

The FHLBank of Des Moines has been involved in pending litigation with a current member stemming from alleged breaches by the member under the FHLBank's MPF program. After consultation with legal counsel, the FHLBank of Des Moines' management does not anticipate that the ultimate liability, if any, arising out of the MPF litigation with this member will have a material adverse effect on the FHLBank's financial condition or results of operations.

See each FHLBank's 2022 Second Quarter SEC Form 10-Q under *Part II. Item 1 - Legal Proceedings* for additional information.

RISK FACTORS

There were no material changes to the risk factors disclosed on pages 28 to 40 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021. (See each FHLBank's 2022 SEC Form 10-Qs for any updates to the risk factors included in the FHLBank's 2021 SEC Form 10-K under *Part I. Item 1A - Risk Factors.*)

MARKET FOR CAPITAL STOCK AND RELATED STOCKHOLDER MATTERS

As a cooperative, each FHLBank conducts its advances business and mortgage loan programs almost exclusively with its members. Members and certain former members own all of the FHLBanks' capital stock. There is no established marketplace for the FHLBanks' stock and it is not publicly traded. FHLBank stock is purchased by members at the stated par value of $100 per share and may be redeemed/repurchased at its stated par value of $100 per share, subject to applicable redemption periods and certain conditions and limitations. (See *Business - Capital, Capital Rules, and Dividends* on pages 15 to 18 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for more information on the restrictions on capital stock redemptions and repurchases.)

At June 30, 2022, the FHLBanks had 328 million shares of capital stock outstanding, including mandatorily redeemable capital stock. The FHLBanks are not required to register their securities under the Securities Act of 1933, as amended; however, each FHLBank is required to register a class of its stock under the Securities Exchange Act of 1934, as amended. (See *Note 9 - Capital* to the accompanying combined financial statements for additional information on regulatory capital stock and mandatorily redeemable capital stock.)

Table 42 presents combined regulatory capital stock, which includes mandatorily redeemable capital stock, held by type of member and FHLBank membership by type of member.

Table 42 - Regulatory Capital Stock Held and Membership by Type of Member
(dollars in millions)

	June 30, 2022		December 31, 2021	
	Regulatory Capital Stock Amount	Number of Members	Regulatory Capital Stock Amount	Number of Members
Commercial banks	$ 16,138	3,762	$ 10,335	3,807
Insurance companies	7,238	556	6,550	542
Credit unions	5,180	1,564	4,368	1,560
Savings institutions	3,787	585	3,793	600
Community development financial institutions	19	68	19	68
Total	**32,362**	**6,535**	**25,065**	**6,577**
Mandatorily redeemable capital stock	416		398	
Total combined regulatory capital stock	**$ 32,778**		**$ 25,463**	

Figures 31 and 32 present the percentage of regulatory capital stock held, and membership, by type of member at June 30, 2022.

Figure 31 - Percentage of Regulatory Capital Stock Held by Type of Member

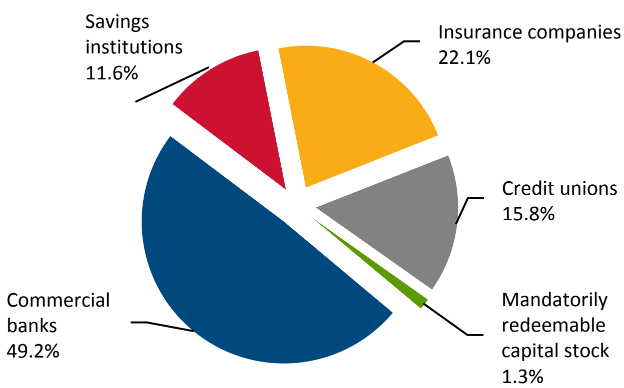
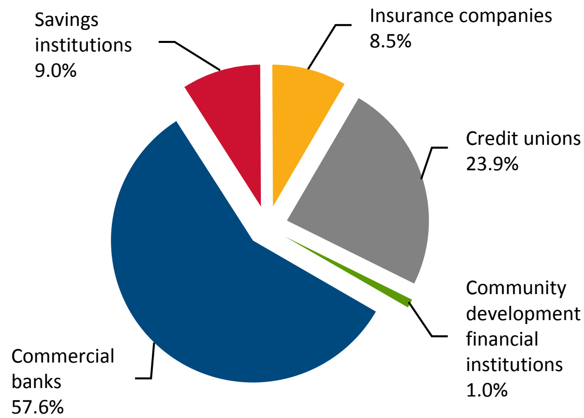


Figure 32 - Percentage of Membership by Type of Member



The information on regulatory capital stock presented in Table 43 is accumulated at the holding-company level. The percentage of total regulatory capital stock identified in Table 43 for each holding company was computed by dividing all regulatory capital stock owned by subsidiaries of that holding company by total combined regulatory capital stock. These percentage concentrations do not represent ownership concentrations in an individual FHLBank.

Table 43 - Top 10 Regulatory Capital Stockholders by Holding Company at June 30, 2022

(dollars in millions)

Holding Company Name(1)	FHLBank Districts(2)	Regulatory Capital Stock(3)	Percentage of Total Regulatory Capital Stock	Mandatorily Redeemable Capital Stock
U.S. Bancorp	Cincinnati, Des Moines	$ 1,200	3.7 %	$ 1
MetLife, Inc.	New York	802	2.4 %	—
TIAA	New York, Atlanta	732	2.2 %	—
New York Community Bancorp, Inc.	New York	635	1.9 %	—
Ally Financial Inc.	Pittsburgh	548	1.7 %	—
Citigroup Inc.	New York	517	1.6 %	—
Citizens Bank, National Association	Boston	505	1.5 %	—
The PNC Financial Services Group, Inc.	Pittsburgh, Cincinnati	431	1.3 %	6
Capital One Financial Corporation	Atlanta	409	1.2 %	—
Midland Financial Co.	Topeka	403	1.2 %	—
		$ 6,182	**18.7 %**	**$ 7**

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(1) Holding company information was obtained from the Federal Reserve System's web site, the National Information Center (NIC), and SEC filings. The NIC is a central repository of data about banks and other institutions for which the Federal Reserve System has a supervisory, regulatory, or research interest, including both domestic and foreign banking organizations operating in the United States.
(2) At June 30, 2022, each holding company had subsidiaries with regulatory capital stock holdings in these FHLBank districts.
(3) Includes FHLBank capital stock that is considered to be mandatorily redeemable, which is classified as a liability under GAAP.

SUPPLEMENTAL INFORMATION

Individual Federal Home Loan Bank Selected Financial Data and Financial Ratios

The following individual Federal Home Loan Bank (FHLBank) selected financial data and financial ratios are unaudited, and provided as a convenience to the reader. Please refer to *Explanatory Statement about Federal Home Loan Banks Combined Financial Report*, which discusses the independent management and operation of the FHLBanks; identifies the availability of other information about the FHLBanks; and describes where to find the periodic reports and other information filed by each FHLBank with the SEC.

Individual FHLBank Selected Financial Data and Financial Ratios (Unaudited)

(dollars in millions)	Boston	New York	Pittsburgh	Atlanta	Cincinnati
Selected Statement of Condition Data(1)					
At June 30, 2022					
Assets					
Investments(2)(3)	$ 28,255	$ 32,920	$ 21,324	$ 43,861	$ 36,508
Advances	30,318	80,062	35,244	72,320	55,771
Mortgage loans held for portfolio	2,897	2,175	4,658	131	7,400
Total assets	**62,064**	**115,963**	**62,049**	**118,191**	**103,057**
Deposits	1,066	1,492	737	2,225	1,225
Consolidated obligations(3)					
Discount notes	25,096	49,519	24,831	51,749	57,078
Bonds	32,722	57,551	32,701	57,498	37,923
Total consolidated obligations	**57,818**	**107,070**	**57,532**	**109,247**	**95,001**
Mandatorily redeemable capital stock	11	8	22	—	20
Total capital					
Capital stock(4)	1,557	4,939	2,063	3,442	4,414
Retained earnings	1,607	1,963	1,430	2,246	1,314
Accumulated other comprehensive income (loss)	(216)	(139)	4	(46)	(33)
Total capital	**2,948**	**6,763**	**3,497**	**5,642**	**5,695**
Asset composition (as a percentage of the individual FHLBank's total assets)					
Investments(2)(3)	45.5 %	28.4 %	34.4 %	37.1 %	35.4 %
Advances	48.8 %	69.0 %	56.8 %	61.2 %	54.1 %
Mortgage loans held for portfolio, net	4.7 %	1.9 %	7.5 %	0.1 %	7.2 %
Retained earnings as a percentage of FHLBank's total assets	2.6 %	1.7 %	2.3 %	1.9 %	1.3 %
FHLBank's total assets as a percentage of FHLBank System	6.6 %	12.2 %	6.6 %	12.5 %	10.9 %
At June 30, 2021					
Assets					
Investments(2)(3)	$ 16,053	$ 37,461	$ 21,033	$ 30,078	$ 27,096
Advances	15,177	79,985	14,955	47,075	23,587
Mortgage loans held for portfolio	3,471	2,526	4,774	178	7,717
Total assets	**35,684**	**120,449**	**41,662**	**78,904**	**58,872**
Deposits	971	1,531	941	2,623	1,336
Consolidated obligations(3)					
Discount notes	8,366	42,173	15,113	22,318	21,180
Bonds	23,475	69,313	22,514	49,030	31,678
Total consolidated obligations	**31,841**	**111,486**	**37,627**	**71,348**	**52,858**
Mandatorily redeemable capital stock	7	2	63	—	14
Total capital					
Capital stock(4)	1,081	4,867	1,203	2,448	2,718
Retained earnings	1,515	1,923	1,387	2,240	1,297
Accumulated other comprehensive income (loss)	48	30	127	(12)	(2)
Total capital	**2,644**	**6,820**	**2,717**	**4,676**	**4,013**
Asset composition (as a percentage of the individual FHLBank's total assets)					
Investments(2)(3)	45.0 %	31.1 %	50.5 %	38.1 %	46.0 %
Advances	42.5 %	66.4 %	35.9 %	59.7 %	40.1 %
Mortgage loans held for portfolio, net	9.7 %	2.1 %	11.5 %	0.2 %	13.1 %
Retained earnings as a percentage of individual FHLBank's total assets	4.2 %	1.6 %	3.3 %	2.8 %	2.2 %
FHLBank's total assets as a percentage of FHLBank System	4.8 %	16.3 %	5.6 %	10.7 %	8.0 %

(1) The sum or recalculation of individual FHLBank amounts may not agree or may not be recalculated from the Combined Statement of Condition amounts due to combining adjustments.

(2) Investments consist of interest-bearing deposits, deposits with other FHLBanks, securities purchased under agreements to resell, federal funds sold, trading securities, available-for-sale securities, and held-to-maturity securities.

(3) See *Note 1 - Summary of Significant Accounting Policies - Basis of Presentation* on page F-15 in the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2021, for information about the elimination of interbank transactions of the FHLBanks.

(4) FHLBank capital stock is redeemable at the request of a member subject to the statutory redemption periods and other conditions and limitations. (See *Note 9 - Capital* to the accompanying combined financial statements for additional information on the statutory redemption periods and other conditions and limitations.)

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
Selected Statement of Condition Data(1)						
At June 30, 2022						
Assets						
Investments(2)(3)	$ 25,434	$ 41,717	$ 32,753	$ 37,053	$ 19,367	$ 43,153
Advances	30,507	52,811	52,731	36,376	29,523	43,221
Mortgage loans held for portfolio	7,730	9,953	7,940	3,986	8,019	863
Total assets	**64,266**	**105,154**	**93,968**	**77,715**	**57,499**	**87,602**
Deposits	908	655	1,528	1,677	781	1,014
Consolidated obligations(3)						
Discount notes	19,587	31,525	50,185	29,623	20,076	53,132
Bonds	39,462	64,519	35,130	40,944	32,928	26,076
Total consolidated obligations	**59,049**	**96,044**	**85,315**	**70,567**	**53,004**	**79,208**
Mandatorily redeemable capital stock	46	273	17	14	1	5
Total capital						
Capital stock(4)	2,251	2,445	3,876	2,798	1,821	2,754
Retained earnings	1,211	4,401	2,458	1,657	1,198	3,890
Accumulated other comprehensive income (loss)	14	40	(29)	177	(23)	100
Total capital	**3,476**	**6,886**	**6,305**	**4,632**	**2,996**	**6,744**
Asset composition (as a percentage of the individual FHLBank's total assets)						
Investments(2)(3)	39.6 %	39.7 %	34.9 %	47.7 %	33.7 %	49.3 %
Advances	47.5 %	50.2 %	56.1 %	46.8 %	51.3 %	49.3 %
Mortgage loans held for portfolio, net	12.0 %	9.5 %	8.4 %	5.1 %	13.9 %	1.0 %
Retained earnings as a percentage of FHLBank's total assets	1.9 %	4.2 %	2.6 %	2.1 %	2.1 %	4.4 %
FHLBank's total assets as a percentage of FHLBank System	6.8 %	11.1 %	9.9 %	8.2 %	6.1 %	9.3 %
At June 30, 2021						
Assets						
Investments(2)(3)	$ 25,594	$ 40,586	$ 29,712	$ 30,152	$ 16,248	$ 28,403
Advances	27,633	46,270	45,560	24,922	20,996	24,194
Mortgage loans held for portfolio	7,737	9,759	7,545	3,206	8,328	1,301
Total assets	**62,771**	**97,494**	**83,285**	**58,627**	**46,310**	**54,244**
Deposits	1,598	1,123	1,810	1,626	1,089	945
Consolidated obligations(3)						
Discount notes	14,445	45,728	23,098	11,371	10,330	17,598
Bonds	42,363	42,922	52,081	41,615	32,088	28,839
Total consolidated obligations	**56,808**	**88,650**	**75,179**	**52,986**	**42,418**	**46,437**
Mandatorily redeemable capital stock	233	248	35	7	2	3
Total capital						
Capital stock(4)	2,234	2,007	3,429	2,093	1,457	2,269
Retained earnings	1,156	4,139	2,383	1,477	1,097	3,765
Accumulated other comprehensive income (loss)	193	487	98	222	93	394
Total capital	**3,583**	**6,633**	**5,910**	**3,792**	**2,647**	**6,428**
Asset composition (as a percentage of the individual FHLBank's total assets)						
Investments(2)(3)	40.8 %	41.6 %	35.7 %	51.4 %	35.1 %	52.4 %
Advances	44.0 %	47.5 %	54.7 %	42.5 %	45.3 %	44.6 %
Mortgage loans held for portfolio, net	12.3 %	10.0 %	9.1 %	5.5 %	18.0 %	2.4 %
Retained earnings as a percentage of individual FHLBank's total assets	1.8 %	4.2 %	2.9 %	2.5 %	2.4 %	6.9 %
FHLBank's total assets as a percentage of FHLBank System	8.5 %	13.2 %	11.3 %	7.9 %	6.3 %	7.3 %

Individual FHLBank Selected Financial Data and Financial Ratios (Unaudited, continued)

(dollars in millions)	Boston	New York	Pittsburgh	Atlanta	Cincinnati
Selected Other Data					
June 30, 2022					
Advance concentrations - top five borrowers	61 %	64 %	77 %	51 %	65 %
Regulatory capital stock concentrations - top five stockholders	51 %	54 %	67 %	43 %	51 %
Regulatory capital-to-assets ratio(5)	5.12 %	5.96 %	5.67 %	4.81 %	5.58 %
Cash and stock dividends					
Quarter-to-date June 30, 2022	$ 5	$ 52	$ 12	$ 23	$ 24
Quarter-to-date June 30, 2021	5	63	18	27	12
Year-to-date June 30, 2022	10	101	24	45	36
Year-to-date June 30, 2021	10	133	39	57	26
Weighted average dividend rate					
Quarter-to-date June 30, 2022	2.09 %	5.00 %	4.14 %	3.74 %	3.00 %
Quarter-to-date June 30, 2021	1.54 %	4.60 %	5.05 %	3.69 %	2.00 %
Year-to-date June 30, 2022	2.07 %	4.88 %	4.11 %	3.72 %	2.56 %
Year-to-date June 30, 2021	1.56 %	4.68 %	5.10 %	3.71 %	2.00 %
Return on average equity(6)					
Quarter-to-date June 30, 2022	6.13 %	4.71 %	4.69 %	1.96 %	3.38 %
Quarter-to-date June 30, 2021	0.92 %	4.21 %	1.70 %	4.82 %	0.03 %
Year-to-date June 30, 2022	5.35 %	4.17 %	3.81 %	2.52 %	2.48 %
Year-to-date June 30, 2021	2.01 %	4.14 %	3.50 %	4.06 %	0.97 %
Return on average assets					
Quarter-to-date June 30, 2022	0.35 %	0.27 %	0.28 %	0.10 %	0.19 %
Quarter-to-date June 30, 2021	0.07 %	0.24 %	0.12 %	0.28 %	— %
Year-to-date June 30, 2022	0.35 %	0.24 %	0.24 %	0.14 %	0.14 %
Year-to-date June 30, 2021	0.15 %	0.23 %	0.23 %	0.23 %	0.06 %
Net interest margin(7)					
Quarter-to-date June 30, 2022	0.60 %	0.52 %	0.50 %	0.27 %	0.33 %
Quarter-to-date June 30, 2021	0.48 %	0.46 %	0.41 %	0.46 %	0.43 %
Year-to-date June 30, 2022	0.66 %	0.48 %	0.48 %	0.30 %	0.37 %
Year-to-date June 30, 2021	0.58 %	0.47 %	0.47 %	0.41 %	0.46 %
Net interest spread					
Quarter-to-date June 30, 2022	0.52 %	0.45 %	0.44 %	0.23 %	0.26 %
Quarter-to-date June 30, 2021	0.44 %	0.44 %	0.37 %	0.45 %	0.39 %
Year-to-date June 30, 2022	0.59 %	0.44 %	0.44 %	0.27 %	0.32 %
Year-to-date June 30, 2021	0.53 %	0.44 %	0.43 %	0.39 %	0.42 %

(5) The regulatory capital-to-assets ratio is calculated based on the FHLBank's total regulatory capital as a percentage of total assets held at period-end. (See *Note 9 - Capital* to the accompanying combined financial statements for a definition and discussion of regulatory capital.)

(6) Return on average equity is net income expressed as a percentage of average total capital. Mandatorily redeemable capital stock is not included in the calculation of return on average equity.

(7) Net interest margin is equal to net interest income represented as a percentage of average interest-earning assets.

(dollars in millions)	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
Selected Other Data						
June 30, 2022						
Advance concentrations - top five borrowers	47 %	48 %	33 %	37 %	52 %	66 %
Regulatory capital stock concentrations - top five stockholders	38 %	34 %	19 %	23 %	40 %	29 %
Regulatory capital-to-assets ratio(5)	5.46 %	6.77 %	6.76 %	5.75 %	5.25 %	7.59 %
Cash and stock dividends						
Quarter-to-date June 30, 2022	$ 14	$ 24	$ 42	$ 5	$ 26	$ 33
Quarter-to-date June 30, 2021	14	21	41	3	16	34
Year-to-date June 30, 2022	27	46	85	8	46	68
Year-to-date June 30, 2021	28	43	81	7	32	64
Weighted average dividend rate						
Quarter-to-date June 30, 2022	2.47 %	4.47 %	5.00 %	0.79 %	5.63 %	6.00 %
Quarter-to-date June 30, 2021	2.57 %	4.12 %	4.93 %	0.66 %	4.06 %	6.00 %
Year-to-date June 30, 2022	2.39 %	4.45 %	4.93 %	0.73 %	5.27 %	6.00 %
Year-to-date June 30, 2021	2.53 %	4.20 %	4.77 %	0.69 %	4.10 %	5.47 %
Return on average equity(6)						
Quarter-to-date June 30, 2022	3.71 %	5.33 %	6.43 %	5.91 %	6.60 %	2.85 %
Quarter-to-date June 30, 2021	1.94 %	4.59 %	3.14 %	2.95 %	4.83 %	3.45 %
Year-to-date June 30, 2022	3.48 %	5.47 %	5.11 %	5.09 %	6.79 %	3.85 %
Year-to-date June 30, 2021	2.66 %	3.33 %	3.85 %	4.13 %	5.68 %	4.72 %
Return on average assets						
Quarter-to-date June 30, 2022	0.21 %	0.36 %	0.42 %	0.38 %	0.35 %	0.25 %
Quarter-to-date June 30, 2021	0.11 %	0.32 %	0.21 %	0.19 %	0.27 %	0.38 %
Year-to-date June 30, 2022	0.20 %	0.37 %	0.34 %	0.33 %	0.37 %	0.39 %
Year-to-date June 30, 2021	0.14 %	0.22 %	0.25 %	0.26 %	0.31 %	0.50 %
Net interest margin(7)						
Quarter-to-date June 30, 2022	0.41 %	0.61 %	0.54 %	0.59 %	0.59 %	0.67 %
Quarter-to-date June 30, 2021	0.36 %	0.64 %	0.41 %	0.34 %	0.55 %	0.88 %
Year-to-date June 30, 2022	0.43 %	0.61 %	0.50 %	0.59 %	0.62 %	0.72 %
Year-to-date June 30, 2021	0.40 %	0.55 %	0.46 %	0.44 %	0.57 %	0.96 %
Net interest spread						
Quarter-to-date June 30, 2022	0.35 %	0.53 %	0.47 %	0.51 %	0.54 %	0.60 %
Quarter-to-date June 30, 2021	0.33 %	0.62 %	0.36 %	0.33 %	0.53 %	0.86 %
Year-to-date June 30, 2022	0.38 %	0.57 %	0.45 %	0.54 %	0.59 %	0.66 %
Year-to-date June 30, 2021	0.39 %	0.53 %	0.41 %	0.43 %	0.55 %	0.94 %

INDEX OF TABLES AND FIGURES CONTAINED IN THE COMBINED FINANCIAL REPORT