FEDERAL HOME LOAN BANKS

Combined Financial Report
for the Quarterly Period Ended June 30, 2021

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, 2021. This Combined Financial Report should be read in conjunction with the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, issued on March 26, 2021. 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.

This Combined Financial Report was issued on August 13, 2021.

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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.

FEDERAL HOME LOAN BANKS COMBINED STATEMENT OF CONDITION
(UNAUDITED)

(dollars in millions, except par value)	June 30, 2021	December 31, 2020
Assets		
Cash and due from banks	$ 4,777	$ 25,125
Interest-bearing deposits *(Note 3)*	5,707	8,076
Securities purchased under agreements to resell *(Note 3)*	48,832	45,588
Federal funds sold *(Note 3)*	47,897	31,510
Investment securities *(Note 3)*		
Trading securities	38,537	55,218
Available-for-sale securities, net, amortized cost of $107,630 and $101,771	109,729	103,123
Held-to-maturity securities, net, fair value of $52,542 and $63,547	51,586	62,350
Total investment securities	199,852	220,691
Advances, includes $3,218 and $3,489 at fair value held under fair value option *(Note 4)*	370,352	422,639
Mortgage loans held for portfolio, net *(Note 5)*	56,541	62,842
Accrued interest receivable, net	980	1,146
Derivative assets, net *(Note 6)*	1,739	1,617
Other assets, net	1,494	1,506
Total assets	$ 738,171	$ 820,740
Liabilities		
Deposits *(Note 7)*	$ 15,576	$ 15,340
Consolidated obligations *(Note 8)*		
Discount notes, includes $15,116 and $9,134 at fair value held under fair value option	231,720	274,804
Bonds, includes $16,220 and $20,798 at fair value held under fair value option	435,797	473,714
Total consolidated obligations	667,517	748,518
Mandatorily redeemable capital stock *(Note 9)*	614	772
Accrued interest payable	833	776
Affordable Housing Program payable	985	1,032
Derivative liabilities, net *(Note 6)*	270	874
Other liabilities	2,505	3,248
Total liabilities	688,300	770,560
Commitments and contingencies *(Note 12)*		
Capital *(Note 9)*		
Capital stock		
Class B putable ($100 par value) issued and outstanding shares	25,478	26,986
Class A putable ($100 par value) issued and outstanding shares	328	412
Total capital stock	25,806	27,398
Retained earnings		
Unrestricted	16,815	16,564
Restricted	5,572	5,434
Total retained earnings	22,387	21,998
Accumulated other comprehensive income (loss) *(Note 10)*	1,678	784
Total capital	49,871	50,180
Total liabilities and capital	$ 738,171	$ 820,740

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)	2021	2020	2021	2020
Interest income				
Advances	$ 665	$ 1,765	$ 1,422	$ 4,657
Interest-bearing deposits	3	6	6	72
Securities purchased under agreements to resell	2	6	7	183
Federal funds sold	11	13	23	240
Investment securities				
Trading securities	175	279	387	587
Available-for-sale securities	251	372	528	863
Held-to-maturity securities	160	310	342	775
Total investment securities	586	961	1,257	2,225
Mortgage loans held for portfolio	336	496	711	1,062
Other	—	—	1	1
Total interest income	1,603	3,247	3,427	8,440
Interest expense				
Consolidated obligations				
Discount notes	46	652	131	2,175
Bonds	623	1,332	1,323	4,042
Total consolidated obligations	669	1,984	1,454	6,217
Deposits	1	1	2	28
Mandatorily redeemable capital stock	6	14	13	32
Total interest expense	676	1,999	1,469	6,277
Net interest income	927	1,248	1,958	2,163
Provision (reversal) for credit losses	—	8	(10)	51
Net interest income after provision (reversal) for credit losses	927	1,240	1,968	2,112
Non-interest income				
Net gains (losses) on investment securities	(119)	(142)	(424)	1,032
Net gains (losses) on financial instruments held under fair value option	5	87	(47)	143
Net gains (losses) on derivatives	(68)	(97)	110	(1,218)
Gains on litigation settlements, net	—	1	—	56
Other, net	62	72	116	100
Total non-interest income (loss)	(120)	(79)	(245)	113
Non-interest expense				
Compensation and benefits	182	190	377	402
Other operating expenses	112	126	216	238
Federal Housing Finance Agency	20	19	41	38
Office of Finance	14	14	33	31
Other, net	25	53	44	58
Total non-interest expense	353	402	711	767
Net income before assessments	454	759	1,012	1,458
Affordable Housing Program assessments	46	77	103	149
Net income	$ 408	$ 682	$ 909	$ 1,309

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)	2021	2020	2021	2020
Net income	$ 408	$ 682	$ 909	$ 1,309
Other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	148	1,053	740	(865)
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	2	8	4	37
Net unrealized gains (losses) relating to hedging activities	(56)	(16)	131	(307)
Pension and postretirement benefits	16	2	19	(4)
Total other comprehensive income (loss)	110	1,047	894	(1,139)
Comprehensive income (loss)	$ 518	$ 1,729	$ 1,803	$ 170

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, 2021 AND 2020

	Capital Stock - Putable			
	Class B		Class A	
(dollars and shares in millions)	Shares	Par Value	Shares	Par Value
Balance, March 31, 2021	263	$ 26,293	4	$ 376
Comprehensive income (loss)	—	—	—	—
Proceeds from sale of capital stock	39	3,859	—	3
Repurchase/redemption of capital stock	(41)	(4,148)	(2)	(221)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(3)	(225)	(2)	(150)
Transfers between Class B and Class A shares	(3)	(320)	3	320
Dividends on capital stock				
Cash	—	—	—	—
Stock	—	19	—	—
Balance, June 30, 2021	255	$ 25,478	3	$ 328
Balance, March 31, 2020	406	$ 40,589	4	$ 448
Adjustment for cumulative effect of accounting change	—	—	—	—
Partial recovery of prior capital distribution to Financing Corporation	—	—	—	—
Comprehensive income (loss)	—	—	—	—
Proceeds from sale of capital stock	38	3,845	—	1
Repurchase/redemption of capital stock	(121)	(12,043)	—	—
Net shares reclassified (to)/from mandatorily redeemable capital stock	(3)	(313)	(4)	(469)
Transfers between Class B and Class A shares	(5)	(521)	5	521
Dividends on capital stock				
Cash	—	—	—	—
Stock	1	27	—	—
Balance, June 30, 2020	316	$ 31,584	5	$ 501

Capital Stock - Putable Total Shares	Capital Stock - Putable Total Par Value	Retained Earnings Unrestricted	Retained Earnings Restricted	Retained Earnings Total	Accumulated Other Comprehensive Income (Loss)	Total Capital
267	$ 26,669	$ 16,727	$ 5,505	$ 22,232	$ 1,568	$ 50,469
—	—	341	67	408	110	518
39	3,862	—	—	—	—	3,862
(43)	(4,369)	—	—	—	—	(4,369)
(5)	(375)	—	—	—	—	(375)
—	—	—	—	—	—	—
—	—	(234)	—	(234)	—	(234)
—	19	(19)	—	(19)	—	—
258	$ 25,806	$ 16,815	$ 5,572	$ 22,387	$ 1,678	$ 49,871
410	$ 41,037	$ 15,701	$ 5,028	$ 20,729	$ (1,842)	$ 59,924
—	—	—	—	—	—	—
—	—	200	—	200	—	200
—	—	547	135	682	1,047	1,729
38	3,846	—	—	—	—	3,846
(121)	(12,043)	—	—	—	—	(12,043)
(7)	(782)	—	—	—	—	(782)
—	—	—	—	—	—	—
—	—	(375)	—	(375)	—	(375)
1	27	(27)	—	(27)	—	—
321	$ 32,085	$ 16,046	$ 5,163	$ 21,209	$ (795)	$ 52,499

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, 2021 AND 2020

	Capital Stock - Putable			
	Class B		Class A	
(dollars and shares in millions)	Shares	Par Value	Shares	Par Value
Balance, December 31, 2020	270	$ 26,986	4	$ 412
Comprehensive income (loss)	—	—	—	—
Proceeds from issuance of capital stock	72	7,159	—	4
Repurchases/redemptions of capital stock	(77)	(7,703)	(3)	(354)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(3)	(271)	(5)	(466)
Transfers between Class B and Class A shares	(7)	(732)	7	732
Dividends on capital stock				
Cash	—	—	—	—
Stock	—	39	—	—
Balance, June 30, 2021	255	$ 25,478	3	$ 328
Balance, December 31, 2019	340	$ 34,047	4	$ 448
Adjustment for cumulative effect of accounting change	—	—	—	—
Partial recovery of prior capital distribution to Financing Corporation	—	—	—	—
Comprehensive income (loss)	—	—	—	—
Proceeds from issuance of capital stock	212	21,224	—	1
Repurchases/redemptions of capital stock	(221)	(22,152)	—	—
Net shares reclassified (to)/from mandatorily redeemable capital stock	(9)	(888)	(6)	(662)
Transfers between Class B and Class A shares	(7)	(714)	7	714
Dividends on capital stock				
Cash	—	—	—	—
Stock	1	67	—	—
Balance, June 30, 2020	316	$ 31,584	5	$ 501

Capital Stock - Putable							
Total		Retained Earnings					
Shares	Par Value	Unrestricted	Restricted	Total	Accumulated Other Comprehensive Income (Loss)	Total Capital
274	$ 27,398	$ 16,564	$ 5,434	$ 21,998	$ 784	$ 50,180
—	—	771	138	909	894	1,803
72	7,163	—	—	—	—	7,163
(80)	(8,057)	—	—	—	—	(8,057)
(8)	(737)	—	—	—	—	(737)
—	—	—	—	—	—	—
—	—	(481)	—	(481)	—	(481)
—	39	(39)	—	(39)	—	—
258	$ 25,806	$ 16,815	$ 5,572	$ 22,387	$ 1,678	$ 49,871
344	$ 34,495	$ 15,686	$ 4,902	$ 20,588	$ 344	$ 55,427
—	—	(28)	—	(28)	—	(28)
—	—	200	—	200	—	200
—	—	1,048	261	1,309	(1,139)	170
212	21,225	—	—	—	—	21,225
(221)	(22,152)	—	—	—	—	(22,152)
(15)	(1,550)	—	—	—	—	(1,550)
—	—	—	—	—	—	—
—	—	(793)	—	(793)	—	(793)
1	67	(67)	—	(67)	—	—
321	$ 32,085	$ 16,046	$ 5,163	$ 21,209	$ (795)	$ 52,499

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, 2021	2020
Operating activities		
Net income	$ 909	$ 1,309
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation and amortization	321	(239)
Net change in derivatives and hedging activities	2,118	(7,400)
Net change in fair value adjustments on trading securities	425	(807)
Net change in fair value adjustments on financial instruments held under fair value option	47	(143)
Other adjustments, net	15	(128)
Net change in		
Trading securities	—	(72)
Accrued interest receivable	168	523
Other assets	(5)	(11)
Accrued interest payable	47	(758)
Other liabilities	(134)	(110)
Total adjustments	3,002	(9,145)
Net cash provided by (used in) operating activities	3,911	(7,836)
Investing activities		
Net change in		
Interest-bearing deposits	3,321	(3,003)
Securities purchased under agreements to resell	(3,243)	28,580
Federal funds sold	(16,387)	(2,297)
Trading securities		
Proceeds	30,582	25,396
Purchases	(14,660)	(33,155)
Available-for-sale securities		
Proceeds	12,920	7,204
Purchases	(17,720)	(7,046)
Held-to-maturity securities		
Proceeds	10,447	14,695
Purchases	(3,113)	(5,237)
Advances		
Repaid	1,687,200	2,995,003
Originated	(1,637,764)	(2,903,717)
Mortgage loans held for portfolio		
Principal collected	12,859	11,136
Purchases	(6,930)	(11,654)
Other investing activities, net	(23)	(30)
Net cash provided by (used in) investing activities	57,489	115,875

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

	Six Months Ended June 30,	
(dollars in millions)	2021	2020
Financing activities		
Net change in deposits and pass-through reserves, and other financing activities	$ 355	$ 5,480
Net proceeds (payments) on derivative contracts with financing element	18	(379)
Net proceeds from issuance of consolidated obligations		
Discount notes	1,650,627	2,133,651
Bonds	233,394	272,329
Payments for maturing and retiring consolidated obligations		
Discount notes	(1,693,614)	(2,145,872)
Bonds	(270,258)	(369,046)
Proceeds from issuance of capital stock	7,163	21,225
Payments for repurchases/redemptions of capital stock	(8,057)	(22,152)
Payments for repurchases/redemptions of mandatorily redeemable capital stock	(895)	(1,835)
Cash dividends paid	(481)	(793)
Partial recovery of prior capital distribution to Financing Corporation	—	200
Net cash provided by (used in) financing activities	(81,748)	(107,192)
Net increase (decrease) in cash and due from banks	(20,348)	847
Cash and due from banks at beginning of the period	25,125	4,960
Cash and due from banks at end of the period	$ 4,777	$ 5,807
Supplemental disclosures		
Cash activities		
Interest paid	$ 1,833	$ 7,613
Affordable Housing Program payments, net	$ 153	$ 169

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, 2020. 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, 2021.

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 revised or 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, 2021 or December 31, 2020.

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. In particular, during the fourth quarter of 2020, as amended by and in accordance with ASU 2021-01, the FHLBanks elected optional expedients specific to discounting transition on a retrospective basis, which did not have a material effect on the FHLBanks' combined financial condition, combined results of operations, or combined cash flows. Additionally, to date, certain FHLBanks sold or transferred to available-for-sale certain held-to-maturity securities, pursuant to the guidance.

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, 2021 and December 31, 2020, none of these investments were with counterparties rated below triple-B and 1.5% and 7.3% of these investments, based on amortized cost, were with counterparties that are 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, 2021 and December 31, 2020, 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, 2021 and December 31, 2020. The carrying values of interest-bearing deposits and federal funds sold exclude accrued interest receivable totaling $1 million at both June 30, 2021 and December 31, 2020.

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, 2021 and December 31, 2020. The carrying value of securities purchased under agreements to resell excludes accrued interest receivable of less than $1 million at both June 30, 2021 and December 31, 2020.

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 - Trading Securities by Major Security Type

(dollars in millions)

Fair Value	June 30, 2021	December 31, 2020
Non-mortgage-backed securities		
Certificates of deposit	$ 575	$ —
U.S. Treasury obligations	34,050	50,734
Other U.S. obligations	107	114
GSE and Tennessee Valley Authority obligations	2,414	2,827
Other	225	254
Total non-mortgage-backed securities	37,371	53,929
Mortgage-backed securities		
U.S. obligations single-family MBS	5	6
GSE single-family MBS	43	48
GSE multifamily MBS	1,118	1,235
Total mortgage-backed securities	1,166	1,289
Total	$ 38,537	$ 55,218

Table 3.2 - Net Gains (Losses) on Trading Securities

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net unrealized gains (losses) on trading securities held at period-end	$ (91)	$ (184)	$ (375)	$ 841
Net gains (losses) on trading securities sold/matured during the period	(29)	42	(50)	64
Net gains (losses) on trading securities	$ (120)	$ (142)	$ (425)	$ 905

Available-for-Sale Securities

Table 3.3 - Available-for-Sale (AFS) Securities by Major Security Type

(dollars in millions)

	June 30, 2021				
	Amortized Cost(1)	Allowance for Credit Losses	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Non-mortgage-backed securities					
U.S. Treasury obligations	$ 14,138	$ —	$ 15	$ (6)	$ 14,147
Other U.S. obligations	3,277	—	57	(8)	3,326
GSE and Tennessee Valley Authority obligations	10,707	—	216	(30)	10,893
State or local housing agency obligations	1,905	—	12	(20)	1,897
Federal Family Education Loan Program ABS	2,769	—	160	—	2,929
Other	751	—	12	(8)	755
Total non-mortgage-backed securities	33,547	—	472	(72)	33,947
Mortgage-backed securities					
U.S. obligations single-family MBS	4,027	—	38	—	4,065
U.S. obligations multifamily MBS	181	—	—	—	181
GSE single-family MBS	5,898	—	72	—	5,970
GSE multifamily MBS	62,135	—	1,446	(62)	63,519
Private-label MBS	1,842	(17)	230	(8)	2,047
Total mortgage-backed securities	74,083	(17)	1,786	(70)	75,782
Total	$ 107,630	$ (17)	$ 2,258	$ (142)	$ 109,729

	December 31, 2020				
	Amortized Cost(1)	Allowance for Credit Losses	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Non-mortgage-backed securities					
U.S. Treasury obligations	$ 8,522	$ —	$ 7	$ —	$ 8,529
Other U.S. obligations	3,550	—	88	(2)	3,636
GSE and Tennessee Valley Authority obligations	11,726	—	204	(37)	11,893
State or local housing agency obligations	1,081	—	16	(23)	1,074
Federal Family Education Loan Program ABS	2,922	—	121	(9)	3,034
Other	777	—	12	(12)	777
Total non-mortgage-backed securities	28,578	—	448	(83)	28,943
Mortgage-backed securities					
U.S. obligations single-family MBS	4,419	—	33	(1)	4,451
U.S. obligations multifamily MBS	47	—	—	—	47
GSE single-family MBS	5,412	—	62	—	5,474
GSE multifamily MBS	61,198	—	848	(126)	61,920
Private-label MBS	2,117	(24)	215	(20)	2,288
Total mortgage-backed securities	73,193	(24)	1,158	(147)	74,180
Total	$ 101,771	$ (24)	$ 1,606	$ (230)	$ 103,123

(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 $244 million and $249 million at June 30, 2021 and December 31, 2020.

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.

Table 3.4 - AFS Securities in a Continuous Unrealized Loss Position

(dollars in millions)

	June 30, 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	$ 5,953	$ (6)	$ —	$ —	$ 5,953	$ (6)
Other U.S. obligations	361	(7)	392	(1)	753	(8)
GSE and Tennessee Valley Authority obligations	40	—	568	(30)	608	(30)
State or local housing agency obligations	51	—	691	(20)	742	(20)
Other	—	—	400	(8)	400	(8)
Total non-mortgage-backed securities	6,405	(13)	2,051	(59)	8,456	(72)
Mortgage-backed securities						
GSE multifamily MBS	2,873	(31)	4,950	(31)	7,823	(62)
Private-label MBS	10	—	254	(8)	264	(8)
Total mortgage-backed securities	2,883	(31)	5,204	(39)	8,087	(70)
Total	$ 9,288	$ (44)	$ 7,255	$ (98)	$ 16,543	$ (142)

	December 31, 2020					
	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						
Other U.S. obligations	$ 348	$ —	$ 700	$ (2)	$ 1,048	$ (2)
GSE and Tennessee Valley Authority obligations	121	(2)	508	(35)	629	(37)
State or local housing agency obligations	335	(15)	398	(8)	733	(23)
Federal Family Education Loan Program ABS	21	—	460	(9)	481	(9)
Other	—	—	430	(12)	430	(12)
Total non-mortgage-backed securities	825	(17)	2,496	(66)	3,321	(83)
Mortgage-backed securities						
U.S. obligations single-family MBS	9	—	619	(1)	628	(1)
GSE multifamily MBS	2,573	(18)	15,431	(108)	18,004	(126)
Private-label MBS	156	(7)	178	(13)	334	(20)
Total mortgage-backed securities	2,738	(25)	16,228	(122)	18,966	(147)
Total	$ 3,563	$ (42)	$ 18,724	$ (188)	$ 22,287	$ (230)

Table 3.5 - AFS Securities by Contractual Maturity
(dollars in millions)

	June 30, 2021		December 31, 2020	
Year of Maturity	**Amortized Cost**	**Fair Value**	**Amortized Cost**	**Fair Value**
Non-mortgage-backed securities				
Due in one year or less	$ 4,453	$ 4,459	$ 7,343	$ 7,346
Due after one year through five years	12,519	12,625	10,181	10,256
Due after five years through ten years	10,523	10,619	5,444	5,565
Due after ten years	3,283	3,315	2,688	2,742
Federal Family Education Loan Program ABS(1)	2,769	2,929	2,922	3,034
Total non-mortgage-backed securities	33,547	33,947	28,578	28,943
Mortgage-backed securities(1)	74,083	75,782	73,193	74,180
Total	$ 107,630	$ 109,729	$ 101,771	$ 103,123

(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 - Proceeds from Sale and Gross Gains and Losses on AFS Securities
(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	**2020**	**2021**	**2020**
Proceeds from sale of AFS securities	$ 20	$ —	$ 20	$ 1,741
Gross gains on sale of AFS securities	1	—	1	83
Gross losses on sale of AFS securities	—	—	—	—
Net realized gains (losses) from sale of AFS securities	$ 1	$ —	$ 1	$ 83

Held-to-Maturity Securities

Table 3.7 - HTM Securities by Major Security Type
(dollars in millions)

	June 30, 2021						
	Amortized Cost(1)	**Allowance for Credit Losses**	**OTTI Recognized in AOCI**	**Net Carrying Value**	**Gross Unrecognized Holding Gains(2)**	**Gross Unrecognized Holding Losses(2)**	**Fair Value**
Non-mortgage-backed securities							
U.S. Treasury obligations	$ 40	$ —	$ —	$ 40	$ —	$ —	$ 40
Other U.S. obligations	1,152	—	—	1,152	18	—	1,170
GSE and Tennessee Valley Authority obligations	2,512	—	—	2,512	88	(2)	2,598
State or local housing agency obligations	575	—	—	575	2	(23)	554
Total non-mortgage-backed securities	4,279	—	—	4,279	108	(25)	4,362
Mortgage-backed securities							
U.S. obligations single-family MBS	4,495	—	—	4,495	46	(6)	4,535
GSE single-family MBS	14,444	—	—	14,444	265	(16)	14,693
GSE multifamily MBS	27,904	—	—	27,904	586	(26)	28,464
Private-label MBS	473	—	(9)	464	27	(3)	488
Total mortgage-backed securities	47,316	—	(9)	47,307	924	(51)	48,180
Total	$ 51,595	$ —	$ (9)	$ 51,586	$ 1,032	$ (76)	$ 52,542

	December 31, 2020						
	Amortized Cost(1)	Allowance for Credit Losses	OTTI Recognized in AOCI	Net Carrying Value	Gross Unrecognized Holding Gains(2)	Gross Unrecognized Holding Losses(2)	Fair Value
Non-mortgage-backed securities							
Certificates of deposit	$ 750	$ —	$ —	$ 750	$ —	$ —	$ 750
U.S. Treasury obligations	41	—	—	41	—	—	41
Other U.S. obligations	1,101	—	—	1,101	25	—	1,126
GSE and Tennessee Valley Authority obligations	2,624	—	—	2,624	103	—	2,727
State or local housing agency obligations	1,491	—	—	1,491	2	(26)	1,467
Total non-mortgage-backed securities	6,007	—	—	6,007	130	(26)	6,111
Mortgage-backed securities							
U.S. obligations single-family MBS	4,466	—	—	4,466	60	(5)	4,521
GSE single-family MBS	19,888	—	—	19,888	322	(13)	20,197
GSE multifamily MBS	31,451	—	—	31,451	738	(31)	32,158
Private-label MBS	552	(1)	(13)	538	31	(9)	560
Total mortgage-backed securities	56,357	(1)	(13)	56,343	1,151	(58)	57,436
Total	$ 62,364	$ (1)	$ (13)	$ 62,350	$ 1,281	$ (84)	$ 63,547

(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 $53 million and $64 million as of June 30, 2021 and December 31, 2020.
(2) Gross unrecognized holding gains (losses) represent the difference between fair value and net carrying value.

Table 3.8 - HTM Securities by Contractual Maturity

(dollars in millions)

	June 30, 2021			December 31, 2020		
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	$ 1,111	$ 1,111	$ 1,112	$ 1,711	$ 1,711	$ 1,712
Due after one year through five years	1,894	1,894	1,931	2,058	2,058	2,105
Due after five years through ten years	792	792	816	703	703	720
Due after ten years	482	482	503	1,535	1,535	1,574
Total non-mortgage-backed securities	4,279	4,279	4,362	6,007	6,007	6,111
Mortgage-backed securities(2)	47,316	47,307	48,180	56,357	56,343	57,436
Total	$ 51,595	$ 51,586	$ 52,542	$ 62,364	$ 62,350	$ 63,547

(1) Net carrying value of HTM securities represents amortized cost after adjustment 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.

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 - Proceeds from Sale and Gains and Losses on HTM Securities
(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Proceeds from sale of HTM securities	$ —	$ —	$ —	$ 356
Amortized cost of HTM securities sold	—	—	—	312
Net realized gains (losses) from sale of HTM securities	$ —	$ —	$ —	$ 44

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, 2021, the FHLBanks recognized a reversal of credit losses of $1 million and $6 million on AFS and HTM securities. During the three months ended June 30, 2020, the FHLBanks recognized a reversal of credit losses of $9 million on AFS and HTM securities. During the six months ended June 30, 2020, the FHLBanks recognized a provision for credit losses of $32 million on AFS and HTM securities, due primarily to a decline in the fair value of AFS PLMBS.

Table 3.10 presents a rollforward of the allowance for credit losses on debt securities for the three and six months ended June 30, 2021 and 2020.

Table 3.10 - Allowance for Credit Losses on Debt Securities
(dollars in millions)

	Three Months Ended June 30,				Six Months Ended June 30,			
	2021		2020		2021		2020	
	AFS	HTM	AFS	HTM	AFS	HTM	AFS	HTM
Balance, at beginning of period	$ 18	$ 1	$ 42	$ 5	$ 24	$ 1	$ —	$ —
Adjustments for cumulative effect of accounting change	—	—	—	—	—	—	—	6
Provision (reversal) for credit losses	(1)	—	(11)	2	(6)	—	31	1
Reduction due to intent to sell	1	(1)	—	—	1	(1)	—	—
Charge-offs, net of recoveries	(1)	—	—	—	(2)	—	—	—
Balance, at end of period	$ 17	$ —	$ 31	$ 7	$ 17	$ —	$ 31	$ 7

To evaluate investment securities for credit losses at June 30, 2021 and December 31, 2020, 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, 2021 and December 31, 2020, 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, 2021 and December 31, 2020, 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 material payment defaults on these securities at June 30, 2021 or December 31, 2020; 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, 2021 and December 31, 2020.

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, 2021 and December 31, 2020, the FHLBanks had not established an allowance for credit losses on any of their 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. As of June 30, 2021 and December 31, 2020, 9.7% and 9.2% 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 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 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, 2021 and December 31, 2020, the allowance for credit losses was $17 million and $24 million for AFS PLMBS. There was no allowance for credit losses on HTM PLMBS at June 30, 2021 and there was $1 million of allowance for credit losses on HTM PLMBS at December 31, 2020. 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 - Advances by Redemption Term

(dollars in millions)

	June 30, 2021		December 31, 2020	
Redemption Term	**Amount(1)**	**Weighted-Average Interest Rate**	**Amount(1)**	**Weighted-Average Interest Rate**
Overdrawn demand and overnight deposit accounts	$ 4	1.24 %	$ 3	1.25 %
Due in 1 year or less	161,170	0.71 %	182,211	0.73 %
Due after 1 year through 2 years	35,876	1.69 %	49,140	1.66 %
Due after 2 years through 3 years	40,565	1.30 %	45,678	1.54 %
Due after 3 years through 4 years	38,586	1.31 %	34,258	1.44 %
Due after 4 years through 5 years	23,487	1.12 %	30,369	1.36 %
Thereafter	66,534	1.61 %	73,987	1.55 %
Total principal amount	366,222	1.13 %	415,646	1.18 %
Commitment fees	—		(1)	
Discounts on AHP advances	(25)		(24)	
Premiums	49		47	
Discounts	(112)		(113)	
Hedging adjustments	4,046		6,851	
Fair value option valuation adjustments	172		233	
Total	$ 370,352		$ 422,639	

(1) Carrying amounts exclude accrued interest receivable of $302 million and $363 million as of June 30, 2021 and December 31, 2020.

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 can 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 - 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, 2021	December 31, 2020	June 30, 2021	December 31, 2020
Overdrawn demand and overnight deposit accounts	$ 4	$ 3	$ 4	$ 3
Due in 1 year or less	205,458	229,463	194,956	214,742
Due after 1 year through 2 years	32,697	44,081	38,279	54,231
Due after 2 years through 3 years	25,275	33,053	40,128	45,866
Due after 3 years through 4 years	29,967	23,868	37,449	33,118
Due after 4 years through 5 years	13,502	24,171	22,368	28,765
Thereafter	59,319	61,007	33,038	38,921
Total principal amount	$ 366,222	$ 415,646	$ 366,222	$ 415,646

(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 - Advances by Current Interest Rate Terms
(dollars in millions)

Redemption Term	June 30, 2021	December 31, 2020
Total fixed-rate	$ 284,878	$ 320,737
Total variable-rate	81,344	94,909
Total principal amount	$ 366,222	$ 415,646

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-34 to F-36 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, 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, 2021 and December 31, 2020, 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, 2021 and December 31, 2020, none of the FHLBanks had any advances that were considered past due for financial reporting purposes, on nonaccrual status, or considered impaired. In addition, there were no TDRs related to advances at any FHLBank during the three and six months ended June 30, 2021 and 2020, 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, 2021 and December 31, 2020.

In December 2020, the FHLBank of Des Moines declared a member in default under the member's contractual terms and demanded all of its outstanding advances to be repaid in full. As of March 31, 2021, all outstanding advances to this member were considered past due based on the member's interest payments being in default for 30 days or more. During the second quarter of 2021, all outstanding advances to this member were repaid in full.

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. The FHLBank of New York implemented the Mortgage Asset Program (MAP®) at the end of 2020 in order to replace its participation in the MPF Program during the first quarter of 2021. Under these mortgage loan 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 - Mortgage Loans Held for Portfolio

(dollars in millions)

	June 30, 2021	December 31, 2020
Fixed-rate, long-term single-family mortgage loans	$ 48,725	$ 55,095
Fixed-rate, medium-term(1) single-family mortgage loans	6,814	6,614
Total unpaid principal balance	55,539	61,709
Premiums	1,010	1,107
Discounts	(20)	(23)
Hedging adjustments	39	82
Total mortgage loans held for portfolio(2)	56,568	62,875
Allowance for credit losses on mortgage loans	(27)	(33)
Mortgage loans held for portfolio, net	$ 56,541	$ 62,842

(1) Medium-term is defined as a term of 15 years or less.
(2) Excludes accrued interest receivable of $250 million and $283 million at June 30, 2021 and December 31, 2020.

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

(dollars in millions)

	June 30, 2021	December 31, 2020
Conventional mortgage loans	$ 52,856	$ 58,766
Government-guaranteed or -insured mortgage loans	2,683	2,943
Total unpaid principal balance	$ 55,539	$ 61,709

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), and 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 each master commitment, 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. (See *Note 12 - Commitments and Contingencies* for additional information.)

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, 2021 and December 31, 2020, the amount of the credit enhancement in the Lender Risk and Member Performance accounts remaining to cover future potential losses totaled $470 million and $455 million.

Relief to Borrowers During the COVID-19 Pandemic. The FHLBanks elected to apply Section 4013 of the CARES Act to the FHLBanks' loan modifications that qualify under the CARES Act. As a result, the FHLBanks have elected to suspend TDR accounting for eligible modifications under Section 4013 of the CARES Act. At June 30, 2021 and December 31, 2020, the FHLBanks had $127 million and $22 million of these modifications outstanding, of which $12 million were on non-accrual status at both June 30, 2021 and December 31, 2020.

The FHLBanks' servicers may grant a forbearance period to borrowers who have requested forbearance based on COVID-19 related difficulties regardless of the status of the loan at the time of the request. There were $696 million and $1,017 million in unpaid principal balance (UPB) of conventional mortgage loans in forbearance due to the COVID-19 pandemic that were not TDRs at June 30, 2021 and December 31, 2020, which represented 1.3% and 1.6% of the FHLBanks' mortgage loans held for portfolio. (See *Note 1 - Summary of Significant Accounting Policies* on page F-20 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, for additional information on the CARES Act.)

Payment Status of Mortgage Loans. Payment status is the key credit quality indicator for conventional mortgage loans and allows the FHLBanks to monitor the migration of past due loans. Past due loans are those where the borrower has failed to make timely payments of principal and/or interest in accordance with the terms of the loan. 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, 2021 and December 31, 2020.

Table 5.3 - Credit Quality Indicator for Conventional Mortgage Loans

(dollars in millions)

	June 30, 2021		
	Conventional Mortgage Loans		
	Origination Year		
Payment Status at Amortized Cost(1)(2)	**Prior to 2017**	**2017 to 2021**	**Total**
Past due 30-59 days	$ 136	$ 165	$ 301
Past due 60-89 days	43	50	93
Past due 90 days or more	223	361	584
Total past due mortgage loans	402	576	978
Total current mortgage loans	15,675	37,190	52,865
Total conventional mortgage loans	$ 16,077	$ 37,766	$ 53,843

	December 31, 2020		
	Conventional Mortgage Loans		
	Origination Year		
Payment Status at Amortized Cost(1)(2)	**Prior to 2016**	**2016 to 2020**	**Total**
Past due 30-59 days	$ 139	$ 248	$ 387
Past due 60-89 days	59	104	163
Past due 90 days or more	245	683	928
Total past due mortgage loans	443	1,035	1,478
Total current mortgage loans	13,576	44,833	58,409
Total conventional mortgage loans	$ 14,019	$ 45,868	$ 59,887

(1) The amortized cost excludes accrued interest receivable.
(2) At June 30, 2021 and December 31, 2020, there were $696 million and $1,017 million in UPB of conventional mortgage loans in forbearance as a result of the COVID-19 pandemic, of which $206 million and $188 million had a current payment status, $45 million and $71 million were 30 to 59 days past due, $41 million and $83 million were 60 to 89 days past due, and $404 million and $675 million were past due 90 days or more.

Table 5.4 - Other Delinquency Statistics

(dollars in millions)

	June 30, 2021		
Amortized Cost	**Conventional Mortgage Loans**	**Government-Guaranteed or -Insured**	**Total**
In process of foreclosure(1)	$ 41	$ 23	$ 64
Serious delinquency rate(2)	1.10 %	3.45 %	1.21 %
Past due 90 days or more and still accruing interest	$ 102	$ 85	$ 187
Loans on non-accrual status(3)	$ 563	$ 1	$ 564

	December 31, 2020		
Amortized Cost	**Conventional Mortgage Loans**	**Government-Guaranteed or -Insured**	**Total**
In process of foreclosure(1)	$ 67	$ 20	$ 87
Serious delinquency rate(2)	1.57 %	4.25 %	1.70 %
Past due 90 days or more and still accruing interest	$ 144	$ 94	$ 238
Loans on non-accrual status(3)	$ 874	$ 10	$ 884

(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. There were foreclosure moratoriums enacted in many areas that expired on July 31, 2021, but an eviction moratorium has been extended by the FHFA to September 30, 2021.
(3) At June 30, 2021 and December 31, 2020, $348 million and $546 million of these conventional mortgage loans on non-accrual status did not have an associated allowance for credit losses. As of June 30, 2021 and December 31, 2020, $353 million and $587 million in UPB of these conventional mortgage loans were in forbearance due to the COVID-19 pandemic.

Allowance for Credit Losses for Mortgage Loans

See *Note 1 - Summary of Significant Accounting Policies* on pages F-18 to F-20 and *Note 6 - Mortgage Loans* on pages F-36 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, 2020, 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, 2021 and December 31, 2020, 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 if repayment is expected to be provided by the sale of the underlying property, that is, if it is considered likely that the borrower will default. 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 mortgage loans for the three and six months ended June 30, 2021 and 2020.

Table 5.5 - Allowance for Credit Losses on Conventional Mortgage Loans

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Balance, at beginning of period	$ 27	$ 29	$ 33	$ 16
Adjustment for cumulative effect of accounting change	—	—	—	11
Charge-offs, net of recoveries	—	(3)	(1)	(4)
Provision (reversal) for credit losses	—	15	(5)	18
Balance, at end of period	$ 27	$ 41	$ 27	$ 41

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. 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, 2021 and December 31, 2020.

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-41 to F-50 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, 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. 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, 2021			December 31, 2020		
	Notional Amount of Derivatives	Derivative Assets	Derivative Liabilities	Notional Amount of Derivatives	Derivative Assets	Derivative Liabilities
Derivatives designated as hedging instruments						
Interest-rate swaps	$ 417,094	$ 911	$ 3,383	$ 330,785	$ 646	$ 4,440
Derivatives not designated as hedging instruments						
Interest-rate swaps	125,391	74	263	148,925	139	400
Interest-rate swaptions	2,036	8	—	3,455	8	—
Interest-rate caps or floors	9,433	3	—	11,346	4	1
Interest-rate futures or forwards	281	—	—	350	—	3
Mortgage delivery commitments	2,402	6	3	3,581	10	7
Other	250	—	—	256	—	1
Total derivatives not designated as hedging instruments	139,793	91	266	167,913	161	412
Total derivatives before netting and collateral adjustments	$ 556,887	1,002	3,649	$ 498,698	807	4,852
Netting adjustments and cash collateral(1)		737	(3,379)		810	(3,978)
Total derivative assets and total derivative liabilities		$ 1,739	$ 270		$ 1,617	$ 874

(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 $4,053 million and $4,502 million at June 30, 2021 and December 31, 2020. Cash collateral received, including accrued interest, was $641 million and $623 million at June 30, 2021 and December 31, 2020.

Table 6.2 presents the net gains (losses) on qualifying and discontinued fair value and cash flow hedging relationships.

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

(dollars in millions)

	Three 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	$ 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)

	Three Months Ended June 30, 2020				
	Interest Income/Expense				
	Advances	Available-for-Sale Securities	Consolidated Discount Notes	Consolidated Bonds	Other Comprehensive Income
Total interest income (expense) presented on the Combined Statement of Income	$ 1,765	$ 372	$ (652)	$ (1,332)	
Gains (losses) on fair value hedging relationships					
Interest rate contracts					
Derivatives(1)	$ (628)	$ (501)	$ 19	$ 117	
Hedged items(2)	124	234	46	109	
Net gains (losses) on fair value hedging relationships	$ (504)	$ (267)	$ 65	$ 226	
Gains (losses) on cash flow hedging relationships(3)					
Interest rate contracts					
Reclassified from AOCI into interest income (expense)	$ —	$ —	$ (8)	$ (3)	
Recognized in OCI					$ (27)

	Six Months Ended June 30, 2021				
	Interest Income/Expense				
	Advances	Available-for-Sale Securities	Consolidated Discount Notes	Consolidated Bonds	Other Comprehensive Income
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

	Six Months Ended June 30, 2020				
	Interest Income/Expense				
	Advances	Available-for-Sale Securities	Consolidated Discount Notes	Consolidated Bonds	Other Comprehensive Income
Total interest income (expense) presented on the Combined Statement of Income	$ 4,657	$ 863	$ (2,175)	$ (4,042)	
Gains (losses) on fair value hedging relationships					
Interest rate contracts					
Derivatives(1)	$ (7,741)	$ (5,706)	$ 76	$ 1,355	
Hedged items(2)	7,077	5,248	(6)	(1,046)	
Net gains (losses) on fair value hedging relationships	$ (664)	$ (458)	$ 70	$ 309	
Gains (losses) on cash flow hedging relationships(3)					
Interest rate contracts					
Reclassified from AOCI into interest income (expense)	$ —	$ —	$ (13)	$ (5)	
Recognized in OCI					$ (325)

(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, 2021 and 2020, 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, 2021, $26 million of deferred net losses on derivative instruments in AOCI is expected to be reclassified to earnings during the next twelve months. At June 30, 2021, the maximum length of time over which an FHLBank is hedging its exposure to the variability in future cash flows for forecasted transactions is eleven 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, 2021 and December 31, 2020.

Table 6.3 - Cumulative Basis Adjustments for Fair Value Hedges

(dollars in millions)

	June 30, 2021				
	Advances	Available-for-Sale Securities	Mortgage Loans	Consolidated Discount Notes	Consolidated Bonds
Amortized cost of hedged asset or liability(1)	$ 168,883	$ 78,782	$ 305	$ —	$ 182,279
Fair value hedging adjustments					
Basis adjustments for active hedging relationships included in amortized cost	$ 3,805	$ 2,471	$ —	$ —	$ 280
Basis adjustments for discontinued hedging relationships included in amortized cost	241	1,261	7	—	140
Total amount of fair value hedging basis adjustments	$ 4,046	$ 3,732	$ 7	$ —	$ 420

	December 31, 2020				
	Advances	Available-for-Sale Securities	Mortgage Loans	Consolidated Discount Notes	Consolidated Bonds
Amortized cost of hedged asset or liability(1)	$ 185,806	$ 72,712	$ 354	$ 9,030	$ 80,994
Fair value hedging adjustments					
Basis adjustments for active hedging relationships included in amortized cost	$ 6,710	$ 4,701	$ —	$ —	$ 1,200
Basis adjustments for discontinued hedging relationships included in amortized cost	141	1,142	9	—	140
Total amount of fair value hedging basis adjustments	$ 6,851	$ 5,843	$ 9	$ —	$ 1,340

(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.

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	2021	2020	2021	2020
Economic hedges				
Interest-rate swaps	$ 70	$ 63	$ 394	$ (1,114)
Interest-rate swaptions	(17)	(2)	4	97
Interest-rate caps or floors	(2)	(1)	(1)	—
Interest-rate futures or forwards	(2)	(12)	6	(60)
Net interest settlements	(124)	(144)	(271)	(183)
Other	(3)	(3)	3	(11)
Mortgage delivery commitments	10	2	(25)	47
Total net gains (losses) related to derivatives not designated as hedging instruments	(68)	(97)	110	(1,224)
Price alignment amount(1)	—	—	—	6
Net gains (losses) on derivatives	$ (68)	$ (97)	$ 110	$ (1,218)

(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, 2021, was $618 million, for which the FHLBanks have posted collateral with a fair value of $589 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 an additional $2 million of collateral at fair value to their uncleared derivatives counterparties at June 30, 2021.

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, 2021.

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.

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

	June 30, 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	$ 687	$ (639)	$ 6	$ 54	$ —	$ 12	$ 42
Cleared	309	1,376	—	1,685	(318)	—	2,003
Total				$ 1,739			$ 2,045
Derivative Liabilities							
Uncleared	$ 3,164	$ (3,000)	$ 3	$ 167	$ —	$ 19	$ 148
Cleared	482	(379)	—	103	21	62	20
Total				$ 270			$ 168

	December 31, 2020						
	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	$ 514	$ (465)	$ 10	$ 59	$ —	$ 30	$ 29
Cleared	283	1,275	—	1,558	(379)	—	1,937
Total				$ 1,617			$ 1,966
Derivative Liabilities							
Uncleared	$ 4,488	$ (3,657)	$ 9	$ 840	$ —	$ 691	$ 149
Cleared	355	(321)	—	34	14	8	12
Total				$ 874			$ 161

(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, 2021 and December 31, 2020, the FHLBanks had additional net credit exposure of $1,730 million and $1,970 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 - Deposits
(dollars in millions)

	June 30, 2021	December 31, 2020
Interest-bearing		
Demand and overnight	$ 14,446	$ 13,609
Term	201	262
Other	17	19
Total interest-bearing	14,664	13,890
Non-interest-bearing		
Demand and overnight	394	547
Other	518	903
Total non-interest-bearing	912	1,450
Total deposits	$ 15,576	$ 15,340

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 $666.7 billion and $746.8 billion at June 30, 2021 and December 31, 2020.

Table 8.1 - Consolidated Discount Notes Outstanding
(dollars in millions)

	Book Value	Principal Amount	Weighted-Average Interest Rate(1)
June 30, 2021	$ 231,720	$ 231,733	0.03 %
December 31, 2020	$ 274,804	$ 274,853	0.11 %

(1) Represents yield to maturity excluding concession fees.

Table 8.2 - Consolidated Bonds Outstanding by Contractual Maturity

(dollars in millions)

	June 30, 2021		December 31, 2020	
Year of Contractual Maturity	**Amount**	**Weighted-Average Interest Rate**	**Amount**	**Weighted-Average Interest Rate**
Due in 1 year or less	$ 212,691	0.46 %	$ 308,260	0.42 %
Due after 1 year through 2 years	58,560	1.01 %	75,647	0.86 %
Due after 2 years through 3 years	24,242	1.40 %	22,349	1.97 %
Due after 3 years through 4 years	28,215	1.21 %	15,379	2.22 %
Due after 4 years through 5 years	48,786	0.90 %	12,143	1.29 %
Thereafter	62,409	1.92 %	38,030	2.56 %
Total principal amount	434,903	0.89 %	471,808	0.82 %
Net premiums	465		533	
Hedging adjustments	420		1,340	
Fair value option valuation adjustments	9		33	
Total	$ 435,797		$ 473,714	

Consolidated bonds outstanding were issued with either fixed-rate coupon payment terms or variable-rate coupon payment terms that are indexed to SOFR, LIBOR, or other specified indices. To meet the specific needs of certain investors in consolidated obligations, both fixed-rate consolidated bonds 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 - Consolidated Bonds Outstanding by Call Features

(dollars in millions)

Principal Amount of Consolidated Bonds	**June 30, 2021**	**December 31, 2020**
Non-callable/non-putable	$ 310,888	$ 428,719
Callable	124,015	43,089
Total principal amount	$ 434,903	$ 471,808

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, 2021**	**December 31, 2020**
Due in 1 year or less	$ 326,360	$ 338,548
Due after 1 year through 2 years	61,988	76,174
Due after 2 years through 3 years	14,218	20,658
Due after 3 years through 4 years	11,963	12,258
Due after 4 years through 5 years	4,810	7,642
Thereafter	15,564	16,528
Total principal amount	$ 434,903	$ 471,808

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 operations 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, 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 capital without a weighting factor.

The FHFA may require an FHLBank to maintain greater minimum capital levels than are required based on FHFA rules and regulation. At June 30, 2021, each FHLBank was in compliance with FHFA regulatory capital requirements.

Table 9.1 - Risk-Based Capital Requirements at June 30, 2021

(dollars in millions)

	Risk-Based Capital	
FHLBank	Minimum Requirement	Actual
Boston	$ 388	$ 2,604
New York	1,152	6,793
Pittsburgh	542	2,652
Atlanta	1,062	4,688
Cincinnati	659	4,029
Indianapolis	698	3,623
Chicago	1,778	6,394
Des Moines	777	5,847
Dallas	1,016	3,577
Topeka	289	2,226
San Francisco	1,098	6,037

Table 9.2 - Regulatory Capital Requirements at June 30, 2021

(dollars in millions)

	Regulatory Capital Ratio		Regulatory Capital	
FHLBank	Minimum Requirement	Actual	Minimum Requirement	Actual
Boston	4.0 %	7.3 %	$ 1,427	$ 2,604
New York	4.0 %	5.6 %	4,818	6,793
Pittsburgh	4.0 %	6.4 %	1,666	2,652
Atlanta	4.0 %	5.9 %	3,156	4,688
Cincinnati	4.0 %	6.8 %	2,355	4,029
Indianapolis	4.0 %	5.8 %	2,511	3,623
Chicago	4.0 %	6.6 %	3,900	6,394
Des Moines	4.0 %	7.0 %	3,331	5,847
Dallas	4.0 %	6.1 %	2,345	3,577
Topeka	4.0 %	5.5 %	1,852	2,555
San Francisco	4.0 %	11.1 %	2,170	6,037

Table 9.3 - Leverage Capital Requirements at June 30, 2021
(dollars in millions)

	Leverage Capital Ratio		Leverage Capital	
FHLBank	Minimum Requirement	Actual	Minimum Requirement	Actual
Boston	5.0 %	11.0 %	$ 1,784	$ 3,906
New York	5.0 %	8.5 %	6,022	10,190
Pittsburgh	5.0 %	9.6 %	2,083	3,979
Atlanta	5.0 %	8.9 %	3,945	7,033
Cincinnati	5.0 %	10.3 %	2,944	6,043
Indianapolis	5.0 %	8.7 %	3,139	5,435
Chicago	5.0 %	9.8 %	4,875	9,592
Des Moines	5.0 %	10.5 %	4,164	8,771
Dallas	5.0 %	9.2 %	2,931	5,364
Topeka	5.0 %	7.9 %	2,316	3,667
San Francisco	5.0 %	16.7 %	2,712	9,056

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. At June 30, 2021, each of the FHLBanks of Boston, Pittsburgh, and 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 is required for those three FHLBanks until such time as the contribution requirement exceeds the balance of restricted retained earnings.

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, 2021, dividends on mandatorily redeemable capital stock of $6 million and $13 million were recorded as interest expense. For the three and six months ended June 30, 2020, dividends on mandatorily redeemable capital stock of $14 million and $32 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 capital stock subject to mandatory redemption. 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 - Mandatorily Redeemable Capital Stock Rollforward

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Balance, beginning of period	$ 667	$ 1,726	$ 772	$ 1,378
Capital stock subject to mandatory redemption reclassified from capital	375	782	737	1,550
Redemption/repurchase of mandatorily redeemable capital stock	(428)	(1,412)	(895)	(1,835)
Other(1)	—	1	—	4
Balance, end of period	$ 614	$ 1,097	$ 614	$ 1,097

(1) Represents a direct purchase of mandatorily redeemable capital stock by a member and rounding adjustments.

Table 9.5 presents the amount of mandatorily redeemable capital stock by contractual year of redemption. 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, 2021	December 31, 2020
Year 1	$ 34	$ 11
Year 2	27	16
Year 3	76	58
Year 4	164	276
Year 5	282	45
Thereafter(1)	—	329
Past contractual redemption date due to remaining activity(2)	31	37
Total	$ 614	$ 772

(1) Represents mandatorily redeemable capital stock resulting from an FHFA rule effective February 19, 2016, that made captive insurance companies ineligible for FHLBank membership. Captive insurance company members that were admitted as FHLBank members prior to September 12, 2014, had their memberships terminated no later than February 19, 2021. The related mandatorily redeemable capital stock is not required to be redeemed until five years after the member's termination.

(2) 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, 2021, 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 for the three and six months ended June 30, 2021 and 2020.

Table 10.1 - Accumulated Other Comprehensive Income

(dollars in millions)

	Net Unrealized Gains (Losses) on AFS Securities (Note 3)	Net Non-Credit Portion of OTTI 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, 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
Balance, March 31, 2020	$ (1,064)	$ —	$ (150)	$ (490)	$ (138)	$ (1,842)
Other comprehensive income before reclassifications						
Unrealized gains (losses)	1,053	—	—	(27)	—	1,026
Accretion of non-credit loss	—	—	8	—	—	8
Reclassifications from accumulated other comprehensive income (loss) to net income						
Amortization on hedging activities	—	—	—	11	—	11
Amortization - pension and postretirement	—	—	—	—	2	2
Net current period other comprehensive income (loss)	1,053	—	8	(16)	2	1,047
Balance, June 30, 2020	$ (11)	$ —	$ (142)	$ (506)	$ (136)	$ (795)

	Net Unrealized Gains (Losses) on AFS Securities (Note 3)	Net Non-Credit Portion of OTTI 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, 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
Balance, December 31, 2019	$ 492	$ 362	$ (179)	$ (199)	$ (132)	$ 344
Other comprehensive income before reclassifications						
Unrealized gains (losses)	(782)	—	—	(325)	—	(1,107)
Non-credit losses included in basis of securities sold	—	—	20	—	—	20
Accretion of non-credit loss	—	—	17	—	—	17
Reclassifications from accumulated other comprehensive income (loss) to net income						
Reclassification of realized net (gains) losses included in net income	(83)	—	—	—	—	(83)
Amortization on hedging activities	—	—	—	18	—	18
Amortization - pension and postretirement	—	—	—	—	(4)	(4)
Net current period other comprehensive income (loss)	(865)	—	37	(307)	(4)	(1,139)
Adjustment for the adoption of ASU 2016-13, as amended	362	(362)	—	—	—	—
Balance, June 30, 2020	$ (11)	$ —	$ (142)	$ (506)	$ (136)	$ (795)

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, 2021 and December 31, 2020. 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.

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, 2021 and 2020.

Table 11.1 presents the net carrying value, fair value, and fair value hierarchy of financial assets and liabilities of the FHLBanks at June 30, 2021 and December 31, 2020. 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, 2021					
		Fair Value				
Financial Instruments	**Net Carrying Value**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Netting Adjustment and Cash Collateral(1)**
Assets						
Cash and due from banks	$ 4,777	$ 4,777	$ 4,777	$ —	$ —	$ —
Interest-bearing deposits	5,707	5,707	2,428	3,279	—	—
Securities purchased under agreements to resell	48,832	48,832	—	48,832	—	—
Federal funds sold	47,897	47,897	—	47,897	—	—
Trading securities	38,537	38,537	7,073	31,464	—	—
Available-for-sale securities	109,729	109,729	—	106,695	3,034	—
Held-to-maturity securities	51,586	52,542	—	51,808	734	—
Advances(2)	370,352	372,316	—	372,316	—	—
Mortgage loans held for portfolio	56,541	58,014	—	57,772	242	—
Mortgage loans held for sale(3)	108	108	—	108	—	—
Accrued interest receivable	980	980	—	980	—	—
Derivative assets, net	1,739	1,739	—	1,002	—	737
Other assets	387	390	329	61	—	—
Liabilities						
Deposits	15,576	15,576	—	15,576	—	—
Consolidated obligations						
Discount notes(4)	231,720	231,715	—	231,715	—	—
Bonds(5)	435,797	438,978	—	438,978	—	—
Total consolidated obligations	667,517	670,693	—	670,693	—	—
Mandatorily redeemable capital stock	614	615	615	—	—	—
Accrued interest payable	833	832	—	832	—	—
Derivative liabilities, net	270	270	—	3,649	—	(3,379)
Other liabilities	65	67	30	37	—	—

	December 31, 2020					
		Fair Value				
Financial Instruments	Net Carrying Value	Total	Level 1	Level 2	Level 3	Netting Adjustment and Cash Collateral(1)
Assets						
Cash and due from banks	$ 25,125	$ 25,125	$ 25,125	$ —	$ —	$ —
Interest-bearing deposits	8,076	8,076	3,282	4,794	—	—
Securities purchased under agreements to resell	45,588	45,588	—	45,588	—	—
Federal funds sold	31,510	31,510	—	31,510	—	—
Trading securities	55,218	55,218	11,741	43,477	—	—
Available-for-sale securities	103,123	103,123	—	100,712	2,411	—
Held-to-maturity securities	62,350	63,547	—	61,835	1,712	—
Advances(2)	422,639	425,227	—	425,227	—	—
Mortgage loans held for portfolio	62,842	65,007	—	64,722	285	—
Mortgage loans held for sale(3)	105	105	—	105	—	—
Accrued interest receivable	1,146	1,146	—	1,146	—	—
Derivative assets, net	1,617	1,617	—	807	—	810
Other assets	368	371	313	58	—	—
Liabilities						
Deposits	15,340	15,340	—	15,340	—	—
Consolidated obligations						
Discount notes(4)	274,804	274,817	—	274,817	—	—
Bonds(5)	473,714	479,178	—	479,178	—	—
Total consolidated obligations	748,518	753,995	—	753,995	—	—
Mandatorily redeemable capital stock	772	774	774	—	—	—
Accrued interest payable	776	774	—	774	—	—
Derivative liabilities, net	874	874	—	4,852	—	(3,978)
Other liabilities	67	70	32	38	—	—

(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) Includes $3,218 million and $3,489 million of advances recorded under fair value option at June 30, 2021 and December 31, 2020.
(3) Represents mortgage loans held for sale recorded under fair value option, included in other assets, net on the Combined Statement of Condition.
(4) Includes $15,116 million and $9,134 million of consolidated discount notes recorded under fair value option at June 30, 2021 and December 31, 2020.
(5) Includes $16,220 million and $20,798 million of consolidated bonds recorded under fair value option at June 30, 2021 and December 31, 2020.

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-65 to F-67, of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020. There were no significant changes in these valuation methodologies and primary inputs during the six months ended June 30, 2021.

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, 2021 and December 31, 2020, 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, 2021				
	Total	Level 1	Level 2	Level 3	Netting Adjustment and Cash Collateral(1)
Recurring fair value measurements - Assets					
Trading securities					
Certificates of deposit	$ 575	$ —	$ 575	$ —	$ —
U.S. Treasury obligations	34,050	7,073	26,977	—	—
Other U.S. obligations	107	—	107	—	—
GSE and Tennessee Valley Authority obligations	2,414	—	2,414	—	—
Other non-MBS	225	—	225	—	—
U.S. obligations single-family MBS	5	—	5	—	—
GSE single-family MBS	43	—	43	—	—
GSE multifamily MBS	1,118	—	1,118	—	—
Total trading securities	38,537	7,073	31,464	—	—
Available-for-sale securities					
U.S. Treasury obligations	14,147	—	14,147	—	—
Other U.S. obligations	3,326	—	3,326	—	—
GSE and Tennessee Valley Authority obligations	10,893	—	10,893	—	—
State or local housing agency obligations	1,897	—	910	987	—
Federal Family Education Loan Program ABS	2,929	—	2,929	—	—
Other non-MBS	755	—	755	—	—
U.S. obligations single-family MBS	4,065	—	4,065	—	—
U.S. obligations multifamily MBS	181	—	181	—	—
GSE single-family MBS	5,970	—	5,970	—	—
GSE multifamily MBS	63,519	—	63,519	—	—
Private-label MBS	2,047	—	—	2,047	—
Total available-for-sale securities	109,729	—	106,695	3,034	—
Advances(2)	3,218	—	3,218	—	—
Mortgage loans held for sale(2)	108	—	108	—	—
Derivative assets, net					
Interest-rate related	1,733	—	996	—	737
Mortgage delivery commitments	6	—	6	—	—
Total derivative assets, net	1,739	—	1,002	—	737
Other assets	353	329	24	—	—
Total recurring assets at fair value	$ 153,684	$ 7,402	$ 142,511	$ 3,034	$ 737
Recurring fair value measurements - Liabilities					
Consolidated Obligations					
Discount notes(2)	$ 15,116	$ —	$ 15,116	$ —	$ —
Bonds(2)	16,220	—	16,220	—	—
Total consolidated obligations	31,336	—	31,336	—	—
Derivative liabilities, net					
Interest-rate related	267	—	3,646	—	(3,379)
Mortgage delivery commitments	3	—	3	—	—
Total derivative liabilities, net	270	—	3,649	—	(3,379)
Total recurring liabilities at fair value	$ 31,606	$ —	$ 34,985	$ —	$ (3,379)
Non-recurring fair value measurements - Assets(3)					
Mortgage loans held for portfolio	$ 55	$ —	$ 1	$ 54	
Total non-recurring assets at fair value	$ 55	$ —	$ 1	$ 54	

	December 31, 2020									
	Total		Level 1		Level 2		Level 3		Netting Adjustment and Cash Collateral(1)	
Recurring fair value measurements - Assets										
Trading securities										
U.S. Treasury obligations	$	50,734	$	11,741	$	38,993	$	—	$	—
Other U.S. obligations		114		—		114		—		—
GSE and Tennessee Valley Authority obligations		2,827		—		2,827		—		—
Other non-MBS		254		—		254		—		—
U.S. obligations single-family MBS		6		—		6		—		—
GSE single-family MBS		48		—		48		—		—
GSE multifamily MBS		1,235		—		1,235		—		—
Total trading securities		55,218		11,741		43,477		—		—
Available-for-sale securities										
U.S. Treasury obligations		8,529		—		8,529		—		—
Other U.S. obligations		3,636		—		3,636		—		—
GSE and Tennessee Valley Authority obligations		11,893		—		11,893		—		—
State or local housing agency obligations		1,074		—		951		123		—
Federal Family Education Loan Program ABS		3,034		—		3,034		—		—
Other non-MBS		777		—		777		—		—
U.S. obligations single-family MBS		4,451		—		4,451		—		—
U.S. obligations multifamily MBS		47		—		47		—		—
GSE single-family MBS		5,474		—		5,474		—		—
GSE multifamily MBS		61,920		—		61,920		—		—
Private-label MBS		2,288		—		—		2,288		—
Total available-for-sale securities		103,123		—		100,712		2,411		—
Advances(2)		3,489		—		3,489		—		—
Mortgage loans held for sale(2)		105		—		105		—		—
Derivative assets, net										
Interest-rate related		1,607		—		797		—		810
Mortgage delivery commitments		10		—		10		—		—
Total derivative assets, net		1,617		—		807		—		810
Other assets		333		313		20		—		—
Total recurring assets at fair value	$	163,885	$	12,054	$	148,610	$	2,411	$	810
Recurring fair value measurements - Liabilities										
Consolidated Obligations										
Discount notes(2)	$	9,134	$	—	$	9,134	$	—	$	—
Bonds(2)		20,798		—		20,798		—		—
Total consolidated obligations		29,932		—		29,932		—		—
Derivative liabilities, net										
Interest-rate related		867		—		4,845		—		(3,978)
Mortgage delivery commitments		7		—		7		—		—
Total derivative liabilities, net		874		—		4,852		—		(3,978)
Total recurring liabilities at fair value	$	30,806	$	—	$	34,784	$	—	$	(3,978)
Non-recurring fair value measurements - Assets(3)										
Mortgage loans held for portfolio	$	89	$	—	$	2	$	87		
Real estate owned		2		—		—		2		
Total non-recurring assets at fair value	$	91	$	—	$	2	$	89		

(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, 2021 and December 31, 2020.
(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, 2021 and 2020.

Table 11.3 - Rollforward of Level 3 Assets and Liabilities

(dollars in millions)

	Three Months Ended June 30, 2021		Three Months Ended June 30, 2020	
	State and Local Housing Agency Obligations	Private-Label MBS	State and Local Housing Agency Obligations	Private-Label MBS
Balance, at beginning of period	$ 109	$ 2,162	$ 65	$ 2,536
Total gains (losses) included in earnings				
Net gains (losses) on sale of available-for-sale securities	—	—	—	1
Interest income	—	19	—	20
(Provision) reversal for credit losses on available-for-sale securities	—	1	—	11
Total gains (losses) included in other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	1	20	3	89
Net change in fair value of other-than-temporarily impaired securities	—	—	—	14
Purchases, issuances, sales, maturities, and settlements				
Sales and maturities	(22)	—	(8)	—
Settlements	(2)	(155)	—	(135)
Transfers from held-to-maturity securities to available-for-sale securities	901	—	—	—
Balance, at end of period	$ 987	$ 2,047	$ 60	$ 2,536
Total amount of unrealized gains (losses) for the period included in OCI relating to assets held at the end of the period	$ (1)	$ 21	$ 2	$ 104
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 the period	$ —	$ 19	$ —	$ (35)

	Six Months Ended June 30, 2021		Six Months Ended June 30, 2020	
	State and Local Housing Agency Obligations	Private-Label MBS	State and Local Housing Agency Obligations	Private-Label MBS
Balance, at beginning of period	$ 123	$ 2,288	$ 65	$ 3,642
Total gains (losses) included in earnings				
Net gains (losses) on sale of available-for-sale securities	—	—	—	82
Interest income	—	38	—	45
(Provision) reversal for credit losses on available-for-sale securities	—	6	—	(31)
Total gains (losses) included in other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	3	27	3	(185)
Net change in fair value of other-than-temporarily impaired securities	—	—	—	(16)
Purchases, issuances, sales, maturities, and settlements				
Sales and maturities	(38)	—	(8)	(726)
Settlements	(2)	(312)	—	(276)
Transfers from held-to-maturity securities to available-for-sale securities	901	—	—	1
Balance, at end of period	$ 987	$ 2,047	$ 60	$ 2,536
Total amount of unrealized gains (losses) for the period included in OCI relating to assets held at the end of the period	$ —	$ 27	$ 2	$ (157)
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 the period	$ —	$ 43	$ —	$ 12

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, 2021 and 2020.

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	**2021**	**2020**	**2021**	**2020**
Advances	$ (2)	$ 32	$ (60)	$ 183
Mortgage loans held for sale(1)	—	—	(2)	2
Consolidated discount notes	—	32	2	(14)
Consolidated bonds	7	23	13	(28)
Total net gains (losses)	$ 5	$ 87	$ (47)	$ 143

(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, 2021 and 2020. 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 as of June 30, 2021 and December 31, 2020.

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

	June 30, 2021			December 31, 2020		
	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	$ 3,218	$ 3,046	$ 172	$ 3,489	$ 3,256	$ 233
Mortgage loans held for sale(1)	108	105	3	105	100	5
Consolidated discount notes	15,116	15,116	—	9,134	9,119	15
Consolidated bonds	16,220	16,211	9	20,798	20,765	33

(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, 2021 and December 31, 2020. Each FHLBank has deemed it unnecessary to record any liabilities for credit losses on these commitments at June 30, 2021 and December 31, 2020.

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

	June 30, 2021			December 31, 2020
Notional amount	Expire Within One Year	Expire After One Year	Total	Total
Standby letters of credit notional amount(1)	$ 134,925	$ 19,756	$ 154,681	$ 164,446
Unsettled consolidated discount notes, principal amount	9,828	—	9,828	4,724
Unsettled consolidated bonds, principal amount	4,470	—	4,470	528
Commitments for standby bond purchases	669	2,309	2,978	2,695
Commitments to fund additional advances	2,839	119	2,958	1,391
Unused lines of credit - advances	2,104	—	2,104	2,325
Commitments to purchase mortgage loans	1,851	—	1,851	2,276
Other	6	—	6	3

(1) Excludes unconditional commitments to issue standby letters of credit of $1,260 million and $68 million at June 30, 2021 and December 31, 2020.

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 subject to the same collateralization and borrowing limits that are applicable to advances. Standby letters of credit may be offered to assist members 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, 2021, 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 $82 million and $97 million at June 30, 2021 and December 31, 2020.

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 2026, although some are renewable at the option of the affected FHLBank. At June 30, 2021 and December 31, 2020, the FHLBanks had standby bond-purchase commitments with 13 and 14 state housing authorities. During the six months ended June 30, 2021, the FHLBanks were not required to purchase any bonds under these agreements. During the six months ended June 30, 2020, the FHLBanks were required to purchase one bond for $122 million 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, 2021, 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, 2021

(dollars in millions, except par value)	Combined	Combining Adjustments	Boston	New York
Assets				
Cash and due from banks	$ 4,777	$ (1)	$ 497	$ 53
Investments, net	302,288	(128)	16,053	37,461
Advances	370,352	(2)	15,177	79,985
Mortgage loans held for portfolio, net	56,541	(1)	3,471	2,526
Other assets, net	4,213	1	486	424
Total assets	$ 738,171	$ (131)	$ 35,684	$ 120,449
Liabilities				
Deposits	$ 15,576	$ (17)	$ 971	$ 1,531
Consolidated obligations				
Discount notes	231,720	—	8,366	42,173
Bonds	435,797	(121)	23,475	69,313
Total consolidated obligations	667,517	(121)	31,841	111,486
Mandatorily redeemable capital stock	614	—	7	2
Other liabilities	4,593	(1)	221	610
Total liabilities	688,300	(139)	33,040	113,629
Capital				
Capital stock				
Class B putable ($100 par value) issued and outstanding	25,478	—	1,081	4,867
Class A putable ($100 par value) issued and outstanding	328	—	—	—
Total capital stock	25,806	—	1,081	4,867
Retained earnings				
Unrestricted	16,815	7	1,147	1,120
Restricted	5,572	1	368	803
Total retained earnings	22,387	8	1,515	1,923
Accumulated other comprehensive income (loss)	1,678	—	48	30
Total capital	49,871	8	2,644	6,820
Total liabilities and capital	$ 738,171	$ (131)	$ 35,684	$ 120,449

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 545	$ 1,032	$ 135	$ 1,363	$ 440	$ 52	$ 189	$ 419	$ 53
21,033	30,078	27,096	25,594	40,586	29,712	30,152	16,248	28,403
14,955	47,075	23,587	27,633	46,270	45,560	24,922	20,996	24,194
4,774	178	7,717	7,737	9,759	7,545	3,206	8,328	1,301
355	541	337	444	439	416	158	319	293
$ 41,662	$ 78,904	$ 58,872	$ 62,771	$ 97,494	$ 83,285	$ 58,627	$ 46,310	$ 54,244
$ 941	$ 2,623	$ 1,336	$ 1,598	$ 1,123	$ 1,810	$ 1,626	$ 1,089	$ 945
15,113	22,318	21,180	14,445	45,728	23,098	11,371	10,330	17,598
22,514	49,030	31,678	42,363	42,922	52,081	41,615	32,088	28,839
37,627	71,348	52,858	56,808	88,650	75,179	52,986	42,418	46,437
63	—	14	233	248	35	7	2	3
314	257	651	549	840	351	216	154	431
38,945	74,228	54,859	59,188	90,861	77,375	54,835	43,663	47,816
1,203	2,448	2,718	2,234	2,007	3,429	2,093	1,129	2,269
—	—	—	—	—	—	—	328	—
1,203	2,448	2,718	2,234	2,007	3,429	2,093	1,457	2,269
930	1,632	792	878	3,469	1,785	1,228	823	3,004
457	608	505	278	670	598	249	274	761
1,387	2,240	1,297	1,156	4,139	2,383	1,477	1,097	3,765
127	(12)	(2)	193	487	98	222	93	394
2,717	4,676	4,013	3,583	6,633	5,910	3,792	2,647	6,428
$ 41,662	$ 78,904	$ 58,872	$ 62,771	$ 97,494	$ 83,285	$ 58,627	$ 46,310	$ 54,244

FEDERAL HOME LOAN BANKS CONDENSED COMBINING SCHEDULES STATEMENTS OF CONDITION

DECEMBER 31, 2020

(dollars in millions, except par value)	Combined	Combining Adjustments	Boston	New York
Assets				
Cash and due from banks	$ 25,125	$ 1	$ 2,050	$ 1,896
Investments, net	305,865	(131)	13,342	39,668
Advances	422,639	—	18,817	92,067
Mortgage loans held for portfolio, net	62,842	—	3,930	2,900
Other assets, net	4,269	(2)	322	465
Total assets	$ 820,740	$ (132)	$ 38,461	$ 136,996
Liabilities				
Deposits	$ 15,340	$ (17)	$ 1,089	$ 1,753
Consolidated obligations				
Discount notes	274,804	1	12,878	57,659
Bonds	473,714	(131)	21,472	69,716
Total consolidated obligations	748,518	(130)	34,350	127,375
Mandatorily redeemable capital stock	772	1	6	3
Other liabilities	5,930	1	234	609
Total liabilities	770,560	(145)	35,679	129,740
Capital				
Capital stock				
Class B putable ($100 par value) issued and outstanding	26,986	(2)	1,268	5,367
Class A putable ($100 par value) issued and outstanding	412	—	—	—
Total capital stock	27,398	(2)	1,268	5,367
Retained earnings				
Unrestricted	16,564	13	1,130	1,135
Restricted	5,434	—	368	774
Total retained earnings	21,998	13	1,498	1,909
Accumulated other comprehensive income (loss)	784	2	16	(20)
Total capital	50,180	13	2,782	7,256
Total liabilities and capital	$ 820,740	$ (132)	$ 38,461	$ 136,996

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 1,036	$ 2,905	$ 2,984	$ 1,812	$ 3,541	$ 978	$ 3,178	$ 4,570	$ 174
16,523	36,380	27,041	23,756	39,649	31,497	25,660	17,252	35,228
24,971	52,168	25,362	31,347	46,695	46,530	32,479	21,227	30,976
4,886	218	9,549	8,516	10,038	8,242	3,423	9,205	1,935
297	624	360	494	433	444	173	338	321
$ 47,713	$ 92,295	$ 65,296	$ 65,925	$ 100,356	$ 87,691	$ 64,913	$ 52,592	$ 68,634
$ 923	$ 1,998	$ 1,327	$ 1,375	$ 1,284	$ 1,908	$ 1,583	$ 1,230	$ 887
9,510	25,385	27,500	16,617	48,643	27,345	22,171	10,882	16,213
33,855	59,379	31,997	43,333	42,670	52,254	37,113	37,648	44,408
43,365	84,764	59,497	59,950	91,313	79,599	59,284	48,530	60,621
143	—	19	251	279	52	14	2	2
241	273	523	899	1,191	392	475	162	930
44,672	87,035	61,366	62,475	94,067	81,951	61,356	49,924	62,440
1,528	3,078	2,641	2,208	2,010	3,341	2,101	1,162	2,284
—	—	—	—	—	—	—	412	—
1,528	3,078	2,641	2,208	2,010	3,341	2,101	1,574	2,284
919	1,610	803	869	3,424	1,775	1,174	793	2,919
457	588	501	268	648	576	234	259	761
1,376	2,198	1,304	1,137	4,072	2,351	1,408	1,052	3,680
137	(16)	(15)	105	207	48	48	42	230
3,041	5,260	3,930	3,450	6,289	5,740	3,557	2,668	6,194
$ 47,713	$ 92,295	$ 65,296	$ 65,925	$ 100,356	$ 87,691	$ 64,913	$ 52,592	$ 68,634

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

THREE MONTHS ENDED JUNE 30, 2021 and 2020

(dollars in millions)	Combined	Combining Adjustments	Boston	New York
June 30, 2021				
Interest income				
Advances	$ 665	$ (1)	$ 48	$ 123
Investments	602	2	27	106
Mortgage loans held for portfolio	336	(1)	23	18
Other interest income	—	(3)	—	—
Total interest income	1,603	(3)	98	247
Interest expense				
Consolidated obligations - Discount notes	46	(1)	1	15
Consolidated obligations - Bonds	623	3	53	89
Other interest expense	7	—	—	—
Total interest expense	676	2	54	104
Net interest income	927	(5)	44	143
Provision (reversal) for credit losses	—	—	—	(2)
Net interest income after provision (reversal) for credit losses	927	(5)	44	145
Non-interest income (loss)	(120)	(6)	(13)	(10)
Non-interest expense	353	(9)	24	52
Affordable Housing Program assessments	46	(3)	1	8
Net income	$ 408	$ 1	$ 6	$ 75
June 30, 2020				
Interest income				
Advances	$ 1,765	$ —	$ 105	$ 326
Investments	986	(2)	46	152
Mortgage loans held for portfolio	496	1	33	24
Other interest income	—	(1)	—	—
Total interest income	3,247	(2)	184	502
Interest expense				
Consolidated obligations — Discount notes	652	—	48	96
Consolidated obligations — Bonds	1,332	2	94	176
Other interest expense	15	(1)	—	—
Total interest expense	1,999	1	142	272
Net interest income	1,248	(3)	42	230
Provision (reversal) for credit losses	8	—	3	3
Net interest income after provision (reversal) for credit losses	1,240	(3)	39	227
Non-interest income (loss)	(79)	(5)	(17)	(23)
Non-interest expense	402	(11)	20	51
Affordable Housing Program assessments	77	1	—	15
Net income	$ 682	$ 2	$ 2	$ 138

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 31	$ 96	$ 36	$ 29	$ 67	$ 121	$ 29	$ 31	$ 55
38	33	79	44	95	41	28	26	83
31	2	39	40	60	50	18	52	4
—	—	—	—	3	—	—	—	—
100	131	154	113	225	212	75	109	142
1	2	2	2	10	3	7	1	3
58	35	86	52	59	117	17	40	14
1	—	—	1	3	1	—	1	—
60	37	88	55	72	121	24	42	17
40	94	66	58	153	91	51	67	125
—	—	—	—	1	1	—	2	(2)
40	94	66	58	152	90	51	65	127
(4)	4	(41)	(10)	(10)	(1)	6	(9)	(26)
22	35	25	29	55	36	26	19	39
2	7	—	2	9	6	3	4	7
$ 12	$ 56	$ —	$ 17	$ 78	$ 47	$ 28	$ 33	$ 55
$ 170	$ 232	$ 172	$ 77	$ 145	$ 231	$ 105	$ 60	$ 142
73	77	118	59	126	88	96	38	115
41	3	74	59	76	67	28	74	16
—	—	—	—	—	—	—	1	—
284	312	364	195	347	386	229	173	273
57	93	83	27	82	43	54	22	47
120	129	130	97	123	223	64	92	82
4	—	1	3	4	1	—	1	2
181	222	214	127	209	267	118	115	131
103	90	150	68	138	119	111	58	142
2	—	—	—	4	—	1	2	(7)
101	90	150	68	134	119	110	56	149
—	6	(16)	(26)	9	15	(3)	(10)	(9)
34	34	24	27	85	39	33	23	43
7	6	11	2	6	10	7	3	9
$ 60	$ 56	$ 99	$ 13	$ 52	$ 85	$ 67	$ 20	$ 88

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

SIX MONTHS ENDED JUNE 30, 2021 and 2020

(dollars in millions)	Combined	Combining Adjustments	Boston	New York
June 30, 2021				
Interest income				
Advances	$ 1,422	$ —	$ 105	$ 263
Investments	1,293	(1)	69	230
Mortgage loans held for portfolio	711	1	48	37
Other interest income	1	(2)	—	—
Total interest income	3,427	(2)	222	530
Interest expense				
Consolidated obligations - Discount notes	131	—	3	45
Consolidated obligations - Bonds	1,323	6	115	183
Other interest expense	15	2	—	—
Total interest expense	1,469	8	118	228
Net interest income	1,958	(10)	104	302
Provision (reversal) for credit losses	(10)	—	(1)	(3)
Net interest income after provision (reversal) for credit losses	1,968	(10)	105	305
Non-interest income (loss)	(245)	(11)	(29)	(43)
Non-interest expense	711	(16)	46	99
Affordable Housing Program assessments	103	—	3	16
Net income	$ 909	$ (5)	$ 27	$ 147
June 30, 2020				
Interest income				
Advances	$ 4,657	$ 1	$ 274	$ 791
Investments	2,720	(4)	122	401
Mortgage loans held for portfolio	1,062	1	70	50
Other interest income	1	—	—	—
Total interest income	8,440	(2)	466	1,242
Interest expense				
Consolidated obligations - Discount notes	2,175	1	175	323
Consolidated obligations - Bonds	4,042	(1)	218	533
Other interest expense	60	(1)	1	3
Total interest expense	6,277	(1)	394	859
Net interest income	2,163	(1)	72	383
Provision (reversal) for credit losses	51	—	2	3
Net interest income after provision (reversal) for credit losses	2,112	(1)	70	380
Non-interest income (loss)	113	(16)	21	(15)
Non-interest expense	767	(19)	42	95
Affordable Housing Program assessments	149	1	5	27
Net income	$ 1,309	$ 1	$ 44	$ 243

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 81	$ 183	$ 79	$ 65	$ 143	$ 252	$ 65	$ 66	$ 120
80	72	170	101	148	98	87	60	179
63	5	83	80	123	103	36	105	27
—	—	—	—	3	—	—	—	—
224	260	332	246	417	453	188	231	326
4	7	7	6	25	8	16	3	7
120	80	183	106	123	243	41	87	36
3	—	—	2	6	1	—	1	—
127	87	190	114	154	252	57	91	43
97	173	142	132	263	201	131	140	283
(1)	—	—	—	1	—	—	2	(8)
98	173	142	132	262	201	131	138	291
6	8	(73)	(23)	(23)	1	4	(15)	(47)
48	71	48	57	116	76	51	37	78
6	11	2	5	13	13	8	9	17
$ 50	$ 99	$ 19	$ 47	$ 110	$ 113	$ 76	$ 77	$ 149
$ 453	$ 651	$ 348	$ 246	$ 383	$ 630	$ 268	$ 191	$ 421
211	297	300	173	366	244	218	122	270
86	7	163	141	163	145	62	159	15
—	—	—	—	—	—	—	1	—
750	955	811	560	912	1,019	548	473	706
158	304	259	100	267	153	169	115	151
381	471	316	321	351	633	218	243	358
12	5	4	8	10	5	4	3	6
551	780	579	429	628	791	391	361	515
199	175	232	131	284	228	157	112	191
5	—	—	—	6	—	2	1	32
194	175	232	131	278	228	155	111	159
(31)	99	15	(30)	11	51	32	(33)	9
55	92	48	53	142	82	56	42	79
12	18	20	5	15	20	13	4	9
$ 96	$ 164	$ 179	$ 43	$ 132	$ 177	$ 118	$ 32	$ 80

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

THREE MONTHS ENDED JUNE 30, 2021 AND 2020

(dollars in millions)	Combined	Combining Adjustments	Boston	New York
June 30, 2021				
Net income	$ 408	$ 1	$ 6	$ 75
Other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	148	(2)	37	30
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
Total other comprehensive income (loss)	110	(8)	27	17
Comprehensive income (loss)	$ 518	$ (7)	$ 33	$ 92
June 30, 2020				
Net income	$ 682	$ 2	$ 2	$ 138
Other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	1,053	—	116	49
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	8	(1)	3	—
Net unrealized gains (losses) relating to hedging activities	(16)	—	1	(6)
Pension and postretirement benefits	2	—	—	2
Total other comprehensive income (loss)	1,047	(1)	120	45
Comprehensive income (loss)	$ 1,729	$ 1	$ 122	$ 183

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 12	$ 56	$ —	$ 17	$ 78	$ 47	$ 28	$ 33	$ 55
(8)	—	9	5	54	(2)	(24)	22	27
—	—	—	—	—	—	—	—	—
—	—	—	—	(9)	—	(14)	—	—
2	1	1	9	1	—	—	—	—
(6)	1	10	14	46	(2)	(38)	22	27
$ 6	$ 57	$ 10	$ 31	$ 124	$ 45	$ (10)	$ 55	$ 82
$ 60	$ 56	$ 99	$ 13	$ 52	$ 85	$ 67	$ 20	$ 88
89	—	—	79	347	60	86	35	192
—	—	—	—	5	—	—	—	1
—	—	—	—	(4)	—	(7)	—	—
1	1	1	(2)	—	(1)	—	—	—
90	1	1	77	348	59	79	35	193
$ 150	$ 57	$ 100	$ 90	$ 400	$ 144	$ 146	$ 55	$ 281

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

SIX MONTHS ENDED JUNE 30, 2021 AND 2020

(dollars in millions)	Combined	Combining Adjustments	Boston	New York
June 30, 2021				
Net income	$ 909	$ (5)	$ 27	$ 147
Other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	740	—	36	(23)
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
Total other comprehensive income (loss)	894	(2)	32	50
Comprehensive income (loss)	$ 1,803	$ (7)	$ 59	$ 197
June 30, 2020				
Net income	$ 1,309	$ 1	$ 44	$ 243
Other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	(865)	—	30	123
Net non-credit portion of other-than-temporary impairment gains (losses) on investment securities	37	(1)	26	1
Net unrealized gains (losses) relating to hedging activities	(307)	—	2	(159)
Pension and postretirement benefits	(4)	2	1	3
Total other comprehensive income (loss)	(1,139)	1	59	(32)
Comprehensive income (loss)	$ 170	$ 2	$ 103	$ 211

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 50	$ 99	$ 19	$ 47	$ 110	$ 113	$ 76	$ 77	$ 149
(12)	—	12	78	252	50	132	51	164
—	—	—	—	—	—	1	—	—
—	—	—	—	32	—	41	—	—
2	4	1	10	(4)	—	—	—	—
(10)	4	13	88	280	50	174	51	164
$ 40	$ 103	$ 32	$ 135	$ 390	$ 163	$ 250	$ 128	$ 313
$ 96	$ 164	$ 179	$ 43	$ 132	$ 177	$ 118	$ 32	$ 80
21	(41)	(1)	(70)	(284)	(104)	(170)	(59)	(310)
—	—	—	—	9	—	1	—	1
—	—	—	—	(48)	—	(102)	—	—
1	1	1	(2)	(11)	—	—	—	—
22	(40)	—	(72)	(334)	(104)	(271)	(59)	(309)
$ 118	$ 124	$ 179	$ (29)	$ (202)	$ 73	$ (153)	$ (27)	$ (229)

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

THREE MONTHS ENDED JUNE 30, 2021 AND 2020

(dollars in millions)	Combined	Combining Adjustments	Boston	New York
Balance, March 31, 2021	$ 50,469	$ 13	$ 2,717	$ 7,238
Comprehensive income (loss)	518	(7)	33	92
Proceeds from issuance of capital stock	3,862	(2)	59	739
Repurchases/redemptions of capital stock	(4,369)	1	(158)	(1,186)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(375)	2	(2)	—
Dividends of capital stock	19	—	—	—
Dividends				
Cash	(234)	1	(5)	(63)
Stock	(19)	—	—	—
Balance, June 30, 2021	$ 49,871	$ 8	$ 2,644	$ 6,820
Balance, March 31, 2020	$ 59,924	$ 3	$ 3,491	$ 9,002
Adjustment for cumulative effect of accounting change	—	—	—	—
Partial recovery of prior capital distribution to Financing Corporation	200	(2)	4	18
Comprehensive income (loss)	1,729	1	122	183
Proceeds from issuance of capital stock	3,846	1	110	712
Repurchases/redemptions of capital stock	(12,043)	2	(857)	(1,691)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(782)	(1)	—	—
Dividends on capital stock	27	—	—	—
Dividends				
Cash	(375)	(2)	(24)	(86)
Stock	(27)	—	—	—
Balance, June 30, 2020	$ 52,499	$ 2	$ 2,846	$ 8,138

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 2,855	$ 4,741	$ 4,045	$ 3,546	$ 6,542	$ 6,012	$ 3,720	$ 2,691	$ 6,349
6	57	10	31	124	45	(10)	55	82
200	290	629	20	105	782	354	359	327
(326)	(384)	(598)	—	(112)	(808)	(272)	(233)	(293)
—	(1)	(61)	—	(5)	(80)	—	(225)	(3)
—	—	—	—	—	—	3	16	—
(18)	(27)	(12)	(14)	(21)	(41)	—	—	(34)
—	—	—	—	—	—	(3)	(16)	—
$ 2,717	$ 4,676	$ 4,013	$ 3,583	$ 6,633	$ 5,910	$ 3,792	$ 2,647	$ 6,428
$ 4,959	$ 8,818	$ 5,875	$ 3,141	$ 5,065	$ 6,733	$ 3,716	$ 2,714	$ 6,407
—	—	—	—	—	—	—	—	—
9	29	17	11	19	26	18	11	40
150	57	100	90	400	144	146	55	281
297	858	32	109	423	547	316	297	144
(1,517)	(3,810)	(950)	—	(540)	(1,398)	(554)	(21)	(707)
(39)	(20)	(8)	(13)	—	—	—	(701)	—
—	—	—	—	—	—	12	15	—
(40)	(70)	(22)	(20)	(20)	(53)	—	—	(38)
—	—	—	—	—	—	(12)	(15)	—
$ 3,819	$ 5,862	$ 5,044	$ 3,318	$ 5,347	$ 5,999	$ 3,642	$ 2,355	$ 6,127

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

SIX MONTHS ENDED JUNE 30, 2021 AND 2020

(dollars in millions)	Combined	Combining Adjustments	Boston	New York
Balance, December 31, 2020	$ 50,180	$ 13	$ 2,782	$ 7,256
Comprehensive income (loss)	1,803	(7)	59	197
Proceeds from issuance of capital stock	7,163	1	98	1,410
Repurchases/redemptions of capital stock	(8,057)	—	(283)	(1,910)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(737)	1	(2)	—
Dividends of capital stock	39	—	—	—
Dividends				
Cash	(481)	—	(10)	(133)
Stock	(39)	—	—	—
Balance, June 30, 2021	$ 49,871	$ 8	$ 2,644	$ 6,820
Balance, December 31, 2019	$ 55,427	$ 1	$ 3,145	$ 7,532
Adjustment for cumulative effect of accounting change	(28)	1	(8)	(4)
Partial recovery of prior capital distribution to Financing Corporation	200	(2)	4	18
Comprehensive income (loss)	170	2	103	211
Proceeds from issuance of capital stock	21,225	2	1,576	4,331
Repurchases/redemptions of capital stock	(22,152)	—	(1,926)	(3,776)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(1,550)	(1)	—	—
Dividends of capital stock	67	—	—	—
Dividends				
Cash	(793)	(1)	(48)	(174)
Stock	(67)	—	—	—
Balance, June 30, 2020	$ 52,499	$ 2	$ 2,846	$ 8,138

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 3,041	$ 5,260	$ 3,930	$ 3,450	$ 6,289	$ 5,740	$ 3,557	$ 2,668	$ 6,194
40	103	32	135	390	163	250	128	313
367	648	1,005	26	273	1,501	685	821	328
(692)	(1,277)	(866)	—	(270)	(1,333)	(700)	(386)	(340)
—	(1)	(62)	—	(6)	(80)	—	(584)	(3)
—	—	—	—	—	—	7	32	—
(39)	(57)	(26)	(28)	(43)	(81)	—	—	(64)
—	—	—	—	—	—	(7)	(32)	—
$ 2,717	$ 4,676	$ 4,013	$ 3,583	$ 6,633	$ 5,910	$ 3,792	$ 2,647	$ 6,428
$ 4,473	$ 7,163	$ 4,445	$ 3,157	$ 5,454	$ 6,726	$ 3,798	$ 2,792	$ 6,741
—	—	—	—	(7)	1	(2)	(6)	(3)
9	29	17	11	19	26	18	11	40
118	124	179	(29)	(202)	73	(153)	(27)	(229)
2,481	4,560	2,104	233	1,151	2,621	864	551	751
(3,126)	(5,846)	(1,100)	—	(1,026)	(3,330)	(883)	(59)	(1,080)
(39)	(22)	(558)	(13)	(1)	(6)	—	(907)	(3)
—	—	—	—	—	—	27	40	—
(97)	(146)	(43)	(41)	(41)	(112)	—	—	(90)
—	—	—	—	—	—	(27)	(40)	—
$ 3,819	$ 5,862	$ 5,044	$ 3,318	$ 5,347	$ 5,999	$ 3,642	$ 2,355	$ 6,127

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
Operating activities				
Net cash provided by (used in) operating activities	$ 3,911	$ (1)	$ 156	$ 502
Investing activities				
Net change/net proceeds and payments in				
Investments	2,147	(2)	(3,030)	2,221
Advances	49,436	2	3,589	11,530
Mortgage loans held for portfolio	5,929	1	447	369
Other investing activities	(23)	—	—	(8)
Net cash provided by (used in) investing activities	57,489	1	1,006	14,112
Financing activities				
Net change in deposits and pass-through reserves, and other financing activities	355	(2)	(118)	(223)
Net proceeds (payments) on derivative contracts with financing element	18	1	30	(2)
Net proceeds from issuance of consolidated obligations				
Discount notes	1,650,627	—	153,008	296,370
Bonds	233,394	1	10,009	33,828
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)
Bonds	(270,258)	—	(7,756)	(34,169)
Consolidated obligation bonds transferred to other FHLBanks	—	174	(174)	—
Proceeds from issuance of capital stock	7,163	1	98	1,410
Payments for repurchases/redemptions of capital stock	(8,057)	—	(283)	(1,910)
Payments for repurchases/redemptions of mandatorily redeemable capital stock	(895)	—	(1)	(1)
Cash dividends paid	(481)	—	(10)	(133)
Net cash provided by (used in) financing activities	(81,748)	(2)	(2,715)	(16,457)
Net increase (decrease) in cash and due from banks	(20,348)	(2)	(1,553)	(1,843)
Cash and due from banks at beginning of the period	25,125	1	2,050	1,896
Cash and due from banks at end of the period	$ 4,777	$ (1)	$ 497	$ 53

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 196	$ 492	$ 300	$ 154	$ 296	$ 348	$ 553	$ 297	$ 618
(4,556)	6,486	4	(1,850)	(1,004)	1,744	(5,035)	978	6,191
9,902	4,512	1,629	3,462	105	724	7,358	112	6,511
94	41	1,772	631	228	671	200	841	634
(2)	(2)	(1)	(3)	(6)	—	(3)	2	—
5,438	11,037	3,404	2,240	(677)	3,139	2,520	1,933	13,336
18	626	10	223	(161)	(90)	39	(141)	174
—	(3)	—	(8)	—	—	47	(11)	(36)
82,453	292,915	99,552	85,206	300,754	134,226	18,678	150,600	36,865
12,130	25,300	19,762	22,130	21,133	29,738	27,497	20,804	11,062
—	—	—	—	—	—	—	—	—
(76,848)	(295,973)	(105,865)	(87,373)	(303,665)	(138,468)	(29,474)	(151,152)	(35,474)
(23,434)	(35,580)	(20,058)	(23,001)	(20,704)	(29,809)	(22,827)	(26,332)	(26,588)
—	—	—	—	—	—	—	—	—
367	648	1,005	26	273	1,501	685	821	328
(692)	(1,277)	(866)	—	(270)	(1,333)	(700)	(386)	(340)
(80)	(1)	(67)	(18)	(37)	(97)	(7)	(584)	(2)
(39)	(57)	(26)	(28)	(43)	(81)	—	—	(64)
(6,125)	(13,402)	(6,553)	(2,843)	(2,720)	(4,413)	(6,062)	(6,381)	(14,075)
(491)	(1,873)	(2,849)	(449)	(3,101)	(926)	(2,989)	(4,151)	(121)
1,036	2,905	2,984	1,812	3,541	978	3,178	4,570	174
$ 545	$ 1,032	$ 135	$ 1,363	$ 440	$ 52	$ 189	$ 419	$ 53

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

SIX MONTHS ENDED JUNE 30, 2020

(dollars in millions)	Combined	Combining Adjustments	Boston	New York
Operating activities				
Net cash provided by (used in) operating activities	$ (7,836)	$ 1	$ (350)	$ (674)
Investing activities				
Net change/net proceeds and payments in				
Investments	25,137	12	240	15,171
Advances	91,286	(1)	9,920	(11,605)
Mortgage loans held for portfolio	(518)	(1)	77	(1)
Other investing activities	(30)	—	—	(11)
Net cash provided by (used in) investing activities	115,875	10	10,237	3,554
Financing activities				
Net change in deposits and pass-through reserves, and other financing activities	5,480	(7)	517	481
Net proceeds (payments) on derivative contracts with financing element	(379)	1	(109)	(4)
Net proceeds from issuance of consolidated obligations				
Discount notes	2,133,651	(1)	58,948	501,373
Bonds	272,329	(1)	7,059	37,394
Payments for maturing and retiring consolidated obligations				
Discount notes	(2,145,872)	(2)	(69,295)	(485,794)
Bonds	(369,046)	—	(6,434)	(57,287)
Proceeds from issuance of capital stock	21,225	2	1,576	4,331
Payments for repurchases/redemptions of capital stock	(22,152)	—	(1,926)	(3,776)
Payments for repurchases/redemptions of mandatorily redeemable capital stock	(1,835)	—	—	(1)
Cash dividends paid	(793)	(1)	(48)	(174)
Partial recovery of prior capital distribution to Financing Corporation	200	(2)	4	18
Net cash provided by (used in) financing activities	(107,192)	(11)	(9,708)	(3,439)
Net increase (decrease) in cash and due from banks	847	—	179	(559)
Cash and due from banks at beginning of the period	4,960	1	69	603
Cash and due from banks at end of the period	**$ 5,807**	**$ 1**	**$ 248**	**$ 44**

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ (431)	$ (794)	$ (322)	$ (502)	$ (2,013)	$ (251)	$ (983)	$ (347)	$ (1,170)
2,376	(4,086)	5,138	(1,948)	3,371	4,256	2,407	(492)	(1,308)
16,308	31,298	(1,141)	(1,663)	2,087	22,873	(851)	8,986	15,075
(137)	33	(494)	847	(979)	76	36	(357)	382
—	(2)	(1)	(3)	(9)	(3)	(3)	3	(1)
18,547	27,243	3,502	(2,767)	4,470	27,202	1,589	8,140	14,148
372	676	281	185	620	542	1,205	198	410
—	(2)	(1)	2	—	—	(239)	(2)	(25)
157,019	204,336	180,209	172,312	323,650	57,433	88,167	317,941	72,264
21,255	37,879	20,341	21,704	27,805	26,738	20,275	22,151	29,729
(154,100)	(198,130)	(184,963)	(161,738)	(327,833)	(65,532)	(86,486)	(331,811)	(80,188)
(41,494)	(66,506)	(19,462)	(29,484)	(26,743)	(45,752)	(23,453)	(17,755)	(34,676)
2,481	4,560	2,104	233	1,151	2,621	864	551	751
(3,126)	(5,846)	(1,100)	—	(1,026)	(3,330)	(883)	(59)	(1,080)
(79)	(22)	(561)	(36)	(40)	(131)	—	(907)	(58)
(97)	(146)	(43)	(41)	(41)	(112)	—	—	(90)
9	29	17	11	19	26	18	11	40
(17,760)	(23,172)	(3,178)	3,148	(2,438)	(27,497)	(532)	(9,682)	(12,923)
356	3,277	2	(121)	19	(546)	74	(1,889)	55
21	911	21	220	29	1,029	21	1,917	118
$ 377	$ 4,188	$ 23	$ 99	$ 48	$ 483	$ 95	$ 28	$ 173

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SELECTED FINANCIAL DATA

(dollars in millions)	2021 June 30,	2021 March 31,	2020 December 31,	2020 September 30,	2020 June 30,
Selected Statement of Condition Data at					
Investments(1)	$ 302,288	$ 285,449	$ 305,865	$ 332,677	$ 351,047
Advances	370,352	399,074	422,639	479,019	557,547
Mortgage loans held for portfolio	56,541	59,413	62,842	67,919	72,912
Total assets	738,171	770,613	820,740	894,323	992,330
Deposits	15,576	17,641	15,340	14,926	15,793
Consolidated obligations					
Discount notes	231,720	244,778	274,804	306,570	391,471
Bonds	435,797	452,143	473,714	515,245	526,394
Total consolidated obligations	667,517	696,921	748,518	821,815	917,865
Mandatorily redeemable capital stock	614	667	772	868	1,097
Capital					
Total capital stock(2)	25,806	26,669	27,398	29,669	32,085
Retained earnings	22,387	22,232	21,998	21,654	21,209
Accumulated other comprehensive income (loss)	1,678	1,568	784	149	(795)
Total capital	49,871	50,469	50,180	51,472	52,499
Selected Statement of Income Data for the quarter ended					
Net interest income	$ 927	$ 1,031	$ 1,111	$ 1,167	$ 1,248
Provision (reversal) for credit losses	—	(10)	(14)	1	8
Net interest income after provision (reversal) for credit losses	927	1,041	1,125	1,166	1,240
Non-interest income (loss)	(120)	(125)	52	108	(79)
Non-interest expense	353	358	447	356	402
Affordable Housing Program Assessments	46	57	73	93	77
Net income	$ 408	$ 501	$ 657	$ 825	$ 682
Selected Other Data for the quarter ended					
Cash and stock dividends	$ 253	$ 267	$ 313	$ 380	$ 402
Dividend payout ratio(3)	62.01 %	53.29 %	47.64 %	46.06 %	58.94 %
Return on average equity (annualized)(4)(5)	3.22 %	4.03 %	5.16 %	6.24 %	4.81 %
Return on average assets (annualized)	0.21 %	0.25 %	0.31 %	0.35 %	0.24 %
Average equity to average assets(5)	6.63 %	6.26 %	5.93 %	5.55 %	5.00 %
Net interest margin(6)	0.49 %	0.53 %	0.52 %	0.50 %	0.45 %
Selected Other Data at					
GAAP capital-to-asset ratio	6.76 %	6.55 %	6.11 %	5.76 %	5.29 %
Regulatory capital-to-assets ratio(7)	6.61 %	6.43 %	6.11 %	5.84 %	5.48 %

(1) Investments consist of interest-bearing deposits, securities purchased under agreements to resell, federal funds sold, trading securities, available-for-sale securities, and held-to-maturity securities.
(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 U.S. Securities and Exchange Commission (SEC). The results of operations for interim periods are not necessarily indicative of the results to be expected for the year ending December 31, 2021, 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, 2020, included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020.

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 24 to 34 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020. 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, or other unanticipated or catastrophic events, including the economic and financial disruptions and uncertainties and significant 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) and 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;
- 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 of 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 and 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 effects of the COVID-19 pandemic, and the governmental and public actions taken in response, on the global and U.S. economies and the FHLBanks continue to evolve, and the full duration and long-term effects of the pandemic, including the spread of new variants of the virus, remains uncertain. During the fourth quarter of 2020 and the first half of 2021, several COVID-19 vaccines were approved for emergency use in the United States. During the first half of 2021, progress on vaccinations led to a reopening of the economy and strong economic growth in the United States, supported by accommodative monetary and fiscal policy. The extraordinary governmental response to the pandemic has resulted in significantly higher financial market liquidity and lower interest rates, as compared to levels before the pandemic. These market conditions have had, and are expected to continue to have, a significant effect on the business and financial results of the FHLBanks. The extent to which the COVID-19 pandemic affects the FHLBanks' businesses, financial condition, and results of operations will depend on many factors that remain highly uncertain and difficult to predict.

Throughout the COVID-19 pandemic, the FHLBanks have remained operational and have successfully executed their mission by serving as a reliable source of liquidity and funding for their members. The FHLBanks are committed to assisting their members and their communities as impacts related to the pandemic continue to evolve. (See *Risk Factors* on Pages 24 to 34 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, for additional information on potential risks to the FHLBanks, including those from the COVID-19 pandemic.)

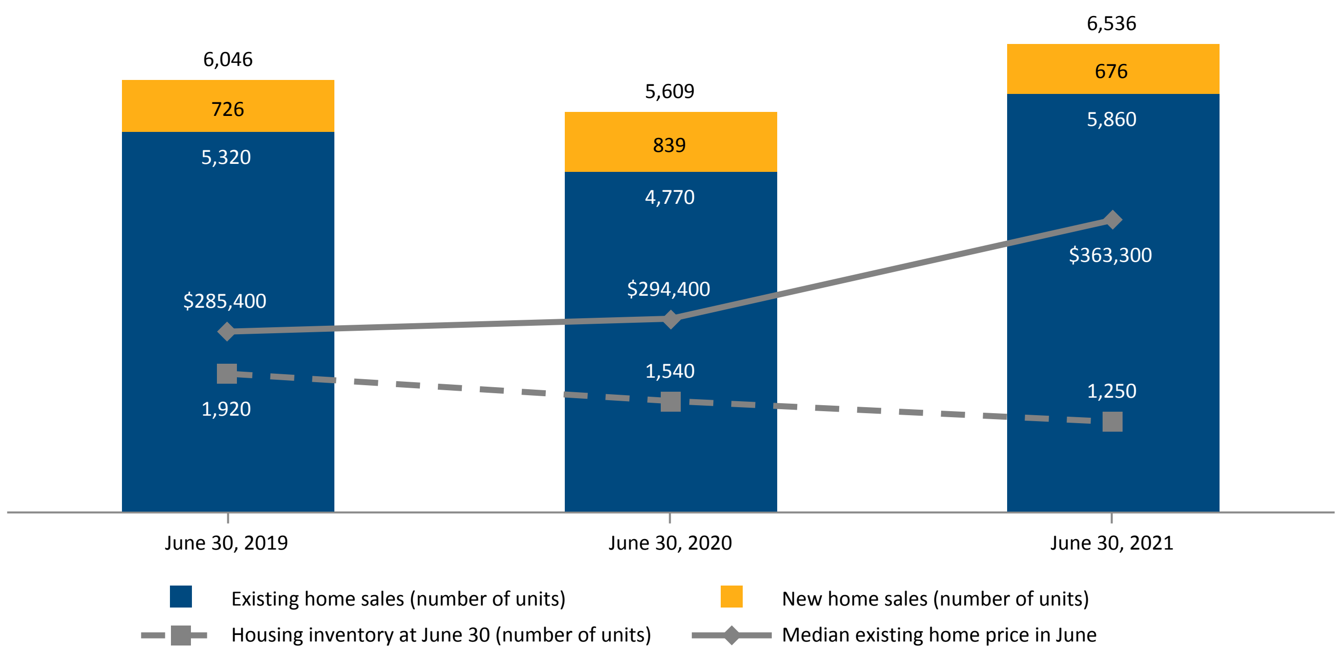
Economy and Financial Markets. The FHLBanks' results of operations are influenced by the overall economy and financial markets, and, in particular, by FHLBank members' demand for advances and the FHLBanks' ability to maintain sufficient access to diverse sources of funding at relatively favorable costs. 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. The Federal Reserve undertook a number of emergency actions in 2020 to, among other things, help facilitate liquidity and support stability in the fixed-income markets as part of its commitment to using its full range of tools to support households, businesses, and the U.S. economy overall during the COVID-19 pandemic.

In July 2021, the Bureau of Labor Statistics reported that the U.S. unemployment rate had declined to 5.9% in June 2021, compared to 6.0% in March 2021 and 6.7% in December 2020. On August 6, 2021, the Bureau of Labor Statistics reported that the U.S. unemployment rate was 5.4% in July 2021.

U.S. real gross domestic product (GDP) increased at an annual rate of 6.3% (revised estimate) and 6.5% (advance estimate) in the first and second quarters of 2021, according to the Bureau of Economic Analysis, compared to the revised annual rates of (5.1)% and (31.2)% in the first and second quarters of 2020. Recent changes in unemployment and GDP reflect the continued economic recovery, reopening of establishments, and continued government response related to the COVID-19 pandemic.

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 increased in the second quarter of 2021, compared to the second quarter of 2020, driven by low mortgage interest rates. However, low housing inventory levels and higher home prices in the second quarter of 2021 continued to constrain sales growth. Business closures and the resulting spike in unemployment during 2020 caused many homeowners to seek relief from their mortgage payments, resulting in higher rates of mortgage loan delinquency. The federal government has enacted several financial relief programs to help offset declines in business and family incomes. The American Rescue Plan Act of 2021, the third major COVID-19 relief bill, was passed by the U.S. Congress in March 2021. This legislation provides significant financial relief to businesses and individuals affected by the COVID-19 pandemic, including extending unemployment assistance programs to September 6, 2021.

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.

The level and volatility of interest rates and credit spreads were affected by several factors during the six months ended June 30, 2021, principally the COVID-19 pandemic and efforts in response by the Federal Reserve to keep interest rates low and facilitate liquidity. Overall economic conditions and financial regulation also continue to be influencing factors.

On March 15, 2020, the 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. In its July 2021 meeting, the Federal Open Market Committee stated that the path of the U.S. economy will continue to depend significantly on the course of the COVID-19 pandemic, including progress on vaccinations, and that it is committed to using its full range of tools to support the U.S. economy in this challenging time. It also decided to maintain the target range of the federal funds rate at 0.0% to 0.25% and continue its purchasing of Treasury securities and agency MBS.

Due to increases in money supply caused by recent federal stimulus programs, the demand for high credit quality, fixed-income investments has exceeded available supply and resulted in lower spreads for the FHLBanks' consolidated obligations relative to certain benchmark interest rates during the first half of 2021, compared to the first half of 2020. Generally, investor demand for the FHLBanks' consolidated obligations has remained strong, with market participants favoring shorter-term or callable obligations. The FHLBanks continued to meet their funding needs during the three and six months ended June 30, 2021.

Table 1 presents the quarterly averages and period-end rates for certain key interest rates. The averages of short-term interest rates were significantly lower during the six months ended June 30, 2021, compared to the six months ended June 30, 2020, affecting the FHLBanks' combined results of operations, primarily by decreasing both interest income and interest expense. The averages of short-term interest rates remained low and were little changed, but the average 3-month LIBOR and 3-month U.S. Treasury rates were lower in the second quarter of 2021, compared to the three months ended June 30, 2020. The prevailing expectation of prolonged low interest rates will likely continue to be a significant factor driving the FHLBanks' results of operations and financial condition.

Table 1 - Key Interest Rates

	Three-Month Average		Six-Month Average		Period End	
	June 30, 2021	June 30, 2020	June 30, 2021	June 30, 2020	June 30, 2021	December 31, 2020
Federal Funds Effective	0.07 %	0.06 %	0.07 %	0.64 %	0.08 %	0.09 %
SOFR	0.02 %	0.05 %	0.03 %	0.63 %	0.05 %	0.07 %
Overnight LIBOR	0.07 %	0.07 %	0.07 %	0.65 %	0.09 %	0.08 %
1-week Overnight Indexed Swap	0.07 %	0.06 %	0.07 %	0.63 %	0.10 %	0.09 %
3-month LIBOR	0.16 %	0.60 %	0.18 %	1.07 %	0.15 %	0.24 %
3-month U.S. Treasury yield	0.02 %	0.13 %	0.03 %	0.62 %	0.04 %	0.07 %
2-year U.S. Treasury yield	0.17 %	0.19 %	0.15 %	0.64 %	0.25 %	0.12 %
10-year U.S. Treasury yield	1.58 %	0.68 %	1.45 %	1.03 %	1.47 %	0.92 %

Source: Bloomberg

Table 2 presents the average funding spreads of newly-issued consolidated obligations relative to Treasury rates, LIBOR, and SOFR. For the three and six months ended June 30, 2021, the cost of newly-issued consolidated obligations generally decreased, as measured by the average indicative spreads to Treasury rates, LIBOR, and SOFR, compared to the three and six months ended June 30, 2020.

Table 2 - Funding Spreads to Treasury, LIBOR, and SOFR
(in basis points)

	Three-Month Average		Six-Month Average		Ending Spread	
Borrowing Term	**June 30, 2021**	**June 30, 2020**	**June 30, 2021**	**June 30, 2020**	**June 30, 2021**	**December 31, 2020**
Treasury						
3-months	1.5	2.9	1.7	5.6	1.5	2.3
2-years	1.5	10.0	1.4	11.2	1.3	1.0
5-years	2.4	25.0	2.8	22.7	1.5	5.3
10-years	9.2	60.0	10.5	52.3	8.0	18.5
LIBOR						
3-months	(12.1)	(44.7)	(12.9)	(40.0)	(8.6)	(13.7)
2-years	(7.9)	(1.7)	(7.5)	1.5	(5.4)	(6.0)
5-years	(5.5)	19.0	(5.7)	18.2	(4.7)	(0.9)
10-years	10.8	58.8	9.6	53.5	10.8	17.6
SOFR						
3-months	0.5	9.9	1.3	7.5	1.3	3.8
2-years	6.4	24.5	6.4	25.9	7.6	6.6
5-years	15.3	44.0	14.4	41.4	15.9	16.6
10-years	34.1	84.3	32.3	77.4	34.2	38.2

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

In July 2017, the United Kingdom's Financial Conduct Authority, which regulates LIBOR, announced that after 2021 it will no longer persuade or compel banks to submit rates for the calculation of LIBOR. In response, 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. In March 2021, the Financial Conduct Authority further announced that LIBOR will 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). (See *Risk Factors - Business Risk - Legislative and Regulatory* on Pages 25 to 27 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, and *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.)

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. Total assets were $738.2 billion at June 30, 2021, a decrease of 10.1% from $820.7 billion at December 31, 2020.

- Advances totaled $370.4 billion at June 30, 2021, a decrease of 12.4% from $422.6 billion at December 31, 2020. The decrease consisted principally of advances made to commercial bank members due to elevated deposits and liquidity in the financial markets, partially offset by an increase in advances to insurance company members. The FHLBanks' assets expand and contract as the needs of member financial institutions and their communities change over time. While it is difficult to predict the future demand for advances and the circumstances of the individual FHLBanks vary, the FHLBanks generally expect that advances may remain at reduced levels or decline further if the level of liquidity in the financial markets and deposit levels at members remain elevated. Commercial banks and insurance companies (excluding captive insurance companies) represented the largest segments of borrowers, with 37.5% and 31.8% of the total principal amount of advances outstanding at June 30, 2021, compared to 42.7% and 27.2% at December 31, 2020. The top 10 advance holding company borrowers represented 27.2% of the total principal amount of advances outstanding at June 30, 2021, compared to 26.7% at December 31, 2020. The FHLBanks protect against credit risk on advances by collateralizing all advances. At June 30, 2021, each FHLBank had rights to collateral with an estimated value greater than the related outstanding advances.

- Investments were $302.3 billion at June 30, 2021, a decrease of 1.2% from $305.9 billion at December 31, 2020. 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 fell to $56.5 billion at June 30, 2021, a decrease of 10.0% from $62.8 billion at December 31, 2020, driven primarily by the high level of prepayments, resulting from the low mortgage interest-rate environment, and reduced mortgage loan purchase volume. Principal repayments of $12.9 billion outpaced mortgage loan purchases of $6.9 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. Although the circumstances of the individual FHLBanks vary, the FHLBanks generally expect that continued high prepayments and reduced purchase opportunities will result in stable or lower balances of mortgage loans during the second half of 2021.

Total liabilities were $688.3 billion at June 30, 2021, a decrease of 10.7% compared to $770.6 billion at December 31, 2020.

- Consolidated obligations totaled $667.5 billion at June 30, 2021, a decrease of 10.8% from $748.5 billion at December 31, 2020, in line with the decrease in total assets and consisting of a 15.7% decrease in consolidated discount notes and an 8.0% decrease 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 $49.9 billion at June 30, 2021, a decrease of 0.6% from $50.2 billion at December 31, 2020. The GAAP capital-to-assets ratio was 6.76% and the regulatory capital-to-assets ratio was 6.61% at June 30, 2021, compared to 6.11% for both ratios at December 31, 2020. Each FHLBank was in compliance with FHFA regulatory capital requirements at June 30, 2021.

- Capital stock was $25.8 billion at June 30, 2021, a decrease of 5.8% from $27.4 billion at December 31, 2020, due to the net repurchases and redemptions of activity-based capital stock, driven primarily by the decrease in advances, and the reclassification of capital stock to mandatorily redeemable capital stock.

- Retained earnings grew to $22.4 billion at June 30, 2021, an increase of 1.8% from $22.0 billion at December 31, 2020, resulting principally from net income of $909 million, partially offset by dividends of $520 million.

Combined Results of Operations. Net income was $408 million for the three months ended June 30, 2021, a decrease of $274 million, or 40.2%, compared to the three months ended June 30, 2020, resulting primarily from a decrease in net interest income after provision (reversal) for credit losses. Net income was $909 million for the six months ended June 30, 2021, a decrease of $400 million, or 30.6%, compared to the six months ended June 30, 2020, resulting primarily from decreases in non-interest income and net interest income after provision (reversal) for credit losses.

Net interest income after provision (reversal) for credit losses was $927 million for the three months ended June 30, 2021, a decrease of $313 million, or 25.2%, compared to the three months ended June 30, 2020. Net interest margin was 0.49% for the three months ended June 30, 2021, an increase of 4 basis points compared to the three months ended June 30, 2020. Net interest income after provision (reversal) for credit losses was $1,968 million for the six months ended June 30, 2021, a decrease of $144 million, or 6.8%, compared to the six months ended June 30, 2020. Net interest margin was 0.51% for the six months ended June 30, 2021, an increase of 12 basis points compared to the six months ended June 30, 2020. The increase in net interest margin was driven primarily by the lower cost of consolidated obligations resulting from the tightening of spreads relative to certain benchmark interest rates during the six months ended June 30, 2021, and the lower net interest margin for the six months ended June 30, 2020, driven by several factors associated with the decline in interest rates that occurred in March 2020, during the onset of the COVID-19 pandemic. Both interest income and interest expense were significantly lower for the three and six months ended June 30, 2021, compared to the three and six months ended June 30, 2020, primarily as a result of the low interest-rate environment; however, the lower average balances of interest-earning assets, principally advances, and lower average balance of consolidated obligations were also contributing factors. 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, fiscal or monetary stimulus, as well as the timing and shape of the economic recovery. Although the circumstances of the individual FHLBanks vary, the FHLBanks generally expect that net interest income and net interest margin will remain at or near current levels for the foreseeable future.

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, due primarily to changes in the fair value of investment securities, derivatives, and financial instruments held under the fair value option resulting primarily from changes in interest rates. Non-interest income was a loss of $79 million and a gain of $113 million for the three and six months ended June 30, 2020.

Non-interest expense was $353 million and $711 million for the three and six months ended June 30, 2021, decreases of $49 million and $56 million, or 12.2% and 7.3%, compared to the three and six months ended June 30, 2020, due primarily to lower compensation and benefits, lower operating expenses, and lower other expenses resulting from reduced contribution for COVID-19 relief programs.

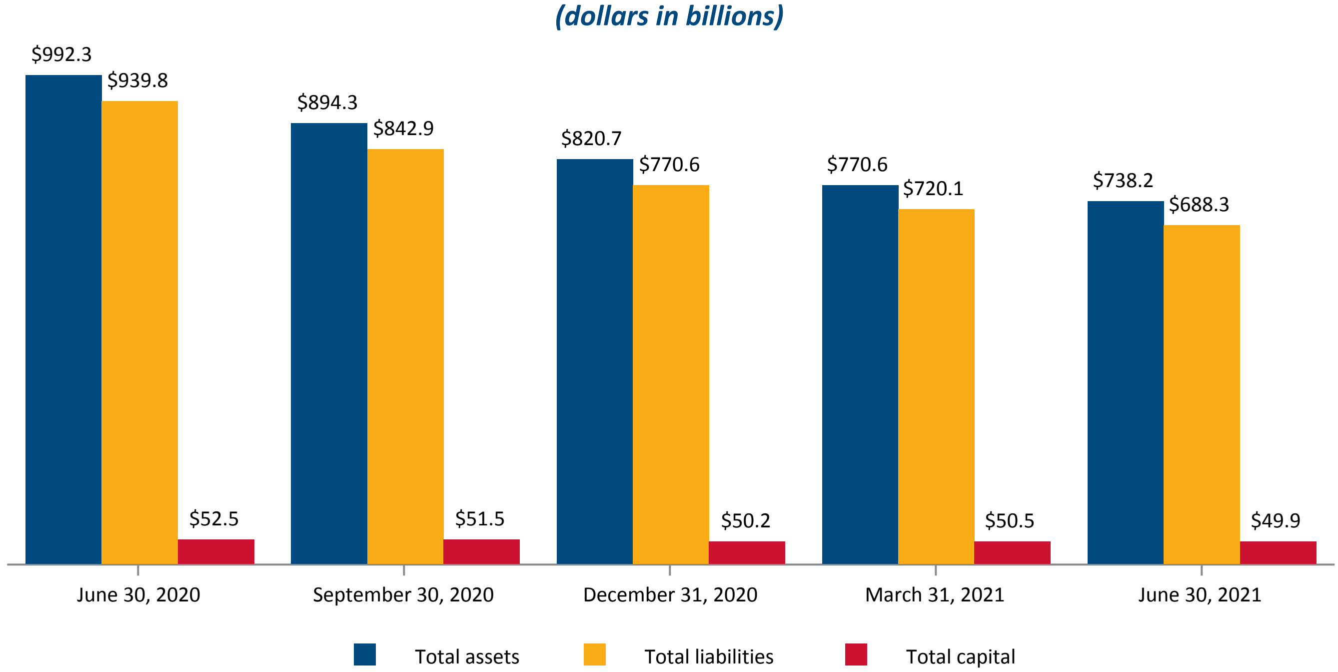
Affordable Housing Program (AHP) assessments result from individual FHLBank income subject to assessment. AHP assessments were $46 million and $103 million for the three and six months ended June 30, 2021, decreases of $31 million and $46 million, or 40.3% and 30.9%, compared to the three and six months ended June 30, 2020.

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). 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, 2021.

Figure 3 - Total Assets (dollars in billions)

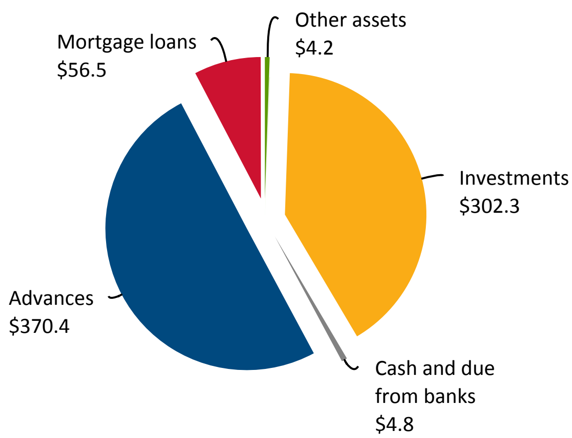
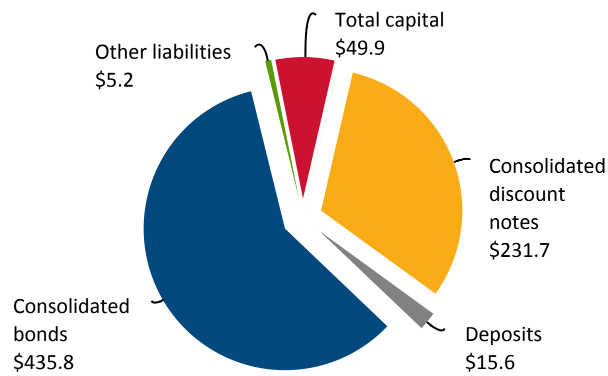


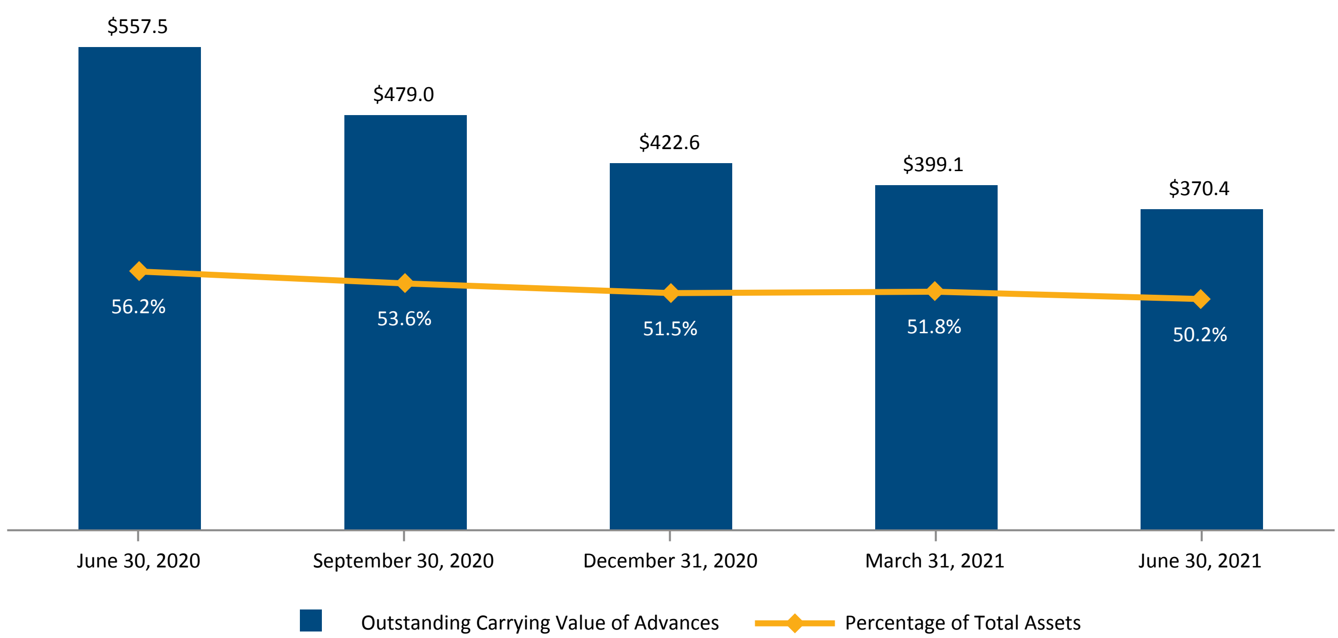
Figure 4 - Total Liabilities and Capital (dollars in billions)



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 $370.4 billion at June 30, 2021, a decrease of $52.3 billion, or 12.4%, from $422.6 billion at December 31, 2020. The decrease in advances at June 30, 2021, compared to December 31, 2020, consisted principally of advances made to commercial bank members, partially offset by an increase in advances to insurance company members. The decrease in advances to the top 25 advance holders at each FHLBank, in aggregate, represented over 70% of the total decrease in the principal amount of advances outstanding at June 30, 2021, compared to December 31, 2020.

The FHLBanks' expand and contract in asset size as the needs of member financial institutions and their communities change over time. As individuals, businesses, and state and local governments received federal stimulus payments and sought financial safety during the COVID-19 pandemic, financial institutions experienced substantial deposit growth. For example, the Federal Deposit Insurance Corporation (FDIC) reported that FDIC-insured depository institutions experienced deposit growth of more than $3 trillion in 2020 and another $635 billion in the first quarter of 2021. These increases in deposits have led to a significantly reduced demand from depository members for FHLBank advances, principally those made to large depository members. While it is difficult to predict the future demand for advances and the circumstances of the individual FHLBanks vary, the FHLBanks generally expect that advances may remain at reduced levels or decline further if the level of liquidity in the financial markets and deposit levels at members remain elevated. Due to the COVID-19 pandemic, certain FHLBanks began offering temporary relief programs providing subsidized advances and grants, and $4.2 billion and $4.9 billion of these advances were outstanding at June 30, 2021 and December 31, 2020.

The percentage of members with outstanding advances was 48.1% at June 30, 2021, compared to 51.8% at December 31, 2020. 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)

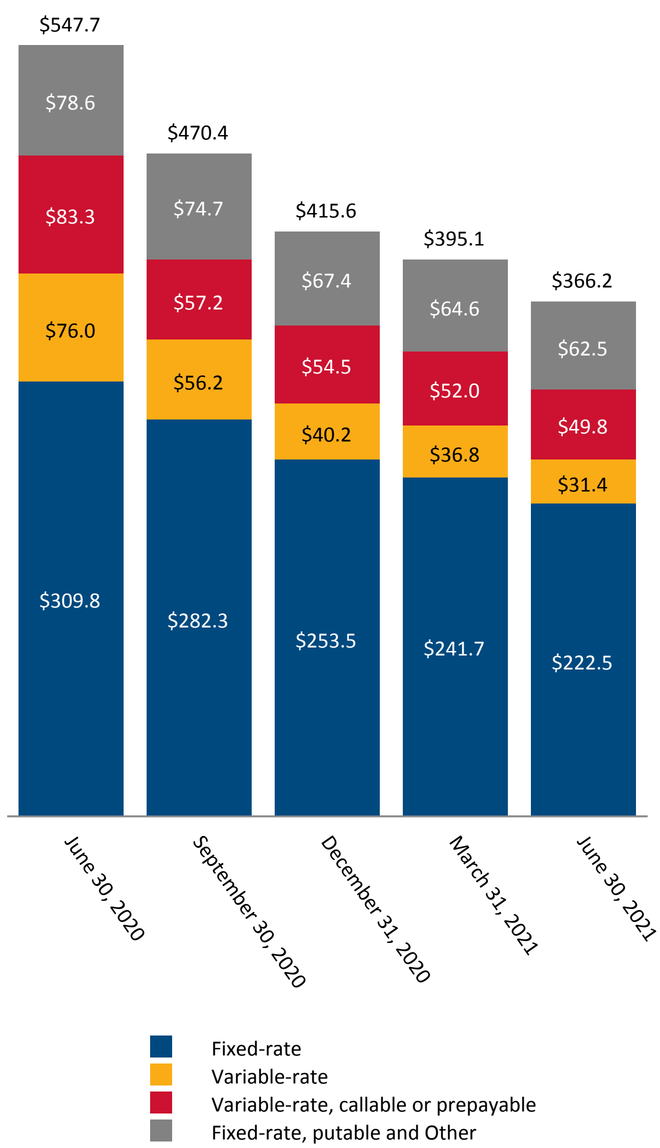


Figure 7 - Advances by Redemption Term (dollars in billions)

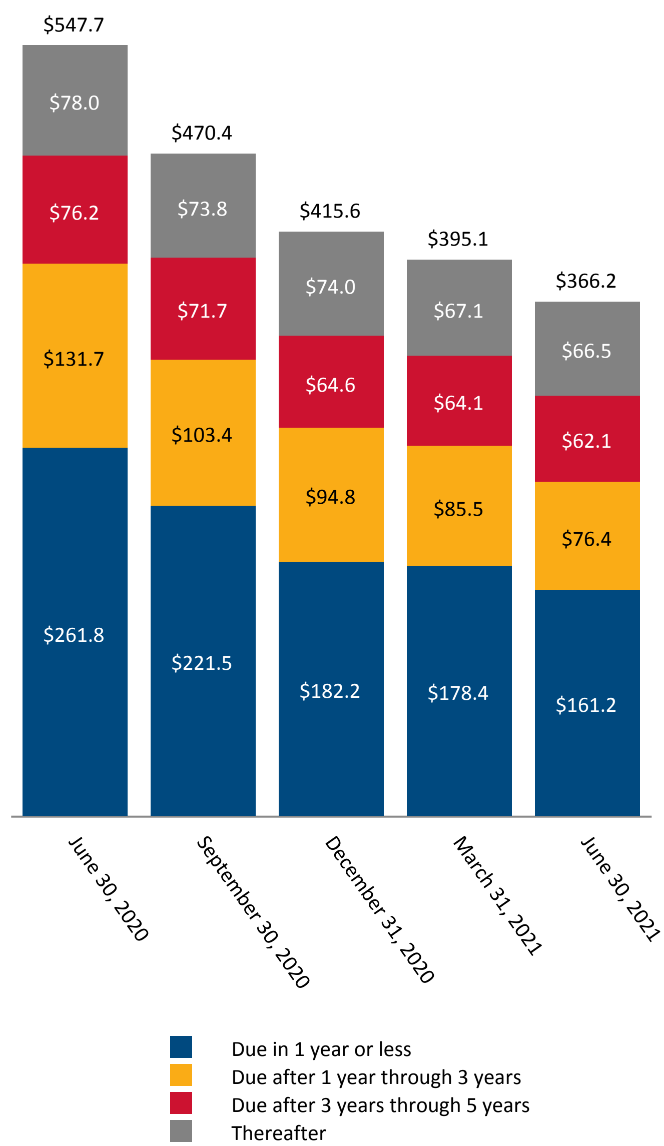


Table 3 presents advances outstanding by product type and redemption term, some of which include advances that contain embedded put or call options. A member can either sell an embedded option to an FHLBank or can purchase an embedded option from an FHLBank. (See *Note 4 - Advances* to the accompanying 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, 2021		December 31, 2020		Change	
	Amount	**Percentage**	**Amount**	**Percentage**	**Amount**	**Percentage**
Fixed-rate						
Due in 1 year or less	$ 124,538	34.0 %	$ 139,146	33.5 %	$ (14,608)	(10.5)%
Due after 1 year through 3 years	46,634	12.7 %	59,445	14.3 %	(12,811)	(21.6)%
Due after 3 years through 5 years	33,003	9.0 %	36,389	8.8 %	(3,386)	(9.3)%
Thereafter	18,316	5.0 %	18,508	4.5 %	(192)	(1.0)%
Total principal amount	222,491	60.7 %	253,488	61.1 %	(30,997)	(12.2)%
Fixed-rate, putable						
Due in 1 year or less	283	0.1 %	215	0.1 %	68	31.6 %
Due after 1 year through 3 years	2,942	0.8 %	1,892	0.5 %	1,050	55.5 %
Due after 3 years through 5 years	3,176	0.9 %	4,151	1.0 %	(975)	(23.5)%
Thereafter	27,468	7.5 %	28,154	6.8 %	(686)	(2.4)%
Total principal amount	33,869	9.3 %	34,412	8.4 %	(543)	(1.6)%
Variable-rate						
Due in 1 year or less	27,271	7.4 %	31,109	7.5 %	(3,838)	(12.3)%
Due after 1 year through 3 years	2,058	0.6 %	7,621	1.8 %	(5,563)	(73.0)%
Due after 3 years through 5 years	710	0.2 %	412	0.1 %	298	72.3
Thereafter	1,356	0.4 %	1,030	0.2 %	326	31.7
Total principal amount	31,395	8.6 %	40,172	9.6 %	(8,777)	(21.8)%
Variable-rate, callable or prepayable(1)						
Due in 1 year or less	5,688	1.6 %	7,526	1.8 %	(1,838)	(24.4)%
Due after 1 year through 3 years	18,374	5.0 %	17,646	4.2 %	728	4.1 %
Due after 3 years through 5 years	18,683	5.1 %	16,617	3.9 %	2,066	12.4 %
Thereafter	7,010	1.9 %	12,757	3.1 %	(5,747)	(45.0)%
Total principal amount	49,755	13.6 %	54,546	13.0 %	(4,791)	(8.8)%
Other(2)						
Due in 1 year or less	3,390	0.9 %	4,215	1.0 %	(825)	(19.6)%
Due after 1 year through 3 years	6,433	1.7 %	8,214	1.9 %	(1,781)	(21.7)%
Due after 3 years through 5 years	6,501	1.8 %	7,058	1.7 %	(557)	(7.9)%
Thereafter	12,384	3.4 %	13,538	3.3 %	(1,154)	(8.5)%
Total principal amount	28,708	7.8 %	33,025	7.9 %	(4,317)	(13.1)%
Overdrawn and overnight deposit accounts	4	—	3	—	1	33.3 %
Total principal amount advances	366,222	100.0 %	415,646	100.0 %	$ (49,424)	(11.9)%
Other adjustments, net(3)	4,130		6,993			
Total advances	$ 370,352		$ 422,639			

(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, 2021 and December 31, 2020. (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, 2021	December 31, 2020
LIBOR	$ 32,573	44,449
SOFR	6,408	6,149
Other(2)	43,556	45,611
Total principal amount of advances indexed to a variable interest rate	$ 82,537	$ 96,209

(1) Includes fixed-rate advances that have cap/floor optionality linked to an interest-rate Index.
(2) Consists primarily of advances indexed to consolidated obligation yields.

Table 5 presents cash flows related to advance originations and advance repayments. During the three and six months ended June 30, 2021, advance repayments exceeded originations, resulting in lower advances outstanding. Both the advance originations and advance repayments decreased during the six months ended June 30, 2021, compared to the six months ended June 30, 2020, due to a decrease in short-term advance activity, driven by elevated levels of liquidity in the financial markets and elevated deposit levels at member institutions.

Table 5 - Advance Originations and Repayments

(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2021	2020	Change	2021	2020	Change
Advances originated	$ 872,916	$ 823,217	$ 49,699	$ 1,637,764	$ 2,903,717	$ (1,265,953)
Advances repaid	901,830	1,072,739	(170,909)	1,687,200	2,995,003	(1,307,803)
Net change	$ (28,914)	$ (249,522)		$ (49,436)	$ (91,286)	

The FHLBanks make advances primarily to their members. At June 30, 2021, advances to depository members (commercial banks, savings institutions, and credit unions) decreased by 17.8% while advances to insurance company members (excluding captive insurance companies) grew by 2.8% compared to December 31, 2020. The decrease in advances to depository members was driven by elevated levels of liquidity in the financial markets and elevated deposits at member institutions. 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, 2021		December 31, 2020	
	Principal Amount	Number of Members	Principal Amount	Number of Members
Commercial bank members	$ 137,457	2,050	$ 177,387	2,231
Insurance company members	116,473	218	113,249	220
Savings institution members	57,806	393	64,400	428
Credit union members	39,160	505	43,253	559
Community development financial institution members	422	30	297	29
Total	351,318	3,196	398,586	3,467
Non-members(1)	13,590		15,976	
Housing associates	1,314		1,084	
Total principal amount	$ 366,222		$ 415,646	
Total members		6,648		6,697

(1) Includes $11.3 billion and $11.7 billion of principal amount of advances outstanding to captive insurance companies at June 30, 2021 and December 31, 2020, that had their memberships terminated no later than February 19, 2021. The December 31, 2020 presentation has been revised to include captive insurance companies within Non-members to conform to the June 30, 2021 presentation.

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, 2021.

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

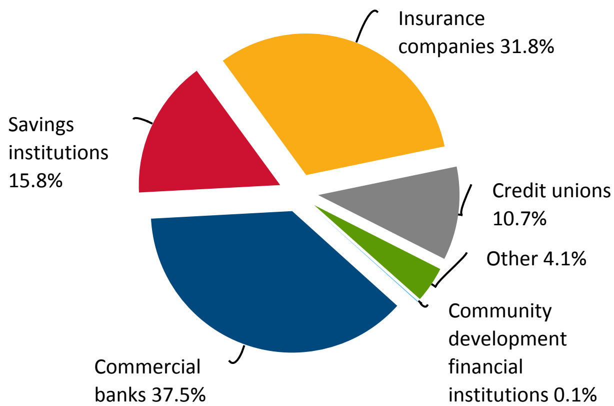


Figure 9 - Percentage of Member Borrowers by Type of Member

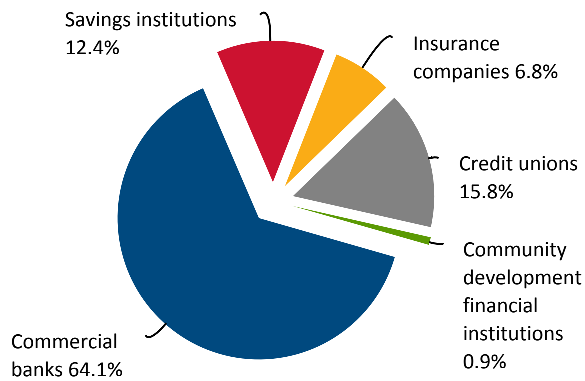


Table 7 presents the FHLBanks' top 10 advance holding borrowers at the holding-company level on a combined basis based on the principal amount of advances outstanding at June 30, 2021. The percentage of total advances for each holding company was computed by dividing the principal amount of advances 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.

Table 7 - Top 10 Advance Holding Borrowers by Holding Company at June 30, 2021

(dollars in millions)

Holding Company Name(1)	FHLBank Districts(2)	Principal Amount	Percentage of Total Principal Amount of Advances
MetLife, Inc.	New York, Boston, Des Moines	$ 16,300	4.5 %
New York Community Bancorp, Inc.	New York	14,003	3.8 %
JPMorgan Chase & Co.	Chicago, Pittsburgh, Des Moines, San Francisco	12,095	3.3 %
Citigroup Inc.	New York	11,500	3.1 %
First Republic Bank	San Francisco	9,000	2.5 %
Equitable Holdings, Inc.	New York	8,218	2.2 %
Bank of America Corporation	Atlanta, San Francisco, Boston, Des Moines	7,843	2.1 %
TIAA	Atlanta, New York	7,670	2.1 %
Midland Financial Co.	Topeka	7,465	2.0 %
Navy Federal Credit Union	Atlanta	5,745	1.6 %
		$ 99,839	27.2 %

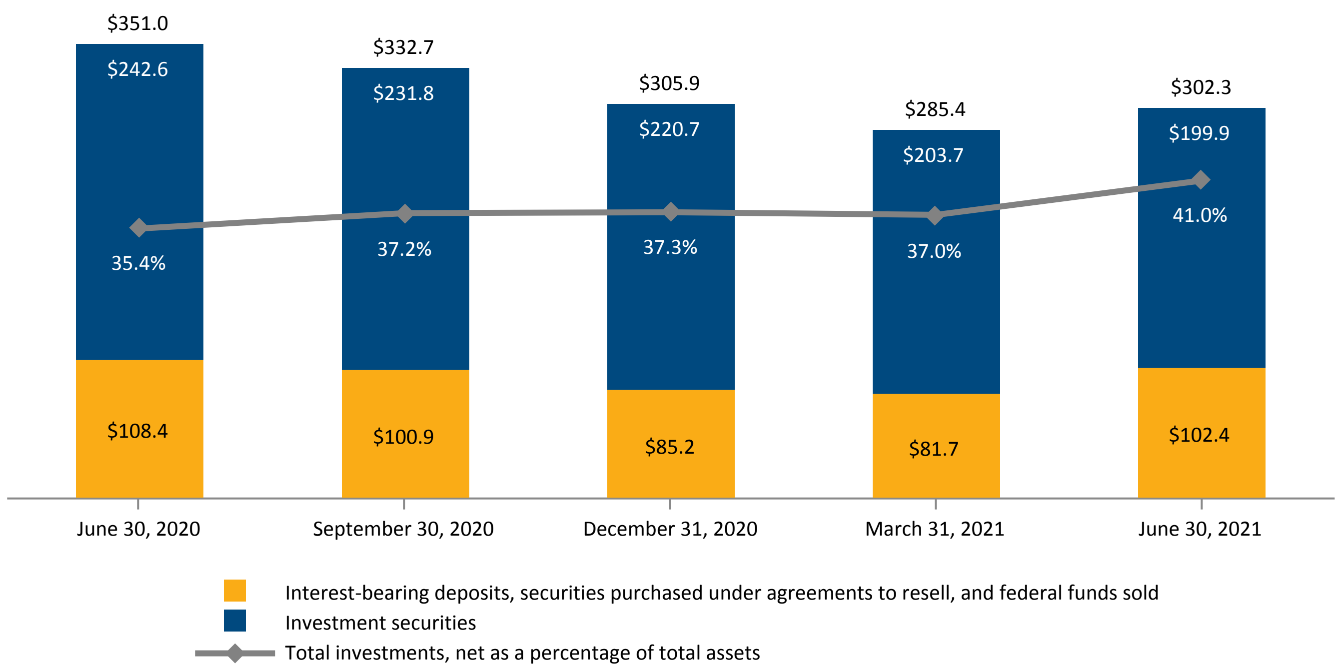
(1) Holding company information was obtained from the Federal Reserve System's web site, the National Information Center (NIC), and SEC filings. The NIC is a central repository of data about banks and other institutions for which the Federal Reserve System has a supervisory, regulatory, or research interest, including both domestic and foreign banking organizations operating in the United States.
(2) At June 30, 2021, 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 103 to 104 of the Federal Home Loan Banks Combined

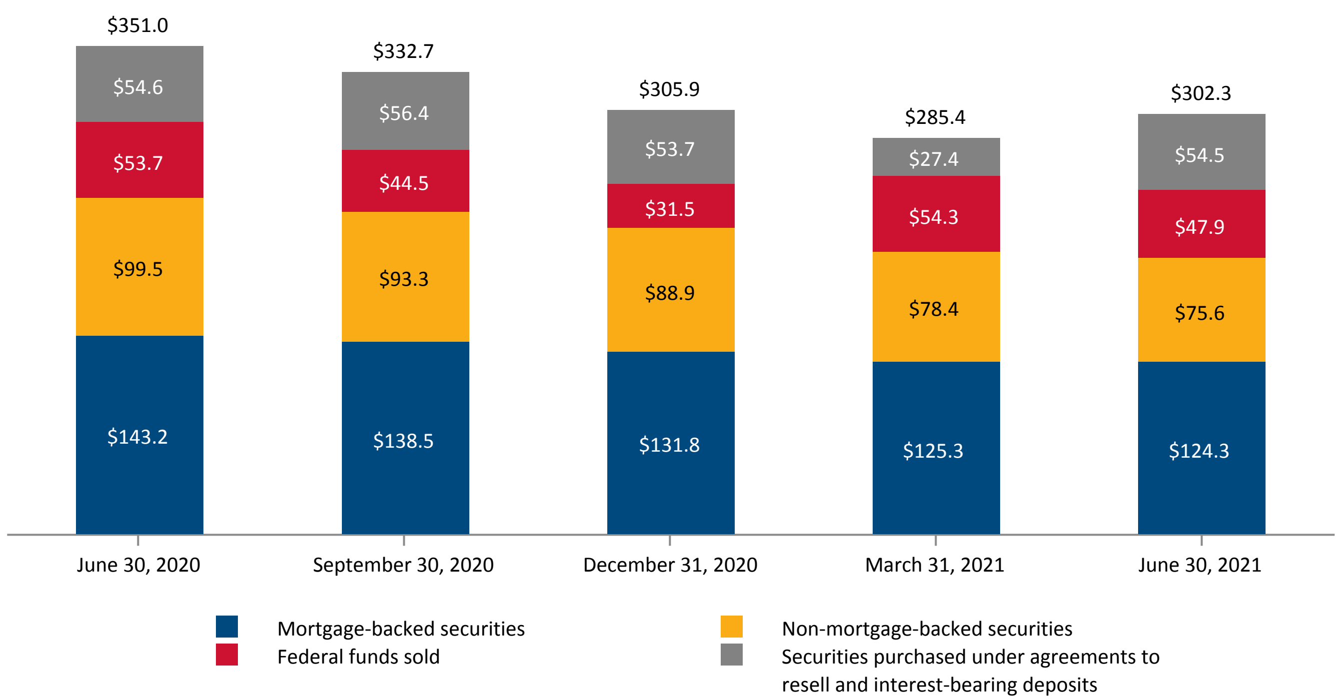
Financial Report for the year ended December 31, 2020, for additional information regarding the regulatory restrictions on investments.) Figure 10 presents total investments for the most recent five quarters.

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



Total investments, net were $302.3 billion at June 30, 2021, a decrease of $3.6 billion, or 1.2%, from $305.9 billion at December 31, 2020. Figure 11 presents the composition of investments by product type for the most recent five quarters.

Figure 11 - Investments 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, 2021, 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, 2021 and December 31, 2020.

Table 8 - Total Investments

(dollars in millions)

Net Carrying Value	June 30, 2021	December 31, 2020	Change
Interest-bearing deposits	$ 5,707	$ 8,076	$ (2,369)
Securities purchased under agreements to resell	48,832	45,588	3,244
Federal funds sold	47,897	31,510	16,387
Total Investment Securities by Major Security Type			
Investment securities non-mortgage-backed securities			
Certificates of deposit	575	750	(175)
U.S. Treasury obligations	48,237	59,304	(11,067)
Other U.S. obligations	4,585	4,851	(266)
GSE and Tennessee Valley Authority obligations	15,819	17,344	(1,525)
State or local housing agency obligations	2,472	2,565	(93)
Federal Family Education Loan Program ABS	2,929	3,034	(105)
Other	980	1,031	(51)
Total investment securities non-mortgage-backed securities	75,597	88,879	(13,282)
Investment securities mortgage-backed securities			
U.S. obligations single-family MBS	8,565	8,923	(358)
U.S. obligations multifamily MBS	181	47	134
GSE single-family MBS	20,457	25,410	(4,953)
GSE multifamily MBS	92,541	94,606	(2,065)
Private-label MBS	2,511	2,826	(315)
Total investment securities mortgage-backed securities	124,255	131,812	(7,557)
Total investment securities	199,852	220,691	(20,839)
Total investments	$ 302,288	$ 305,865	$ (3,577)

The FHLBanks classify investment securities as held to maturity (HTM), available-for-sale (AFS), or trading securities. The interest-rate and prepayment risks associated with these 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)

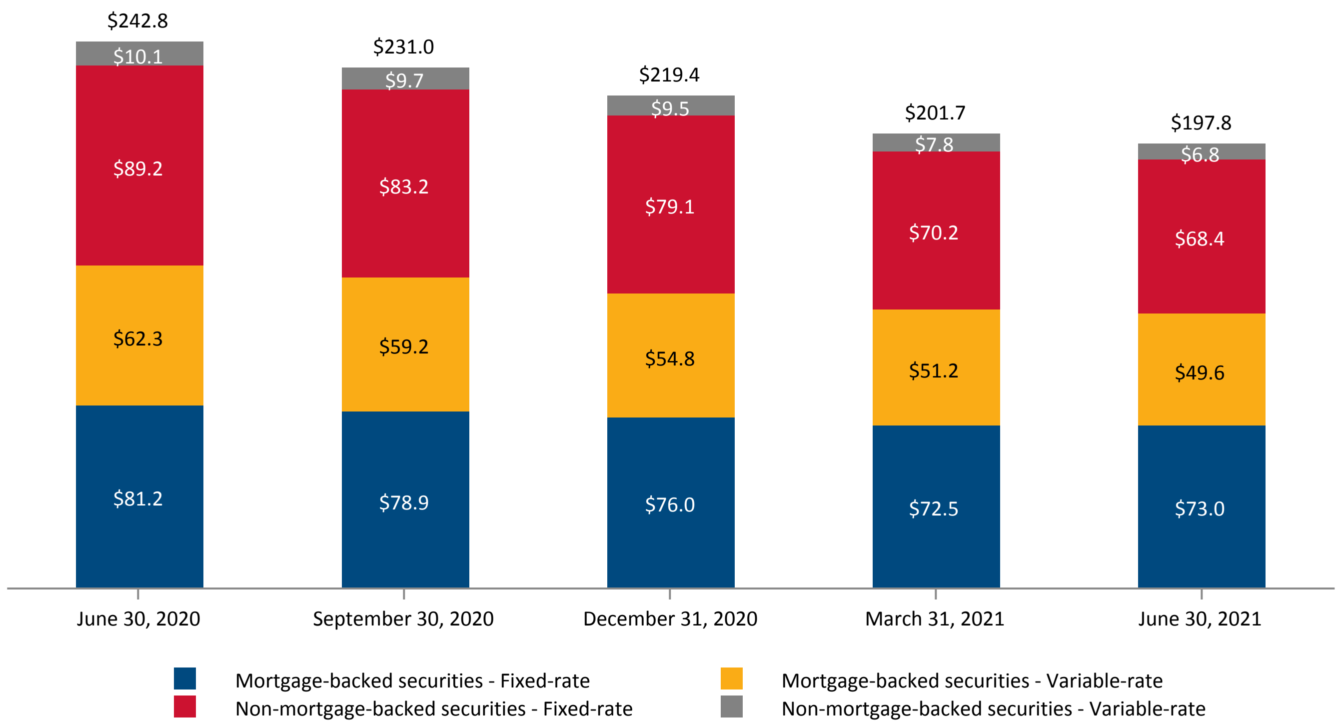


Table 9 presents the interest-rate payment terms of investment securities at June 30, 2021 and December 31, 2020.

Table 9 - Interest-Rate Payment Terms of Investment Securities

(dollars in millions)

	June 30, 2021	December 31, 2020
Trading Securities at Fair Value		
Trading non-mortgage-backed securities		
Fixed-rate	$ 37,365	$ 51,711
Variable-rate	6	2,218
Total trading non-mortgage-backed securities	37,371	53,929
Trading mortgage-backed securities		
Fixed-rate	1,118	1,235
Variable-rate	48	54
Total trading mortgage-backed securities	1,166	1,289
Total trading securities	$ 38,537	$ 55,218
Available-for-Sale Securities at Amortized Cost		
Available-for-sale non-mortgage-backed securities		
Fixed-rate	$ 28,344	$ 23,935
Variable-rate	5,203	4,643
Total available-for-sale non-mortgage-backed securities	33,547	28,578
Available-for-sale mortgage-backed securities		
Fixed-rate	56,619	57,323
Variable-rate	17,464	15,870
Total available-for-sale mortgage-backed securities	74,083	73,193
Total available-for-sale securities	$ 107,630	$ 101,771
Held-to-Maturity Securities at Amortized Cost		
Held-to-maturity non-mortgage-backed securities		
Fixed-rate	$ 2,704	$ 3,411
Variable-rate	1,575	2,596
Total held-to-maturity non-mortgage-backed securities	4,279	6,007
Held-to-maturity mortgage-backed securities		
Fixed-rate	15,245	17,473
Variable-rate	32,071	38,884
Total held-to-maturity mortgage-backed securities	47,316	56,357
Total held-to-maturity securities	$ 51,595	$ 62,364

Table 10 presents the principal amount of variable-rate investment securities by interest-rate index at June 30, 2021 and December 31, 2020. (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)

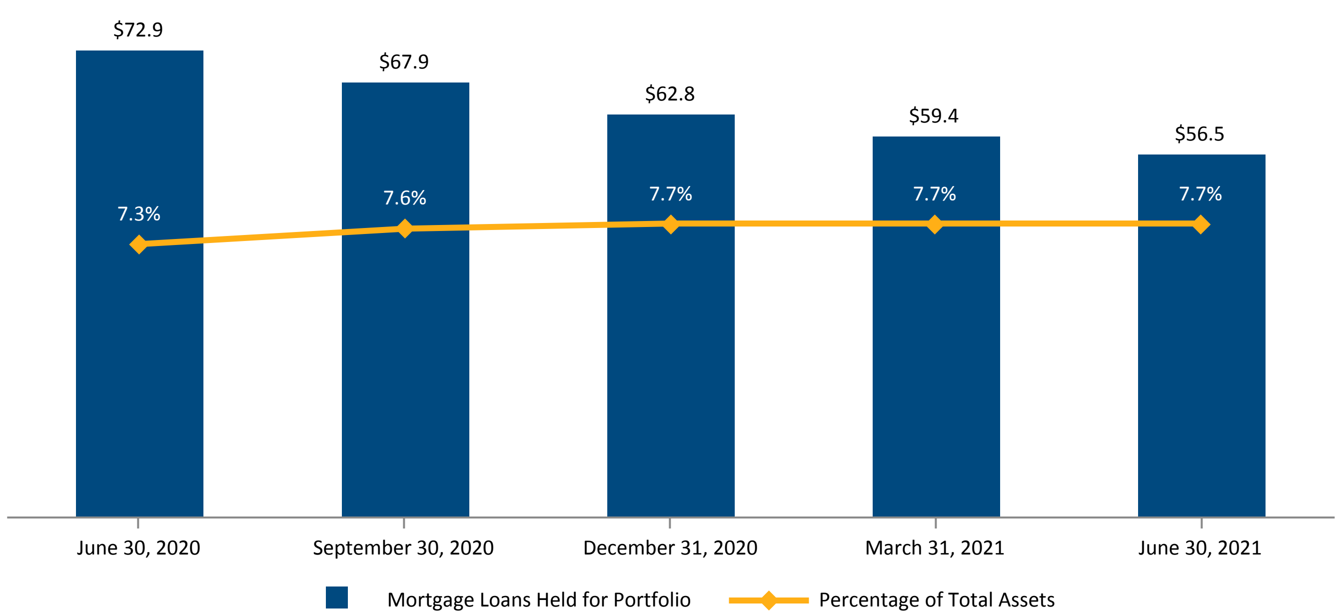
	June 30, 2021			December 31, 2020		
	Non-mortgage-backed securities	Mortgage-backed securities	Total	Non-mortgage-backed securities	Mortgage-backed securities	Total
LIBOR	$ 5,743	$ 46,848	$ 52,591	$ 6,886	$ 53,895	$ 60,781
SOFR	761	2,716	3,477	75	887	962
Other	273	350	623	2,490	408	2,898
Total principal amount of variable-rate investment securities	$ 6,777	$ 49,914	$ 56,691	$ 9,451	$ 55,190	$ 64,641

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, 2021, each of the FHLBanks was in compliance with this regulatory requirement at the time of its respective securities purchases. However, at June 30, 2021, each of the FHLBanks of Atlanta and Dallas exceeded the 300% regulatory limit and was precluded from purchasing additional MBS/ABS investments until their respective MBS/ABS to total regulatory capital percentage declined below 300%. None of these FHLBanks were required by the FHFA to sell any previously purchased securities. On a combined basis, the FHLBanks' percentage of MBS/ABS (net of regulatory excluded MBS) was 253% of total combined regulatory capital at June 30, 2021.

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. (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 $56.6 billion at June 30, 2021, a decrease of $6.3 billion, or 10.0%, from $62.9 billion at December 31, 2020, driven primarily by the high level of prepayments, resulting from the low mortgage interest-rate environment, and reduced mortgage loan purchase volume. The allowance for credit losses on mortgage loans was $27 million at June 30, 2021, a decrease of $6 million from $33 million at December 31, 2020. The FHLBanks utilize credit enhancements on conventional mortgage loans held for portfolio, which help to mitigate expected credit losses. Although the circumstances of the individual FHLBanks vary, the FHLBanks generally expect that continued high prepayments and reduced purchase opportunities will result in stable or lower balances of mortgage loans during the second half of 2021.

Table 11 - Mortgage Loans Held for Portfolio

(dollars in millions)

	June 30, 2021	December 31, 2020	Change
Mortgage loans held for portfolio	$ 56,568	$ 62,875	$ (6,307)
Allowance for credit losses on mortgage loans	(27)	(33)	6
Mortgage loans held for portfolio, net	$ 56,541	$ 62,842	$ (6,301)

Table 12 presents the risk elements and credit losses of mortgage loans held for portfolio. 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.

Table 12 - Mortgage Loans Held for Portfolio - Risk Elements and Credit Losses

(dollars in millions)

Unpaid Principal Balance	June 30, 2021	December 31, 2020
Total past due 90 days or more and still accruing interest	$ 185	$ 244
Non-accrual loans	$ 558	$ 863
Troubled debt restructurings (TDRs), performing	$ 63	$ 72

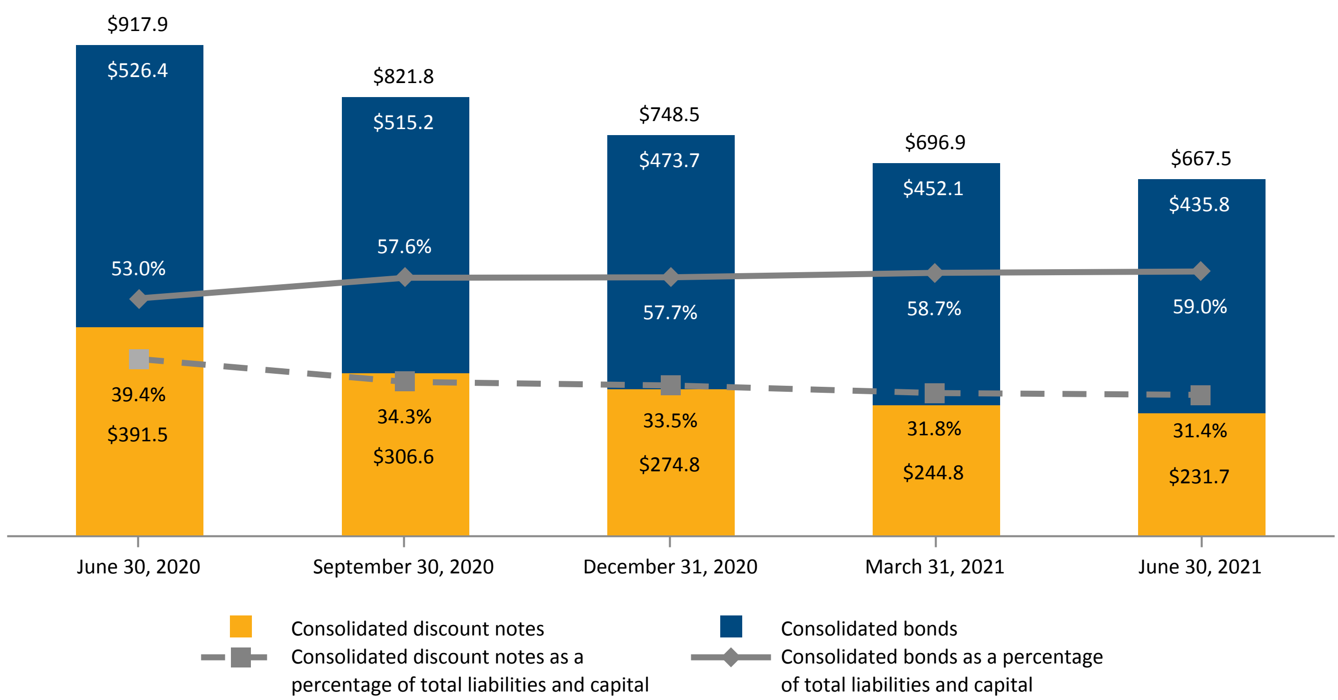
	Six Months Ended June 30, 2021	Year Ended December 31, 2020
Allowance for credit losses, beginning of period	$ 33	$ 16
Adjustment for cumulative effect of accounting change	—	11
Charge-offs, net of recoveries	(1)	(8)
Provision (reversal) for credit losses	(5)	14
Allowance for credit losses, end of period	$ 27	$ 33

The FHLBanks' servicers may grant a forbearance period to borrowers who have requested forbearance based on COVID-19 related difficulties regardless of the status of the loan at the time of the request. (See *Note 5 - Mortgage Loans* to the accompanying combined financial statements for more information.)

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 current economic conditions resulting from the COVID-19 pandemic and the timing and shape of the economic recovery. 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 $667.5 billion at June 30, 2021, a decrease of $81.0 billion, or 10.8%, from $748.5 billion at December 31, 2020, in line with the decrease in total assets. The decrease in consolidated obligations was comprised of a 15.7% decrease in consolidated discount notes and an 8.0% decrease 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 SOFR, LIBOR, or other specified indices and have maturities ranging from three months to 30 years. The carrying value of consolidated bonds was $435.8 billion at June 30, 2021, a decrease of $37.9 billion, or 8.0%, from $473.7 billion at December 31, 2020. In addition to the decrease in the carrying value of consolidated bonds at June 30, 2021, there was a change in the mix of consolidated bonds. The principal amount of variable-rate bonds declined to $128.0 billion at June 30, 2021, from $249.7 billion at December 31, 2020, a decrease of $121.7 billion, or 48.7%, and the principal amount of fixed-rate, callable bonds rose to $107.5 billion at June 30, 2021, from $37.3 billion at December 31, 2020, an increase of $70.1 billion, or 187.9%, driven by the lower cost of issuing fixed-rate, callable bonds compared to alternative types of consolidated bonds during the six months ended June 30, 2021. Consolidated bonds represented 65.3% and 63.3% of total consolidated obligations outstanding at June 30, 2021 and December 31, 2020.

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 $231.7 billion at June 30, 2021, a decrease of $43.1 billion, or 15.7%, from $274.8 billion at December 31, 2020. Consolidated discount notes represented 34.7% and 36.7% of total consolidated obligations outstanding at June 30, 2021 and December 31, 2020.

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)

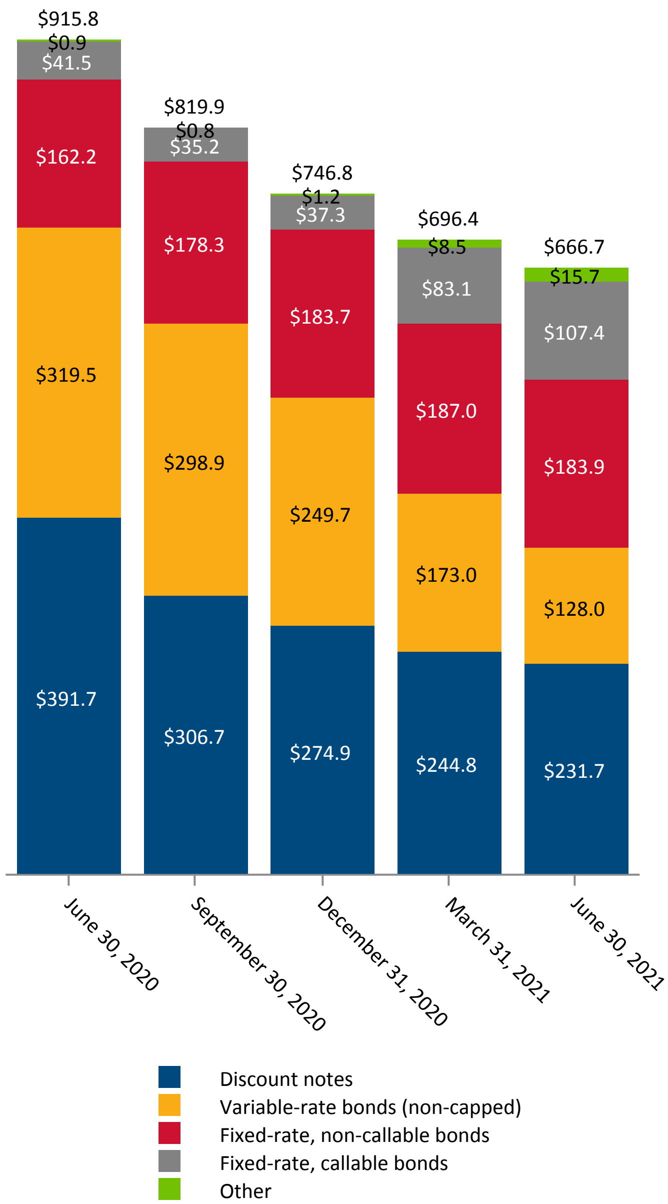


Figure 16 - Consolidated Obligations by Contractual Maturity (dollars in billions)

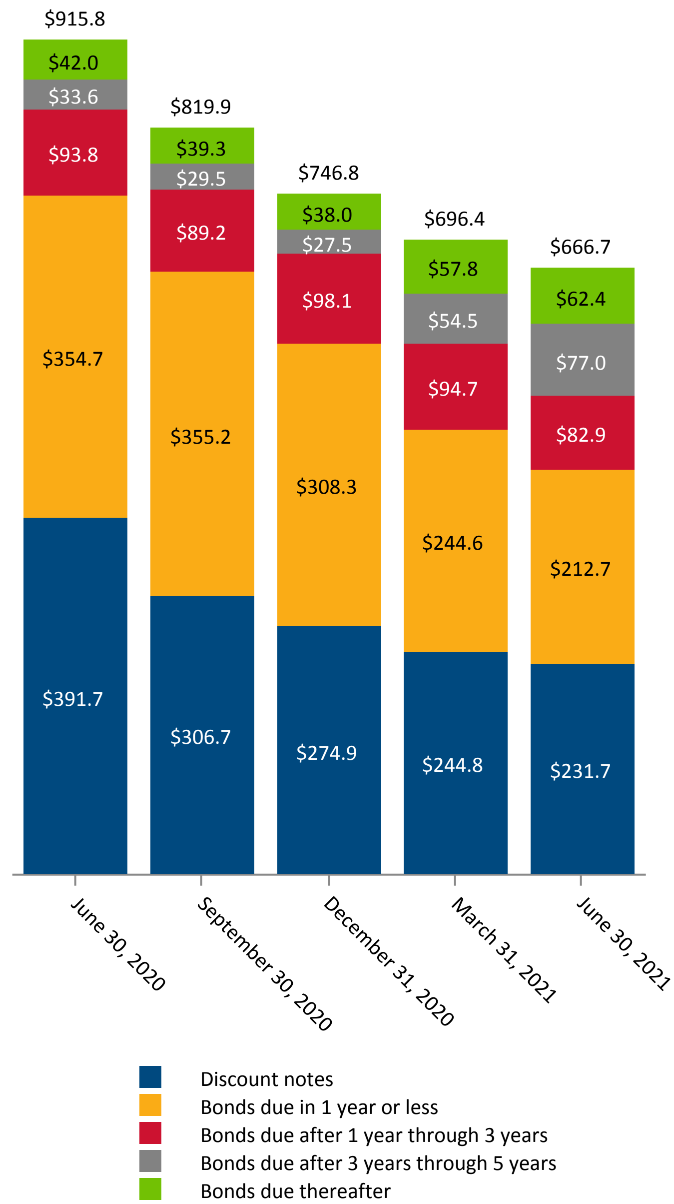


Table 13 presents the composition of consolidated obligations by product type and by contractual maturity at June 30, 2021 and December 31, 2020.

Table 13 - Types of Consolidated Obligations by Contractual Maturity

(dollars in millions)

	June 30, 2021		December 31, 2020		Change	
	Amount	Percentage	Amount	Percentage	Amount	Percentage
Consolidated Discount Notes						
Overnight	$ 1,000	0.1 %	$ —	—	$ 1,000	—
Due after 1 day through 30 days	88,159	13.2 %	99,563	13.3 %	(11,404)	(11.5)%
Due after 30 days through 90 days	111,748	16.8 %	129,194	17.3 %	(17,446)	(13.5)%
Due after 90 days through 1 year	30,826	4.6 %	46,096	6.2 %	(15,270)	(33.1)%
Total principal amount	231,733	34.7 %	274,853	36.8 %	(43,120)	(15.7)%
Consolidated Bonds						
Fixed-rate, non-callable						
Due in 1 year or less	109,259	16.5 %	99,473	13.3 %	9,786	9.8 %
Due after 1 year through 3 years	42,795	6.5 %	48,168	6.4 %	(5,373)	(11.2)%
Due after 3 years through 5 years	16,271	2.4 %	19,532	2.6 %	(3,261)	(16.7)%
Thereafter	15,564	2.3 %	16,528	2.2 %	(964)	(5.8)%
Total principal amount	183,889	27.7 %	183,701	24.5 %	188	0.1 %
Fixed-rate, callable						
Due in 1 year or less	3,010	0.5 %	4,150	0.6 %	(1,140)	(27.5)%
Due after 1 year through 3 years	11,963	1.8 %	4,338	0.6 %	7,625	175.8 %
Due after 3 years through 5 years	51,543	7.7 %	7,400	1.0 %	44,143	596.5 %
Thereafter	40,936	6.1 %	21,439	2.9 %	19,497	90.9 %
Total principal amount	107,452	16.1 %	37,327	5.1 %	70,125	187.9 %
Variable-rate (non-capped)						
Due in 1 year or less	99,948	15.0 %	204,107	27.3 %	(104,159)	(51.0)%
Due after 1 year through 3 years	27,851	4.2 %	45,478	6.1 %	(17,627)	(38.8)%
Due after 3 years through 5 years	180	—	110	—	70	63.6 %
Thereafter	—	—	—	—	—	—
Total principal amount	127,979	19.2 %	249,695	33.4 %	(121,716)	(48.7)%
Step-up/step-down, callable						
Due in 1 year or less	—	—	—	—	—	—
Due after 1 year through 3 years	250	—	—	—	250	—
Due after 3 years through 5 years	8,981	1.3 %	480	0.1 %	8,501	1,771.0 %
Thereafter	5,944	0.9 %	63	—	5,881	9,334.9 %
Total principal amount	15,175	2.2 %	543	0.1 %	14,632	2,694.7 %
Other						
Due in 1 year or less	440	0.1 %	530	0.1 %	(90)	(17.0)%
Due after 1 year through 3 years	55	—	125	—	(70)	(56.0)%
Due after 3 years through 5 years	25	—	—	—	25	—
Thereafter	—	—	—	—	—	—
Total principal amount	520	0.1 %	655	0.1 %	(135)	(20.6)%
Total principal amount consolidated bonds	435,015	65.3 %	471,921	63.2 %	(36,906)	(7.8)%
Total principal amount	666,748	100.0 %	746,774	100.0 %	$ (80,026)	(10.7)%
Other adjustments, net(1)	769		1,744			
Total consolidated obligations	$ 667,517		$ 748,518			

(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, 2021 and December 31, 2020. (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, 2021	December 31, 2020
SOFR	$ 118,829	$ 196,291
LIBOR	9,150	53,418
Other	—	50
Total principal amount of variable-rate consolidated bonds	$ 127,979	$ 249,759

Table 15 presents cash flows related to consolidated obligations, which illustrates payments exceeding proceeds for the three and six months ended June 30, 2021, resulting in lower consolidated obligations outstanding. The volume of both net proceeds and total payments of consolidated obligations decreased during the three and six months ended June 30, 2021, compared to the three and six months ended June 30, 2020, due primarily to a decrease in the issuance of discount notes driven by a decrease in short-term advance activity.

Table 15 - Net Proceeds and Payments for Consolidated Obligations
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2021	2020	Change	2021	2020	Change
Net proceeds from issuance of consolidated obligations						
Discount notes	$ 694,360	$ 775,871	$ (81,511)	$ 1,650,627	$ 2,133,651	$ (483,024)
Bonds	109,305	88,994	20,311	233,394	272,329	(38,935)
Net proceeds	803,665	864,865	$ (61,200)	1,884,021	2,405,980	$ (521,959)
Payments for maturing and retiring consolidated obligations						
Discount notes	707,394	960,509	$ (253,115)	1,693,614	2,145,872	$ (452,258)
Bonds	125,865	162,217	(36,352)	270,258	369,046	(98,788)
Total payments	833,259	1,122,726	$ (289,467)	1,963,872	2,514,918	$ (551,046)
Net change	$ (29,594)	$ (257,861)		$ (79,851)	$ (108,938)	

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 six months ended June 30, 2021, the total issuance of consolidated bonds decreased compared to the six months ended June 30, 2020, in line with the decrease in demand for advances. In addition, during the three and six months ended June 30, 2021, there was a shift in issuance from single-index, variable-rate consolidated bonds to fixed-rate bonds, driven by the lower cost of issuing fixed-rate bonds compared to variable-rate bonds during these periods.

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

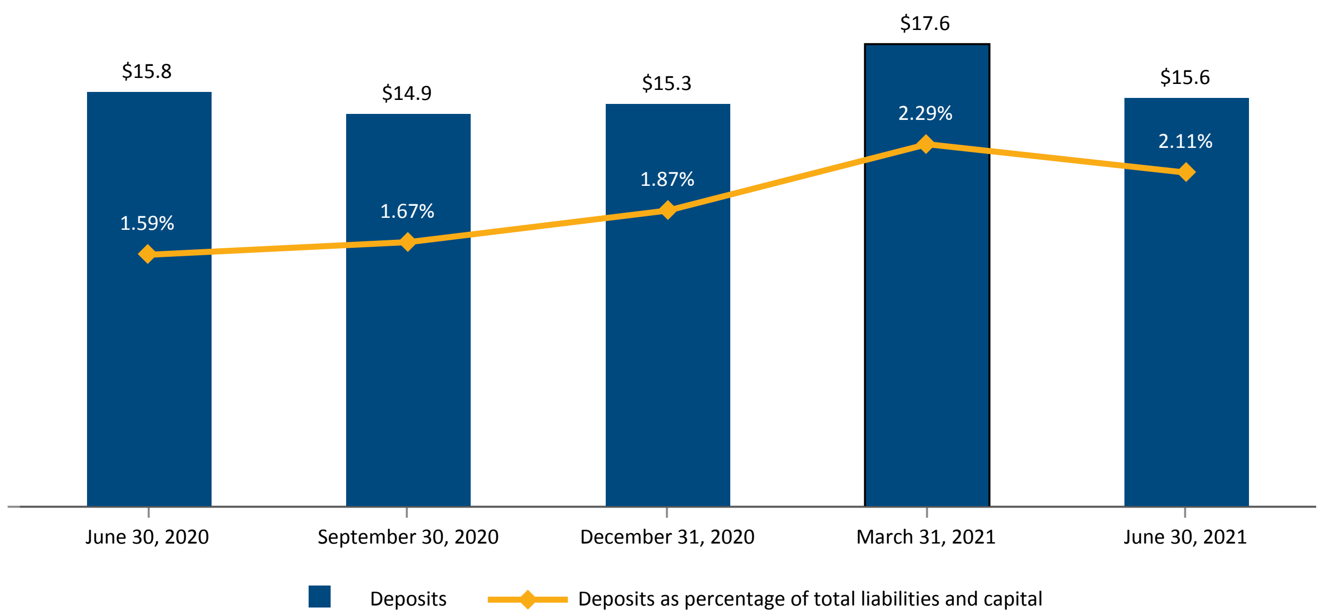
	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Single-index, variable-rate(1)	20.5 %	62.5 %	20.2 %	72.9 %
Fixed-rate, non-callable	38.4 %	26.3 %	35.0 %	14.3 %
Fixed-rate, callable	33.9 %	11.2 %	38.3 %	12.7 %
Step-up/step-down(2)	7.2 %	—	6.5 %	0.1 %
Total	100.0 %	100.0 %	100.0 %	100.0 %

(1) Includes SOFR-linked consolidated bonds of $21.6 billion and $45.0 billion, which represented 96.6% and 95.3% of the single-index variable-rate consolidated bonds issued during the three and six months ended June 30, 2021. Includes SOFR-linked consolidated bonds of $49.9 billion and $125.9 billion, which represented 89.7% and 63.5% of the single-index variable-rate consolidated bonds issued during the three and six months ended June 30, 2020.
(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 $15.6 billion at June 30, 2021, an increase of $0.2 billion, or 1.5%, from December 31, 2020. 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 92.7% and 88.7% of deposits at June 30, 2021 and December 31, 2020, 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)

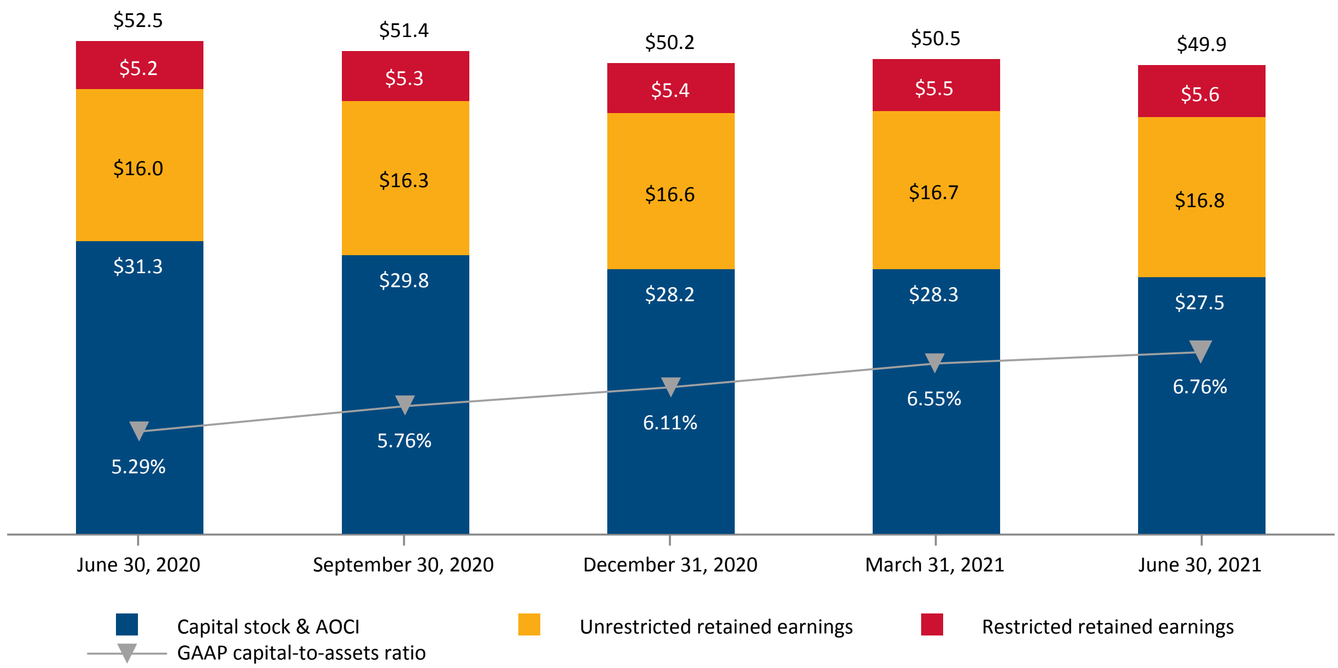


Table 17 - Total Capital and Capital-to-Assets Ratios

(dollars in millions)

	June 30, 2021	December 31, 2020	Change
Capital stock	$ 25,806	$ 27,398	$ (1,592)
Retained earnings:			
Unrestricted	16,815	16,564	251
Restricted(1)	5,572	5,434	138
Total retained earnings	22,387	21,998	389
AOCI	1,678	784	894
Total GAAP capital	49,871	50,180	(309)
Exclude: AOCI	(1,678)	(784)	(894)
Add: Mandatorily redeemable capital stock	614	772	(158)
Total combined regulatory capital(2)	$ 48,807	$ 50,168	$ (1,361)
Total assets	$ 738,171	$ 820,740	$ (82,569)
Combined GAAP capital-to-assets ratio	6.76 %	6.11 %	
Combined regulatory capital-to-assets ratio(3)	6.61 %	6.11 %	

(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 $49.9 billion at June 30, 2021, a decrease of $309 million, or 0.6%, from $50.2 billion at December 31, 2020, due primarily to a decrease in capital stock, partially offset by an increase in AOCI and the growth in retained earnings. The combined GAAP capital-to-assets ratio was 6.76% at June 30, 2021, an increase of 65 basis points from 6.11% at December 31, 2020.

Capital Stock. Capital stock was $25.8 billion at June 30, 2021, a decrease of $1,592 million, or 5.8%, from $27.4 billion at December 31, 2020, due to the net repurchases and redemptions of activity-based capital stock, driven primarily by the decrease in advances, and the reclassification of capital stock to mandatorily redeemable capital stock.

Retained Earnings. Retained earnings grew to $22.4 billion at June 30, 2021, an increase of $389 million, or 1.8%, from $22.0 billion at December 31, 2020, resulting principally from net income of $909 million, partially offset by dividends of $520 million. Unrestricted retained earnings were $16.8 billion at June 30, 2021, an increase of $251 million, or 1.5%, from $16.6 billion at December 31, 2020. Restricted retained earnings were $5.6 billion at June 30, 2021, an increase of $138 million, or 2.5%, from $5.4 billion at December 31, 2020.

Accumulated Other Comprehensive Income (Loss). AOCI grew to $1.7 billion at June 30, 2021, an increase of $894 million, from $784 million at December 31, 2020, resulting principally from net unrealized gains on MBS classified as AFS investment securities.

Figures 19 and 20 present the components of capital as a percentage of total GAAP capital at June 30, 2021 and December 31, 2020.

Figure 19 - Capital Components as a Percentage of Total GAAP Capital at June 30, 2021

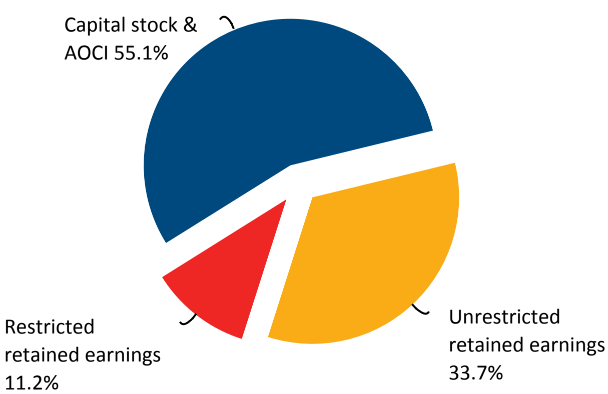
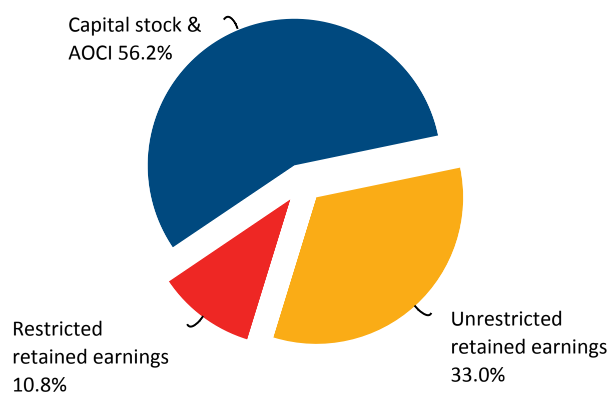


Figure 20 - Capital Components as a Percentage of Total GAAP Capital at December 31, 2020



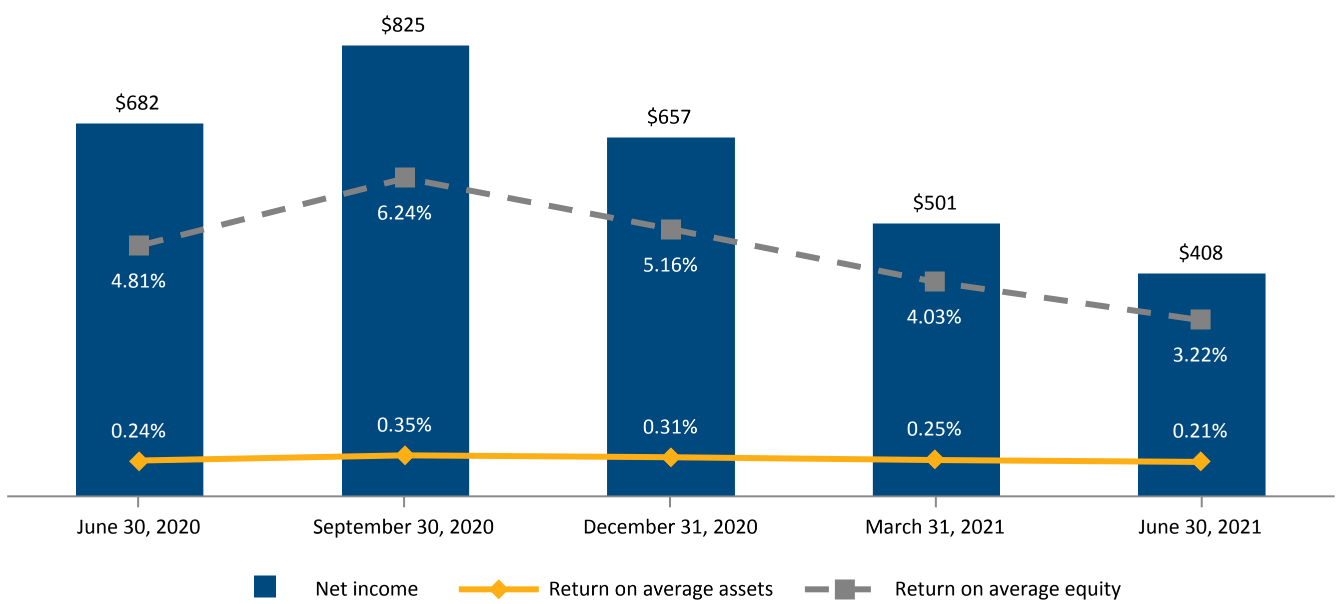
Regulatory Capital. Total combined regulatory capital was $48.8 billion at June 30, 2021, a decrease of $1,361 million, or 2.7%, from $50.2 billion at December 31, 2020, due primarily to a decrease in capital stock.

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 $408 million for the three months ended June 30, 2021, a decrease of 40.2% compared to the three months ended June 30, 2020, due primarily to a decrease in net interest income after provision (reversal) for credit losses. Net income was $909 million for the six months ended June 30, 2021, a decrease of 30.6% compared to the six months ended June 30, 2020, resulting primarily from decreases in non-interest income and net interest income after provision (reversal) for credit losses.

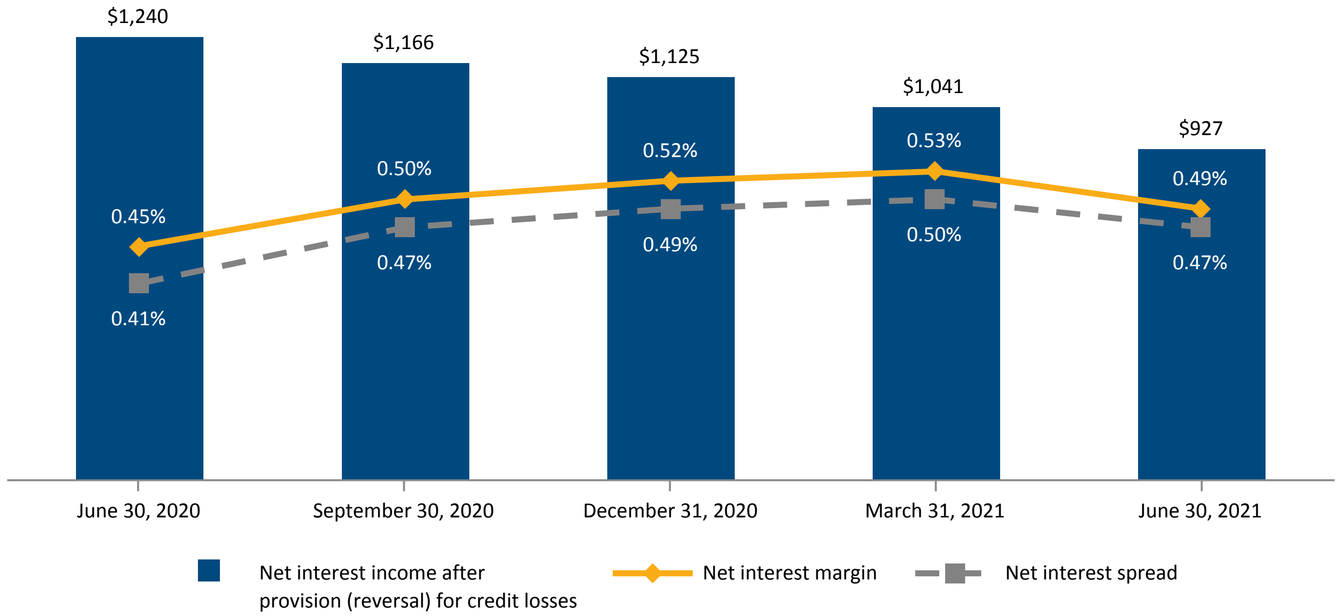
Table 18 - Changes in Net Income
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2021	**2020**	**Change**	**2021**	**2020**	**Change**
Net interest income after provision (reversal) for credit losses	$ 927	$ 1,240	$ (313)	$ 1,968	$ 2,112	$ (144)
Non-interest income (loss)	(120)	(79)	(41)	(245)	113	(358)
Non-interest expense	353	402	(49)	711	767	(56)
Affordable Housing Program assessments	46	77	(31)	103	149	(46)
Net income	$ 408	$ 682	$ (274)	$ 909	$ 1,309	$ (400)

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 COVID-19 pandemic and the efforts in response by the Federal Reserve have resulted in historically low interest rates and high levels of market liquidity. 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, fiscal or monetary stimulus, as well as the timing and shape of the economic recovery. Although the circumstances of the individual FHLBanks vary, the FHLBanks generally expect that net interest income and net interest margin will remain at or near current levels for the foreseeable future. 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 $927 million and $1,968 million for the three and six months ended June 30, 2021, decreases of 25.2% and 6.8% compared to the three and six months ended June 30, 2020, primarily due to the low interest-rate environment resulting from the COVID-19 pandemic and the reduced demand for advances due to elevated deposit levels at member institutions and liquidity in the financial markets.

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

(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2021	2020	Change	2021	2020	Change
Interest income						
Advances	$ 665	$ 1,765	$ (1,100)	$ 1,422	$ 4,657	$ (3,235)
Investments and other	602	986	(384)	1,294	2,721	(1,427)
Mortgage loans held for portfolio	336	496	(160)	711	1,062	(351)
Total interest income	1,603	3,247	(1,644)	3,427	8,440	(5,013)
Interest expense						
Consolidated obligations - Discount notes	46	652	(606)	131	2,175	(2,044)
Consolidated obligations - Bonds	623	1,332	(709)	1,323	4,042	(2,719)
Total consolidated obligations	669	1,984	(1,315)	1,454	6,217	(4,763)
Deposits and mandatorily redeemable capital stock	7	15	(8)	15	60	(45)
Total interest expense	676	1,999	(1,323)	1,469	6,277	(4,808)
Net interest income	927	1,248	(321)	1,958	2,163	(205)
Provision (reversal) for credit losses	—	8	(8)	(10)	51	(61)
Net interest income after provision (reversal) for credit losses	$ 927	$ 1,240	$ (313)	$ 1,968	$ 2,112	$ (144)

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,					
	2021			2020		
	Average Balance	Interest Income/ Expense	Average Yield/ Rate	Average Balance	Interest Income/ Expense	Average Yield/ Rate
Assets						
Interest-bearing deposits and other	$ 9,815	$ 3	0.12 %	$ 22,253	$ 6	0.11 %
Securities purchased under agreements to resell	19,628	2	0.04 %	34,675	6	0.07 %
Federal funds sold	65,933	11	0.07 %	77,420	13	0.07 %
Investment securities(1)(2)	198,010	586	1.19 %	242,407	961	1.59 %
Advances	403,988	665	0.66 %	673,043	1,765	1.05 %
Mortgage loans(3)	57,757	336	2.33 %	74,224	496	2.69 %
Total interest-earning assets	755,131	1,603	0.85 %	1,124,022	3,247	1.16 %
Other non-interest-earning assets	7,374			13,399		
Fair-value adjustment on investment securities(2)	3,783			2,973		
Total assets	$ 766,288			$ 1,140,394		
Liabilities and Capital						
Consolidated obligations - Discount notes	$ 251,095	46	0.07 %	$ 489,355	652	0.54 %
Consolidated obligations - Bonds	439,067	623	0.57 %	566,473	1,332	0.95 %
Deposits and mandatorily redeemable capital stock	16,686	7	0.17 %	15,137	15	0.40 %
Total interest-bearing liabilities	706,848	676	0.38 %	1,070,965	1,999	0.75 %
Non-interest-bearing liabilities	8,617			12,393		
Total liabilities	715,465			1,083,358		
Capital	50,823			57,036		
Total liabilities and capital	$ 766,288			$ 1,140,394		
Net interest income		$ 927			$ 1,248	
Net interest spread			0.47 %			0.41 %
Net interest margin			0.49 %			0.45 %
Total interest-earning assets to total interest-bearing liabilities	106.83 %			104.95 %		

	Six Months Ended June 30,					
	2021			2020		
	Average Balance	Interest Income/ Expense	Average Yield/ Rate	Average Balance	Interest Income/ Expense	Average Yield/ Rate
Assets						
Interest-bearing deposits and other	$ 10,545	$ 7	0.13 %	$ 20,958	$ 73	0.70 %
Securities purchased under agreements to resell	24,155	7	0.06 %	41,930	183	0.88 %
Federal funds sold	64,663	23	0.07 %	75,263	240	0.64 %
Investment securities(1)(2)	203,848	1,257	1.24 %	240,749	2,225	1.86 %
Advances	410,492	1,422	0.70 %	657,242	4,657	1.42 %
Mortgage loans(3)	59,366	711	2.42 %	73,957	1,062	2.89 %
Total interest-earning assets	773,069	3,427	0.89 %	1,110,099	8,440	1.53 %
Other non-interest-earning assets	7,835			10,814		
Fair-value adjustment on investment securities(2)	4,089			3,126		
Total assets	$ 784,993			$ 1,124,039		
Liabilities and Capital						
Consolidated obligations - Discount notes	$ 257,747	131	0.10 %	$ 451,802	2,175	0.97 %
Consolidated obligations - Bonds	450,721	1,323	0.59 %	590,782	4,042	1.38 %
Deposits and mandatorily redeemable capital stock	16,565	15	0.18 %	13,805	60	0.87 %
Total interest-bearing liabilities	725,033	1,469	0.41 %	1,056,389	6,277	1.19 %
Non-interest-bearing liabilities	9,369			11,144		
Total liabilities	734,402			1,067,533		
Capital	50,591			56,506		
Total liabilities and capital	$ 784,993			$ 1,124,039		
Net interest income		$ 1,958			$ 2,163	
Net interest spread			0.48 %			0.34 %
Net interest margin			0.51 %			0.39 %
Total interest-earning assets to total interest-bearing liabilities	106.63 %			105.08 %		

(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* 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, 2021 vs. 2020			Six Months Ended June 30, 2021 vs. 2020		
	Volume	Rate	Total	Volume	Rate	Total
Interest Income						
Interest-bearing deposits and other	$ (4)	$ 1	$ (3)	$ (25)	$ (41)	$ (66)
Securities purchased under agreements to resell	(2)	(2)	(4)	(55)	(121)	(176)
Federal funds sold	(2)	—	(2)	(30)	(187)	(217)
Investment securities(1)	(159)	(216)	(375)	(304)	(664)	(968)
Advances	(571)	(529)	(1,100)	(1,374)	(1,861)	(3,235)
Mortgage loans	(101)	(59)	(160)	(191)	(160)	(351)
Total interest income	(839)	(805)	(1,644)	(1,979)	(3,034)	(5,013)
Interest Expense						
Consolidated obligations - Discount notes	(217)	(389)	(606)	(662)	(1,382)	(2,044)
Consolidated obligations - Bonds	(256)	(453)	(709)	(795)	(1,924)	(2,719)
Deposits and mandatorily redeemable capital stock	2	(10)	(8)	10	(55)	(45)
Total interest expense	(471)	(852)	(1,323)	(1,447)	(3,361)	(4,808)
Changes in net interest income	$ (368)	$ 47	$ (321)	$ (532)	$ 327	$ (205)

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

Net interest income was $927 million and $1,958 million for the three and six months ended June 30, 2021, decreases of 25.7% and 9.5% compared to the three and six months ended June 30, 2020. Both interest income and interest expense were significantly lower for the three and six months ended June 30, 2021, compared to the three and six months ended June 30, 2020, primarily due to the low interest-rate environment resulting from the COVID-19 pandemic and the reduced demand for advances due to elevated deposit levels at member institutions and liquidity in the financial markets.

- Interest income was $1,603 million and $3,427 million for the three and six months ended June 30, 2021, decreases of 50.6% and 59.4% compared to the three and six months ended June 30, 2020, resulting from decreases in both the average yields on, and the average balances of, interest-earning assets, principally advances. The average yields on interest-earning assets were 0.85% and 0.89% for the three and six months ended June 30, 2021, decreases of 31 and 64 basis points compared to the three and six months ended June 30, 2020. The average balances of interest earning assets were $755.1 billion and $773.1 billion for the three and six months ended June 30, 2021, decreases of 32.8% and 30.4% compared to the three and six months ended June 30, 2020.

- Interest expense was $676 million and $1,469 million for the three and six months ended June 30, 2021, decreases of 66.2% and 76.6% compared to the three and six months ended June 30, 2020, due to the lower average rates on consolidated obligations, and the lower average balances of consolidated obligations. The average rates on consolidated obligations were 0.39% and 0.41% for the three and six months ended June 30, 2021, decreases of 37 and 79 basis points compared to the three and six months ended June 30, 2020. The average balances of consolidated obligations were $690.2 billion and $708.5 billion for the three and six months ended June 30, 2021, decreases of 34.6% and 32.0% compared to the three and six months ended June 30, 2020.

Net interest margin was 0.49% and 0.51% for the three and six months ended June 30, 2021, increases of 4 and 12 basis points compared to the three and six months ended June 30, 2020. The increase in net interest margin during the six months ended June 30, 2021, was driven primarily by the lower cost of consolidated obligations resulting from the tightening of spreads relative to certain benchmark interest rates during this period, and the lower net interest margin for the six months ended June 30, 2020, driven by several factors associated with the decline in interest rates that occurred in March 2020, during the onset of the COVID-19 pandemic.

Factors Affecting Net Interest Income.

Advances. Interest income on advances was $665 million and $1,422 million for the three and six months ended June 30, 2021, decreases of 62.3% and 69.5% compared to the three and six months ended June 30, 2020, resulting from decreases in both the average yields on, and the average balances of advances. The average yields on advances were 0.66% and 0.70% for the three and six months ended June 30, 2021, decreases of 39 and 72 basis points compared to the three and six months ended June 30, 2020. The decreases in the average yields on advances were the result of lower interest rates on advances driven by the low interest-rate environment, including the effect of derivatives and hedging activities on interest income from advances, and the runoff of higher-yielding advances and replacement of these advances in the low interest-rate environment. (See *Table 22* for additional information regarding the effect of derivatives and hedging activities on net interest income.) The average balances of advances were $404.0 billion and $410.5 billion for the three and six months ended June 30, 2021, decreases of 40.0% and 37.5% compared to the three and six months ended June 30, 2020. The declines in the average balances of advances were primarily the result of the reduced demand for advances due to elevated deposit levels at member institutions and liquidity in the financial markets.

Mortgage Loans. Interest income on mortgage loans was $336 million and $711 million for the three and six months ended June 30, 2021, decreases of 32.3% and 33.1% compared to the three and six months ended June 30, 2020, resulting from decreases in both the average balances of, and the average yields on, mortgage loans. The average balances of mortgage loans were $57.8 billion and $59.4 billion for the three and six months ended June 30, 2021, decreases of 22.2% and 19.7% compared to the three and six months ended June 30, 2020, driven primarily by the high level of prepayments, resulting from the low mortgage interest-rate environment, and reduced mortgage loan purchase volume. The average yields on mortgage loans were 2.33% and 2.42% for the three and six months ended June 30, 2021, decreases of 36 and 47 basis points compared to the three and six months ended June 30, 2020. The decreases in the average yields on mortgage loans were the result of the low mortgage interest-rate environment.

Total Investments. Interest income on investments was $602 million and $1,294 million for the three and six months ended June 30, 2021, decreases of 38.9% and 52.4% compared to the three and six months ended June 30, 2020, resulting primarily from decreases in the average yields on investments. The average yields on investments were 0.82% and 0.86%, decreases of 23 and 58 basis points compared to the three and six months ended June 30, 2020. The decreases in the average yields on investments were the result of lower interest rates on investments in the low interest-rate environment, including the effect of derivatives and hedging activities on interest income from investments, and the runoff of higher-yielding investments and replacement of these investments in the low interest-rate environment, including a decrease in the yields on short-term investments funded by member capital and short-term debt. (See *Table 22* for additional information regarding the effect of derivatives and hedging activities on net interest income and *Financial Discussion and Analysis - Liquidity and Capital Resources* for more discussion regarding the FHLBanks' liquidity requirements.) Although the low interest-rate environment was the primary factor affecting interest income on investments, lower average balances also contributed to the decrease in interest income on investments. The average balances of investments were $293.4 billion and $303.2 billion for the three and six months ended June 30, 2021, decreases of 22.1% and 20.0% compared to the three and six months ended June 30, 2020.

Consolidated Obligations. Interest expense on consolidated obligations was $669 million and $1,454 million for the three and six months ended June 30, 2021, decreases of 66.3% and 76.6% compared to the three and six months ended June 30, 2020, due to the lower average rates on consolidated obligations, and the lower average balances of consolidated obligations. The average rates on consolidated obligations were 0.39% and 0.41% for the three and six months ended June 30, 2021, decreases of 37 and 79 basis points compared to the three and six months ended June 30, 2020. The decreases in the average rates on consolidated obligations were driven by the low interest-rate environment, including the effect of derivatives and hedging activities on interest expense from consolidated obligations due primarily to an increase in net interest settlement payments on derivatives, and the runoff of higher-rate consolidated obligations and replacement of these consolidated obligations in the low interest-rate environment. (See *Table 22* for additional information regarding the effect of derivatives and hedging activities on net interest income.) The average balances of consolidated obligations were $690.2 billion and $708.5 billion for the three and six months ended June 30, 2021, decreases of 34.6% and 32.0% compared to the three and six months ended June 30, 2020, principally resulting from decreases in the average balances of advances and investments.

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, 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)

	Three Months Ended June 30, 2020					
	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	$ (23)	$ (7)	$ (8)	$ (3)	$ (1)	$ (42)
Net gains (losses) on derivatives and hedged items	3	12	—	13	18	46
Net interest settlements on derivatives	(484)	(272)	—	213	29	(514)
Total effect on net interest income	$ (504)	$ (267)	$ (8)	$ 223	$ 46	$ (510)

	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)

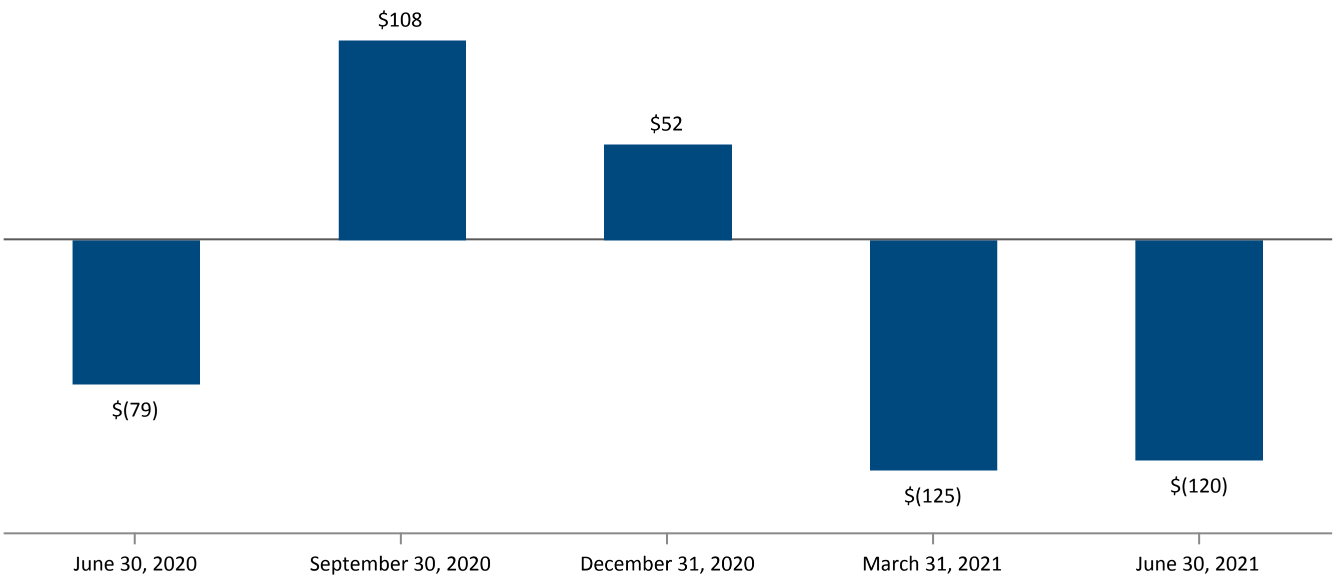
	Six Months Ended June 30, 2020					
	Advances	Investment Securities	Mortgage Loans(1)	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	$ (42)	$ (9)	$ (12)	$ (5)	$ (2)	$ (70)
Net gains (losses) on derivatives and hedged items	(31)	(66)	—	5	2	(90)
Net interest settlements on derivatives	(591)	(383)	—	304	40	(630)
Total effect on net interest income	$ (664)	$ (458)	$ (12)	$ 304	$ 40	$ (790)

(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 $120 million and a loss of $245 million for the three and six months ended June 30, 2021, due primarily to changes in the fair value of investment securities, derivatives, and financial instruments held under fair value option resulting primarily from changes in interest rates. Non-interest income was a loss of $79 million and a gain of $113 million for the three and six months ended June 30, 2020.

Table 23 - Changes in Non-Interest Income

(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2021	2020	Change	2021	2020	Change
Net gains (losses) on investment securities	$ (119)	$ (142)	$ 23	$ (424)	$ 1,032	$ (1,456)
Net gains (losses) on financial instruments held under fair value option	5	87	(82)	(47)	143	(190)
Net gains (losses) on derivatives	(68)	(97)	29	110	(1,218)	1,328
Gains on litigation settlements, net	—	1	(1)	—	56	(56)
Other, net	62	72	(10)	116	100	16
Total non-interest income (loss)	$ (120)	$ (79)	$ (41)	$ (245)	$ 113	$ (358)

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. There are a number of factors that affect the fair value of investment securities, including current and projected levels of interest rates, credit spreads, and volatility, as well as the passage of time. Net losses on investment securities were $119 million and $424 million for the three and six months ended June 30, 2021, compared to net losses of $142 million and net gains of $1,032 million for the three and six months ended June 30, 2020, due primarily to fair value losses on U.S. Treasury obligations classified as trading securities driven by changes 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 option were $5 million for the three months ended June 30, 2021, compared to $87 million for the three months ended June 30, 2020. Net losses on financial instruments held under fair value option were $47 million for the six months ended June 30, 2021, compared to net gains of $143 million for the six months ended June 30, 2020, resulting primarily from changes 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 losses on derivatives were $68 million for the three months ended June 30, 2021, compared to net losses of $97 million for the three months ended June 30, 2020, due primarily to fair value losses on economic hedges, which were hedging trading securities. Net gains on derivatives were $110 million for the six months ended June 30, 2021, compared to net losses of $1,218 million for the six months ended June 30, 2020, due primarily to fair value gains on economic hedges, which were hedging trading securities and advances. 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, 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)

	Three Months Ended June 30, 2020							
	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	$ (12)	$ (74)	$ (14)	$ (10)	$ 11	$ (2)	$ 4	$ (97)
Price alignment amount	—	—	—	—	—	—	—	—
Total net gains (losses) on derivatives	(12)	(74)	(14)	(10)	11	(2)	4	(97)
Net gains (losses) on trading securities(1)	—	(146)	—	—	—	—	—	(146)
Net gains (losses) on financial instruments under fair value option	32	—	—	23	32	—	—	87
Total effect on non-interest income	$ 20	$ (220)	$ (14)	$ 13	$ 43	$ (2)	$ 4	$ (156)

	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)

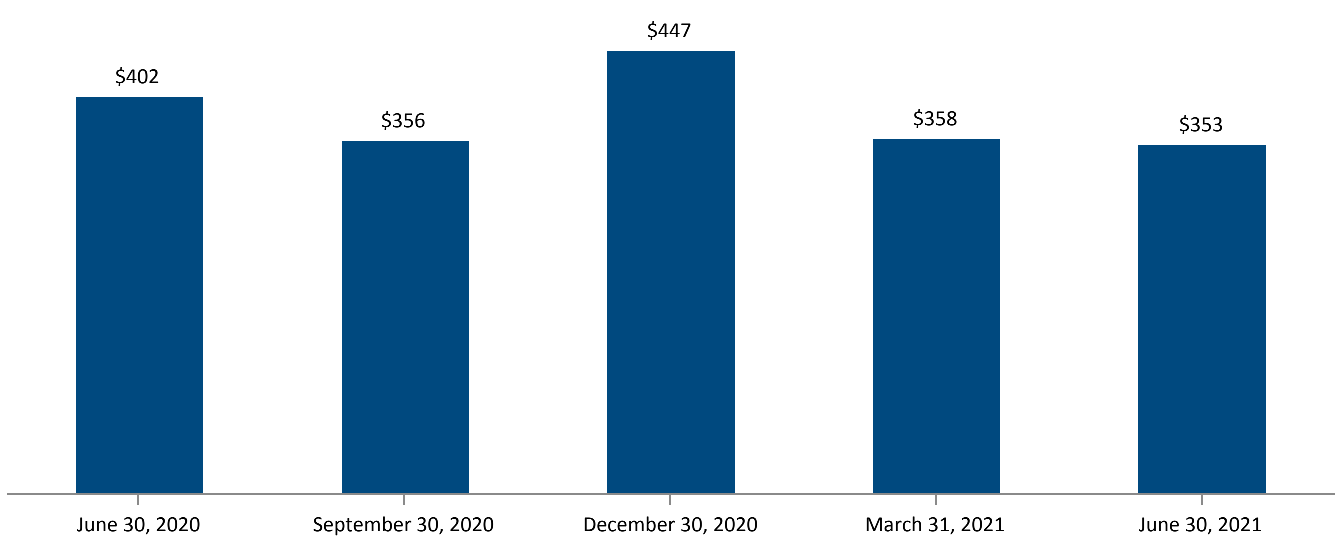
	Six Months Ended June 30, 2020							
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives								
Gains (losses) related to derivatives not designated as hedging instruments	$ (258)	$ (1,268)	$ (29)	$ 111	$ 93	$ 90	$ 37	$ (1,224)
Price alignment amount	—	—	—	—	—	—	6	6
Total net gains (losses) on derivatives	(258)	(1,268)	(29)	111	93	90	43	(1,218)
Net gains (losses) on trading securities(1)	—	872	—	—	—	—	—	872
Net gains (losses) on financial instruments under fair value option	183	—	2	(28)	(14)	—	—	143
Total effect on non-interest income	$ (75)	$ (396)	$ (27)	$ 83	$ 79	$ 90	$ 43	$ (203)

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

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 $353 million and $711 million for the three and six months ended June 30, 2021, decreases of 12.2% and 7.3% compared to the three and six months ended June 30, 2020. The decrease in non-interest expense for the three months ended June 30, 2021, resulted primarily from a decrease in other expenses driven by lower COVID-19 related relief program expenses, as well as lower other operating expenses. The decrease in non-interest expense for the six months ended June 30, 2021, was due primarily to lower compensation and benefits compared to the six months ended June 30, 2020, during which the FHLBank of Atlanta made an additional retirement plan contribution of $20 million, as well as lower other operating expenses.

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

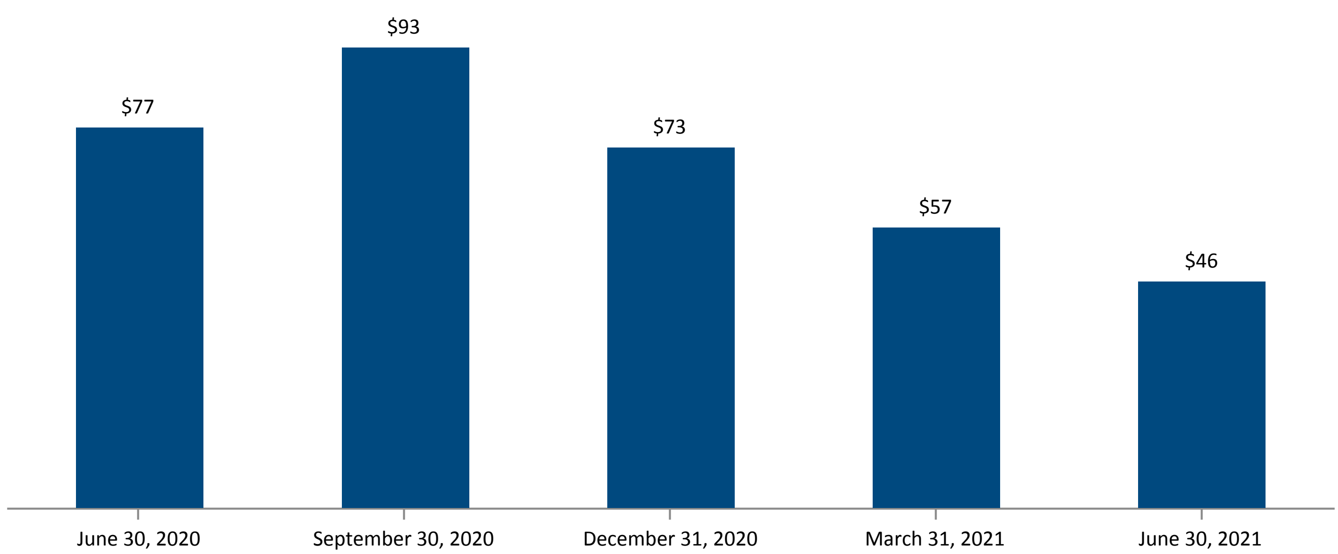
	Three Months Ended June 30,			Six Months Ended June 30,		
	2021	2020	Change	2021	2020	Change
Compensation and benefits	$ 182	$ 190	$ (8)	$ 377	$ 402	$ (25)
Other operating expenses	112	126	(14)	216	238	(22)
Federal Housing Finance Agency	20	19	1	41	38	3
Office of Finance	14	14	—	33	31	2
Other expenses	25	53	(28)	44	58	(14)
Total non-interest expense	$ 353	$ 402	$ (49)	$ 711	$ 767	$ (56)

Affordable Housing Program Assessments

By regulation, each FHLBank is required 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 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* 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. All FHLBank operating costs for the AHP are included in operating expenses, so all AHP assessments go directly to support affordable housing projects. 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 $110 million for the three months ended June 30, 2021, compared to $1,047 million for the three months ended June 30, 2020, due principally to lower net unrealized gains on MBS classified as AFS securities. Other comprehensive income was $894 million for the six months ended June 30, 2021, compared to a loss of $1,139 million for the six months ended June 30, 2020, due principally to net unrealized gains on MBS classified as AFS securities.

Table 26 - Comprehensive Income

(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2021	2020	Change	2021	2020	Change
Net income	$ 408	$ 682	$ (274)	$ 909	$ 1,309	$ (400)
Other comprehensive income						
Changes in fair value of AFS securities						
Net unrealized gains (losses) on AFS securities	148	1,053	(905)	740	(865)	1,605
Changes in non-credit other-than-temporary impairment losses						
Non-credit losses included in basis of HTM securities sold	—	—	—	—	20	(20)
Accretion of non-credit portion on HTM securities	2	8	(6)	4	17	(13)
Total changes in non-credit OTTI losses	2	8	(6)	4	37	(33)
Net unrealized gains (losses) relating to hedging activities	(56)	(16)	(40)	131	(307)	438
Other	16	2	14	19	(4)	23
Total other comprehensive income (loss)	110	1,047	(937)	894	(1,139)	2,033
Comprehensive income (loss)	$ 518	$ 1,729	$ (1,211)	$ 1,803	$ 170	$ 1,633

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 OTTI Losses. Changes in non-credit OTTI losses are generally due to the accretion of the non-credit portion on HTM securities. During the six months ended June 30, 2020, the changes in non-credit OTTI losses were also comprised of the adjustment to non-credit losses included in the basis of HTM securities sold.

Accretion of the Non-credit Portion on HTM Securities. For HTM securities with non-credit-related impairment losses recognized in AOCI prior to January 1, 2020, the non-credit-related impairment is accreted as an increase in the carrying value over the remaining life of the security, based on the amount and timing of future estimated cash flows.

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, 2021, 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 FHLBanks and 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, 2021, 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 and fixed-rate consolidated bonds during the six months ended June 30, 2021. Due to the COVID-19 pandemic and the resulting decline in interest rates, investors preferred short-term or callable obligations. During the first half of 2021, the FHLBanks continued to benefit from strong investor interest and managed their debt issuance to meet the needs of their members. Average funding spreads of newly-issued consolidated obligations relative to benchmark indices have generally improved during the six months ended June 30, 2021, compared to the six months ended June 30, 2020.

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. For example, the SEC's implementation of money market fund reforms from 2010 to 2016 resulted in a significant increase in demand for U.S. government and agency debt, including the FHLBanks' short-term consolidated obligations. The holding of the FHLBanks' consolidated obligations by money market funds, as a percentage of the total outstanding consolidated obligations, has increased in recent years and was 44% at June 30, 2021, compared to 54% at December 31, 2020, based on data from SEC filings by registered money market funds. While increased demand from this investor class has benefited the FHLBanks' ability to access short-term funding at attractive costs, this demand could change over time. (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 31 to 32 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, 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, 2021, 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, 2021, each FHLBank was in compliance with its statutory minimum capital requirements. In addition, the FHFA requires that each FHLBank maintain a ratio of at least two percent of capital stock to total assets. At June 30, 2021, each FHLBank was in compliance with this requirement. (See *Note 9 - Capital* to the accompanying combined financial statements for additional information regarding minimum regulatory capital requirements.)

Regulatory guidance provides that each FHLBank assess, at least once a year, the adequacy of its retained earnings under various future financial and economic scenarios, including:

- parallel and non-parallel interest-rate shifts;
- changes in the interest-rate relationship between different yield curves; and
- changes in the credit quality of the FHLBank's assets.

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. At June 30, 2021, each of the FHLBanks of Boston, Pittsburgh, and 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 is required for those FHLBanks until such time as the contribution requirement exceeds the balance of restricted retained earnings.

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, 2020, 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-12 to F-24 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020.

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, 2020. 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 90 to 93 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020. 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, 2020 (pages 94 to 97) and the quarterly period ended March 31, 2021 (pages 42 to 44), for a description of certain legislative and regulatory developments that occurred prior to the publication of these reports.)

LIBOR Transition

2021 ISDA Interest Rate Derivatives Definitions. On June 11, 2021, the International Swaps and Derivatives Association, Inc. (ISDA) published 2021 ISDA Interest Rate Derivatives Definitions (2021 ISDA Definitions), which will update and consolidate the frequently supplemented 2006 ISDA Definitions as the standard definitions for cleared and uncleared interest rate derivatives. The 2021 ISDA Definitions incorporate prior supplements to the 2006 ISDA Definitions in addition to other changes made to conform to updates in market practice and regulation. Both the 2006 ISDA Definitions as supplemented, effective January 25, 2021, and the 2021 ISDA Definitions contain ISDA-recommended fallbacks for interest-rate derivatives referencing an Interbank Offered Rate, including U.S. dollar LIBOR. ISDA has announced that implementation of the 2021 ISDA Definitions is expected to take place for clearing houses, trading venues, and other market infrastructures between October 1-4, 2021. While the FHLBanks may continue to use the current 2006 ISDA Definitions, ISDA will not incorporate any further supplements following implementation of the 2021 ISDA Definitions.

The FHLBanks do not expect the implementation of the 2021 ISDA Definitions to have a material effect on the FHLBanks' combined financial condition or combined results of operations.

Certain Developments Related to the COVID-19 Pandemic

Federal Reserve Board Extends Paycheck Protection Program Liquidity Facility. On June 25, 2021, the Federal Reserve Board announced a final extension of its Paycheck Protection Program (PPP) Liquidity Facility by an additional month, to July 30, 2021. The PPP Liquidity Facility provides collateralized PPP loan liquidity to eligible Federal Reserve member financial institutions in order to facilitate PPP loan originations at such financial institutions. The extension allowed additional processing time for banks, community development financial institutions, and other financial institutions to pledge to the facility any PPP loans approved by the Small Business Administration through the June 30, 2021 expiration of the PPP.

Additional COVID-19 Presidential, Legislative, and Regulatory Developments. In light of the COVID-19 pandemic, the President of the United States, through executive orders, governmental agencies, including the SEC, the Office of the Comptroller of the Currency, the Federal Reserve Board, the FDIC, the National Credit Union Administration, the U.S. Commodity Futures Trading Commission, and the FHFA, as well as state governments and agencies, have taken, and may continue to take, actions to provide various forms of relief from, and guidance regarding, the financial, operational, credit, market, and other effects of the pandemic, and Congress has enacted, and may continue to enact, pandemic relief legislation, some of which may have a direct or indirect impact on the FHLBanks and/or their members. Many of these actions are temporary in nature. The FHLBanks continue to monitor these actions and guidance as they evolve and to evaluate their potential impact on the FHLBanks.

Other Legislative Matter

Affordable Housing and Community Investment. Legislation has been introduced in the U.S. Senate and House of Representatives that, if enacted in its proposed form, would require that the FHLBanks set aside higher percentages of their earnings for their affordable housing and community investment programs than is currently required under law. The FHLBanks are actively monitoring these proposals.

External Credit Ratings

Since June 30, 2021, no changes to external credit ratings have occurred with regard to the FHLBanks or their consolidated obligations. At July 31, 2021, 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 FHLBanks and their consolidated obligations. Table 27 presents each FHLBank's long-term credit rating, short-term credit rating, and outlook at July 31, 2021.

Table 27 - FHLBanks' Long-Term Credit Ratings, Short-Term Credit Ratings, and Outlook at July 31, 2021

	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 Analysts of Combined Financial Condition and Combined Results of Operations - Risk Management,* on pages 114 to 116, and *Risk Factors*, on *pages* 24 to 34, of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020 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, 2021, 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 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, discounts 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 during 2020 created by the COVID-19 pandemic, the FHLBanks are taking 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, 2021, each FHLBank had rights to collateral with an estimated value greater than the related outstanding advances. (See *Financials Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Risk Management - Credit Risk - Advances*, on pages 98 to 103 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, 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 that the collateral has a readily ascertainable value and that the FHLBank can perfect a security interest in it; and
- certain qualifying securities representing undivided equity interests in eligible advance collateral.

To support small and community banks during the COVID-19 pandemic, in April 2020, the FHFA permitted the FHLBanks to accept Paycheck Protection Program loans as collateral for advances, subject to certain conditions. In addition, to provide greater flexibility in the current economic environment, most FHLBanks implemented temporary relief provisions to allow for mortgage loans within a forbearance period of up to 12 months to be recognized as eligible collateral for advances, as long as the loans continue to meet all other eligibility requirements as defined in the FHLBanks' collateral guidelines.

As of June 30, 2021, there were 71 individual FHLBank borrowers (69 FHLBank members and 2 non-members) 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 was 3.2 at June 30, 2021, which represents the total of these 71 individual FHLBank borrowers' eligible collateral divided by these borrowers' advances and other credit products outstanding. The collateralization ratio for all borrowers was 4.3 at June 30, 2021. 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, 2021

(dollars in millions)

	Borrowers with at Least $1.0 Billion of Advances Outstanding	All Borrowers	Percentage
Advances outstanding, principal amount	$ 227,033	$ 366,222	62.0 %
Other credit products	$ 29,749	$ 143,406	20.7 %
Collateral outstanding	$ 809,990	$ 2,215,588	36.6 %

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, 2021

(dollars in millions)

	Blanket Lien		Listing		Delivery		Total	
Collateral Type	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage
Single-family mortgage loans(1)	$ 496,551	22.4%	$ 555,125	25.1%	$ 2,179	0.1%	$ 1,053,855	47.6%
Commercial real estate loans	342,127	15.5%	106,538	4.8%	40,626	1.8%	489,291	22.1%
Multifamily mortgage loans	73,954	3.3%	103,215	4.7%	18,480	0.8%	195,649	8.8%
U.S. agency MBS and CMOs	n/a	n/a	n/a	n/a	133,797	6.0%	133,797	6.0%
Home equity loans and lines of credit	57,950	2.6%	59,906	2.7%	4	—	117,860	5.3%
Other real estate loans	57,827	2.6%	15,728	0.7%	4,498	0.2%	78,053	3.5%
CFI loans	31,159	1.4%	1,261	0.1%	21	—	32,441	1.5%
Commercial MBS	n/a	n/a	n/a	n/a	30,413	1.4%	30,413	1.4%
U.S. obligations	n/a	n/a	n/a	n/a	20,832	0.9%	20,832	0.9%
U.S. agency securities (excluding MBS)	n/a	n/a	n/a	n/a	16,043	0.7%	16,043	0.7%
Private-label MBS and CMOs	n/a	n/a	n/a	n/a	5,626	0.3%	5,626	0.3%
Other(2)	1,102	—	10,589	0.5%	30,037	1.4%	41,728	1.9%
Total collateral	$ 1,060,670	47.8%	$ 852,362	38.6%	$ 302,556	13.6%	$ 2,215,588	100.0%

(1) Includes Federal Housing Administration and Department of Veterans Affairs loans.
(2) Includes Paycheck Protection Program 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, 2021.

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

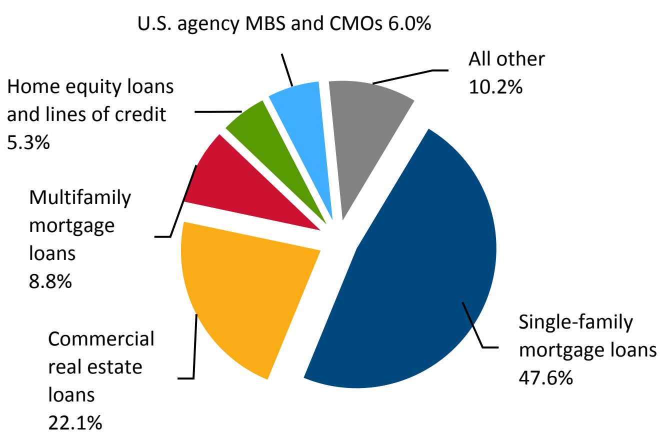
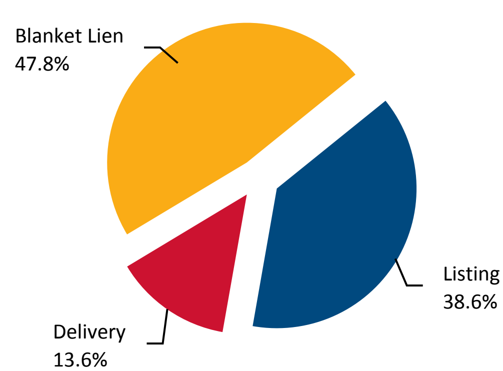


Figure 27 - Percentage of Collateral Securing Advances and Other Credit Products by Pledging Method



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 primarily subject to credit risk related to private-label mortgage-backed securities that are either directly or indirectly supported by underlying mortgage loans. Each private-label mortgage-backed security may contain one or more forms of credit protection/enhancements, including, but not limited to, (1) guarantee of principal and interest, (2) subordination, (3) over-collateralization and excess interest, and (4) third-party insurance. Credit enhancement achieved through subordination features results in the subordination of payments to junior classes to support cash flows received by senior classes held by investors such as the FHLBanks.

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 103 to 104 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, for additional information regarding the regulatory restrictions on 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), and/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. Figures 28 and 29 present the composition of total investments by credit rating at June 30, 2021 and December 31, 2020.

Figure 28 - Total Investments by Credit Rating at June 30, 2021 (dollars in billions)

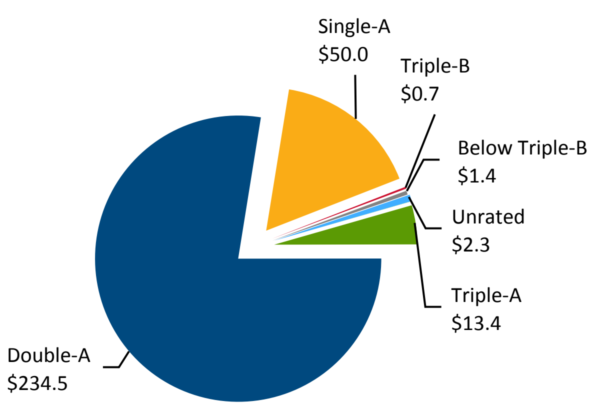


Figure 29 - Total Investments by Credit Rating at December 31, 2020 (dollars in billions)

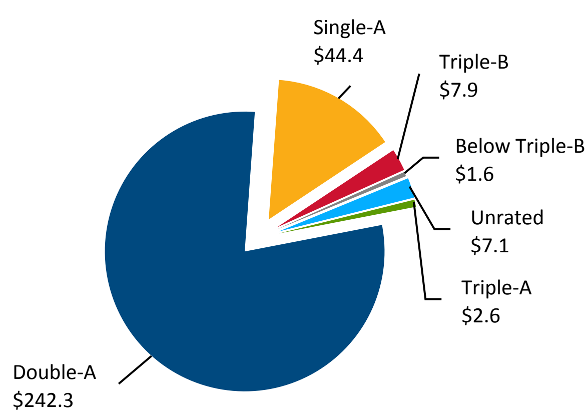


Table 30 presents the credit ratings of the investment securities held by the FHLBanks as of June 30, 2021 and December 31, 2020, using the lowest long-term credit rating for each security owned by an individual FHLBank based on the nationally recognized statistical rating organization(s) used by that 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, 2021(1)(2)						
Carrying Value, Net	**Triple-A**	**Double-A**	**Single-A**	**Triple-B**	**Below Triple-B**	**Unrated**	**Total**
Interest-bearing deposits	$ —	$ —	$ 5,659	$ 48	$ —	$ —	$ 5,707
Securities purchased under agreements to resell	10,900	25,437	10,495	500	—	1,500	48,832
Federal funds sold	—	14,407	33,490	—	—	—	47,897
Investment securities by major security type							
Non-mortgage backed securities							
Certificates of deposit	—	350	225	—	—	—	575
U.S. Treasury obligations	—	48,237	—	—	—	—	48,237
Other U.S. obligations	—	4,585	—	—	—	—	4,585
GSE and Tennessee Valley Authority obligations	—	15,819	—	—	—	—	15,819
State or local housing agency obligations	922	1,545	2	3	—	—	2,472
Federal Family Education Loan Program ABS	—	2,929	—	—	—	—	2,929
Other	904	68	—	—	—	8	980
Total non-mortgage-backed securities	1,826	73,533	227	3	—	8	75,597
Mortgage-backed securities							
U.S. obligations single-family	—	8,565	—	—	—	—	8,565
U.S. obligations multifamily	—	181	—	—	—	—	181
GSE single-family	—	20,451	4	—	2	—	20,457
GSE multifamily	707	91,834	—	—	—	—	92,541
Private-label	—	57	168	115	1,374	797	2,511
Total mortgage-backed securities	707	121,088	172	115	1,376	797	124,255
Total investment securities	2,533	194,621	399	118	1,376	805	199,852
Total investments	$ 13,433	$ 234,465	$ 50,043	$ 666	$ 1,376	$ 2,305	$ 302,288

	December 31, 2020(2)(3)						
Carrying Value, Net	Triple-A	Double-A	Single-A	Triple-B	Below Triple-B	Unrated	Total
Interest-bearing deposits	$ —	$ —	$ 8,028	$ 48	$ —	$ —	$ 8,076
Securities purchased under agreements to resell	—	20,713	11,125	7,500	—	6,250	45,588
Federal funds sold	—	6,755	24,575	180	—	—	31,510
Investment securities by major security type							
Non-mortgage backed securities							
Certificates of deposit	—	250	500	—	—	—	750
U.S. Treasury obligations	—	59,304	—	—	—	—	59,304
Other U.S. obligations	—	4,851	—	—	—	—	4,851
GSE and Tennessee Valley Authority obligations	—	17,344	—	—	—	—	17,344
State or local housing agency obligations	953	1,571	6	35	—	—	2,565
Federal Family Education Loan Program ABS	21	3,013	—	—	—	—	3,034
Other	932	91	—	—	—	8	1,031
Total non-mortgage-backed securities	1,906	86,424	506	35	—	8	88,879
Mortgage-backed securities							
U.S. obligations single-family	—	8,923	—	—	—	—	8,923
U.S. obligations multifamily	—	47	—	—	—	—	47
GSE single-family	—	25,403	4	—	3	—	25,410
GSE multifamily	713	93,893	—	—	—	—	94,606
Private-label	—	85	160	111	1,631	839	2,826
Total mortgage-backed securities	713	128,351	164	111	1,634	839	131,812
Total investment securities	2,619	214,775	670	146	1,634	847	220,691
Total investments	$ 2,619	$ 242,243	$ 44,398	$ 7,874	$ 1,634	$ 7,097	$ 305,865

(1) Does not reflect any changes in ratings, outlook, or watch status occurring after June 30, 2021.
(2) Net carrying values do not include related accrued interest and are presented after any allowance for credit losses.
(3) Does not reflect any changes in ratings, outlook, or watch status occurring after December 31, 2020.

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, 2021, the FHLBanks had aggregate unsecured credit exposure from investments of $1 billion or more to each of 12 private counterparties. The aggregate unsecured credit exposure to these counterparties represented 94.4% 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, 2021	December 31, 2020
Interest-bearing deposits	$ 5,707	$ 8,076
Federal funds sold	47,897	31,510
Certificates of deposit	575	750
Total	$ 54,179	$ 40,336

(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. This limit is based on a percentage of eligible capital and the counterparty's overall credit rating. 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 eligible amount of capital is then multiplied by a stated percentage. The percentage that an FHLBank may offer for term extensions of unsecured credit ranges from 1% to 15% based on the counterparty's credit rating. The calculation of term extensions of unsecured credit includes on-balance sheet transactions, off-balance sheet commitments, and derivative transactions. (See *Credit Risk - Derivative Counterparties* for additional information related to derivatives exposure.)

FHFA regulation also permits 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, 2021, each of the FHLBanks was in compliance with the regulatory limits established for unsecured credit.

The FHLBanks are prohibited by FHFA regulation 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, 2021, an FHLBank held full faith and credit U.S. guaranteed securities with foreign issuers totaling $432 million. Other than these investments, the FHLBanks are in compliance with the FHFA regulation as of June 30, 2021.

As of June 30, 2021, 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, 2021, all of the FHLBanks' unsecured investments in both federal funds sold and certificates of deposit were to U.S. branches and agency offices of foreign commercial banks.

Figures 30 and 31 present total unsecured investment credit exposure by credit rating and by contractual maturity at June 30, 2021.

Figure 30 - Total Unsecured Investment Credit Exposure by Credit Rating (dollars in billions)

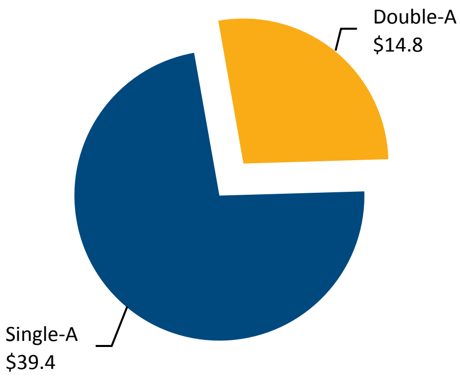


Figure 31 - Total Unsecured Investment Credit Exposure by Contractual Maturity (dollars in billions)

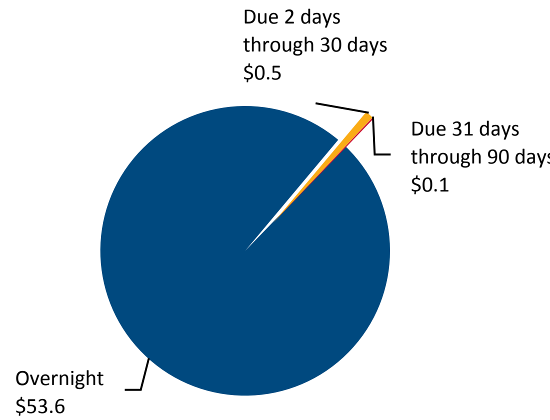


Table 32 presents the lowest long-term credit ratings of the unsecured investment credit exposures presented by the domicile of the counterparty or the domicile of the counterparty's immediate parent for U.S. branches and agency offices of foreign commercial banks based on the nationally recognized statistical 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, 2021(1)

(dollars in millions)

	Investment Grade			
Carrying Value(2)	**Double-A**	**Single-A**	**Triple-B**	**Total**
Domestic	$ —	$ 5,659	$ 48	$ 5,707
U.S. branches and agency offices of foreign commercial banks				
Canada	2,583	14,032	—	16,615
Australia	4,326	5,085	—	9,411
Netherlands	—	6,442	—	6,442
Sweden	50	4,094	—	4,144
Norway	4,030	—	—	4,030
Germany	1,468	2,486	—	3,954
Finland	2,300	—	—	2,300
France	—	1,000	—	1,000
United Kingdom	—	500	—	500
Austria	—	76	—	76
Total U.S. branches and agency offices of foreign commercial banks	14,757	33,715	—	48,472
Total unsecured investment credit exposure	$ 14,757	$ 39,374	$ 48	$ 54,179

(1) Does not reflect any changes in ratings, outlook, or watch status occurring after June 30, 2021.
(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, 2021, 98.9% 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, 2021

(dollars in millions)

Carrying Value(1)	Overnight	Due 2 days through 30 days	Due 31 days through 90 days	Total
Domestic	$ 5,707	$ —	$ —	$ 5,707
U.S. branches and agency offices of foreign commercial banks				
Canada	16,415	200	—	16,615
Australia	9,411	—	—	9,411
Netherlands	6,442	—	—	6,442
Sweden	4,094	—	50	4,144
Norway	3,930	100	—	4,030
Germany	3,729	225	—	3,954
Finland	2,300	—	—	2,300
France	1,000	—	—	1,000
United Kingdom	500	—	—	500
Austria	76	—	—	76
Total U.S. branches and agency offices of foreign commercial banks	47,897	525	50	48,472
Total unsecured investment credit exposure	$ 53,604	$ 525	$ 50	$ 54,179

(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 New York implemented the MAP at the end of 2020 in order to replace its participation in the MPF Program during the first quarter of 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.

Due to the negative economic impacts associated with the COVID-19 pandemic, the FHLBanks have implemented temporary relief provisions for MPP and MPF Program loans, including forbearance under the CARES Act, temporary moratoriums on foreclosures and evictions, and temporary alternative underwriting procedures.

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 109 to 113 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, for additional information on credit risk of mortgage loans held for portfolio, including loss allocation structures, mortgage insurance, and state concentrations for MPF Program and MPP 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, 2021.

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, 2021.

Table 34 presents the derivative positions with non-member counterparties and member institutions to which the FHLBanks had credit exposure at June 30, 2021. 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, 2021

(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	$ 5,418	$ 46	$ (34)	$ —	$ 12
Triple-B	3,654	7	(7)	—	—
Cleared derivatives(2)	115,623	8	301	625	934
Liability positions with credit exposure					
Uncleared derivatives					
Double-A	201	(13)	13	—	—
Single-A	37,186	(417)	408	20	11
Triple-B	14,124	(387)	401	—	14
Cleared derivatives(2)	259,801	(167)	1,454	1,511	2,798
Total derivative positions with credit exposure to non-member counterparties	436,007	(923)	2,536	2,156	3,769
Member institutions(3)	1,498	6	—	—	6
Total	$ 437,505	$ (917)	$ 2,536	$ 2,156	$ 3,775

(1) This table does not reflect any changes in rating, outlook, or watch status occurring after June 30, 2021.
(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 FHLBank 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. 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 117 to 126 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, 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 will 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 will 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). Although the Financial Conduct Authority does not expect LIBOR to become unrepresentative before the applicable cessation date and intends to consult on requiring the administrator of LIBOR to continue publishing LIBOR of certain currencies and tenors on a non-representative, synthetic basis for a period after the applicable cessation date, there is no assurance that LIBOR, of any particular currency or tenor, 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' assets and liabilities are indexed to LIBOR, with exposure extending past December 31, 2021. 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.

In assessing their current exposure to LIBOR, the FHLBanks have developed an inventory of affected financial instruments and identified contracts that may require adding or adjusting the fallback language, which includes advances, investment securities, consolidated bonds, and derivatives. The FHLBanks have added or adjusted fallback language related to a majority of their advances to members and have 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. (See *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Legislative and Regulatory Developments,* on pages 94 to 97, of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020 for more information.) 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.

The FHLBanks continue to assess their operational readiness, including updating their processes and information technology systems to support the transition from LIBOR to an alternative reference rate. In order to manage their balance sheet exposure to LIBOR-indexed assets and liabilities, including those with maturities beyond 2021, the FHLBanks continue to issue SOFR-indexed consolidated bonds and SOFR-linked advances. In addition, the FHLBanks execute derivative transactions to swap certain financial instruments to SOFR or other alternative reference rates.

Market activity in SOFR-indexed financial instruments continues and during the six months ended June 30, 2021 and 2020, the FHLBanks issued $45.0 billion and $125.9 billion in SOFR-linked consolidated bonds. The FHLBanks continue to execute LIBOR-indexed derivative transactions to manage interest-rate risk and 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, 2021 and 2020, the FHLBanks issued $8.4 billion and $19.5 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. (See *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Legislative and Regulatory Developments,* on pages 94 to 97, of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020 for more information.) 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.

The FHLBanks have LIBOR exposure related to advances, investment securities, consolidated bonds, 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, 2021. At June 30, 2021, none of the FHLBanks had exposure to LIBOR tenors that cease immediately after December 31, 2021.

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

(dollars in millions)

	June 30, 2021				
	LIBOR Tenors That Cease or Will no Longer be Representative Immediately After June 30, 2023				
	Due/Terminates in 2021	Due/Terminates in 2022	Due/Terminates through June 30, 2023	Due/Terminates thereafter	Total
Assets with LIBOR exposure					
Advances by redemption term (principal amount)	$ 15,715	$ 7,663	$ 545	$ 8,650	$ 32,573
Investment securities by contractual maturity (principal amount)(1)					
Non-mortgage-backed securities	50	436	121	5,136	5,743
Mortgage-backed securities	131	112	993	45,612	46,848
Total investment securities	181	548	1,114	50,748	52,591
LIBOR-indexed interest-rate swaps notional amount (receive leg)					
Cleared	11,899	14,022	5,960	46,894	78,775
Uncleared	2,051	3,152	2,214	41,490	48,907
Total interest-rate swaps	13,950	17,174	8,174	88,384	127,682
Total principal/notional amount	$ 29,846	$ 25,385	$ 9,833	$ 147,782	$ 212,846
Liabilities with LIBOR exposure					
Consolidated bonds by contractual maturity (principal amount)	$ 8,900	$ 250	$ —	$ —	$ 9,150
LIBOR-indexed interest-rate swaps notional amount (pay leg)					
Cleared	41,675	10,884	1,985	3,016	57,560
Uncleared	3,793	370	442	1,176	5,781
Total interest-rate swaps	45,468	11,254	2,427	4,192	63,341
Total principal/notional amount	$ 54,368	$ 11,504	$ 2,427	$ 4,192	$ 72,491

(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, 2021. Table 36 presents the notional amount of other derivatives with LIBOR exposure at June 30, 2021. At June 30, 2021, none of the FHLBanks had other derivatives with LIBOR tenors that cease immediately after December 31, 2021.

Table 36 - Notional Amount of Other Derivatives with LIBOR Exposure

(dollars in millions)

	June 30, 2021				
	LIBOR Tenors That Cease or Will no Longer be Representative Immediately After June 30, 2023				
	Due/Terminates in 2021	Due/Terminates in 2022	Due/Terminates through June 30, 2023	Due/Terminates thereafter	Total
Interest-rate swaptions	$ 217	$ 1,064	$ —	$ 755	$ 2,036
Interest-rate caps or floors	1,895	333	340	6,865	9,433
Total notional amount of other derivatives with LIBOR exposure	$ 2,112	$ 1,397	$ 340	$ 7,620	$ 11,469

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 operations risk-based capital requirements, which are defined by applicable regulations. 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 2021 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)	(4)
Dallas	(5)	(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 2021 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 2021 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 2021 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 2021 Second Quarter SEC Form 10-Q.

(4) Although the FHLBank of Des Moines measures and monitors market value of equity and duration of equity, those measures are not disclosed as key market/income risk measures. The FHLBank of Des Moines disclosed, in its 2021 Second Quarter SEC Form 10-Q, market value of capital stock (MVCS) sensitivity and projected income sensitivity as key market/income risk measures and MVCS and regulatory capital as its key capital adequacy measures.

(5) The FHLBank of Dallas monitors and measures duration of equity and duration gap, as described in its 2021 Second Quarter SEC Form 10-Q. In addition, the FHLBank of Dallas also monitors adjusted duration of equity and adjusted duration gap, which measurements more closely align the put dates on its putable advances with the projected call dates of associated interest-rate swaps. See the FHLBank of Dallas' 2021 Second Quarter SEC Form 10-Q for additional information.

(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 2021 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, 2021			December 31, 2020		
FHLBank	Down	Base	Up	Down	Base	Up
Boston	3.5	4.3	4.5	(0.5)	5.5	4.3
New York	1.4	(1.7)	(0.2)	1.1	(0.5)	0.2
Pittsburgh	2.0	(2.0)	1.3	3.1	(0.9)	3.2
Atlanta	4.7	1.8	3.6	5.3	4.1	4.0
Cincinnati	(0.2)	1.2	3.4	(0.1)	(2.3)	3.2
Indianapolis	1.1	(0.1)	0.9	—	0.7	0.4
Chicago	1.0	0.5	1.3	1.4	0.6	1.4
Des Moines	3.7	0.3	1.6	3.5	(1.3)	0.6
Dallas	(6.0)	0.6	1.9	(5.5)	(0.4)	1.4
Topeka	1.2	(2.4)	(0.1)	0.5	(1.2)	(1.3)
San Francisco	0.1	0.6	1.7	—	1.3	1.9

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, 2021	December 31, 2020
Boston	3.6	4.5
New York	(1.6)	(0.7)
Pittsburgh	(2.4)	(0.2)
Atlanta	1.1	2.6
Cincinnati	—	(0.3)
Indianapolis	(0.5)	0.1
Chicago	0.4	0.6
Des Moines	0.2	(1.7)
Dallas	0.2	(0.5)
Topeka	(1.7)	(0.8)
San Francisco	0.5	1.3

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, 2021 and December 31, 2020. 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, 2021		December 31, 2020	
	Pay Leg	Receive Leg	Pay Leg	Receive Leg
Interest-Rate Index				
Fixed	$ 290,607	$ 237,801	$ 313,474	$ 137,384
SOFR	112,267	89,378	39,600	80,857
OIS	76,270	87,624	39,091	96,001
LIBOR	63,341	127,682	87,540	165,463
Other interest-rate index	—	—	5	5
Total notional amount of interest-rate swaps	$ 542,485	$ 542,485	$ 479,710	$ 479,710

In addition to the interest-rate swaps included in Table 40, the FHLBanks have other derivatives at June 30, 2021 and December 31, 2020 . Table 41 presents the notional amount of other derivatives at June 30, 2021 and December 31, 2020.

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

	June 30, 2021	December 31, 2020
Interest-rate caps or floors	$ 9,433	$ 11,346
Mortgage delivery commitments	2,402	3,581
Interest-rate swaptions	2,036	3,455
Interest-rate futures or forwards	281	350
Other	250	256
Total notional amount of other derivatives	$ 14,402	$ 18,988

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, 2020, 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, 2020, 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, 2020. (See *Part II. Item 8 - Financial Statements and Supplementary Data* or *Item 9A - Controls and Procedures* of each FHLBank's 2020 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 2021 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, 2021, 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 2021 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 and the member's failure to repay its outstanding advances owed to the FHLBank. During the second quarter of 2021, all litigation related to this member's failure to repay its outstanding advances was resolved. After consultation with legal counsel, the FHLBank of Des Moines' management does not anticipate that the ultimate liability, if any, arising out of the remaining 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 2021 Second Quarter SEC Form 10-Q under *Part II. Item 1 - Legal Proceedings* for additional information, including updates, to its legal proceedings.

RISK FACTORS

There were no material changes to the risk factors disclosed on pages 24 to 34 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020. (See each FHLBank's 2021 SEC Form 10-Qs for any updates to the risk factors included in the FHLBank's 2020 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 13 to 16 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, for more information on the restrictions on capital stock redemptions and repurchases.)

At June 30, 2021, the FHLBanks had 264 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, 2021		December 31, 2020	
	Regulatory Capital Stock Amount	Number of Members	Regulatory Capital Stock Amount	Number of Members
Commercial banks	$ 11,555	3,893	$ 13,168	3,916
Insurance companies	6,412	526	6,287	528
Credit unions	4,075	1,556	3,997	1,559
Savings institutions	3,741	607	3,927	630
Community development financial institutions	23	66	19	64
Total	25,806	6,648	27,398	6,697
Mandatorily redeemable capital stock	614		772	
Total combined regulatory capital stock	$ 26,420		$ 28,170	

Figures 32 and 33 present the percentage of regulatory capital stock held, and membership, by type of member at June 30, 2021.

Figure 32 - Percentage of Regulatory Capital Stock Held by Type of Member

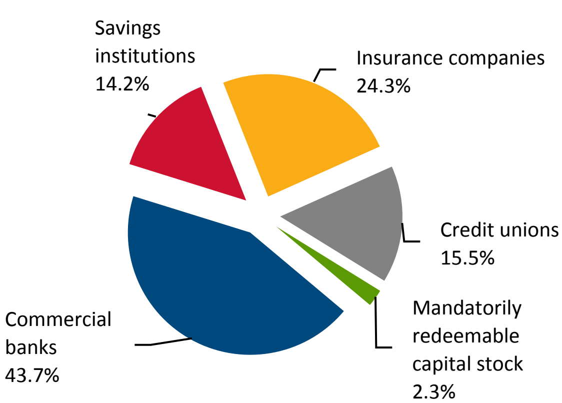
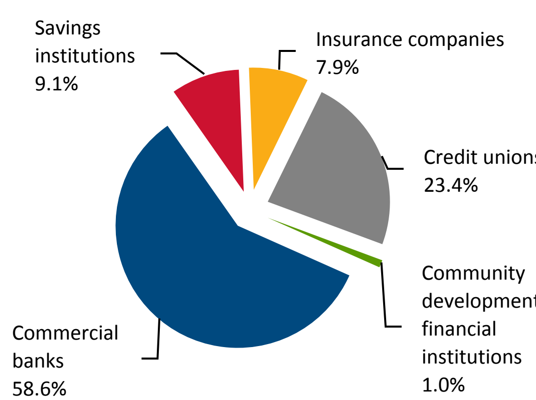


Figure 33 - Percentage of Membership by Type of Member



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, 2021

(dollars in millions)

Holding Company Name(1)	FHLBank Districts(2)	Regulatory Capital Stock(3)	Percentage of Total Regulatory Capital Stock	Mandatorily Redeemable Capital Stock
MetLife, Inc.	New York, Boston, Des Moines	$ 793	3.0 %	$ 4
New York Community Bancorp, Inc.	New York	685	2.6 %	—
Citigroup Inc.	New York	619	2.3 %	—
U.S. Bancorp	Cincinnati, Des Moines	438	1.7 %	1
TIAA	Atlanta, New York	397	1.5 %	—
Equitable Holdings, Inc.	New York	382	1.4 %	—
MP (Thrift) LLC	Indianapolis	377	1.4 %	—
Midland Financial Co.	Topeka	360	1.4 %	—
JPMorgan Chase & Co.	Chicago, Pittsburgh, Cincinnati, Des Moines, San Francisco	330	1.2 %	293
Bank of America Corporation	Atlanta, San Francisco, Boston, Des Moines	319	1.2 %	4
		$ 4,700	17.7 %	$ 302

(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, 2021, 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 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

(dollars in millions)	Boston	New York	Pittsburgh
Selected Statement of Condition Data(1)			
At June 30, 2021			
Assets			
Investments(2)(3)	$ 16,053	$ 37,461	$ 21,033
Advances	15,177	79,985	14,955
Mortgage loans held for portfolio	3,471	2,526	4,774
Total assets	35,684	120,449	41,662
Deposits	971	1,531	941
Consolidated obligations(3)			
Discount notes	8,366	42,173	15,113
Bonds	23,475	69,313	22,514
Total consolidated obligations	31,841	111,486	37,627
Mandatorily redeemable capital stock	7	2	63
Total capital			
Capital stock(4)	1,081	4,867	1,203
Retained earnings	1,515	1,923	1,387
Accumulated other comprehensive income (loss)	48	30	127
Total capital	2,644	6,820	2,717
Asset composition (as a percentage of the individual FHLBank's total assets)			
Investments(2)(3)	45.0 %	31.1 %	50.5 %
Advances	42.5 %	66.4 %	35.9 %
Mortgage loans held for portfolio	9.7 %	2.1 %	11.5 %
Total retained earnings as a percentage of FHLBank's total assets	4.2 %	1.6 %	3.3 %
FHLBank's total assets as a percentage of FHLBank System's total assets	4.8 %	16.3 %	5.6 %
At June 30, 2020			
Assets			
Investments(2)(3)	$ 16,286	$ 41,376	$ 22,333
Advances	24,828	113,789	49,614
Mortgage loans held for portfolio	4,411	3,165	5,242
Total assets	46,161	158,872	77,975
Deposits	1,191	1,590	952
Consolidated obligations(3)			
Discount notes	17,309	89,500	26,052
Bonds	24,563	59,032	46,582
Total consolidated obligations	41,872	148,532	72,634
Mandatorily redeemable capital stock	6	4	304
Total capital			
Capital stock(4)	1,519	6,334	2,371
Retained earnings	1,455	1,884	1,334
Accumulated other comprehensive income (loss)	(128)	(80)	114
Total capital	2,846	8,138	3,819
Asset composition (as a percentage of the individual FHLBank's total assets)			
Investments(2)(3)	35.3 %	26.0 %	28.6 %
Advances	53.8 %	71.6 %	63.6 %
Mortgage loans held for portfolio	9.6 %	2.0 %	6.7 %
Total retained earnings as a percentage of individual FHLBank's total assets	3.2 %	1.2 %	1.7 %
FHLBank's total assets as a percentage of FHLBank System's total assets	4.7 %	16.0 %	7.9 %

(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-13 in the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2020, for information about the elimination of interbank transactions in the combined financial statements 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.)

Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
$ 30,078	$ 27,096	$ 25,594	$ 40,586	$ 29,712	$ 30,152	$ 16,248	$ 28,403
47,075	23,587	27,633	46,270	45,560	24,922	20,996	24,194
178	7,717	7,737	9,759	7,545	3,206	8,328	1,301
78,904	58,872	62,771	97,494	83,285	58,627	46,310	54,244
2,623	1,336	1,598	1,123	1,810	1,626	1,089	945
22,318	21,180	14,445	45,728	23,098	11,371	10,330	17,598
49,030	31,678	42,363	42,922	52,081	41,615	32,088	28,839
71,348	52,858	56,808	88,650	75,179	52,986	42,418	46,437
—	14	233	248	35	7	2	3
2,448	2,718	2,234	2,007	3,429	2,093	1,457	2,269
2,240	1,297	1,156	4,139	2,383	1,477	1,097	3,765
(12)	(2)	193	487	98	222	93	394
4,676	4,013	3,583	6,633	5,910	3,792	2,647	6,428
38.1 %	46.0 %	40.8 %	41.6 %	35.7 %	51.4 %	35.1 %	52.4 %
59.7 %	40.1 %	44.0 %	47.5 %	54.7 %	42.5 %	45.3 %	44.6 %
0.2 %	13.1 %	12.3 %	10.0 %	9.1 %	5.5 %	18.0 %	2.4 %
2.8 %	2.2 %	1.8 %	4.2 %	2.9 %	2.5 %	2.4 %	6.9 %
10.7 %	8.0 %	8.5 %	13.2 %	11.3 %	7.9 %	6.3 %	7.3 %
$ 54,167	$ 29,533	$ 25,509	$ 36,005	$ 34,315	$ 32,000	$ 20,634	$ 39,029
67,221	48,913	34,848	49,250	57,942	38,643	21,529	50,970
263	11,704	10,083	10,947	9,246	4,020	10,946	2,888
126,596	90,645	71,070	96,731	102,485	74,960	53,534	93,440
2,192	1,236	1,145	1,465	1,654	2,460	989	942
58,295	44,324	28,234	37,440	21,364	35,978	13,561	19,416
59,925	39,339	36,973	51,760	72,748	32,695	36,446	66,449
118,220	83,663	65,207	89,200	94,112	68,673	50,007	85,865
1	19	300	289	81	7	2	83
3,680	3,813	2,194	1,837	3,802	2,474	1,392	2,668
2,200	1,247	1,128	3,873	2,257	1,340	997	3,494
(18)	(16)	(4)	(363)	(60)	(172)	(34)	(35)
5,862	5,044	3,318	5,347	5,999	3,642	2,355	6,127
42.8 %	32.6 %	35.9 %	37.2 %	33.5 %	42.7 %	38.5 %	41.8 %
53.1 %	54.0 %	49.0 %	50.9 %	56.5 %	51.6 %	40.2 %	54.5 %
0.2 %	12.9 %	14.2 %	11.3 %	9.0 %	5.4 %	20.4 %	3.1 %
1.7 %	1.4 %	1.6 %	4.0 %	2.2 %	1.8 %	1.9 %	3.7 %
12.8 %	9.1 %	7.2 %	9.7 %	10.3 %	7.6 %	5.4 %	9.4 %

Individual FHLBank Selected Financial Data and Financial Ratios (continued)

(dollars in millions)	Boston	New York	Pittsburgh
Selected Other Data			
June 30, 2021			
Advance concentrations - top five borrowers	31 %	66 %	59 %
Regulatory capital stock concentrations - top five stockholders	21 %	54 %	50 %
Regulatory capital-to-assets ratio(5)	7.3 %	5.6 %	6.4 %
Cash and stock dividends			
Quarter-to-date June 30, 2021	$ 5	$ 63	$ 18
Quarter-to-date June 30, 2020	$ 24	$ 86	$ 40
Year-to-date June 30, 2021	$ 10	$ 133	$ 39
Year-to-date June 30, 2020	$ 48	$ 174	$ 97
Weighted average dividend rate			
Quarter-to-date June 30, 2021	1.54 %	4.60 %	5.05 %
Quarter-to-date June 30, 2020	5.06 %	5.60 %	6.06 %
Year-to-date June 30, 2021	1.56 %	4.68 %	5.10 %
Year-to-date June 30, 2020	5.26 %	5.75 %	6.76 %
Return on average equity(6)			
Quarter-to-date June 30, 2021	0.92 %	4.21 %	1.70 %
Quarter-to-date June 30, 2020	0.36 %	6.45 %	5.89 %
Year-to-date June 30, 2021	2.01 %	4.14 %	3.50 %
Year-to-date June 30, 2020	2.82 %	6.04 %	4.62 %
Return on average assets			
Quarter-to-date June 30, 2021	0.07 %	0.24 %	0.12 %
Quarter-to-date June 30, 2020	0.02 %	0.32 %	0.26 %
Year-to-date June 30, 2021	0.15 %	0.23 %	0.23 %
Year-to-date June 30, 2020	0.15 %	0.29 %	0.21 %
Net interest margin(7)			
Quarter-to-date June 30, 2021	0.48 %	0.46 %	0.41 %
Quarter-to-date June 30, 2020	0.31 %	0.53 %	0.45 %
Year-to-date June 30, 2021	0.58 %	0.47 %	0.47 %
Year-to-date June 30, 2020	0.25 %	0.47 %	0.43 %
Net interest spread			
Quarter-to-date June 30, 2021	0.44 %	0.44 %	0.37 %
Quarter-to-date June 30, 2020	0.26 %	0.49 %	0.42 %
Year-to-date June 30, 2021	0.53 %	0.44 %	0.43 %
Year-to-date June 30, 2020	0.18 %	0.40 %	0.38 %

(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.

Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
58 %	55 %	42 %	51 %	38 %	39 %	59 %	67 %
44 %	34 %	38 %	34 %	21 %	25 %	42 %	22 %
5.9 %	6.8 %	5.8 %	6.6 %	7.0 %	6.1 %	5.5 %	11.1 %
$ 27	$ 12	$ 14	$ 21	$ 41	$ 3	$ 16	$ 34
$ 70	$ 22	$ 20	$ 20	$ 53	$ 12	$ 15	$ 38
$ 57	$ 26	$ 28	$ 43	$ 81	$ 7	$ 32	$ 64
$ 146	$ 43	$ 41	$ 41	$ 112	$ 27	$ 40	$ 90
3.69 %	2.00 %	2.57 %	4.12 %	4.93 %	0.66 %	4.06 %	6.00 %
5.53 %	2.50 %	4.00 %	4.53 %	4.88 %	1.99 %	3.69 %	5.00 %
3.71 %	2.00 %	2.53 %	4.20 %	4.77 %	0.69 %	4.10 %	5.47 %
5.73 %	2.50 %	4.13 %	4.60 %	5.01 %	2.19 %	4.85 %	5.99 %
4.82 %	0.03 %	1.94 %	4.59 %	3.14 %	2.95 %	4.83 %	3.45 %
3.01 %	7.12 %	1.64 %	3.41 %	5.58 %	6.99 %	3.20 %	5.66 %
4.06 %	0.97 %	2.66 %	3.33 %	3.85 %	4.13 %	5.68 %	4.72 %
4.47 %	7.04 %	2.70 %	4.39 %	5.54 %	6.22 %	2.45 %	2.47 %
0.28 %	— %	0.11 %	0.32 %	0.21 %	0.19 %	0.27 %	0.38 %
0.14 %	0.37 %	0.07 %	0.20 %	0.31 %	0.32 %	0.14 %	0.32 %
0.23 %	0.06 %	0.14 %	0.22 %	0.25 %	0.26 %	0.31 %	0.50 %
0.21 %	0.36 %	0.12 %	0.25 %	0.30 %	0.30 %	0.11 %	0.15 %
0.46 %	0.43 %	0.36 %	0.64 %	0.41 %	0.34 %	0.55 %	0.88 %
0.22 %	0.58 %	0.37 %	0.54 %	0.43 %	0.53 %	0.39 %	0.51 %
0.41 %	0.46 %	0.40 %	0.55 %	0.46 %	0.44 %	0.57 %	0.96 %
0.23 %	0.47 %	0.37 %	0.55 %	0.39 %	0.40 %	0.38 %	0.35 %
0.45 %	0.39 %	0.33 %	0.62 %	0.36 %	0.33 %	0.53 %	0.86 %
0.21 %	0.55 %	0.33 %	0.50 %	0.37 %	0.49 %	0.35 %	0.48 %
0.39 %	0.42 %	0.39 %	0.53 %	0.41 %	0.43 %	0.55 %	0.94 %
0.19 %	0.42 %	0.30 %	0.49 %	0.30 %	0.34 %	0.31 %	0.28 %

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