

FEDERAL HOME LOAN BANKS

Combined Financial Report for the Quarterly Period Ended June 30, 2016

This Combined Financial Report provides financial information on the Federal Home Loan Banks. Investors should use this Combined Financial Report with other information provided by the Federal Home Loan Banks when considering whether or not to purchase Federal Home Loan Bank consolidated bonds and consolidated discount notes (collectively referred to as consolidated obligations).

Consolidated obligations are the joint and several obligations of all Federal Home Loan Banks, even though each Federal Home Loan Bank is a separately chartered entity with its own board of directors and management. This means that each individual Federal Home Loan Bank is responsible for the payment of principal and interest on all consolidated obligations issued by the Federal Home Loan Banks. 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 either the United States or any government agency.

The Securities Act of 1933, as amended, does not require the registration of consolidated obligations; therefore, no registration statement 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 securities or determined if this report is truthful or complete.

Carefully consider the risk factors provided in the Combined Financial Reports. Neither the Combined Financial Reports nor any offering materials provided on behalf of the Federal Home Loan Banks describe all the risks of investing in Federal Home Loan Bank consolidated obligations. Investors should consult with their financial and legal advisors about the risks of investing in these consolidated obligations.

The financial information contained in this Combined Financial Report is for the quarterly period ended June 30, 2016. This Combined Financial Report should be read in conjunction with the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, issued on March 25, 2016. Combined Financial Reports are available on the Federal Home Loan Banks Office of Finance web site at www.fhlp-of.com. This web site address is provided as a matter of convenience only, and its contents are not made part of this report and are not intended to be incorporated by reference into this report.

Investors should direct questions about Federal Home Loan Bank consolidated obligations or the Combined Financial Report to the Federal Home Loan Banks Office of Finance at (703) 467-3600.

This Combined Financial Report was issued on August 15, 2016.

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TABLE OF CONTENTS

	Page
Explanatory Statement about Federal Home Loan Banks Combined Financial Report	i
Combined Financial Statements (Unaudited)	F-1
Combined Statement of Condition	F-1
Combined Statement of Income	F-2
Combined Statement of Comprehensive Income	F-3
Combined Statement of Capital	F-4
Combined Statement of Cash Flows	F-6
Notes to Combined Financial Statements (Unaudited)	F-8
Note 1 - Summary of Significant Accounting Policies	F-8
Note 2 - Recently Issued and Adopted Accounting Guidance	F-10
Note 3 - Trading Securities	F-12
Note 4 - Available-for-Sale Securities	F-13
Note 5 - Held-to-Maturity Securities	F-15
Note 6 - Other-than-Temporary Impairment Analysis	F-18
Note 7 - Advances	F-20
Note 8 - Mortgage Loans	F-21
Note 9 - Allowance for Credit Losses	F-22
Note 10 - Derivatives and Hedging Activities	F-26
Note 11 - Deposits	F-32
Note 12 - Consolidated Obligations	F-32
Note 13 - Capital	F-34
Note 14 - Accumulated Other Comprehensive Income (Loss)	F-38
Note 15 - Fair Value	F-40
Note 16 - Commitments and Contingencies	F-49
Note 17 - Subsequent Events	F-50
Condensed Combining Schedules (Unaudited)	F-52
Selected Financial Data	1
Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations	2
Forward-Looking Information	2
Executive Summary	3
Combined Financial Condition	7
Combined Results of Operations	16
Liquidity and Capital Resources	27
Critical Accounting Estimates	29
Recent Accounting Developments	30
Legislative and Regulatory Developments	31
Recent Rating Agency Actions	32
Risk Management	32
Quantitative and Qualitative Disclosures about Market Risk	42
Controls and Procedures	44
Legal Proceedings	46
Risk Factors	47
Other Information	48
Market for Capital Stock and Related Stockholder Matters	49
Supplemental Information	S-1
Index of Tables Contained in the Combined Financial Report	Index

Consolidated obligations issued under the Federal Home Loan Banks' Global Debt Program may be listed on the Euro MTF market of the Luxembourg Stock Exchange. The Luxembourg Stock Exchange has allocated the number 2306 to the Federal Home Loan Banks' Global Debt Program for listing purposes. Under the Federal Home Loan Banks' agreement with the underwriter(s) of a particular series of consolidated obligations, any series of consolidated obligations listed on the Luxembourg Stock Exchange may be delisted if the continuation of the listing has become unduly onerous in the opinion of the issuer, and the issuer has agreed with the underwriter(s) that it will use reasonable efforts to list the consolidated obligations on another stock exchange.

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), the fiscal agent of the FHLBanks, comprise the FHLBank System.

The Office of Finance is responsible for preparing the Combined Financial Report 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 Report. The Office of Finance is responsible for combining the financial information it receives from each of the FHLBanks.

The FHLBanks Combined Financial Report is intended to be used by investors in consolidated obligations (consolidated bonds and consolidated discount notes) of the FHLBanks as these are the 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.

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. This is the case in the typical holding company structure, where there is a parent corporation 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 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 are not necessarily identical 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 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 that 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, and quarterly financial reports, filed on SEC Form 10-Q. Those reports contain additional information that is not contained in this Combined Financial Report. An investor should review available information on individual FHLBanks to obtain additional detail on each FHLBank's business, risk profile, and accounting and financial reporting policies. FHLBank financial reports are made available on the web site of each FHLBank and on the SEC's web site at www.sec.gov. This web site address is provided as a matter of convenience only, and its contents are not made part of this report and are not intended to be incorporated by reference into this report.

FEDERAL HOME LOAN BANKS
COMBINED STATEMENT OF CONDITION
(Unaudited)

<i>(dollars in millions, except par value)</i>	June 30, 2016	December 31, 2015
Assets		
Cash and due from banks	\$ 6,199	\$ 14,289
Interest-bearing deposits	2,908	1,836
Securities purchased under agreements to resell	46,910	47,827
Federal funds sold	45,671	42,380
Investment securities		
Trading securities (Note 3)	12,026	10,760
Available-for-sale securities (Note 4)	82,631	75,916
Held-to-maturity securities, fair value of \$97,485 and \$96,123 (Note 5)	95,643	94,965
Total investment securities	190,300	181,641
Advances, includes \$12,216 and \$13,744 at fair value held under fair value option (Note 7)	689,792	634,022
Mortgage loans held for portfolio, net		
Mortgage loans held for portfolio (Note 8)	45,708	44,603
Allowance for credit losses on mortgage loans (Note 9)	(18)	(18)
Total mortgage loans held for portfolio, net	45,690	44,585
Accrued interest receivable	1,171	1,112
Premises, software, and equipment, net	220	217
Derivative assets, net (Note 10)	1,240	755
Other assets	555	603
Total assets	\$ 1,030,656	\$ 969,267
Liabilities		
Deposits (Note 11)	\$ 8,661	\$ 8,533
Consolidated obligations (Note 12)		
Discount notes, includes \$20,806 and \$21,478 at fair value held under fair value option	471,032	494,045
Bonds, includes \$18,706 and \$20,735 at fair value held under fair value option	494,158	411,851
Total consolidated obligations	965,190	905,896
Mandatorily redeemable capital stock	1,845	745
Accrued interest payable	982	986
Affordable Housing Program payable	888	841
Derivative liabilities, net (Note 10)	1,198	1,131
Other liabilities	2,346	2,121
Subordinated notes	—	944
Total liabilities	981,110	921,197
Commitments and contingencies (Note 16)		
Capital (Note 13)		
Capital stock		
Class B putable (\$100 par value) issued and outstanding shares	34,625	34,005
Class A putable (\$100 par value) issued and outstanding shares	188	180
Total capital stock	34,813	34,185
Additional capital from merger	128	194
Retained earnings		
Unrestricted	11,143	10,473
Restricted	4,167	3,852
Total retained earnings	15,310	14,325
Accumulated other comprehensive income (loss) (Note 14)	(705)	(634)
Total capital	49,546	48,070
Total liabilities and capital	\$ 1,030,656	\$ 969,267

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

FEDERAL HOME LOAN BANKS
COMBINED STATEMENT OF INCOME
(Unaudited)

<i>(dollars in millions)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Interest income				
Advances	\$ 1,236	\$ 546	\$ 2,378	\$ 1,226
Prepayment fees on advances, net	35	23	47	49
Interest-bearing deposits	10	2	18	5
Securities purchased under agreements to resell	20	7	42	14
Federal funds sold	63	18	123	38
Investment securities				
Trading securities	49	41	102	82
Available-for-sale securities	385	362	776	718
Held-to-maturity securities	446	448	894	917
Total investment securities	880	851	1,772	1,717
Mortgage loans held for portfolio	387	410	786	819
Other	(2)	2	—	3
Total interest income	2,629	1,859	5,166	3,871
Interest expense				
Consolidated obligations				
Discount notes	513	166	1,002	331
Bonds	1,179	901	2,264	1,792
Total consolidated obligations	1,692	1,067	3,266	2,123
Deposits	4	1	8	2
Subordinated notes	10	13	24	27
Mandatorily redeemable capital stock	23	40	40	58
Total interest expense	1,729	1,121	3,338	2,210
Net interest income	900	738	1,828	1,661
Provision (reversal) for credit losses	1	3	2	2
Net interest income after provision (reversal) for credit losses	899	735	1,826	1,659
Non-interest income				
Other-than-temporary impairment losses				
Total other-than-temporary impairment losses	(5)	(18)	(21)	(22)
Net amount of impairment losses reclassified to/(from) accumulated other comprehensive income (loss)	(1)	6	6	(45)
Net other-than-temporary impairment losses	(6)	(12)	(15)	(67)
Net gains (losses) on trading securities	46	(76)	148	(67)
Net realized gains (losses) from sale of available-for-sale securities	3	3	16	58
Net realized gains (losses) from sale of held-to-maturity securities	1	4	1	10
Net gains (losses) on financial instruments held under fair value option	(10)	(30)	—	(39)
Net gains (losses) on derivatives and hedging activities	(73)	326	(310)	285
Gains on litigation settlements, net	252	143	600	623
Net gains (losses) on debt extinguishments	(2)	—	(3)	(2)
Other, net	43	33	85	70
Total non-interest income (loss)	254	391	522	871
Non-interest expense				
Compensation and benefits	151	174	304	325
Other operating expenses	88	153	176	247
Federal Housing Finance Agency	13	14	29	30
Office of Finance	11	12	24	23
Other	7	6	13	7
Total non-interest expense	270	359	546	632
Net income before assessments	883	767	1,802	1,898
Affordable Housing Program assessments	91	83	185	199
Net income	\$ 792	\$ 684	\$ 1,617	\$ 1,699

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

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

<i>(dollars in millions)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net income	\$ 792	\$ 684	\$ 1,617	\$ 1,699
Other comprehensive income				
Net unrealized gains/losses on available-for-sale securities				
Unrealized gains (losses)	24	(169)	42	(79)
Reclassification of realized net (gains) losses included in net income	(4)	(6)	(16)	(6)
Total net unrealized gains/losses on available-for-sale securities	20	(175)	26	(85)
Net unrealized gains/losses on held-to-maturity securities transferred from available-for-sale securities				
Unrealized gains (losses)	—	—	1	—
Reclassification of (gains) losses included in net income	—	(1)	—	—
Total net unrealized gains/losses on held-to-maturity securities transferred from available-for-sale securities	—	(1)	1	—
Net non-credit portion of other-than-temporary impairment losses on available-for-sale securities				
Non-credit portion of other-than-temporary impairment losses transferred from held-to-maturity securities	—	(1)	—	(12)
Net change in fair value of other-than-temporarily impaired securities	81	(20)	7	(15)
Net amount of impairment losses reclassified to (from) non-interest income	1	(6)	(7)	45
Reclassification of (gains) losses included in net income	1	3	—	(52)
Total net non-credit portion of other-than-temporary impairment losses on available-for-sale securities	83	(24)	—	(34)
Net non-credit portion of other-than-temporary impairment losses on held-to-maturity securities				
Net amount of impairment losses reclassified to (from) non-interest income	—	—	1	—
Accretion of non-credit portion	24	31	48	63
Non-credit portion of other-than-temporary impairment losses transferred to available-for-sale securities	—	1	—	12
Total net non-credit portion of other-than-temporary impairment losses on held-to-maturity securities	24	32	49	75
Net unrealized gains/losses relating to hedging activities				
Unrealized gains (losses)	(29)	113	(160)	53
Reclassification of (gains) losses included in net income	4	4	11	8
Total net unrealized gains/losses relating to hedging activities	(25)	117	(149)	61
Pension and postretirement benefits	(2)	2	2	(4)
Total other comprehensive income (loss)	100	(49)	(71)	13
Comprehensive income	\$ 892	\$ 635	\$ 1,546	\$ 1,712

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

FEDERAL HOME LOAN BANKS
COMBINED STATEMENT OF CAPITAL
SIX MONTHS ENDED JUNE 30, 2016 AND 2015
(Unaudited)

<i>(dollars and shares in millions)</i>	Capital Stock - Putable			
	Class B		Class A	
	Shares	Par Value	Shares	Par Value
Balance, December 31, 2014	335	\$ 33,464	3	\$ 241
Proceeds from issuance of capital stock	100	9,965	—	2
Capital stock issued from merger	9	863	—	31
Repurchases/redemptions of capital stock	(102)	(10,170)	(3)	(230)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(1)	(135)	—	(2)
Transfers between Class B and Class A shares	(2)	(153)	2	153
Additional capital from merger	—	—	—	—
Comprehensive income (loss)	—	—	—	—
Capital stock canceled and other merger activity	(9)	(863)	—	(31)
Dividends on capital stock				
Cash	—	—	—	—
Stock	—	33	—	—
Balance, June 30, 2015	330	\$ 33,004	2	\$ 164
Balance, December 31, 2015	340	\$ 34,005	2	\$ 180
Proceeds from issuance of capital stock	126	12,560	—	3
Repurchases/redemptions of capital stock	(99)	(9,852)	(2)	(217)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(19)	(1,892)	—	(20)
Transfers between Class B and Class A shares	(2)	(242)	2	242
Comprehensive income (loss)	—	—	—	—
Dividends on capital stock				
Cash	—	—	—	—
Stock	—	46	—	—
Balance, June 30, 2016	346	\$ 34,625	2	\$ 188

Capital Stock - Putable		Additional Capital from Merger	Retained Earnings			Accumulated Other Comprehensive Income (Loss)	Total Capital
Total			Unrestricted	Restricted	Total		
Shares	Par Value						
338	\$ 33,705	\$ —	\$ 9,736	\$ 3,508	\$ 13,244	\$ 54	\$ 47,003
100	9,967	—	—	—	—	—	9,967
9	894	—	—	—	—	—	894
(105)	(10,400)	—	—	—	—	—	(10,400)
(1)	(137)	—	—	—	—	—	(137)
—	—	—	—	—	—	—	—
—	—	246	—	—	—	—	246
—	—	—	1,356	343	1,699	13	1,712
(9)	(894)	—	(250)	(63)	(313)	(51)	(1,258)
—	—	—	(800)	—	(800)	—	(800)
—	33	—	(33)	—	(33)	—	—
332	\$ 33,168	\$ 246	\$ 10,009	\$ 3,788	\$ 13,797	\$ 16	\$ 47,227
342	\$ 34,185	\$ 194	\$ 10,473	\$ 3,852	\$ 14,325	\$ (634)	\$ 48,070
126	12,563	—	—	—	—	—	12,563
(101)	(10,069)	—	—	—	—	—	(10,069)
(19)	(1,912)	—	—	—	—	—	(1,912)
—	—	—	—	—	—	—	—
—	—	—	1,302	315	1,617	(71)	1,546
—	—	(66)	(586)	—	(586)	—	(652)
—	46	—	(46)	—	(46)	—	—
348	\$ 34,813	\$ 128	\$ 11,143	\$ 4,167	\$ 15,310	\$ (705)	\$ 49,546

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

FEDERAL HOME LOAN BANKS
COMBINED STATEMENT OF CASH FLOWS
(Unaudited)

<i>(dollars in millions)</i>	Six Months Ended June 30,	
	2016	2015
Operating activities		
Net income	\$ 1,617	\$ 1,699
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation and amortization	23	(26)
Net change in derivatives and hedging activities	314	301
Net other-than-temporary impairment losses	15	67
Other adjustments	(33)	(63)
Net change in fair value adjustments on trading securities	(120)	64
Net change in fair value adjustments on financial instruments held under fair value option	—	39
Net change in		
Trading securities	(29)	(65)
Accrued interest receivable	(67)	25
Other assets	34	(29)
Accrued interest payable	16	(41)
Other liabilities	36	60
Total adjustments	189	332
Net cash provided by (used in) operating activities	1,806	2,031
Investing activities		
Net change in		
Interest-bearing deposits	(3,042)	580
Securities purchased under agreements to resell	917	(13,496)
Federal funds sold	(3,291)	11,136
Premises, software, and equipment	(27)	(24)
Trading securities		
Net decrease (increase) in short-term	102	(405)
Proceeds from long-term	2,223	930
Purchases of long-term	(3,643)	(852)
Available-for-sale securities		
Net decrease (increase) in short-term	(500)	1,039
Proceeds from long-term	8,442	8,361
Purchases of long-term	(13,043)	(7,271)
Held-to-maturity securities		
Net decrease (increase) in short-term	7	249
Proceeds from long-term	8,647	11,100
Purchases of long-term	(9,085)	(6,112)
Advances		
Principal collected	3,374,469	2,473,567
Made	(3,428,186)	(2,496,028)
Mortgage loans held for portfolio		
Principal collected	3,704	4,200
Purchases	(4,867)	(5,481)
Proceeds from sales of foreclosed assets	53	66
Principal collected on other loans	1	1
Net cash provided by (used in) investing activities	(67,119)	(18,440)

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

<i>(dollars in millions)</i>	Six Months Ended June 30,	
	2016	2015
Financing activities		
Net change in		
Deposits and pass-through reserves	\$ (1,089)	\$ 328
Net proceeds (payments) on derivative contracts with financing element	(201)	(411)
Net proceeds from issuance of consolidated obligations		
Discount notes	1,746,568	2,265,819
Bonds	254,686	155,603
Payments for maturing and retiring consolidated obligations		
Discount notes	(1,769,736)	(2,230,084)
Bonds	(173,092)	(185,722)
Payments for retirement of subordinated notes	(944)	—
Proceeds from issuance of capital stock	12,563	9,967
Payments for repurchases/redemptions of mandatorily redeemable capital stock	(811)	(2,319)
Payments for repurchases/redemptions of capital stock	(10,069)	(10,400)
Cash dividends paid	(652)	(800)
Net cash provided by (used in) financing activities	57,223	1,981
Net increase (decrease) in cash and due from banks	(8,090)	(14,428)
Cash and due from banks at beginning of the period	14,289	26,421
Cash and due from banks at end of the period	<u>\$ 6,199</u>	<u>\$ 11,993</u>
Supplemental disclosures		
Interest paid	\$ 3,298	\$ 2,547
Affordable Housing Program payments, net	\$ 138	\$ 138
Transfers of mortgage loans to other assets	\$ 28	\$ 43
Transfers of other-than-temporarily impaired held-to-maturity securities to available-for-sale securities	\$ —	\$ 70
Transfers of mortgage loans held for sale to securitized mortgage loans	\$ 206	\$ —
Transfer of held-to-maturity securities to available-for-sale securities that are not other-than-temporarily impaired	\$ —	\$ 8,963
Net capital stock reclassified to/(from) mandatorily redeemable capital stock	<u>\$ (1,912)</u>	<u>\$ (137)</u>

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. They are financial cooperatives that provide a readily available, competitively-priced source of funds to their member institutions. Each FHLBank operates as a separate entity with its own management, employees, and board of directors. The FHLBanks do not have any special purpose entities or any other type of off-balance sheet conduits.

The Federal Housing Finance Agency (FHFA) is the independent Federal regulator of the FHLBanks, Federal Home Loan Mortgage Corporation (Freddie Mac), and Federal National Mortgage Association (Fannie Mae). The FHFA's stated mission is to ensure that the housing GSEs operate in a safe and sound manner so that they serve as a reliable source of liquidity and funding for housing finance and community investment.

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. Certain FHLBanks also use these funds to acquire mortgage loans from members (acquired member assets) through their respective FHLBank's Mortgage Purchase Program (MPP) or the Mortgage Partnership Finance® (MPF®) Program. "Mortgage Partnership Finance" and "MPF" are registered trademarks of the FHLBank of Chicago.

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.

FHLBanks of Des Moines and Seattle Merger

Effective May 31, 2015, the FHLBank of Des Moines and the FHLBank of Seattle completed the merger pursuant to the definitive merger agreement, dated September 25, 2014. At closing, the FHLBank of Seattle merged with and into the FHLBank of Des Moines, with the FHLBank of Des Moines surviving the merger as the continuing FHLBank. The first date of operations for the combined FHLBank was June 1, 2015. Thus, the combined statements of income, comprehensive income, capital, and cash flows, along with the supporting condensed combining schedules, for the periods ended June 30, 2015, reflect the FHLBank of Seattle's activities for the periods ended May 31, 2015.

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, 2015. 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, 2016, or for other interim periods.

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 presentation 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. The most significant transactions between the FHLBanks are:

1. *Transfers of Direct Liability on Consolidated Bonds between FHLBanks.* These transfers occur when the primary obligation under consolidated bonds issued on behalf of one FHLBank are transferred to and assumed by another

FHLBank. The transferring FHLBank treats the transfer as a debt extinguishment because it is released from being the primary obligor when the Office of Finance records the transfer, pursuant to its duties under applicable regulations. The assuming FHLBank then becomes the primary obligor while the transferring FHLBank has a contingent liability because it still has joint and several liability with respect to repaying the transferred consolidated bonds.

The FHLBank assuming the consolidated bond liability initially records the consolidated bond at fair value, which represents the amount paid to the assuming FHLBank by the transferring FHLBank to assume the debt. A premium or discount exists for the amount paid above or below par. Because these transfers represent inter-company transfers under combination accounting principles, an inter-company elimination is made for any gain or loss on transfer. As a result, the subsequent amortization of premium or discount, amortization of concession fees, and recognition of hedging-related adjustments in the combined financial statements represent those of the transferring FHLBank.

2. *Purchases of Consolidated Bonds.* These purchases occur when consolidated bonds issued on behalf of one FHLBank are purchased by another FHLBank in the open market. All purchase transactions occur at market prices with third parties and the purchasing FHLBanks treat these consolidated bonds as investments. Under combination accounting principles, the investment and the consolidated bonds, and related contractual interest income and expense, are eliminated in combination.

No other transactions among the FHLBanks had a material effect on operating results. (See the [Condensed Combining Schedules](#) for the combining 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.)

Reclassifications and Revisions to Prior Period Amounts. Certain amounts in the 2015 combined financial statements have been reclassified or revised to conform to the financial statement presentation for the three and six months ended June 30, 2016. Additionally, certain other prior period amounts have been revised and may not agree to the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015. These amounts were not deemed to be material.

Changes in the Presentation of Debt Issuance Costs (also referred to as Concessions). On January 1, 2016, the FHLBanks retrospectively adopted the guidance, *Simplifying the Presentation of Debt Issuance Costs*, issued by the Financial Accounting Standards Board (FASB) on April 7, 2015. As a result, \$86 million of unamortized concessions included in other assets at December 31, 2015, were reclassified as a reduction in the balance of the corresponding consolidated obligations. The reclassification resulted in decreases of \$10 million in consolidated discount notes and \$76 million in consolidated bonds at December 31, 2015. Accordingly, the FHLBanks' total assets and total liabilities each decreased by \$86 million at December 31, 2015. The adoption of this guidance did not have any effect on the FHLBanks' combined results of operations and combined cash flows. (See [Note 2 - Recently Issued and Adopted Accounting Guidance](#) for discussion on this guidance.)

Subsequent Events. For purposes of this Combined Financial Report, subsequent events have been evaluated from July 1, 2016, through the time of publication. (See [Note 17 - Subsequent Events](#) for more information.)

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 the determination of other-than-temporary impairments of certain mortgage-backed securities (MBS) and fair value of derivatives, certain advances, certain investment securities, and certain consolidated obligations that are reported at fair value on the Combined Statement of Condition. Actual results could differ from these estimates significantly.

Fair Value. The fair value amounts, recorded on the Combined Statement of Condition and in the footnotes 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. Although an FHLBank uses its best judgment in estimating the fair value of these financial instruments, there are inherent limitations in any valuation technique. Therefore, these fair values may not be indicative of the amounts that would have been realized in market transactions at the reporting dates. (See [Note 15 - Fair Value](#) for more information.)

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 10 - Derivatives and Hedging Activities](#) for additional information regarding these agreements.)

At June 30, 2016 and December 31, 2015, the FHLBanks had \$46,910 million and \$47,827 million in securities purchased under agreements to resell. Based on the fair value of the related collateral held, the 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, 2016 and December 31, 2015.

Consolidated Obligations

Concessions. The FHLBanks pay concessions to dealers in connection with the issuance of certain consolidated obligations. The Office of Finance prorates the amount of the concession to each FHLBank based upon the percentage of the debt issued that is assumed by that FHLBank. Concessions paid on consolidated obligations designated under the fair value option are expensed as incurred in non-interest expense. As a result of adopting the FASB's guidance, *Simplifying the Presentation of Debt Issuance Costs*, the FHLBanks record concessions paid on consolidated obligations not designated under the fair value option as a direct deduction from their carrying amounts, consistent with the presentation of discounts on consolidated obligations. The concessions are amortized, using the interest method, over the term to maturity or the estimated life of the corresponding consolidated obligations. The amortization of those concessions is included in consolidated obligation interest expense. (See [Note 2 - Recently Issued and Adopted Accounting Guidance](#) for discussion on this guidance.)

Note 2 - Recently Issued and Adopted Accounting Guidance

Measurement of Credit Losses on Financial Instruments

On June 16, 2016, the FASB issued amended guidance for the accounting of credit losses on financial instruments. The amendments require entities to measure expected credit losses based on relevant information about past events (including historical experience), current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. An entity must use judgment in determining the relevant information and estimation methods that are appropriate in its circumstances. The new guidance requires a financial asset, or a group of financial assets, measured at amortized cost basis to be presented at the net amount expected to be collected over the contractual term of the financial asset(s). The guidance also requires, among other things, the following:

- The statement of income reflects the measurement of credit losses for newly recognized financial assets, as well as the expected increases or decreases of expected credit losses that have taken place during the period.
- Entities determine the allowance for credit losses for purchased financial assets with a more-than-insignificant amount of credit deterioration since origination that are measured at amortized cost basis in a similar manner to other financial assets measured at amortized cost basis. The initial allowance for credit losses is required to be added to the purchase price.
- Entities record credit losses relating to available-for-sale debt securities through an allowance for credit losses. The amendments limit the allowance for credit losses to the amount by which fair value is below amortized cost.
- Public entities further disaggregate the current disclosure of credit quality indicators in relation to the amortized cost of financing receivables by the year of origination (i.e., vintage).

This guidance is effective for the FHLBanks for interim and annual periods beginning on January 1, 2020. Early application is permitted as of the interim and annual reporting periods beginning after December 15, 2018. This guidance should be applied

using a modified-retrospective approach, through a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. In addition, entities are required to use a prospective transition approach for purchased financial assets with a more-than-insignificant amount of credit deterioration since origination and for debt securities for which an other-than-temporary impairment had been recognized before the effective date. The FHLBanks are in the process of evaluating this guidance, but its effect on the FHLBanks' combined financial condition, combined results of operations, and combined cash flows has not yet been determined.

Effect of Derivative Contract Novations on Existing Hedge Accounting Relationships

On March 10, 2016, the FASB issued amendments to clarify that a change in the counterparty to a derivative instrument that has been designated as the hedging instrument under GAAP does not, in and of itself, require dedesignation of that hedging relationship provided that all other hedge accounting criteria continue to be met. This guidance becomes effective for the FHLBanks for the interim and annual periods beginning on January 1, 2017, and early adoption is permitted. The amendments provide entities with the option to apply the guidance using either a prospective approach or a modified retrospective approach, retrospectively applied to all derivative instruments that meet the specific conditions.

The FHLBanks elected to early adopt this guidance prospectively on January 1, 2016. The adoption of this guidance did not have a material effect on the FHLBanks' combined financial condition, combined results of operations, and combined cash flows.

Revenue from Contracts with Customers

On May 28, 2014, the FASB issued guidance on revenue from contracts with customers. This guidance outlines a comprehensive model for recognizing revenue arising from contracts with customers and supersedes most current revenue recognition guidance. In addition, this guidance amends the existing requirements for the recognition of a gain or loss on the transfer of non-financial assets that are not in a contract with a customer. This guidance applies to all contracts with customers except those that are within the scope of certain other standards, such as financial instruments, certain guarantees, insurance contracts, and lease contracts. The guidance provides entities with the option of using either of the following adoption methods: a full retrospective method, retrospectively to each prior reporting period presented; or a modified retrospective method, retrospectively with the cumulative effect of initially applying this guidance recognized at the date of initial application.

On August 12, 2015, the FASB issued an amendment to defer the effective date of the guidance issued in May 2014 by one year. In 2016, the FASB has issued additional amendments to clarify certain aspects of the new revenue guidance. However, these amendments do not change the core principle of the new revenue standard.

This guidance is effective for the FHLBanks for interim and annual periods beginning on January 1, 2018. Early application is permitted only as of the interim and annual reporting periods beginning after December 15, 2016. The FHLBanks are in the process of evaluating this guidance, but its effect on the FHLBanks' combined financial condition, combined results of operations, and combined cash flows is not expected to be material.

Customer's Accounting for Fees Paid in a Cloud Computing Arrangement

On April 15, 2015, the FASB issued amendments to clarify a customer's accounting for fees paid in a cloud computing arrangement. The amendments provide guidance to customers on determining whether a cloud computing arrangement includes a software license. If the arrangement includes a software license, then the customer should account for the software license element of the arrangement consistent with the acquisition of other software licenses. If the arrangement does not contain a software license, the customer should account for the arrangement as a service contract. This guidance became effective for the FHLBanks for the interim and annual periods beginning on January 1, 2016 and was adopted prospectively. However, this guidance did not have a material effect on the FHLBanks' combined financial condition, combined results of operations, and combined cash flows.

Simplifying the Presentation of Debt Issuance Costs

On April 7, 2015, the FASB issued guidance to simplify the presentation of debt issuance costs. This guidance requires that debt issuance costs related to a recognized debt liability be presented on the statement of condition as a direct deduction from the carrying amount of that debt liability, consistent with the presentation of debt discounts. This guidance became effective for the FHLBanks for the interim and annual periods beginning on January 1, 2016 and was adopted retrospectively.

The adoption of this guidance resulted in a reclassification of unamortized debt issuance costs from other assets to consolidated obligations on the Combined Statements of Condition at December 31, 2015. (See [Note 1 - Summary of Significant Accounting Policies](#) for additional discussion relating to the reclassification as a result of adopting this guidance.)

Amendments to the Consolidation Analysis

On February 18, 2015, the FASB issued amended guidance intended to enhance consolidation guidance for legal entities such as limited partnerships, limited liability corporations, and securitization structures (collateralized debt obligations, collateralized loan obligations, and mortgage-backed security transactions). The new guidance primarily focuses on the following:

- Placing more emphasis on risk of loss when determining a controlling financial interest. A reporting organization may no longer have to consolidate a legal entity in certain circumstances based solely on its fee arrangement, when certain criteria are met.
- Reducing the frequency of the application of related-party guidance when determining a controlling financial interest in a VIE.
- Potentially changing consolidation conclusions for entities in several industries that typically make use of limited partnerships or VIEs.

This guidance became effective for the FHLBanks for the interim and annual periods beginning on January 1, 2016 and did not have a material effect on the FHLBanks' combined financial condition, combined results of operations, and combined cash flows.

Note 3 - Trading Securities

Table 3.1 - Trading Securities by Major Security Type
(dollars in millions)

Fair Value	June 30, 2016	December 31, 2015
Non-mortgage-backed securities		
U.S. Treasury obligations	\$ 2,863	\$ 1,310
Other U.S. obligations	236	237
GSE and Tennessee Valley Authority obligations	6,860	7,216
State or local housing agency obligations	1	1
Other	305	290
Total non-mortgage-backed securities	10,265	9,054
Mortgage-backed securities		
Other U.S. obligations single-family MBS	22	24
GSE single-family MBS	143	159
GSE multifamily MBS	1,596	1,523
Total mortgage-backed securities	1,761	1,706
Total	\$ 12,026	\$ 10,760

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net unrealized gains (losses) on trading securities held at period-end	\$ 47	\$ (76)	\$ 154	\$ (67)
Net unrealized and realized gains (losses) on trading securities sold/ matured during the period	(1)	—	(6)	—
Net gains (losses) on trading securities	\$ 46	\$ (76)	\$ 148	\$ (67)

Note 4 - Available-for-Sale Securities

Table 4.1 - Available-for-Sale (AFS) Securities by Major Security Type
(dollars in millions)

	June 30, 2016				
	Amortized Cost(1)	OTTI Recognized in AOCI(2)	Gross Unrealized Gains(3)	Gross Unrealized Losses(3)	Fair Value
Non-mortgage-backed securities					
Certificates of deposit	\$ 1,200	\$ —	\$ —	\$ —	\$ 1,200
Other U.S. obligations	4,658	—	27	(28)	4,657
GSE and Tennessee Valley Authority obligations	17,442	—	57	(119)	17,380
State or local housing agency obligations	1,261	—	19	(1)	1,279
Federal Family Education Loan Program ABS	4,740	—	128	(34)	4,834
Other	1,202	—	5	(35)	1,172
Total non-mortgage-backed securities	30,503	—	236	(217)	30,522
Mortgage-backed securities					
Other U.S. obligations single-family MBS	5,223	—	55	(16)	5,262
Other U.S. obligations multifamily MBS	686	—	2	(1)	687
GSE single-family MBS	10,175	—	93	(4)	10,264
GSE multifamily MBS	28,229	—	471	(231)	28,469
Private-label residential MBS	7,182	(185)	436	(6)	7,427
Total mortgage-backed securities	51,495	(185)	1,057	(258)	52,109
Total	\$ 81,998	\$ (185)	\$ 1,293	\$ (475)	\$ 82,631
December 31, 2015					
	Amortized Cost(1)	OTTI Recognized in AOCI(2)	Gross Unrealized Gains(3)	Gross Unrealized Losses(3)	Fair Value
Non-mortgage-backed securities					
Certificates of deposit	\$ 700	\$ —	\$ —	\$ —	\$ 700
Other U.S. obligations	4,833	—	27	(31)	4,829
GSE and Tennessee Valley Authority obligations	14,936	—	48	(121)	14,863
State or local housing agency obligations	1,199	—	3	(3)	1,199
Federal Family Education Loan Program ABS	5,089	—	233	(23)	5,299
Other	1,151	—	5	(32)	1,124
Total non-mortgage-backed securities	27,908	—	316	(210)	28,014
Mortgage-backed securities					
Other U.S. obligations single-family MBS	4,547	—	57	(17)	4,587
Other U.S. obligations multifamily MBS	747	—	—	(3)	744
GSE single-family MBS	9,584	—	45	(43)	9,586
GSE multifamily MBS	24,476	—	419	(202)	24,693
Private-label residential MBS	8,039	(185)	442	(14)	8,282
Home equity loan ABS	8	—	2	—	10
Total mortgage-backed securities	47,401	(185)	965	(279)	47,902
Total	\$ 75,309	\$ (185)	\$ 1,281	\$ (489)	\$ 75,916

- (1) Amortized cost of AFS securities includes adjustments made to the cost basis of an investment for accretion, amortization, previous other-than-temporary impairment (OTTI) recognized in earnings, and/or fair value hedge accounting adjustments.
- (2) OTTI recognized in accumulated other comprehensive income (loss) (AOCI) does not include \$426 million in subsequent unrealized gains (losses) in fair value of previously other-than-temporarily impaired AFS securities at both June 30, 2016 and December 31, 2015, which is included in net non-credit portion of OTTI losses on AFS securities in [Note 14 - Accumulated Other Comprehensive Income \(Loss\)](#).
- (3) Gross unrealized gains and gross unrealized losses on AFS securities include \$426 million in subsequent unrealized gains (losses) in fair value of previously other-than-temporarily impaired AFS securities at both June 30, 2016 and December 31, 2015, which is not included in net unrealized gains (losses) on AFS securities in [Note 14 - Accumulated Other Comprehensive Income \(Loss\)](#).

Table 4.2 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 4.2 - AFS Securities in a Continuous Unrealized Loss Position
(dollars in millions)

	June 30, 2016					
	Less than 12 Months		12 months or more		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses(1)
Non-mortgage-backed securities						
Other U.S. Obligations	\$ 2,051	\$ (16)	\$ 1,913	\$ (12)	\$ 3,964	\$ (28)
GSE and Tennessee Valley Authority obligations	3,857	(27)	1,809	(92)	5,666	(119)
State or local housing agency obligations	721	(1)	—	—	721	(1)
Federal Family Education Loan Program ABS	57	(1)	733	(33)	790	(34)
Other	143	—	510	(35)	653	(35)
Total non-mortgage-backed securities	6,829	(45)	4,965	(172)	11,794	(217)
Mortgage-backed securities						
Other U.S. obligations single-family MBS	2,352	(12)	316	(4)	2,668	(16)
Other U.S. obligations multifamily MBS	102	—	101	(1)	203	(1)
GSE single-family MBS	1,761	(3)	279	(1)	2,040	(4)
GSE multifamily MBS	10,527	(109)	6,280	(122)	16,807	(231)
Private-label residential MBS	365	(5)	2,014	(186)	2,379	(191)
Total mortgage-backed securities	15,107	(129)	8,990	(314)	24,097	(443)
Total	\$ 21,936	\$ (174)	\$ 13,955	\$ (486)	\$ 35,891	\$ (660)

	December 31, 2015					
	Less than 12 Months		12 months or more		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses(1)
Non-mortgage-backed securities						
Other U.S. Obligations	\$ 3,875	\$ (31)	\$ —	\$ —	\$ 3,875	\$ (31)
GSE and Tennessee Valley Authority obligations	5,509	(42)	721	(79)	6,230	(121)
State or local housing agency obligations	601	(3)	10	—	611	(3)
Federal Family Education Loan Program ABS	64	(1)	787	(22)	851	(23)
Other	376	(2)	487	(30)	863	(32)
Total non-mortgage-backed securities	10,425	(79)	2,005	(131)	12,430	(210)
Mortgage-backed securities						
Other U.S. obligations single-family MBS	2,431	(14)	126	(3)	2,557	(17)
Other U.S. obligations multifamily MBS	537	(2)	109	(1)	646	(3)
GSE single-family MBS	3,855	(30)	520	(13)	4,375	(43)
GSE multifamily MBS	12,748	(147)	2,782	(55)	15,530	(202)
Private-label residential MBS	340	(5)	2,250	(194)	2,590	(199)
Total mortgage-backed securities	19,911	(198)	5,787	(266)	25,698	(464)
Total	\$ 30,336	\$ (277)	\$ 7,792	\$ (397)	\$ 38,128	\$ (674)

(1) Total unrealized losses in Table 4.2 will not agree to total gross unrealized losses in Table 4.1. Total unrealized losses in Table 4.2 includes non-credit-related OTTI recognized in AOCI.

Table 4.3 - AFS Securities by Contractual Maturity
(dollars in millions)

Year of Maturity	June 30, 2016		December 31, 2015	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Non-mortgage-backed securities				
Due in one year or less	\$ 3,193	\$ 3,197	\$ 2,145	\$ 2,147
Due after one year through five years	6,987	7,008	8,529	8,545
Due after five years through ten years	11,623	11,605	8,580	8,563
Due after ten years	3,960	3,878	3,565	3,460
Federal Family Education Loan Program ABS(1)	4,740	4,834	5,089	5,299
Total non-mortgage-backed securities	30,503	30,522	27,908	28,014
Mortgage-backed securities(1)	51,495	52,109	47,401	47,902
Total	\$ 81,998	\$ 82,631	\$ 75,309	\$ 75,916

(1) Federal Family Education Loan Program ABS and 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.

Table 4.4 - Proceeds from Sale and Gross Gains and Losses on AFS Securities
(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Proceeds from sale of AFS securities	\$ 1,697	\$ 55	\$ 3,057	\$ 2,156
Gross gains on sale of AFS securities	\$ 3	\$ 3	\$ 16	\$ 72
Gross losses on sale of AFS securities	—	—	—	(14)
Net realized gains/(losses) from sale of AFS securities	\$ 3	\$ 3	\$ 16	\$ 58 ^(a)

(a) Includes \$52 million of net realized gains relating to sales of previously other-than-temporarily impaired securities.

See [Note 6 - Other-than-Temporary Impairment Analysis](#) for analysis related to OTTI and information on the transfers of securities between the AFS portfolio and the held-to-maturity (HTM) portfolio.

Note 5 - Held-to-Maturity Securities

Table 5.1 - HTM Securities by Major Security Type
(dollars in millions)

	June 30, 2016					
	Amortized Cost(1)	OTTI Recognized in AOCI(2)	Carrying Value(2)	Gross Unrecognized Holding Gains(3)	Gross Unrecognized Holding Losses(3)	Fair Value
Non-mortgage-backed securities						
Other U.S. obligations	\$ 1,858	\$ —	\$ 1,858	\$ 83	\$ (1)	\$ 1,940
GSE and Tennessee Valley Authority obligations	6,710	—	6,710	92	(1)	6,801
State or local housing agency obligations	2,505	—	2,505	10	(106)	2,409
Total non-mortgage-backed securities	11,073	—	11,073	185	(108)	11,150
Mortgage-backed securities						
Other U.S. obligations single-family MBS	9,462	—	9,462	137	(14)	9,585
Other U.S. obligations multifamily MBS	12	—	12	—	—	12
GSE single-family MBS	45,994	—	45,994	713	(47)	46,660
GSE multifamily MBS	24,140	—	24,140	509	(46)	24,603
Private-label residential MBS	5,144	(444)	4,700	549	(92)	5,157
Manufactured housing loan ABS	77	—	77	2	(1)	78
Home equity loan ABS	219	(34)	185	59	(4)	240
Total mortgage-backed securities	85,048	(478)	84,570	1,969	(204)	86,335
Total	\$ 96,121	\$ (478)	\$ 95,643	\$ 2,154	\$ (312)	\$ 97,485

December 31, 2015						
	Amortized Cost(1)	OTTI Recognized in AOCI(2)	Carrying Value(2)	Gross Unrecognized Holding Gains(3)	Gross Unrecognized Holding Losses(3)	Fair Value
Non-mortgage-backed securities						
Other U.S. obligations	\$ 1,957	\$ —	\$ 1,957	\$ 64	\$ (1)	\$ 2,020
GSE and Tennessee Valley Authority obligations	6,226	—	6,226	57	(15)	6,268
State or local housing agency obligations	2,710	—	2,710	10	(116)	2,604
Total non-mortgage-backed securities	10,893	—	10,893	131	(132)	10,892
Mortgage-backed securities						
Other U.S. obligations single-family MBS	10,223	—	10,223	46	(41)	10,228
Other U.S. obligations multifamily MBS	23	—	23	—	—	23
GSE single-family MBS	48,258	—	48,258	546	(238)	48,566
GSE multifamily MBS	19,951	—	19,951	289	(58)	20,182
Private-label residential MBS	5,822	(490)	5,332	636	(83)	5,885
Manufactured housing loan ABS	86	—	86	2	(1)	87
Home equity loan ABS	236	(37)	199	65	(4)	260
Total mortgage-backed securities	84,599	(527)	84,072	1,584	(425)	85,231
Total	\$ 95,492	\$ (527)	\$ 94,965	\$ 1,715	\$ (557)	\$ 96,123

(1) Amortized cost of HTM securities includes adjustments made to the cost basis of an investment for accretion, amortization, and/or previous OTTI recognized in earnings.

(2) Carrying value of HTM securities represents amortized cost after adjustment for the non-credit-related OTTI recognized in AOCI.

(3) Gross unrecognized holding gains (losses) represent the difference between fair value and carrying value.

Table 5.2 presents the HTM securities with unrealized losses, which are aggregated by major security type and length of time that individual securities have been in a continuous unrealized loss position.

Table 5.2 - HTM Securities in a Continuous Unrealized Loss Position
(dollars in millions)

June 30, 2016						
	Less than 12 Months		12 months or more		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses(1)
Non-mortgage-backed securities						
Other U.S. obligations	\$ 12	\$ —	\$ 16	\$ (1)	\$ 28	\$ (1)
GSE and Tennessee Valley Authority obligations	2,453	(1)	—	—	2,453	(1)
State or local housing agency obligations	565	(4)	836	(102)	1,401	(106)
Total non-mortgage-backed securities	3,030	(5)	852	(103)	3,882	(108)
Mortgage-backed securities						
Other U.S. obligations single-family MBS	2,186	(7)	598	(7)	2,784	(14)
GSE single-family MBS	7,379	(27)	2,725	(20)	10,104	(47)
GSE multifamily MBS	3,304	(15)	3,916	(31)	7,220	(46)
Private-label residential MBS	696	(10)	3,625	(342)	4,321	(352)
Manufactured housing loan ABS	—	—	8	(1)	8	(1)
Home equity loan ABS	7	—	49	(4)	56	(4)
Total mortgage-backed securities	13,572	(59)	10,921	(405)	24,493	(464)
Total	\$ 16,602	\$ (64)	\$ 11,773	\$ (508)	\$ 28,375	\$ (572)

	December 31, 2015					
	Less than 12 Months		12 months or more		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses(1)
Non-mortgage-backed securities						
Other U.S. obligations	\$ 618	\$ —	\$ 16	\$ (1)	\$ 634	\$ (1)
GSE and Tennessee Valley Authority obligations	4,631	(10)	745	(5)	5,376	(15)
State or local housing agency obligations	115	—	861	(116)	976	(116)
Total non-mortgage-backed securities	5,364	(10)	1,622	(122)	6,986	(132)
Mortgage-backed securities						
Other U.S. obligations single-family MBS	4,716	(35)	605	(6)	5,321	(41)
GSE single-family MBS	14,691	(141)	3,234	(97)	17,925	(238)
GSE multifamily MBS	9,212	(42)	2,208	(16)	11,420	(58)
Private-label residential MBS	820	(6)	3,854	(351)	4,674	(357)
Manufactured housing loan ABS	—	—	9	(1)	9	(1)
Home equity loan ABS	—	—	61	(4)	61	(4)
Total mortgage-backed securities	29,439	(224)	9,971	(475)	39,410	(699)
Total	\$ 34,803	\$ (234)	\$ 11,593	\$ (597)	\$ 46,396	\$ (831)

(1) Total unrealized losses in Table 5.2 will not agree to total gross unrecognized holding losses in Table 5.1. Total unrealized losses in Table 5.2 includes non-credit-related OTTI recognized in AOCI and gross unrecognized holding gains on previously other-than-temporarily impaired securities.

Table 5.3 - HTM Securities by Contractual Maturity
(dollars in millions)

Year of Maturity	June 30, 2016			December 31, 2015		
	Amortized Cost	Carrying Value(1)	Fair Value	Amortized Cost	Carrying Value(1)	Fair Value
Non-mortgage-backed securities						
Due in one year or less	\$ 2,435	\$ 2,435	\$ 2,436	\$ 1,499	\$ 1,499	\$ 1,499
Due after one year through five years	5,084	5,084	5,099	5,509	5,509	5,501
Due after five years through ten years	670	670	717	827	827	858
Due after ten years	2,884	2,884	2,898	3,058	3,058	3,034
Total non-mortgage-backed securities	11,073	11,073	11,150	10,893	10,893	10,892
Mortgage-backed securities(2)	85,048	84,570	86,335	84,599	84,072	85,231
Total	\$ 96,121	\$ 95,643	\$ 97,485	\$ 95,492	\$ 94,965	\$ 96,123

(1) Carrying value of HTM securities represents amortized cost after adjustment for non-credit-related OTTI recognized in AOCI.

(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.

Realized Gains and Losses

Certain FHLBanks sold securities out of their respective HTM portfolio that were either within three months of maturity 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 5.4 - Proceeds from Sale and Gains and Losses on HTM Securities
(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Proceeds from sale of HTM securities	\$ 67	\$ 249	\$ 115	\$ 599
Carrying value of HTM securities sold	66	245	114	589
Net realized gains (losses) from sale of HTM securities	\$ 1	\$ 4	\$ 1	\$ 10

Note 6 - Other-than-Temporary Impairment Analysis

Each FHLBank evaluates its individual AFS and HTM investment securities holdings in an unrealized loss position for OTTI on a quarterly basis. A description of the OTTI evaluation process is disclosed in *Note 1 - Summary of Significant Accounting Policies*, pages F-13 to F-14, of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015. The FHLBanks' uniform framework is disclosed in *Note 8 - Other-than-Temporary Impairment Analysis*, pages F-33 to F-34, of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015.

Certain Private-label MBS

The FHLBanks' system-wide governance committee developed a short-term housing price forecast with projected changes ranging from a decrease of 2.0% to an increase of 10.0% over the twelve month period beginning April 1, 2016. For the vast majority of markets, the projected short-term housing price changes range from an increase of 2.0% to an increase of 6.0%. Thereafter, a unique path is projected for each geographic area based on an internally developed framework derived from historical data.

HTM Securities Transferred to AFS Securities. Certain changes in circumstances may cause an FHLBank to change its intent to hold a certain security to maturity without calling into question its intent to hold other debt securities to maturity in the future. Thus, the sale or transfer of an HTM security due to certain changes in circumstances, such as evidence of significant deterioration in the issuer's creditworthiness, is not considered to be inconsistent with its original classification. Additionally, other events that are isolated, nonrecurring, or unusual for an FHLBank that could not have been reasonably anticipated may cause an FHLBank to sell or transfer an HTM security without necessarily calling into question its intent to hold other debt securities to maturity.

During the three and six months ended June 30, 2016, there were no transfers of securities from HTM to AFS. During the three months ended June 30, 2015, the FHLBank of Pittsburgh elected to transfer its private-label MBS with fair values of \$3 million that experienced credit-related OTTI from its HTM portfolio to its AFS portfolio. During the six months ended June 30, 2015, the FHLBanks of Pittsburgh and San Francisco elected to transfer private-label MBS with fair values of \$3 million and \$4 million that experienced credit-related OTTI from their respective HTM portfolio to their respective AFS portfolio. Each of these FHLBanks recognized an OTTI credit loss on these HTM private-label residential MBS, which that FHLBank believes is evidence of a significant deterioration in the issuer's creditworthiness. This deterioration is the basis for the transfers to the AFS portfolio. These transfers allow management the option to decide to sell these securities prior to maturity in response to changes in interest rates, changes in prepayment risk, or other factors. For the AFS securities in an unrealized loss position, each of the affected FHLBanks asserted as of June 30, 2015, that it has no intent to sell and believes it is not more likely than not that it will be required to sell any security before its anticipated recovery of the remaining amortized cost basis.

In connection with the merger with the FHLBank of Des Moines, the FHLBank of Seattle changed its intent to hold HTM securities to maturity and consequently transferred its entire HTM portfolio, with a fair value of \$9.1 billion, to its AFS portfolio in March 2015. Based on its intent to sell its private-label MBS, the FHLBank of Seattle recorded a \$52 million OTTI charge in March 2015. The FHLBank of Seattle subsequently sold all of its private-label MBS and realized a \$52 million gain on sale in March 2015.

Table 6.1 presents the June 30, 2016 balance of the total HTM and AFS MBS with OTTI charges during the life of the security, which represents securities other-than-temporarily impaired prior to and at June 30, 2016, based on each individual FHLBank's impairment analyses of its investment portfolio.

Table 6.1 - Total MBS Other-than-Temporarily Impaired during the Life of the Security at June 30, 2016*(dollars in millions)*

	Held-to-Maturity Securities(1)				Available-for-Sale Securities(1)		
	Unpaid Principal Balance	Amortized Cost	Carrying Value	Fair Value	Unpaid Principal Balance	Amortized Cost	Fair Value
Private-label residential MBS(2)							
Prime	\$ 919	\$ 752	\$ 582	\$ 781	\$ 2,743	\$ 2,214	\$ 2,405
Alt-A	1,351	1,029	806	1,032	6,061	4,962	5,016
Subprime	499	295	244	361	2	1	1
Total private-label residential MBS	2,769	2,076	1,632	2,174	8,806	7,177	7,422
Home equity loan ABS(2)							
Subprime	137	108	74	129	—	—	—
Total home equity loan ABS	137	108	74	129	—	—	—
Total	\$ 2,906	\$ 2,184	\$ 1,706	\$ 2,303	\$ 8,806	\$ 7,177	\$ 7,422

(1) Table 6.1 does not include all HTM and AFS securities that are in an unrealized loss position as of June 30, 2016. This table includes only HTM and AFS MBS with OTTI charges during the life of the security.

(2) The FHLBanks classify securities as prime, Alt-A, and subprime based on the originator's classification at the time of origination or based on classification by a nationally recognized statistical rating organization upon issuance of the securities.

Table 6.2 presents a rollforward of the amounts related to credit losses recognized in earnings. The rollforward relates to the amount of credit losses on investment securities held by the FHLBanks for which a portion of OTTI losses was recognized in accumulated other comprehensive income (loss).

Table 6.2 - Rollforward of the Amounts Related to Credit Losses Recognized into Earnings*(dollars in millions)*

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Balance, at beginning of period	\$ 3,179	\$ 3,403	\$ 3,240	\$ 3,836
Additions				
Additional OTTI credit losses for securities upon which an OTTI charge was previously recognized (1)(2)	6	12	15	15
Reductions				
Securities sold or matured during the period(3)	—	—	(2)	—
Credit losses on securities that an FHLBank intends to sell before recovery of its amortized cost basis	—	—	—	(368)
Increases in cash flows expected to be collected (accreted as interest income over the remaining lives of the applicable securities)	(64)	(64)	(132)	(132)
Balance, at end of period	<u>\$ 3,121</u>	<u>\$ 3,351</u>	<u>\$ 3,121</u>	<u>\$ 3,351</u>

(1) For the three months ended June 30, 2016 and 2015, additional OTTI credit losses for securities upon which an OTTI charge was previously recognized relates to all securities that were also previously impaired prior to April 1, 2016 and 2015. For the six months ended June 30, 2016 and 2015, additional OTTI credit losses for securities upon which an OTTI charge was previously recognized relates to all securities that were also previously impaired prior to January 1, 2016 and 2015.

(2) Does not include \$52 million of OTTI charges related to AFS private-label mortgage-backed securities for the six months ended June 30, 2015, that the FHLBank of Seattle intended to sell, and subsequently sold.

(3) Represents reductions related to securities sold or having reached final maturity during the period, and therefore are no longer held by the FHLBanks at the end of the period.

All other AFS and HTM Investment Securities

At June 30, 2016, the FHLBanks held certain other AFS and HTM securities in unrealized loss positions. These unrealized losses are due primarily to interest rate volatility and/or illiquidity. These losses are considered temporary as each FHLBank expects to recover the entire amortized cost basis on its remaining AFS and HTM securities in unrealized loss positions 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. As a result, each FHLBank does not consider these other AFS and HTM investment securities to be other-than-temporarily impaired at June 30, 2016.

Note 7 - 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 LIBOR or other specified indices, or consolidated discount note rates.

Table 7.1 - Advances Redemption Terms
(dollars in millions)

Contractual Maturity	June 30, 2016		December 31, 2015	
	Amount	Weighted-Average Interest Rate	Amount	Weighted-Average Interest Rate
Overdrawn demand and overnight deposit accounts	\$ 17	1.69%	\$ 26	3.70%
Due in 1 year or less	276,230	0.73%	251,458	0.70%
Due after 1 year through 2 years	120,943	1.17%	103,118	1.16%
Due after 2 years through 3 years	93,294	1.14%	95,768	1.23%
Due after 3 years through 4 years	59,116	1.15%	61,161	0.99%
Due after 4 years through 5 years	51,716	1.17%	46,331	1.13%
Thereafter	82,089	1.41%	71,890	1.54%
Index-amortizing advances(1)	1,554	2.92%	1,481	3.15%
Total par value	684,959	1.02%	631,233	1.02%
Commitment fees	(2)		(2)	
Discounts on AHP advances	(31)		(32)	
Premiums	169		201	
Discounts	(56)		(63)	
Hedging adjustments	4,624		2,644	
Fair value option valuation adjustments	129		41	
Total	\$ 689,792		\$ 634,022	

(1) Index-amortizing advances require repayment according to predetermined amortization schedules linked to the level of various indices. Generally, as market interest rates rise (fall), the maturity of an index-amortizing advance extends (contracts).

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). At June 30, 2016 and December 31, 2015, the FHLBanks had callable and prepayable advances outstanding totaling \$210.9 billion and \$170.8 billion. 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. If advances are prepaid, replacement funding may be available.

Some advances contain embedded options allowing an FHLBank to offer puttable and convertible advances. A member either can sell an embedded option to an FHLBank or can purchase an embedded option from an FHLBank.

With a puttable 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, and offer, subject to certain conditions, replacement funding at prevailing market rates. Generally, these put options are exercised when interest rates increase. At both June 30, 2016 and December 31, 2015, the FHLBanks had puttable advances outstanding totaling \$12.5 billion.

Convertible advances allow an FHLBank to convert an advance from one interest-payment term structure to another. When issuing convertible advances, an FHLBank may purchase put options from a member that allow that FHLBank to convert the fixed-rate advance to a variable-rate advance at the current market rate or another structure after an agreed-upon lockout period. A convertible advance carries a lower 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. 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. At June 30, 2016 and December 31, 2015, the FHLBanks had convertible advances outstanding totaling \$4.1 billion and \$5.3 billion.

Table 7.2 - Advances by Year of Contractual Maturity or Next Call Date and Next Put or Convert Date
(dollars in millions)

	Year of Contractual Maturity or Next Call Date(1)		Year of Contractual Maturity or Next Put or Convert Date	
	June 30, 2016	December 31, 2015	June 30, 2016	December 31, 2015
Overdrawn demand and overnight deposit accounts	\$ 17	\$ 26	\$ 17	\$ 26
Due in 1 year or less	433,889	380,262	287,825	264,554
Due after 1 year through 2 years	99,778	86,223	114,427	96,655
Due after 2 years through 3 years	66,834	74,732	91,941	91,702
Due after 3 years through 4 years	32,876	35,660	57,910	61,083
Due after 4 years through 5 years	22,770	25,288	51,487	45,348
Thereafter	27,241	27,561	79,798	70,384
Index-amortizing advances	1,554	1,481	1,554	1,481
Total par value	\$ 684,959	\$ 631,233	\$ 684,959	\$ 631,233

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

Contractual Maturity	June 30, 2016	December 31, 2015
Total fixed-rate	\$ 339,965	\$ 322,976
Total variable-rate	344,994	308,257
Total par value	\$ 684,959	\$ 631,233

Credit Risk Exposure and Security Terms

The FHLBanks' potential credit risk from advances is concentrated in commercial banks. The FHLBanks' advances outstanding that were greater than or equal to \$1.0 billion per borrower were \$482.1 billion and \$442.6 billion at June 30, 2016 and December 31, 2015. These advances were made to 99 and 96 borrowers (members and non-members) at June 30, 2016 and December 31, 2015, which represented 70.4% and 70.1% of total advances outstanding at June 30, 2016 and December 31, 2015. (See [Note 9 - Allowance for Credit Losses](#) for information related to the FHLBanks' credit risk on advances and allowance methodology for credit losses.)

Note 8 - Mortgage Loans

Mortgage Loans Held for Portfolio

Mortgage loans held for portfolio consist of loans obtained through the MPP and MPF Program and are either conventional or government-guaranteed or -insured mortgage loans. The MPP and MPF Program involve the purchase by the FHLBanks of 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. The FHLBanks are authorized to hold acquired member assets, such as assets acquired under the MPP and MPF Program.

Table 8.1 - Mortgage Loans Held for Portfolio
(dollars in millions)

	June 30, 2016	December 31, 2015
Fixed-rate, long-term single-family mortgage loans	\$ 37,928	\$ 36,346
Fixed-rate, medium-term(1) single-family mortgage loans	6,892	7,422
Total unpaid principal balance	44,820	43,768
Premiums	811	775
Discounts	(44)	(52)
Deferred loan costs, net	(3)	(3)
Hedging adjustments	124	115
Total mortgage loans held for portfolio	\$ 45,708	\$ 44,603

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

Table 8.2 - Mortgage Loans Held for Portfolio by Collateral/Guarantee Type
(dollars in millions)

	June 30, 2016	December 31, 2015
Conventional mortgage loans	\$ 40,546	\$ 39,320
Government-guaranteed or -insured mortgage loans	4,274	4,448
Total unpaid principal balance	<u>\$ 44,820</u>	<u>\$ 43,768</u>

Note 9 - Allowance for Credit Losses

Each FHLBank has established an allowance methodology for its applicable portfolio segments:

- credit products (advances, letters of credit, and other extensions of credit to borrowers);
- government-guaranteed or -insured mortgage loans held for portfolio;
- conventional MPF loans held for portfolio and conventional MPP loans held for portfolio;
- term federal funds sold; and
- term securities purchased under agreements to resell.

See *Note 1 - Summary of Significant Accounting Policies* and *Note 11 - Allowance for Credit Losses* on pages F-16 to F-17 and pages F-38 to F-44 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, for a description of allowance methodologies related to the FHLBanks' portfolio segments as well as the FHLBanks' policies for impairing financing receivables, placing them on non-accrual status, and charging them off when necessary.

Credit Products

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 credit products. At June 30, 2016 and December 31, 2015, each FHLBank had rights to collateral on a borrower-by-borrower basis with an estimated value equal to, or greater than, its outstanding extensions of credit.

Each FHLBank continues to evaluate and make changes to its collateral guidelines, as necessary, based on current market conditions. At June 30, 2016 and December 31, 2015, none of the FHLBanks had any credit products that were past due, on non-accrual status, or considered impaired. In addition, there were no troubled debt restructurings related to credit products at any FHLBank during the three and six months ended June 30, 2016 and 2015.

Based on the collateral held as security, each FHLBank management's credit extension and collateral policies and repayment history on credit products, no FHLBank has incurred any losses on its credit products. Accordingly, at June 30, 2016 and December 31, 2015, no FHLBank recorded any allowance for credit losses on these credit products, and no FHLBank recorded any liability to reflect an allowance for credit losses for off-balance sheet credit exposures. (See [Note 16 - Commitments and Contingencies](#) for additional information on the FHLBanks' off-balance sheet credit exposure.)

Government-Guaranteed or -Insured Mortgage Loans Held for Portfolio

An FHLBank invests 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, no FHLBank established an allowance for credit losses for its government-guaranteed or -insured mortgage loan portfolio at June 30, 2016 and December 31, 2015. Furthermore, none of these mortgage loans has been placed on non-accrual status because of the U.S. government guarantee or insurance on these loans and the contractual obligation of the loan servicer to repurchase the loans when certain criteria are met.

Mortgage Loans Held for Portfolio - Conventional MPF and Conventional MPP

Rollforward of Allowance for Credit Losses on Mortgage Loans. Each FHLBank established an allowance for credit losses on its conventional mortgage loans held for portfolio. Table 9.1 presents a rollforward of the allowance for credit losses on mortgage loans for the three and six months ended June 30, 2016 and 2015, and Table 9.2 presents the recorded investment in mortgage loans by impairment methodology at June 30, 2016 and December 31, 2015. The recorded investment in a loan is the unpaid principal balance of the loan, adjusted for accrued interest, net deferred loan fees or costs, unamortized premiums or discounts, fair value hedge adjustments, and direct write-downs. The recorded investment is not net of any valuation allowance.

Table 9.1 - Rollforward of Allowance for Credit Losses on Conventional MPF/MPP Mortgage Loans
(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Balance, at beginning of period	\$ 18	\$ 25	\$ 18	\$ 52
Charge-offs, net of recoveries	(1)	(7)	(2)	(33)
Provision (reversal) for credit losses	1	3	2	2
Balance, at end of period	<u>\$ 18</u>	<u>\$ 21</u>	<u>\$ 18</u>	<u>\$ 21</u>

Table 9.2 - Allowance for Credit Losses and Recorded Investment by Impairment Methodology on Conventional MPF/MPP Mortgage Loans

(dollars in millions)

	June 30, 2016	December 31, 2015
Allowance for credit losses, end of period		
Individually evaluated for impairment	\$ 6	\$ 5
Collectively evaluated for impairment	12	13
Total allowance for credit losses	<u>\$ 18</u>	<u>\$ 18</u>
Recorded investment, end of period		
Individually evaluated for impairment	\$ 315	\$ 2,661
Collectively evaluated for impairment	41,225	37,594
Total recorded investment	<u>\$ 41,540</u>	<u>\$ 40,255</u>

Credit Quality Indicators. Key credit quality indicators for mortgage loans include the migration of past due loans, non-accrual loans, loans in process of foreclosure, and impaired loans. Table 9.3 presents the FHLBanks' key credit quality indicators for mortgage loans at June 30, 2016 and December 31, 2015.

Table 9.3 - Recorded Investment in Delinquent Mortgage Loans
(dollars in millions)

	June 30, 2016		
	Conventional MPF/MPP	Government-Guaranteed or -Insured	Total
Past due 30-59 days	\$ 352	\$ 166	\$ 518
Past due 60-89 days	94	48	142
Past due 90 days or more	286	65	351
Total past due mortgage loans	732	279	1,011
Total current mortgage loans	40,808	4,095	44,903
Total mortgage loans(1)	<u>\$ 41,540</u>	<u>\$ 4,374</u>	<u>\$ 45,914</u>
Other delinquency statistics			
In process of foreclosure, included above(2)	\$ 161	\$ 19	\$ 180
Serious delinquency rate(3)	0.70%	1.49%	0.77%
Past due 90 days or more and still accruing interest	\$ 52	\$ 65	\$ 117
Loans on non-accrual status	<u>\$ 274</u>	<u>\$ —</u>	<u>\$ 274</u>

	December 31, 2015		
	Conventional MPF/MPP	Government-Guaranteed or -Insured	Total
Past due 30-59 days	\$ 402	\$ 203	\$ 605
Past due 60-89 days	118	61	179
Past due 90 days or more	343	76	419
Total past due mortgage loans	863	340	1,203
Total current mortgage loans	39,392	4,212	43,604
Total mortgage loans(1)	\$ 40,255	\$ 4,552	\$ 44,807
Other delinquency statistics			
In process of foreclosure, included above(2)	\$ 183	\$ 23	\$ 206
Serious delinquency rate(3)	0.86%	1.67%	0.94%
Past due 90 days or more and still accruing interest	\$ 66	\$ 76	\$ 142
Loans on non-accrual status	\$ 321	\$ —	\$ 321

- (1) The difference between the recorded investment and the carrying value of total mortgage loans of \$206 million and \$204 million at June 30, 2016 and December 31, 2015, primarily relates to accrued interest. (See [Note 8 - Mortgage Loans](#) for details on the carrying values of total mortgage loans.)
- (2) Includes loans where the decision of foreclosure or a similar alternative, such as pursuit of deed-in-lieu, has been reported. Loans in the process of foreclosure are included in past due or current loans depending on their delinquency status.
- (3) 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 delinquent or loans that are in the process of foreclosure (including past due or current loans in the process of foreclosure).

Individually Evaluated Impaired Loans. Certain conventional mortgage loans, primarily impaired mortgage loans that are considered collateral-dependent, may be specifically identified for purposes of calculating the allowance for credit losses. The estimated credit losses on impaired collateral-dependent loans may be separately determined because sufficient information exists to make a reasonable estimate of the inherent loss on these loans on an individual loan basis. 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).

Table 9.4 presents the recorded investment, unpaid principal balance, and related allowance of impaired conventional MPF/MPP mortgage loans individually assessed for impairment at June 30, 2016 and December 31, 2015, and Table 9.5 presents the average recorded investment and related interest income recognized on these loans during the three and six months ended June 30, 2016 and 2015.

Table 9.4 - Individually Evaluated Impaired Conventional MPF/MPP Mortgage Loans
(dollars in millions)

	June 30, 2016			December 31, 2015		
	Recorded Investment	Unpaid Principal Balance	Related Allowance	Recorded Investment	Unpaid Principal Balance	Related Allowance
With no related allowance	\$ 281	\$ 288	\$ —	\$ 312	\$ 321	\$ —
With an allowance	34	34	6	37	37	5
Total	\$ 315	\$ 322	\$ 6	\$ 349	\$ 358	\$ 5

Table 9.5 - Average Recorded Investment of Individually Impaired Conventional MPF/MPP Mortgage Loans and Related Interest Income Recognized
(dollars in millions)

	Three Months Ended June 30,			
	2016		2015	
	Average Recorded Investment	Interest Income Recognized	Average Recorded Investment	Interest Income Recognized
With no related allowance	\$ 286	\$ 1	\$ 359	\$ 1
With an allowance	34	—	39	—
Total	\$ 320	\$ 1	\$ 398	\$ 1

	Six Months Ended June 30,			
	2016		2015	
	Average Recorded Investment	Interest Income Recognized	Average Recorded Investment	Interest Income Recognized
With no related allowance	\$ 294	\$ 2	\$ 362	\$ 2
With an allowance	35	1	46	1
Total	\$ 329	\$ 3	\$ 408	\$ 3

Credit Enhancements. An FHLBank's allowance for credit losses considers the credit enhancements associated with conventional mortgage loans under the MPF Program and MPP. These credit enhancements apply after a homeowner's equity is exhausted. Credit enhancements may include primary mortgage insurance, supplemental mortgage insurance, the credit enhancement amount plus any recoverable performance-based credit enhancement fees (for MPF loans), and Lender Risk Account (for MPP loans). The amount of credit enhancements estimated to protect an FHLBank against credit losses is determined through the use of a validated model. Any incurred losses that would be recovered from the credit enhancements are not reserved as part of an FHLBank's allowance for credit losses on mortgage loans. (See *Note 11 - Allowance for Credit Losses* on pages F-42 to F-43 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, for additional information on credit enhancements for the Mortgage Partnership Finance Program and Mortgage Purchase Program.)

At June 30, 2016 and December 31, 2015, the amounts of First Loss Account remaining to cover the losses under the MPF program were \$386 million and \$385 million. This balance excludes amounts that may be recovered through the recapture of performance-based credit enhancement fees. 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 performance-based credit enhancement fees. An FHLBank records credit enhancement fees paid to the participating financial institutions as a reduction to mortgage interest income. Credit enhancement fees totaled \$6 million for both the three months ended June 30, 2016 and 2015, and \$11 million for both the six months ended June 30, 2016 and 2015.

At June 30, 2016 and December 31, 2015, the amounts of Lender Risk Account remaining to cover future potential losses under the MPP were \$274 million and \$248 million. The Lender Risk Account is a lender-specific account funded by an MPP FHLBank in an amount approximately sufficient to cover expected losses on the pool of mortgages.

Troubled Debt Restructurings. A troubled debt restructuring is considered to have occurred when a concession is granted to a borrower for economic or legal reasons related to the borrower's financial difficulties and that concession would not have been considered otherwise. An FHLBank has granted a concession when it does not expect to collect all amounts due to the FHLBank under the original contract as a result of the restructuring. Loans outstanding as of June 30, 2016 and December 31, 2015 that are discharged in Chapter 7 bankruptcy and have not been reaffirmed by the borrowers are also considered to be troubled debt restructurings, except in certain cases where supplemental mortgage insurance policies are held or where all contractual amounts due are still expected to be collected as a result of certain credit enhancements or government guarantees. As of June 30, 2016 and December 31, 2015, the recorded investment balances of mortgage loans classified as troubled debt restructurings were \$162 million and \$169 million.

An FHLBank's MPF loan troubled debt restructurings primarily involve modifying the borrower's monthly payment for a period of up to 36 months to achieve a housing expense ratio of no more than 31% of their qualifying monthly income. The outstanding principal balance is first re-amortized to reflect a principal and interest payment for a term not to exceed 40 years. This would result in a balloon payment at the original maturity date of the loan as the maturity date and the number of remaining monthly payments are not adjusted. If the 31% housing expense ratio is not achieved through re-amortization, the interest rate is reduced in 0.125% increments below the original note rate, to a floor rate of 3.00%, resulting in reduced principal and interest payments, for the temporary payment modification period of up to 36 months, until the desired 31% housing expense ratio is met.

An FHLBank's MPP loan troubled debt restructurings primarily involve loans where an agreement permits the recapitalization of past due amounts up to the original loan amount. Under this type of modification, no other terms of the original loan are modified, including the borrower's original interest rate and contractual maturity.

An MPF or MPP loan considered to be a troubled debt restructuring is individually evaluated for impairment when determining its related allowance for credit losses. Credit loss is measured by factoring in expected cash shortfalls (i.e., loss severity rate) incurred as of the reporting date as well as the economic loss attributable to delaying the original contractual principal and interest due dates, if applicable.

Real Estate Owned. The FHLBanks had \$44 million and \$57 million of real estate owned recorded in other assets on the Combined Statement of Condition at June 30, 2016 and December 31, 2015.

Term Federal Funds Sold and Term Securities Purchased Under Agreements to Resell

These investments are generally short-term, their recorded balance approximates fair value, and they are generally transacted with counterparties that are considered by an individual FHLBank to be of investment quality. FHLBank investments in federal funds are evaluated for purposes of a reserve for credit losses only if the investment is not paid when due. All investments in federal funds sold are unsecured and were repaid or expected to be repaid according to the contractual terms as of June 30, 2016 and December 31, 2015. Securities purchased under agreements to resell are considered collateralized financing arrangements and effectively represent short-term loans. The terms of these loans are structured such that if the market value of the underlying securities decreases below the market value required as collateral, the counterparty must place an equivalent amount of additional securities as collateral or remit an equivalent amount of cash. If an agreement to resell is deemed to be impaired, the difference between the fair value of the collateral and the amortized cost of the agreement is charged to earnings. Based upon the collateral held as security, each FHLBank determined that no allowance for credit losses was needed for its securities purchased under agreements to resell at June 30, 2016 and December 31, 2015.

Note 10 - 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 12 - Derivatives and Hedging Activities* on pages F-44 to F-52 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, for additional information on the FHLBanks' derivative transactions.)

Derivative financial instruments are used by an FHLBank when they are considered to be the most cost-effective alternative to achieve the FHLBank's financial and risk management objectives. Each FHLBank reevaluates its hedging strategies from time to time 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 (uncleared derivatives) or cleared through a Futures Commission Merchant (i.e., clearing agent) with a Derivative Clearing Organization (cleared derivatives).

Once a derivative transaction has been accepted for clearing by a Derivative Clearing Organization (Clearinghouse), the derivative transaction is novated and the executing counterparty is replaced with the Clearinghouse. 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 10.1 presents the fair value of derivative instruments, including 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 10.1 - Fair Value of Derivative Instruments
(dollars in millions)

	June 30, 2016			December 31, 2015		
	Notional Amount of Derivatives	Derivative Assets	Derivative Liabilities	Notional Amount of Derivatives	Derivative Assets	Derivative Liabilities
Derivatives designated as hedging instruments						
Interest-rate swaps	\$ 352,578	\$ 1,671	\$ 8,660	\$ 354,657	\$ 1,447	\$ 5,636
Interest-rate swaptions	5	—	—	4	—	—
Interest-rate caps or floors	—	—	—	60	—	—
Total derivatives designated as hedging instruments	352,583	1,671	8,660	354,721	1,447	5,636
Derivatives not designated as hedging instruments						
Interest-rate swaps	143,729	826	1,162	139,185	605	752
Interest-rate swaptions	1,607	59	—	1,776	41	—
Interest-rate caps or floors	28,555	74	3	28,615	111	12
Interest-rate futures or forwards	1,030	—	12	620	2	—
Mortgage delivery commitments	2,213	13	2	1,207	2	3
Other	345	3	3	176	1	—
Total derivatives not designated as hedging instruments	177,479	975	1,182	171,579	762	767
Total derivatives before netting and collateral adjustments	\$ 530,062	2,646	9,842	\$ 526,300	2,209	6,403
Netting adjustments and cash collateral(1)		(1,406)	(8,644)		(1,454)	(5,272)
Total derivative assets and total derivative liabilities		\$ 1,240	\$ 1,198		\$ 755	\$ 1,131

- (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. Cash collateral posted and related accrued interest was \$7,415 million and \$4,363 million at June 30, 2016 and December 31, 2015. Cash collateral received and related accrued interest was \$177 million and \$544 million at June 30, 2016 and December 31, 2015.

Table 10.2 presents the components of net gains (losses) on derivatives and hedging activities as presented on the Combined Statement of Income.

Table 10.2 - Net Gains (Losses) on Derivatives and Hedging Activities

(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Derivatives designated as hedging instruments				
Total net gains related to fair value hedge ineffectiveness ⁽¹⁾	\$ (10)	\$ 229	\$ (43)	\$ 231
Total net gains related to cash flow hedge ineffectiveness	3	1	3	1
Derivatives not designated as hedging instruments				
Economic hedges				
Interest-rate swaps	(46)	111	(221)	70
Interest-rate swaptions	7	(5)	17	3
Interest-rate caps or floors	(18)	(8)	(31)	(15)
Interest-rate futures or forwards	(16)	12	(29)	—
Net interest settlements	(13)	(2)	(44)	(7)
Other	—	—	(2)	—
Mortgage delivery commitments	19	(13)	39	1
Intermediary interest-rate swap transactions	1	1	1	1
Total net gains (losses) related to derivatives not designated as hedging instruments	(66)	96	(270)	53
Net gains (losses) on derivatives and hedging activities	\$ (73)	\$ 326	\$ (310)	\$ 285

(1) Consists of interest-rate swaps.

Table 10.3 presents, by type of hedged item, the gains (losses) on derivatives and the related hedged items in fair value hedging relationships and the effect of those derivatives on the FHLBanks' net interest income.

Table 10.3 - Effect of Fair Value Hedge-Related Derivative Instruments

(dollars in millions)

Hedged Item Type	Three Months Ended June 30, 2016			
	Gains (Losses) on Derivatives	Gains (Losses) on Hedged Items	Net Fair Value Hedge Ineffectiveness	Net Effect of Derivatives on Net Interest Income ⁽¹⁾
Advances	\$ (482)	\$ 494	\$ 12	\$ (456)
Consolidated bonds	156	(148)	8	236
Consolidated discount notes	2	(3)	(1)	1
Available-for-sale securities	(494)	465	(29)	(165)
Total	\$ (818)	\$ 808	\$ (10)	\$ (384)

Hedged Item Type	Three Months Ended June 30, 2015			
	Gains (Losses) on Derivatives	Gains (Losses) on Hedged Items	Net Fair Value Hedge Ineffectiveness	Net Effect of Derivatives on Net Interest Income ⁽¹⁾
Advances	\$ 1,372	\$ (1,163)	\$ 209	\$ (719)
Consolidated bonds	(425)	422	(3)	504
Consolidated discount notes	1	(1)	—	3
Available-for-sale securities	490	(467)	23	(169)
Total	\$ 1,438	\$ (1,209)	\$ 229	\$ (381)

Six Months Ended June 30, 2016

Hedged Item Type	Gains (Losses) on Derivatives	Gains (Losses) on Hedged Items	Net Fair Value Hedge Ineffectiveness	Net Effect of Derivatives on Net Interest Income(1)
Advances	\$ (2,035)	\$ 2,065	\$ 30	\$ (983)
Consolidated bonds	646	(674)	(28)	514
Consolidated discount notes	8	(11)	(3)	(4)
Available-for-sale securities	(1,332)	1,290	(42)	(337)
Total	\$ (2,713)	\$ 2,670	\$ (43)	\$ (810)

Six Months Ended June 30, 2015

Hedged Item Type	Gains (Losses) on Derivatives	Gains (Losses) on Hedged Items	Net Fair Value Hedge Ineffectiveness	Net Effect of Derivatives on Net Interest Income(1)
Advances	\$ 820	\$ (583)	\$ 237	\$ (1,452)
Consolidated bonds	18	(37)	(19)	1,003
Consolidated discount notes	3	(3)	—	4
Available-for-sale securities	193	(180)	13	(339)
Total	\$ 1,034	\$ (803)	\$ 231	\$ (784)

- (1) The net effect of derivatives, in fair value hedge relationships, on net interest income is included in the interest income or interest expense line item of the respective hedged item type. These amounts include the effect of net interest settlements attributable to designated fair value hedges but do not include \$(19) million and \$(168) million of amortization/accretion related to fair value hedging activities for the three months ended June 30, 2016 and 2015 and \$(34) million and \$(202) million for the six months ended June 30, 2016 and 2015.

Table 10.4 presents by type of hedged item in cash flow hedging relationships, the gains (losses) recognized in OCI, the gains (losses) reclassified from AOCI into income, and the effect of those hedging activities on the FHLBanks' net gains (losses) on derivatives and hedging activities on the Combined Statement of Income. (See [Note 14 - Accumulated Other Comprehensive Income \(Loss\)](#) for more details on the effect of cash flow hedges on AOCI.)

Table 10.4 - Effect of Cash Flow Hedge-Related Derivative Instruments
(dollars in millions)

Derivatives and Hedged Items in Cash Flow Hedging Relationships(1)	Three Months Ended June 30, 2016			
	Amount of Gains (Losses) Recognized in OCI on Derivatives (Effective Portion)	Location of Gains (Losses) Reclassified from AOCI into Income (Effective Portion)	Amount of Gains (Losses) Reclassified from AOCI into Income (Effective Portion)	Amount of Gains Recognized in Net Gains (Losses) on Derivatives and Hedging Activities (Ineffective Portion)
Interest-rate swaps				
Consolidated bonds	\$ (10)	Interest expense	\$ (8)	\$ (1)
Consolidated discount notes	(19)	Interest expense	(1)	4
Interest-rate caps or floors				
Advances	—	Interest income	2	—
Total	\$ (29)		\$ (7)	\$ 3
Derivatives and Hedged Items in Cash Flow Hedging Relationships(1)	Three Months Ended June 30, 2015			
	Amount of Gains (Losses) Recognized in OCI on Derivatives (Effective Portion)	Location of Gains (Losses) Reclassified from AOCI into Income (Effective Portion)	Amount of Gains (Losses) Reclassified from AOCI into Income (Effective Portion)	Amount of Gains Recognized in Net Gains (Losses) on Derivatives and Hedging Activities (Ineffective Portion)
Interest-rate swaps				
Consolidated bonds	\$ 13	Interest expense	\$ (7)	\$ —
Consolidated discount notes	100	Interest expense	—	1
Interest-rate caps or floors				
Advances	—	Interest income	2	—
Total	\$ 113		\$ (5)	\$ 1

Six Months Ended June 30, 2016				
Derivatives and Hedged Items in Cash Flow Hedging Relationships(1)	Amount of Gains (Losses) Recognized in OCI on Derivatives (Effective Portion)	Location of Gains (Losses) Reclassified from AOCI into Income (Effective Portion)	Amount of Gains (Losses) Reclassified from AOCI into Income (Effective Portion)	Amount of Gains Recognized in Net Gains (Losses) on Derivatives and Hedging Activities (Ineffective Portion)
Interest-rate swaps				
Consolidated bonds	\$ (28)	Interest expense	\$ (17)	\$ (1)
Consolidated discount notes	(132)	Interest expense	(2)	4
Interest-rate caps or floors				
Advances	—	Interest income	5	—
Total	<u>\$ (160)</u>		<u>\$ (14)</u>	<u>\$ 3</u>

Six Months Ended June 30, 2015				
Derivatives and Hedged Items in Cash Flow Hedging Relationships(1)	Amount of Gains (Losses) Recognized in OCI on Derivatives (Effective Portion)	Location of Gains (Losses) Reclassified from AOCI into Income (Effective Portion)	Amount of Gains (Losses) Reclassified from AOCI into Income (Effective Portion)	Amount of Gains Recognized in Net Gains (Losses) on Derivatives and Hedging Activities (Ineffective Portion)
Interest-rate swaps				
Consolidated bonds	\$ —	Interest expense	\$ (13)	\$ —
Consolidated discount notes	53	Interest expense	(1)	1
Interest-rate caps or floors				
Advances	—	Interest income	5	—
Total	<u>\$ 53</u>		<u>\$ (9)</u>	<u>\$ 1</u>

(1) Table 10.4 does not include \$(61) million and \$(71) million for the effect of net interest settlements on net interest income attributable to open cash flow hedges for the three months ended June 30, 2016 and 2015 and \$(117) million and \$(142) million for the six months ended June 30, 2016 and 2015.

For the three and six months ended June 30, 2016 and 2015, 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, 2016, \$3 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, 2016, the maximum length of time over which an FHLBank is hedging its exposure to the variability in future cash flows for forecasted transactions is fifteen years, excluding those forecasted transactions related to the payment of variable interest on existing financial instruments.

Managing Credit Risk on Derivatives

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. The aggregate fair value of all uncleared derivative instruments with credit-risk-related contingent features that were in a net liability position (before cash collateral and related accrued interest) at June 30, 2016, was \$3.3 billion, for which the FHLBanks have posted collateral with a fair value of \$2.8 billion 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 \$288 million of collateral at fair value to their uncleared derivatives counterparties at June 30, 2016.

For cleared derivatives, the Clearinghouse determines initial margin requirements and generally credit ratings are not factored into the initial margin. However, clearing agents may require additional initial margin to be posted based on credit considerations, including, but not limited to, credit rating downgrades. None of the FHLBanks were required to post additional initial margin by its clearing agents, based on credit considerations, at June 30, 2016.

Offsetting of Derivative Assets and Derivative Liabilities

An FHLBank presents derivative instruments, related cash collateral, including initial and variation margin, 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.

Table 10.5 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 received from or pledged to counterparties.

Table 10.5 - Offsetting of Derivative Assets and Derivative Liabilities
(dollars in millions)

	June 30, 2016		December 31, 2015	
	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
Derivative instruments meeting netting requirements				
Gross recognized amount				
Uncleared derivatives	\$ 1,368	\$ 5,231	\$ 1,446	\$ 4,667
Cleared derivatives	1,265	4,599	761	1,733
Total gross recognized amount	2,633	9,830	2,207	6,400
Gross amounts of netting adjustments and cash collateral				
Uncleared derivatives	(1,189)	(4,059)	(1,384)	(3,550)
Cleared derivatives	(217)	(4,585)	(70)	(1,722)
Total gross amounts of netting adjustments and cash collateral	(1,406)	(8,644)	(1,454)	(5,272)
Net amounts after netting adjustments and cash collateral				
Uncleared derivatives	179	1,172	62	1,117
Cleared derivatives	1,048	14	691	11
Total net amounts after netting adjustments and cash collateral	1,227	1,186	753	1,128
Derivative instruments not meeting netting requirements(1)				
Uncleared derivatives	13	12	2	3
Total derivative instruments not meeting netting requirements(1)	13	12	2	3
Total derivative assets and total derivative liabilities				
Uncleared derivatives	192	1,184	64	1,120
Cleared derivatives	1,048	14	691	11
Total derivative assets and total derivative liabilities presented on the Combined Statement of Condition	1,240	1,198	755	1,131
Non-cash collateral received or pledged not offset				
Can be sold or repledged				
Uncleared derivatives	3	50	12	64
Total can be sold or repledged	3	50	12	64
Cannot be sold or repledged				
Uncleared derivatives	145	409	16	332
Cleared derivatives	—	14	—	11
Total cannot be sold or repledged	145	423	16	343
Net amount(2)				
Uncleared derivatives	44	725	36	724
Cleared derivatives	1,048	—	691	—
Total net amount(2)	\$ 1,092	\$ 725	\$ 727	\$ 724

(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 overcollateralization at an FHLBank's individual clearing agent and/or counterparty level is not included in the determination of the net amount. At June 30, 2016 and December 31, 2015, the FHLBanks had additional net credit exposure of \$738 million and \$353 million due to instances where an FHLBank's non-cash collateral to a counterparty exceeded the FHLBank's net derivative liability position.

Note 11 - Deposits

The FHLBanks offer demand and overnight deposit programs to members and qualifying non-members. In addition, certain FHLBanks offer short-term interest-bearing deposit programs to members, and in certain cases, 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 items as other deposits.

Table 11.1 - Deposits
(dollars in millions)

	June 30, 2016	December 31, 2015
Interest-bearing		
Demand and overnight	\$ 7,927	\$ 7,635
Term	390	489
Other	19	15
Total interest-bearing	<u>8,336</u>	<u>8,139</u>
Non-interest-bearing		
Demand and overnight	161	252
Other	164	142
Total non-interest-bearing	<u>325</u>	<u>394</u>
Total deposits	<u>\$ 8,661</u>	<u>\$ 8,533</u>

Note 12 - Consolidated Obligations

Consolidated obligations consist of consolidated bonds and consolidated discount notes. 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 are issued primarily to raise intermediate- and 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 at or below their face value and are redeemed at par when they mature.

Table 12.1 - Consolidated Discount Notes Outstanding
(dollars in millions)

	Book Value	Par Value	Weighted-Average Interest Rate(1)
June 30, 2016	\$ 471,032	\$ 471,379	0.39%
December 31, 2015	\$ 494,045	\$ 494,343	0.26%

(1) Represents yield to maturity excluding concession fees.

Table 12.2 - Consolidated Bonds Outstanding by Contractual Maturity
(dollars in millions)

Year of Contractual Maturity	June 30, 2016		December 31, 2015	
	Amount	Weighted-Average Interest Rate	Amount	Weighted-Average Interest Rate
Due in 1 year or less	\$ 280,332	0.77%	\$ 192,642	0.75%
Due after 1 year through 2 years	101,729	1.15%	86,088	1.27%
Due after 2 years through 3 years	30,825	1.58%	40,794	1.52%
Due after 3 years through 4 years	19,955	2.09%	22,917	1.89%
Due after 4 years through 5 years	20,796	1.97%	20,628	2.11%
Thereafter	38,424	2.88%	47,354	2.82%
Index-amortizing notes	142	4.73%	158	4.73%
Total par value	492,203	1.17%	410,581	1.31%
Net premiums	507		570	
Hedging adjustments	1,388		721	
Fair value option valuation adjustments	60		(21)	
Total	\$ 494,158		\$ 411,851	

Consolidated obligations outstanding were issued with either fixed-rate coupon payment terms or variable-rate coupon payment terms that may use a variety of indices for interest-rate resets, including the federal funds effective rate, LIBOR, and others. 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 obligations are issued, an FHLBank typically enters into derivatives containing features that offset the terms and embedded options, if any, of the consolidated bond obligations.

Table 12.3 - Consolidated Bonds Outstanding by Call Features
(dollars in millions)

Par Value of Consolidated Bonds	June 30, 2016	December 31, 2015
Non-callable/non-puttable	\$ 432,660	\$ 336,930
Callable	59,543	73,651
Total par value	\$ 492,203	\$ 410,581

Table 12.4 - Consolidated Bonds Outstanding by Contractual Maturity or Next Call Date
(dollars in millions)

Year of Contractual Maturity or Next Call Date	June 30, 2016	December 31, 2015
Due in 1 year or less	\$ 332,785	\$ 260,664
Due after 1 year through 2 years	94,163	80,929
Due after 2 years through 3 years	24,088	25,982
Due after 3 years through 4 years	12,641	13,234
Due after 4 years through 5 years	9,886	9,956
Thereafter	18,498	19,658
Index-amortizing notes	142	158
Total par value	\$ 492,203	\$ 410,581

Note 13 - 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 is required to 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 (including additional capital from merger).
3. *Leverage capital.* Each FHLBank is required to 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, 2016, each FHLBank was in compliance with FHFA regulatory capital requirements.

Table 13.1 - Risk-Based Capital Requirements at June 30, 2016
(dollars in millions)

FHLBank	Risk-Based Capital	
	Minimum Requirement	Actual
Boston	\$ 621	\$ 3,554
New York	695	7,019
Pittsburgh	701	4,163
Atlanta	1,419	7,088
Cincinnati	605	5,106
Indianapolis	527	2,432
Chicago	984	4,960
Des Moines	888	7,159
Dallas	659	2,598
Topeka	309	1,846
San Francisco	2,468	5,834

Table 13.2 - Regulatory Capital Requirements at June 30, 2016
(dollars in millions)

FHLBank	Regulatory Capital Ratio		Regulatory Capital	
	Minimum Requirement	Actual	Minimum Requirement	Actual
Boston	4.0%	5.7%	\$ 2,486	\$ 3,554
New York	4.0%	5.5%	5,149	7,019
Pittsburgh	4.0%	4.8%	3,476	4,163
Atlanta	4.0%	4.9%	5,844	7,088
Cincinnati	4.0%	4.8%	4,246	5,106
Indianapolis	4.0%	4.7%	2,080	2,432
Chicago	4.0%	6.2%	3,226	4,960
Des Moines	4.0%	4.3%	6,714	7,287
Dallas	4.0%	4.8%	2,178	2,598
Topeka	4.0%	4.4%	1,860	2,037
San Francisco	4.0%	5.9%	3,977	5,834

Table 13.3 - Leverage Capital Requirements at June 30, 2016
(dollars in millions)

FHLBank	Leverage Capital Ratio		Leverage Capital	
	Minimum Requirement	Actual	Minimum Requirement	Actual
Boston	5.0%	8.6%	\$ 3,108	\$ 5,331
New York	5.0%	8.2%	6,436	10,528
Pittsburgh	5.0%	7.2%	4,345	6,244
Atlanta	5.0%	7.3%	7,305	10,632
Cincinnati	5.0%	7.2%	5,307	7,659
Indianapolis	5.0%	7.0%	2,600	3,648
Chicago	5.0%	9.2%	4,033	7,440
Des Moines	5.0%	6.5%	8,393	10,865
Dallas	5.0%	7.2%	2,722	3,897
Topeka	5.0%	6.4%	2,325	2,960
San Francisco	5.0%	8.8%	4,972	8,751

Each FHLBank is a cooperative whose member financial institutions and former members own all of the FHLBank's capital stock. 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.

Additional Capital from Merger

As a result of the merger between the FHLBanks of Des Moines and Seattle, the FHLBank of Des Moines recognized net assets acquired from the FHLBank of Seattle by recording the par value of capital stock issued in the transaction as capital stock, with the remaining portion of net assets acquired recorded as additional capital from merger. The FHLBank of Des Moines treats this additional capital from merger as a component of total capital for regulatory capital purposes. Following the merger, the FHLBank of Des Moines began distributing dividends on capital stock from additional capital from merger. For the three and six months ended June 30, 2016, the FHLBank of Des Moines paid dividends in the amount of \$35 million and \$66 million, resulting in an ending additional capital from merger balance of \$128 million at June 30, 2016. The FHLBank of Des Moines intends to pay future dividends, when and if declared, from this account until the additional capital from merger balance is depleted.

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 allocate 20% of its net income each quarter to a separate restricted retained earnings account until the balance of that account equals at least one percent of that FHLBank's average balance of outstanding consolidated obligations for the previous quarter. These restricted retained earnings are not available to pay dividends.

The FHLBank of San Francisco's Excess Stock Repurchase, Retained Earnings, and Dividend Framework establishes amounts to be retained in restricted retained earnings, which are not made available for dividends in the current dividend period. These amounts are not related to the Capital Agreement; however, they are also classified as restricted retained earnings on the Combined Statement of Condition. The FHLBank of San Francisco retains in restricted retained earnings any cumulative net gains in earnings (net of applicable assessments) resulting from gains or losses on derivatives and associated hedged items and financial instruments carried at fair value (valuation adjustments). In addition to any cumulative net gains resulting from valuation adjustments, the FHLBank of San Francisco holds an additional amount in restricted retained earnings intended to protect paid-in capital from the effects of an extremely adverse credit event, an extremely adverse operations risk event, a cumulative net loss related to the FHLBank of San Francisco's derivatives and associated hedged items and financial instruments carried at fair value, an extremely adverse change in the market value of the FHLBank of San Francisco's capital, a significant amount of additional credit-related OTTI on private-label residential MBS, or some combination of these effects, especially in periods of extremely low net income resulting from an adverse interest-rate environment, and to maintain capital compliance.

Table 13.4 presents the components of retained earnings, including the restricted amounts related to the Capital Agreement and the restricted amounts related to the FHLBank of San Francisco's Excess Stock Repurchase, Retained Earnings, and Dividend Framework.

Table 13.4 - Retained Earnings
(dollars in millions)

	Unrestricted Retained Earnings	Capital Agreement Restricted Retained Earnings	Other Restricted Retained Earnings(1)	Total Restricted Retained Earnings	Total Retained Earnings
Balance, December 31, 2014	\$ 9,736	\$ 1,673	\$ 1,835	\$ 3,508	\$ 13,244
Net income	1,356	345	(2)	343	1,699
Merger activity	(250)	(63)	—	(63)	(313)
Dividends on capital stock					
Cash	(800)	—	—	—	(800)
Stock	(33)	—	—	—	(33)
Balance, June 30, 2015	\$ 10,009	\$ 1,955	\$ 1,833	\$ 3,788	\$ 13,797
Balance, December 31, 2015	\$ 10,473	\$ 2,192	\$ 1,660	\$ 3,852	\$ 14,325
Net income	1,302	325	(10)	315	1,617
Dividends on capital stock					
Cash	(586)	—	—	—	(586)
Stock	(46)	—	—	—	(46)
Balance, June 30, 2016	\$ 11,143	\$ 2,517	\$ 1,650	\$ 4,167	\$ 15,310

(1) Represents retained earnings restricted by the FHLBank of San Francisco's Excess Stock Repurchase, Retained Earnings, and Dividend Framework related to valuation adjustments and the retained earnings buildup.

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 months ended June 30, 2016 and 2015, dividends on mandatorily redeemable capital stock in the amount of \$23 million and \$40 million were recorded as interest expense. For the six months ended June 30, 2016 and 2015, dividends on mandatorily redeemable capital stock in the amount of \$40 million and \$58 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 13.5 presents capital stock subject to mandatory redemption. Payment is contingent on 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 13.5 - Mandatorily Redeemable Capital Stock Rollforward
(dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Balance, at beginning of period	\$ 1,912	\$ 1,959	\$ 745	\$ 2,631
Net capital stock subject to mandatory redemption reclassified (to)/ from capital	254	(1)	1,912 ^(a)	137
Redemption/repurchase of mandatorily redeemable capital stock	(321)	(1,508) ^(b)	(811)	(2,319) ^(b)
Accrued stock dividend classified as mandatorily redeemable capital stock	—	—	(1)	1
Balance, at end of period	\$ 1,845	\$ 450	\$ 1,845	\$ 450

- (a) Consists primarily of reclassifications to mandatorily redeemable capital stock resulting from an FHFA rule effective February 19, 2016, that makes captive insurance companies ineligible for FHLBank membership. Captive insurance company members that were admitted as FHLBank members prior to September 12, 2014, will have their memberships terminated no later than February 19, 2021. Captive insurance company members that were admitted as FHLBank members on or after September 12, 2014, will have their memberships terminated no later than February 19, 2017.
- (b) Consists primarily of mandatorily redeemable capital stock redeemed in connection with the merger of the FHLBanks of Des Moines and Seattle as well as additional repurchases/redemptions by certain other FHLBanks.

Table 13.6 presents the amount of mandatorily redeemable capital stock at June 30, 2016, 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, if membership is terminated due to merger or consolidation, 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 13.6 - Mandatorily Redeemable Capital Stock by Contractual Year of Redemption
(dollars in millions)

	June 30, 2016
Year 1	\$ 32
Year 2	17
Year 3	7
Year 4	40
Year 5	403
Thereafter(1)	1,168
Past contractual redemption date due to remaining activity(2)	178
Total	<u>\$ 1,845</u>

- (1) Represents mandatorily redeemable capital stock resulting from an FHFA rule effective February 19, 2016, that makes captive insurance companies ineligible for FHLBank membership. Captive insurance company members that were admitted as FHLBank members prior to September 12, 2014, will have their memberships terminated no later than February 19, 2021. Captive insurance company members that were admitted as FHLBank members on or after September 12, 2014, will have their memberships terminated no later than February 19, 2017. 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, 2016, no FHLBank had excess capital stock outstanding totaling more than one percent of its total assets.

Capital Classification Determination

The FHFA has implemented the prompt corrective action provisions of the Housing Act. The FHFA rule defined four capital classifications for the FHLBanks: adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized, and the FHFA issued a regulation implementing the prompt corrective action provisions that apply to FHLBanks that are not deemed to be adequately capitalized. 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 is classified by the FHFA as adequately capitalized as of the date of the FHFA's most recent notification to each FHLBank.

Note 14 - Accumulated Other Comprehensive Income (Loss)

Table 14.1 presents a summary of changes in accumulated other comprehensive income (loss) for the three and six months ended June 30, 2016 and 2015.

Table 14.1 - Accumulated Other Comprehensive Income (Loss)

(dollars in millions)

	Three Months Ended June 30,						
	Net Unrealized Gains (Losses) on AFS Securities (Note 4)	Net Unrealized Gains (Losses) on HTM Securities Transferred from AFS Securities	Net Non-Credit Portion of OTTI Losses on AFS Securities (Notes 4 and 6)	Net Non-Credit Portion of OTTI Losses on HTM Securities (Notes 5 and 6)	Net Unrealized Gains (Losses) Relating to Hedging Activities (Note 10)	Pension and Postretirement Benefits	Total Accumulated Other Comprehensive Income (Loss)
Balance, March 31, 2015	\$ 1,293	\$ —	\$ 339	\$ (612)	\$ (805)	\$ (99)	\$ 116
Other comprehensive income before reclassifications							
Unrealized gains (losses)	(169)	—	(35)	—	113	—	(91)
Non-credit OTTI losses	—	—	(10)	(2)	—	—	(12)
Non-credit OTTI losses transferred	—	—	(1)	1	—	—	—
Change in fair value of other-than-temporarily impaired securities	—	—	15	—	—	—	15
Accretion of non-credit loss	—	—	—	31	—	—	31
Reclassifications from accumulated other comprehensive income (loss) to net income							
Reclassification of realized net (gains) losses included in net income	(6)	(1)	3	—	—	—	(4)
Non-credit OTTI to credit OTTI	—	—	4	2	—	—	6
Amortization on hedging activities (1)	—	—	—	—	4	—	4
Amortization - pension and postretirement	—	—	—	—	—	2	2
Net current period other comprehensive income (loss)	(175)	(1)	(24)	32	117	2	(49)
Merger activity(2)	(51)	—	—	—	—	—	(51)
Balance, June 30, 2015	<u>\$ 1,067</u>	<u>\$ (1)</u>	<u>\$ 315</u>	<u>\$ (580)</u>	<u>\$ (688)</u>	<u>\$ (97)</u>	<u>\$ 16</u>
Balance, March 31, 2016	\$ 372	\$ —	\$ 158	\$ (502)	\$ (750)	\$ (83)	\$ (805)
Other comprehensive income before reclassifications							
Unrealized gains (losses)	24	—	51	—	(29)	—	46
Non-credit OTTI losses	—	—	(1)	(1)	—	—	(2)
Change in fair value of other-than-temporarily impaired securities	—	—	30	—	—	—	30
Accretion of non-credit loss	—	—	—	24	—	—	24
Reclassifications from accumulated other comprehensive income (loss) to net income							
Reclassification of realized net (gains) losses included in net income	(4)	—	1	—	—	—	(3)
Non-credit OTTI to credit OTTI	—	—	2	1	—	—	3
Amortization on hedging activities (1)	—	—	—	—	4	—	4
Amortization - pension and postretirement	—	—	—	—	—	(2)	(2)
Net current period other comprehensive income (loss)	20	—	83	24	(25)	(2)	100
Balance, June 30, 2016	<u>\$ 392</u>	<u>\$ —</u>	<u>\$ 241</u>	<u>\$ (478)</u>	<u>\$ (775)</u>	<u>\$ (85)</u>	<u>\$ (705)</u>

Six Months Ended June 30,

	Net Unrealized Gains (Losses) on AFS Securities (Note 4)	Net Unrealized Gains (Losses) on HTM Securities Transferred from AFS Securities	Net Non-Credit Portion of OTTI Losses on AFS Securities (Notes 4 and 6)	Net Non-Credit Portion of OTTI Losses on HTM Securities (Notes 5 and 6)	Net Unrealized Gains (Losses) Relating to Hedging Activities (Note 10)	Pension and Postretirement Benefits	Total Accumulated Other Comprehensive Income (Loss)
Balance, December 31, 2014	\$ 1,203	\$ (1)	\$ 349	\$ (655)	\$ (749)	\$ (93)	\$ 54
Other comprehensive income before reclassifications							
Unrealized gains (losses)	(79)	—	(85)	—	53	—	(111)
Non-credit OTTI losses	—	—	(13)	(2)	—	—	(15)
Non-credit OTTI losses transferred	—	—	(12)	12	—	—	—
Change in fair value of other-than-temporarily impaired securities	—	—	70	—	—	—	70
Accretion of non-credit loss	—	—	—	63	—	—	63
Reclassifications from accumulated other comprehensive income (loss) to net income							
Reclassification of realized net (gains) losses included in net income	(6)	—	(52)	—	—	—	(58)
Non-credit OTTI to credit OTTI	—	—	58	2	—	—	60
Amortization on hedging activities (1)	—	—	—	—	8	—	8
Amortization - pension and postretirement	—	—	—	—	—	(4)	(4)
Net current period other comprehensive income (loss)	(85)	—	(34)	75	61	(4)	13
Merger activity(2)	(51)	—	—	—	—	—	(51)
Balance, June 30, 2015	<u>\$ 1,067</u>	<u>\$ (1)</u>	<u>\$ 315</u>	<u>\$ (580)</u>	<u>\$ (688)</u>	<u>\$ (97)</u>	<u>\$ 16</u>

Balance, December 31, 2015	\$ 366	\$ (1)	\$ 241	\$ (527)	\$ (626)	\$ (87)	\$ (634)
Other comprehensive income before reclassifications							
Unrealized gains (losses)	42	1	—	—	(160)	—	(117)
Non-credit OTTI losses	—	—	(12)	(1)	—	—	(13)
Change in fair value of other-than-temporarily impaired securities	—	—	7	—	—	—	7
Accretion of non-credit loss	—	—	—	48	—	—	48
Reclassifications from accumulated other comprehensive income (loss) to net income							
Reclassification of realized net (gains) losses included in net income	(16)	—	—	—	—	—	(16)
Non-credit OTTI to credit OTTI	—	—	5	2	—	—	7
Amortization on hedging activities (1)	—	—	—	—	11	—	11
Amortization - pension and postretirement	—	—	—	—	—	2	2
Net current period other comprehensive income (loss)	26	1	—	49	(149)	2	(71)
Balance, June 30, 2016	<u>\$ 392</u>	<u>\$ —</u>	<u>\$ 241</u>	<u>\$ (478)</u>	<u>\$ (775)</u>	<u>\$ (85)</u>	<u>\$ (705)</u>

(1) Amortization on hedging activities consists of amortization to:	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Interest income - Advances	\$ 2	\$ 2	\$ 5	\$ 5
Interest expense - Consolidated bonds	(8)	(7)	(17)	(13)
Interest expense - Consolidated discount notes	(1)	—	(2)	(1)
Net gains (losses) on derivatives and hedging activities	3	1	3	1
Total amortization on hedging activities	<u>\$ (4)</u>	<u>\$ (4)</u>	<u>\$ (11)</u>	<u>\$ (8)</u>

(2) Represents the elimination of the FHLBank of Seattle's closing AOCI balance in connection with the merger.

Note 15 - 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. 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, 2016 and December 31, 2015.

Fair Value Hierarchy

The FHLBanks record trading securities, available-for-sale 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 private-label MBS, certain mortgage loans held for portfolio, and certain other assets on a non-recurring basis. GAAP establishes a fair value hierarchy and requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The inputs are evaluated and an overall level for the 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.
- **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. These reclassifications are reported as transfers in/out at fair value at the beginning of the quarter in which the changes occur. The FHLBanks had no transfers of assets or liabilities recorded at fair value on a recurring basis during the three and six months ended June 30, 2016 and 2015.

Table 15.1 presents the carrying value, fair value, and fair value hierarchy of financial assets and liabilities of the FHLBanks at June 30, 2016 and December 31, 2015. 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.

Table 15.1 - Fair Value Summary
(dollars in millions)

Financial Instruments	June 30, 2016					
	Carrying Value	Total	Fair Value			Netting Adjustment and Cash Collateral(1)
			Level 1	Level 2	Level 3	
Assets						
Cash and due from banks	\$ 6,199	\$ 6,199	\$ 6,199	\$ —	\$ —	\$ —
Interest-bearing deposits	2,908	2,908	1,450	1,458	—	—
Securities purchased under agreements to resell	46,910	46,910	—	46,910	—	—
Federal funds sold	45,671	45,671	—	45,671	—	—
Trading securities	12,026	12,026	15	12,011	—	—
Available-for-sale securities	82,631	82,631	41	75,163	7,427	—
Held-to-maturity securities	95,643	97,485	—	90,750	6,735	—
Advances(2)	689,792	689,916	—	689,916	—	—
Mortgage loans held for portfolio, net	45,690	47,716	—	47,481	235	—
Mortgage loans held for sale(3)	36	36	—	36	—	—
Accrued interest receivable	1,171	1,171	—	1,171	—	—
Derivative assets, net	1,240	1,240	—	2,646	—	(1,406)
Other assets	101	101	91	10	—	—
Liabilities						
Deposits	8,661	8,661	—	8,661	—	—
Consolidated obligations						
Discount notes(4)	471,032	471,098	—	471,098	—	—
Bonds(5)	494,158	497,914	—	497,914	—	—
Total consolidated obligations	965,190	969,012	—	969,012	—	—
Mandatorily redeemable capital stock	1,845	1,845	1,845	—	—	—
Accrued interest payable	982	982	—	982	—	—
Derivative liabilities, net	1,198	1,198	—	9,842	—	(8,644)
Other liabilities	52	52	52	—	—	—

December 31, 2015

Financial Instruments	Carrying Value	Fair Value				Netting Adjustment and Cash Collateral(1)
		Total	Level 1	Level 2	Level 3	
Assets						
Cash and due from banks	\$ 14,289	\$ 14,289	\$ 14,289	\$ —	\$ —	\$ —
Interest-bearing deposits	1,836	1,836	650	1,186	—	—
Securities purchased under agreements to resell	47,827	47,827	—	47,827	—	—
Federal funds sold	42,380	42,380	—	42,380	—	—
Trading securities	10,760	10,760	14	10,746	—	—
Available-for-sale securities	75,916	75,916	35	67,589	8,292	—
Held-to-maturity securities	94,965	96,123	—	88,610	7,513	—
Advances(2)	634,022	633,569	—	633,569	—	—
Mortgage loans held for portfolio, net	44,585	45,960	—	45,717	243	—
Mortgage loans held for sale(3)	54	54	—	54	—	—
Accrued interest receivable	1,112	1,112	—	1,112	—	—
Derivative assets, net	755	755	—	2,205	4	(1,454)
Other assets	90	90	81	9	—	—
Liabilities						
Deposits	8,533	8,533	—	8,533	—	—
Consolidated obligations						
Discount notes(4)	494,045	494,021	—	494,021	—	—
Bonds(5)	411,851	413,127	—	413,072	55	—
Total consolidated obligations	905,896	907,148	—	907,093	55	—
Mandatorily redeemable capital stock	745	745	745	—	—	—
Accrued interest payable	986	986	—	986	—	—
Derivative liabilities, net	1,131	1,131	—	6,403	—	(5,272)
Other liabilities	48	48	48	—	—	—
Subordinated notes	944	966	—	966	—	—

(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 \$12,216 million and \$13,744 million of advances recorded under fair value option at June 30, 2016 and December 31, 2015.

(3) Represents mortgage loans held for sale recorded under fair value option, included in other assets on the Combined Statement of Condition at June 30, 2016 and December 31, 2015.

(4) Includes \$20,806 million and \$21,478 million of consolidated discount notes recorded under fair value option at June 30, 2016 and December 31, 2015.

(5) Includes \$18,706 million and \$20,735 million of consolidated bonds recorded under fair value option at June 30, 2016 and December 31, 2015, and \$55 million of consolidated bonds that are carried at fair value under a full fair value hedge strategy at December 31, 2015.

Summary of Valuation Methodologies and Primary Inputs

A description of the valuation methodologies and primary inputs is disclosed in *Note 20 - Fair Value*, pages F-70 to F-74, of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015. There have been no significant changes in these valuation methodologies and primary inputs during the three and six months ended June 30, 2016.

Fair Value Measurements

Table 15.2 presents the fair value of assets and liabilities that are recorded on a recurring or non-recurring basis at June 30, 2016 and December 31, 2015, by level within the fair value hierarchy. The FHLBanks measure certain held-to-maturity securities and 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 15.2 - Fair Value Measurements
(dollars in millions)

	June 30, 2016				Netting Adjustment and Cash Collateral(1)
	Total	Level 1	Level 2	Level 3	
Recurring fair value measurements - Assets					
Trading securities					
U.S. Treasury obligations	\$ 2,863	\$ —	\$ 2,863	\$ —	\$ —
Other U.S. obligations	236	—	236	—	—
GSE and Tennessee Valley Authority obligations	6,860	—	6,860	—	—
State or local housing agency obligations	1	—	1	—	—
Other non-MBS	305	15	290	—	—
Other U.S. obligations single-family MBS	22	—	22	—	—
GSE single-family MBS	143	—	143	—	—
GSE multifamily MBS	1,596	—	1,596	—	—
Total trading securities	12,026	15	12,011	—	—
Available-for-sale securities					
Certificates of deposit	1,200	—	1,200	—	—
Other U.S. obligations	4,657	—	4,657	—	—
GSE and Tennessee Valley Authority obligations	17,380	—	17,380	—	—
State or local housing agency obligations	1,279	—	1,279	—	—
Federal Family Education Loan Program ABS	4,834	—	4,834	—	—
Other non-MBS	1,172	41	1,131	—	—
Other U.S. obligations single-family MBS	5,262	—	5,262	—	—
Other U.S. obligations multifamily MBS	687	—	687	—	—
GSE single-family MBS	10,264	—	10,264	—	—
GSE multifamily MBS	28,469	—	28,469	—	—
Private-label residential MBS	7,427	—	—	7,427	—
Total available-for-sale securities	82,631	41	75,163	7,427	—
Advances(2)	12,216	—	12,216	—	—
Mortgage loans held for sale(3)	36	—	36	—	—
Derivative assets, net					
Interest-rate related	1,227	—	2,633	—	(1,406)
Mortgage delivery commitments	13	—	13	—	—
Total derivative assets, net	1,240	—	2,646	—	(1,406)
Other assets	101	91	10	—	—
Total recurring assets at fair value	\$ 108,250	\$ 147	\$ 102,082	\$ 7,427	\$ (1,406)

June 30, 2016

	Total	Level 1	Level 2	Level 3	Netting Adjustment and Cash Collateral(1)
Recurring fair value measurements - Liabilities					
Consolidated Obligations					
Discount notes(4)	\$ 20,806	\$ —	\$ 20,806	\$ —	\$ —
Bonds(5)	18,706	—	18,706	—	—
Total consolidated obligations	39,512	—	39,512	—	—
Derivative liabilities, net					
Interest-rate related	1,196	—	9,840	—	(8,644)
Mortgage delivery commitments	2	—	2	—	—
Total derivative liabilities, net	1,198	—	9,842	—	(8,644)
Total recurring liabilities at fair value	\$ 40,710	\$ —	\$ 49,354	\$ —	\$ (8,644)
Non-recurring fair value measurements - Assets(6)					
Held-to-maturity securities					
Private-label residential MBS	\$ 14	\$ —	\$ —	\$ 14	
Mortgage loans held for portfolio	75	—	2	73	
Real estate owned	22	—	—	22	
Total non-recurring assets at fair value	\$ 111	\$ —	\$ 2	\$ 109	

December 31, 2015

	Total	Level 1	Level 2	Level 3	Netting Adjustment and Cash Collateral(1)
Recurring fair value measurements - Assets					
Trading securities					
U.S. Treasury obligations	\$ 1,310	\$ —	\$ 1,310	\$ —	\$ —
Other U.S. obligations	237	—	237	—	—
GSE and Tennessee Valley Authority obligations	7,216	—	7,216	—	—
State or local housing agency obligations	1	—	1	—	—
Other non-MBS	290	14	276	—	—
Other U.S. obligations single-family MBS	24	—	24	—	—
GSE single-family MBS	159	—	159	—	—
GSE multifamily MBS	1,523	—	1,523	—	—
Total trading securities	10,760	14	10,746	—	—
Available-for-sale securities					
Certificates of deposit	700	—	700	—	—
Other U.S. obligations	4,829	—	4,829	—	—
GSE and Tennessee Valley Authority obligations	14,863	—	14,863	—	—
State or local housing agency obligations	1,199	—	1,199	—	—
Federal Family Education Loan Program ABS	5,299	—	5,299	—	—
Other non-MBS	1,124	35	1,089	—	—
Other U.S. obligations single-family MBS	4,587	—	4,587	—	—
Other U.S. obligations multifamily MBS	744	—	744	—	—
GSE single-family MBS	9,586	—	9,586	—	—
GSE multifamily MBS	24,693	—	24,693	—	—
Private-label residential MBS	8,282	—	—	8,282	—
Home equity loan ABS	10	—	—	10	—
Total available-for-sale securities	75,916	35	67,589	8,292	—

December 31, 2015

	Total	Level 1	Level 2	Level 3	Netting Adjustment and Cash Collateral(1)
Advances(2)	13,744	—	13,744	—	—
Mortgage loans held for sale(3)	54	—	54	—	—
Derivative assets, net					
Interest-rate related	753	—	2,203	4	(1,454)
Mortgage delivery commitments	2	—	2	—	—
Total derivative assets, net	755	—	2,205	4	(1,454)
Other assets	90	81	9	—	—
Total recurring assets at fair value	\$ 101,319	\$ 130	\$ 94,347	\$ 8,296	\$ (1,454)
Recurring fair value measurements - Liabilities					
Consolidated Obligations					
Discount notes(4)	\$ 21,478	\$ —	\$ 21,478	\$ —	\$ —
Bonds(5)	20,790	—	20,735	55	—
Total consolidated obligations	42,268	—	42,213	55	—
Derivative liabilities, net					
Interest-rate related	1,128	—	6,400	—	(5,272)
Mortgage delivery commitments	3	—	3	—	—
Total derivative liabilities, net	1,131	—	6,403	—	(5,272)
Total recurring liabilities at fair value	\$ 43,399	\$ —	\$ 48,616	\$ 55	\$ (5,272)
Non-recurring fair value measurements - Assets(7)					
Held-to-maturity securities					
Private-label residential MBS	\$ 36	\$ —	\$ —	\$ 36	
Mortgage loans held for portfolio	127	—	11	116	
Real estate owned	32	—	—	32	
Total non-recurring assets at fair value	\$ 195	\$ —	\$ 11	\$ 184	

- (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 advances recorded under fair value option at June 30, 2016 and December 31, 2015.
- (3) Represents mortgage loans held for sale recorded under fair value option, included in other assets on the Combined Statement of Condition at June 30, 2016 and December 31, 2015.
- (4) Represents consolidated discount notes recorded under fair value option at June 30, 2016 and December 31, 2015.
- (5) Represents \$18,706 million and \$20,735 million of consolidated bonds recorded under fair value option at June 30, 2016 and December 31, 2015, and \$55 million of consolidated bonds that are carried at fair value under a full fair value hedge strategy at December 31, 2015.
- (6) The fair value information presented is as of the date the fair value adjustment was recorded during the six months ended June 30, 2016.
- (7) The fair value information presented is as of the date the fair value adjustment was recorded during the year ended December 31, 2015.

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

Table 15.3 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, 2016 and 2015.

Table 15.3 - Rollforward of Level 3 Assets and Liabilities

(dollars in millions)

	Three Months Ended June 30, 2016			
	Available-for-Sale Securities		Derivative Assets(1)	
	Private-Label Residential MBS	Home Equity Loan ABS	Interest-Rate Related	Consolidated Bonds
Balance, at beginning of period	\$ 7,878	\$ —	\$ —	\$ —
Total gains (losses) included in earnings				
Net gains (losses) on sale of available-for-sale securities	—	(1)	—	—
Interest income	47	—	—	—
Net other-than-temporary impairment losses	(4)	—	—	—
Total gains (losses) included in other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	3	—	—	—
Net amount of impairment losses reclassified to (from) non-interest income	(1)	1	—	—
Net change in fair value of other-than-temporarily impaired securities	81	—	—	—
Purchases, issuances, sales, and settlements				
Settlements	(577)	—	—	—
Balance, at end of period	\$ 7,427	\$ —	\$ —	\$ —
Total amount of gains (losses) for the period included in earnings attributable to the change in unrealized gains/losses relating to assets and liabilities held at end of period	\$ 29	\$ —	\$ —	\$ —

	Three Months Ended June 30, 2015			
	Available-for-Sale Securities		Derivative Assets(1)	
	Private-Label Residential MBS	Home Equity Loan ABS	Interest-Rate Related	Consolidated Bonds
Balance, at beginning of period	\$ 9,490	\$ 11	\$ 9	\$ (59)
Total gains (losses) included in earnings				
Net gains (losses) on sale of available-for-sale securities	(3)	—	—	—
Interest income	39	1	—	—
Net other-than-temporary impairment losses	(8)	—	—	—
Total gains (losses) included in other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	2	—	—	—
Net amount of impairment losses reclassified to (from) non-interest income	(6)	—	—	—
Net change in fair value of other-than-temporarily impaired securities	(19)	(1)	—	—
Purchases, issuances, sales, and settlements				
Sales	1	—	—	—
Settlements	(386)	(1)	—	—
Transfers from held-to-maturity to available-for-sale securities(2)	4	—	—	—
Balance, at end of period	\$ 9,114	\$ 10	\$ 9	\$ (59)
Total amount of gains (losses) for the period included in earnings attributable to the change in unrealized gains/losses relating to assets and liabilities held at end of period	\$ 20	\$ 1	\$ —	\$ —

	Six Months Ended June 30, 2016			
	Available-for-Sale Securities		Derivative Assets(1)	
	Private-Label Residential MBS	Home Equity Loan ABS	Interest-Rate Related	Consolidated Bonds
Balance, at beginning of period	\$ 8,282	\$ 10	\$ 4	\$ (55)
Total gains (losses) included in earnings				
Net gains (losses) on derivatives and hedging activities	—	—	(4)	55
Interest income	94	—	—	—
Net other-than-temporary impairment losses	(12)	—	—	—
Total gains (losses) included in other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	1	—	—	—
Net amount of impairment losses reclassified to (from) non-interest income	(7)	—	—	—
Net change in fair value of other-than-temporarily impaired securities	8	(1)	—	—
Purchases, issuances, sales, and settlements				
Sales	—	(8)	—	—
Settlements	(939)	(1)	—	—
Balance, at end of period	\$ 7,427	\$ —	\$ —	\$ —
Total amount of gains (losses) for the period included in earnings attributable to the change in unrealized gains/losses relating to assets and liabilities held at end of period	\$ 55	\$ —	\$ —	\$ 55

	Six Months Ended June 30, 2015			
	Available-for-Sale Securities		Derivative Assets(1)	
	Private-Label Residential MBS	Home Equity Loan ABS	Interest-Rate Related	Consolidated Bonds
Balance, at beginning of period	\$ 11,036	\$ 12	\$ 13	\$ (62)
Total gains (losses) included in earnings				
Net gains (losses) on sale of available-for-sale securities	52	—	—	—
Net gains (losses) on derivatives and hedging activities	—	—	(4)	3
Interest income	81	1	—	—
Net other-than-temporary impairment losses	(63)	—	—	—
Total gains (losses) included in other comprehensive income				
Net unrealized gains (losses) on available-for-sale securities	(46)	—	—	—
Net amount of impairment losses reclassified to (from) non-interest income	45	—	—	—
Net change in fair value of other-than-temporarily impaired securities	(14)	(1)	—	—
Purchases, issuances, sales, and settlements				
Sales	(1,560)	—	—	—
Settlements	(748)	(2)	—	—
Transfers from held-to-maturity to available-for-sale securities(2)	331	—	—	—
Balance, at end of period	\$ 9,114	\$ 10	\$ 9	\$ (59)
Total amount of gains (losses) for the period included in earnings attributable to the change in unrealized gains/losses relating to assets and liabilities held at end of period	\$ 43	\$ 1	\$ —	\$ 4

(1) Balances exclude netting adjustments and cash collateral.

(2) In March 2015, the FHLBank of Seattle transferred \$323 million of its private-label residential MBS from its HTM portfolio to its AFS portfolio based on its intent to sell its private-label residential MBS in connection with the merger with the FHLBank of Des Moines. The FHLBank of Seattle subsequently sold these private-label residential MBS. The remaining balance relates to certain FHLBanks that elected to transfer its private-label residential MBS that had credit-related OTTI from its respective held-to-maturity portfolio to its respective available-for-sale portfolio during the six months ended June 30, 2015. (See [Note 6 - Other-than-Temporary Impairment Analysis](#) for additional information on these transfers.)

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 15.4 presents net gains (losses) related to financial assets and liabilities for which the fair value option was elected during the three and six months ended June 30, 2016 and 2015.

Table 15.4 - Fair Value Option - Financial Assets and Liabilities
(dollars in millions)

Net Gains (Losses) on Financial Instruments Held under Fair Value Option	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Advances	\$ 20	\$ (38)	\$ 87	\$ (12)
Mortgage loans held for sale(1)	(1)	—	—	—
Consolidated discount notes	(5)	(4)	(14)	(7)
Consolidated bonds	(24)	12	(73)	(20)
Total net gains (losses)	\$ (10)	\$ (30)	\$ —	\$ (39)

(1) Included in other assets on the Combined Statement of Condition at June 30, 2016.

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. The change in fair value does not include changes in instrument-specific credit risk. Each of the Electing FHLBanks determined that no adjustments to the fair values of its instruments recorded under fair value option for instrument-specific credit risk were necessary during the three and six months ended June 30, 2016 and 2015.

Table 15.5 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, 2016 and December 31, 2015.

Table 15.5 - Aggregate Fair Value and Aggregate Unpaid Balance
(dollars in millions)

	June 30, 2016			December 31, 2015		
	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(1)	\$ 12,216	\$ 12,087	\$ 129	\$ 13,744	\$ 13,703	\$ 41
Mortgage loans held for sale(2)	36	34	2	54	53	1
Consolidated discount notes	20,806	20,785	21	21,478	21,468	10
Consolidated bonds	18,706	18,646	60	20,735	20,756	(21)

(1) At June 30, 2016 and December 31, 2015, none of the advances were 90 days or more past due or had been placed on non-accrual status.

(2) Included in other assets on the Combined Statement of Condition at June 30, 2016 and December 31, 2015.

Note 16 - Commitments and Contingencies

Off-Balance Sheet Commitments

Table 16.1 - Off-Balance Sheet Commitments
(dollars in millions)

Notional amount	June 30, 2016			December 31, 2015
	Expire Within One Year	Expire After One Year	Total	Total
Standby letters of credit outstanding(1)	\$ 95,387	\$ 27,080	\$ 122,467	\$ 123,500
Unsettled consolidated bonds, at par(2)	5,133	—	5,133	808
Unsettled consolidated discount notes, at par	7,389	—	7,389	11,414
Commitments for standby bond purchases	642	1,625	2,267	2,517
Unused lines of credit - advances	2,347	—	2,347	2,380
Commitments to fund additional advances	5,054	407	5,461	1,990
Commitments to purchase mortgage loans	1,327	—	1,327	807
Other(3)	487	1	488	337

(1) Excludes unconditional commitments to issue standby letters of credit of \$237 million and \$168 million at June 30, 2016 and December 31, 2015.

(2) Unsettled consolidated bonds of \$2,459 million and \$510 million were hedged with associated interest-rate swaps at June 30, 2016 and December 31, 2015.

(3) Consists primarily of commitments related to MPF products and commitments to purchase investments not yet traded.

Standby Letters of Credit. A standby letter of credit is a financing arrangement between an FHLBank and its member. 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 payment amount is converted into a collateralized advance to the member. These standby letters of credit have original expiration periods of up to 20 years, currently expiring no later than 2034. The carrying value of guarantees related to standby letters of credit are recorded in other liabilities and were \$141 million and \$179 million at June 30, 2016 and December 31, 2015.

Each FHLBank monitors the creditworthiness of its members that have standby letters of credit. In addition, standby letters of credit are fully collateralized at the time of issuance. As a result, each FHLBank has deemed it unnecessary to record any additional liability on these commitments.

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. The standby bond-purchase commitments entered into by these FHLBanks have original expiration periods of up to seven years, currently expiring no later than 2020, although some are renewable at the option of the affected FHLBank. At both June 30, 2016 and December 31, 2015, the FHLBanks had standby bond-purchase commitments with 12 state housing authorities. During the six months ended June 30, 2016 and 2015, the FHLBanks were not required to purchase any bonds under these agreements.

Pledged Collateral

Certain FHLBanks pledged securities, as collateral, related to derivatives. (See [Note 10 - Derivatives and Hedging Activities](#) for additional information about the FHLBanks' pledged collateral and other credit-risk-related contingent features.)

Lehman Bankruptcy

On September 15, 2008, Lehman Brothers Holdings, Inc. (LBHI), the parent company of Lehman Brothers Special Financing (LBSF) and a guarantor of LBSF's obligations, announced it had filed a petition for bankruptcy protection under Chapter 11 of the U.S. Bankruptcy Code. This filing precipitated the termination of the FHLBanks' derivatives transactions with LBSF. Each affected FHLBank calculated its resulting settlement amount, including in that calculation any unreturned collateral pledged in connection with those transactions.

Several FHLBanks received a derivatives alternative dispute resolution (ADR) notice from the LBHI bankruptcy estate relating to the unwinding of derivatives transactions between LBSF and individual FHLBanks in 2008. Under the derivatives ADR notice, an FHLBank may agree to the demand, deny the demand, or make a counteroffer and ultimately arrive at a settlement of the demand. Some of these FHLBanks have settled their disputes with the LBHI bankruptcy estate. Each of the FHLBanks of New York and Cincinnati has disclosed information regarding its legal proceedings in connection with LBHI's insolvency in its individual Second Quarter 2016 SEC Form 10-Q.

Other Legal Proceedings

The FHLBanks are subject to other 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 17 - Subsequent Events

Subsequent events have been evaluated from July 1, 2016, through the time of publication of this Combined Financial Report. 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, and the following event:

FHLBank of San Francisco

In July 2016, the FHLBank of San Francisco recognized \$240 million in gains on litigation settlements, net, in connection with the FHLBank of San Francisco's private-label MBS litigation and settlement agreements with certain defendants.

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FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF CONDITION
JUNE 30, 2016
(Unaudited)

<i>(dollars in millions, except par value)</i>	Combined	Combining Adjustments	Boston	New York
Assets				
Cash and due from banks	\$ 6,199	\$ (1)	\$ 414	\$ 345
Investments	285,789	(247)	19,676	29,988
Advances	689,792	—	38,242	95,273
Mortgage loans held for portfolio, net	45,690	(2)	3,628	2,631
Other assets	3,186	(3)	200	489
Total assets	<u>\$ 1,030,656</u>	<u>\$ (253)</u>	<u>\$ 62,160</u>	<u>\$ 128,726</u>
Liabilities				
Deposits	\$ 8,661	\$ (24)	\$ 635	\$ 1,365
Consolidated obligations				
Discount notes	471,032	1	30,484	49,072
Bonds	494,158	(251)	27,139	70,900
Total consolidated obligations	965,190	(250)	57,623	119,972
Mandatorily redeemable capital stock	1,845	(2)	35	30
Other liabilities	5,414	2	706	585
Total liabilities	<u>981,110</u>	<u>(274)</u>	<u>58,999</u>	<u>121,952</u>
Capital				
Capital stock				
Class B putable (\$100 par value) issued and outstanding	34,625	—	2,354	5,666
Class A putable (\$100 par value) issued and outstanding	188	—	—	—
Total capital stock	34,813	—	2,354	5,666
Additional capital from merger	128	—	—	—
Retained earnings				
Unrestricted	11,143	22	955	984
Restricted	4,167	—	210	338
Total retained earnings	15,310	22	1,165	1,322
Accumulated other comprehensive income (loss)	(705)	(1)	(358)	(214)
Total capital	<u>49,546</u>	<u>21</u>	<u>3,161</u>	<u>6,774</u>
Total liabilities and capital	<u>\$ 1,030,656</u>	<u>\$ (253)</u>	<u>\$ 62,160</u>	<u>\$ 128,726</u>

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
\$ 2,646	\$ 1,164	\$ 12	\$ 431	\$ 375	\$ 460	\$ 124	\$ 214	\$ 15
14,529	36,842	22,850	16,040	28,964	44,143	22,982	13,444	36,578
66,336	106,926	74,563	26,465	46,424	116,294	31,123	26,183	61,963
3,154	518	8,510	8,772	4,667	6,640	67	6,473	632
241	643	207	293	232	323	142	177	242
<u>\$ 86,906</u>	<u>\$ 146,093</u>	<u>\$ 106,142</u>	<u>\$ 52,001</u>	<u>\$ 80,662</u>	<u>\$ 167,860</u>	<u>\$ 54,438</u>	<u>\$ 46,491</u>	<u>\$ 99,430</u>
\$ 646	\$ 1,168	\$ 878	\$ 664	\$ 532	\$ 1,066	\$ 851	\$ 661	\$ 219
20,814	68,585	48,894	15,920	45,876	92,521	30,047	26,888	41,930
60,769	68,560	50,458	32,467	29,091	66,599	20,748	16,754	50,924
81,583	137,145	99,352	48,387	74,967	159,120	50,795	43,642	92,854
6	9	96	178	302	698	3	4	486
381	599	818	503	354	472	318	167	509
<u>82,616</u>	<u>138,921</u>	<u>101,144</u>	<u>49,732</u>	<u>76,155</u>	<u>161,356</u>	<u>51,967</u>	<u>44,474</u>	<u>94,068</u>
3,232	5,240	4,227	1,401	1,774	5,241	1,811	1,159	2,520
—	—	—	—	—	—	—	188	—
<u>3,232</u>	<u>5,240</u>	<u>4,227</u>	<u>1,401</u>	<u>1,774</u>	<u>5,241</u>	<u>1,811</u>	<u>1,347</u>	<u>2,520</u>
—	—	—	—	—	128	—	—	—
738	1,562	553	713	2,526	1,035	715	579	761
187	277	230	140	358	185	69	106	2,067
925	1,839	783	853	2,884	1,220	784	685	2,828
133	93	(12)	15	(151)	(85)	(124)	(15)	14
4,290	7,172	4,998	2,269	4,507	6,504	2,471	2,017	5,362
<u>\$ 86,906</u>	<u>\$ 146,093</u>	<u>\$ 106,142</u>	<u>\$ 52,001</u>	<u>\$ 80,662</u>	<u>\$ 167,860</u>	<u>\$ 54,438</u>	<u>\$ 46,491</u>	<u>\$ 99,430</u>

FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF CONDITION
DECEMBER 31, 2015
(Unaudited)

<i>(dollars in millions, except par value)</i>	Combined	Combining Adjustments	Boston	New York
Assets				
Cash and due from banks	\$ 14,289	\$ —	\$ 254	\$ 327
Investments	273,684	(287)	18,019	26,167
Advances	634,022	1	36,076	93,874
Mortgage loans held for portfolio, net	44,585	(3)	3,582	2,525
Other assets	2,687	(4)	172	345
Total assets	<u>\$ 969,267</u>	<u>\$ (293)</u>	<u>\$ 58,103</u>	<u>\$ 123,238</u>
Liabilities				
Deposits	\$ 8,533	\$ (10)	\$ 483	\$ 1,350
Consolidated obligations				
Discount notes	494,045	1	28,479	46,850
Bonds	411,851	(308)	25,427	67,716
Total consolidated obligations	905,896	(307)	53,906	114,566
Mandatorily redeemable capital stock	745	1	42	19
Other liabilities	6,023	(7)	649	584
Total liabilities	<u>921,197</u>	<u>(323)</u>	<u>55,080</u>	<u>116,519</u>
Capital				
Capital stock				
Class B putable (\$100 par value) issued and outstanding	34,005	(1)	2,337	5,585
Class A putable (\$100 par value) issued and outstanding	180	—	—	—
Total capital stock	34,185	(1)	2,337	5,585
Additional capital from merger	194	—	—	—
Retained earnings				
Unrestricted	10,473	31	934	967
Restricted	3,852	1	195	303
Total retained earnings	14,325	32	1,129	1,270
Accumulated other comprehensive income (loss)	(634)	(1)	(443)	(136)
Total capital	<u>48,070</u>	<u>30</u>	<u>3,023</u>	<u>6,719</u>
Total liabilities and capital	<u>\$ 969,267</u>	<u>\$ (293)</u>	<u>\$ 58,103</u>	<u>\$ 123,238</u>

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
\$ 2,377	\$ 1,751	\$ 10	\$ 4,932	\$ 499	\$ 982	\$ 837	\$ 683	\$ 1,637
16,144	35,175	37,356	10,415	28,324	40,167	16,323	13,606	32,275
74,505	104,168	73,292	26,909	36,778	89,173	24,747	23,580	50,919
3,087	584	7,980	8,146	4,828	6,755	55	6,391	655
217	568	146	206	242	297	120	166	212
<u>\$ 96,330</u>	<u>\$ 142,246</u>	<u>\$ 118,784</u>	<u>\$ 50,608</u>	<u>\$ 70,671</u>	<u>\$ 137,374</u>	<u>\$ 42,082</u>	<u>\$ 44,426</u>	<u>\$ 85,698</u>
\$ 685	\$ 1,084	\$ 804	\$ 557	\$ 538	\$ 1,110	\$ 1,046	\$ 759	\$ 127
42,276	69,434	77,199	19,251	41,564	98,990	20,541	21,813	27,647
48,601	63,953	35,092	27,862	22,582	31,208	18,025	19,866	51,827
90,877	133,387	112,291	47,113	64,146	130,198	38,566	41,679	79,474
6	14	38	14	8	103	9	3	488
261	745	470	538	1,327	338	262	143	713
91,829	135,230	113,603	48,222	66,019	131,749	39,883	42,584	80,802
3,540	5,101	4,429	1,528	1,950	4,714	1,540	1,029	2,253
—	—	—	—	—	—	—	180	—
3,540	5,101	4,429	1,528	1,950	4,714	1,540	1,209	2,253
—	—	—	—	—	194	—	—	—
719	1,585	556	705	2,407	700	699	560	610
162	255	209	130	323	101	63	92	2,018
881	1,840	765	835	2,730	801	762	652	2,628
80	75	(13)	23	(28)	(84)	(103)	(19)	15
4,501	7,016	5,181	2,386	4,652	5,625	2,199	1,842	4,896
<u>\$ 96,330</u>	<u>\$ 142,246</u>	<u>\$ 118,784</u>	<u>\$ 50,608</u>	<u>\$ 70,671</u>	<u>\$ 137,374</u>	<u>\$ 42,082</u>	<u>\$ 44,426</u>	<u>\$ 85,698</u>

FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF INCOME
THREE MONTHS ENDED JUNE 30, 2016 AND 2015
(Unaudited)

<i>(dollars in millions)</i>	Combined	Combining Adjustments	Boston	New York
June 30, 2016				
Interest income				
Advances	\$ 1,271	\$ 3	\$ 82	\$ 210
Investments	973	(3)	56	86
Mortgage loans held for portfolio	387	—	30	22
Other interest income	(2)	(2)	—	—
Total interest income	2,629	(2)	168	318
Interest expense				
Consolidated obligations - Discount notes	513	1	22	48
Consolidated obligations - Bonds	1,179	3	90	139
Other interest expense	37	(2)	1	2
Total interest expense	1,729	2	113	189
Net interest income	900	(4)	55	129
Provision (reversal) for credit losses	1	—	—	—
Net interest income after provision (reversal) for credit losses	899	(4)	55	129
Non-interest income (loss)	254	(4)	17	—
Non-interest expense	270	(5)	19	27
Affordable Housing Program assessments	91	2	6	10
Net income	\$ 792	\$ (5)	\$ 47	\$ 92
June 30, 2015				
Interest income				
Advances	\$ 569	\$ —	\$ 59	\$ 120
Investments	878	(5)	52	71
Mortgage loans held for portfolio	410	(1)	30	20
Other interest income	2	1	—	—
Total interest income	1,859	(5)	141	211
Interest expense				
Consolidated obligations - Discount notes	166	1	4	23
Consolidated obligations - Bonds	901	(2)	80	82
Other interest expense	54	—	1	—
Total interest expense	1,121	(1)	85	105
Net interest income	738	(4)	56	106
Provision (reversal) for credit losses	3	—	—	1
Net interest income after provision (reversal) for credit losses	735	(4)	56	105
Non-interest income (loss)	391	6	131	3
Non-interest expense	359	—	21	25
Affordable Housing Program assessments	83	(1)	17	8
Net income	\$ 684	\$ 3	\$ 149	\$ 75

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco	Seattle
\$ 157	\$ 139	\$ 140	\$ 51	\$ 74	\$ 189	\$ 52	\$ 57	\$ 117	\$ —
61	120	95	48	188	99	46	36	141	—
29	7	58	68	55	59	1	51	7	—
—	—	—	—	—	—	—	—	—	—
247	266	293	167	317	347	99	144	265	—
27	63	44	15	95	113	29	24	32	—
126	122	170	104	98	135	32	56	104	—
1	1	2	2	13	5	—	—	12	—
154	186	216	121	206	253	61	80	148	—
93	80	77	46	111	94	38	64	117	—
—	—	—	—	—	1	—	—	—	—
93	80	77	46	111	93	38	64	117	—
1	17	7	(2)	45	192	5	(15)	(9)	—
19	31	21	19	41	27	20	14	37	—
8	6	6	3	11	26	2	3	8	—
\$ 67	\$ 60	\$ 57	\$ 22	\$ 104	\$ 232	\$ 21	\$ 32	\$ 63	\$ —
\$ 81	\$ (81)	\$ 87	\$ 30	\$ 42	\$ 71	\$ 34	\$ 34	\$ 81	\$ 11
58	107	81	39	201	61	19	25	147	22
30	10	65	64	66	61	1	50	8	6
—	—	—	—	—	—	—	1	—	—
169	36	233	133	309	193	54	110	236	39
10	9	10	4	72	15	3	3	10	2
78	75	139	82	103	97	20	50	80	17
—	—	—	—	13	1	—	—	38	1
88	84	149	86	188	113	23	53	128	20
81	(48)	84	47	121	80	31	57	108	19
—	—	—	(1)	4	1	—	(2)	—	—
81	(48)	84	48	117	79	31	59	108	19
26	176	6	8	24	6	13	(14)	(2)	8
17	31	19	18	33	56	19	16	34	70
9	10	7	4	11	3	2	3	11	(1)
\$ 81	\$ 87	\$ 64	\$ 34	\$ 97	\$ 26	\$ 23	\$ 26	\$ 61	\$ (42)

FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF INCOME
SIX MONTHS ENDED JUNE 30, 2016 AND 2015
(Unaudited)

<i>(dollars in millions)</i>	Combined	Combining Adjustments	Boston	New York
June 30, 2016				
Interest income				
Advances	\$ 2,425	\$ 1	\$ 162	\$ 401
Investments	1,955	(8)	115	172
Mortgage loans held for portfolio	786	—	61	44
Other interest income	—	—	—	—
Total interest income	5,166	(7)	338	617
Interest expense				
Consolidated obligations - Discount notes	1,002	—	45	97
Consolidated obligations - Bonds	2,264	3	181	261
Other interest expense	72	—	1	3
Total interest expense	3,338	3	227	361
Net interest income	1,828	(10)	111	256
Provision (reversal) for credit losses	2	—	—	1
Net interest income after provision (reversal) for credit losses	1,826	(10)	111	255
Non-interest income (loss)	522	(7)	13	(5)
Non-interest expense	546	(8)	38	56
Affordable Housing Program assessments	185	1	9	19
Net income	<u>\$ 1,617</u>	<u>\$ (10)</u>	<u>\$ 77</u>	<u>\$ 175</u>
June 30, 2015				
Interest income				
Advances	\$ 1,275	\$ 1	\$ 120	\$ 251
Investments	1,774	(10)	103	142
Mortgage loans held for portfolio	819	—	61	39
Other interest income	3	2	—	—
Total interest income	3,871	(7)	284	432
Interest expense				
Consolidated obligations - Discount notes	331	1	10	46
Consolidated obligations - Bonds	1,792	3	162	161
Other interest expense	87	3	1	—
Total interest expense	2,210	7	173	207
Net interest income	1,661	(14)	111	225
Provision (reversal) for credit losses	2	(1)	—	1
Net interest income after provision (reversal) for credit losses	1,659	(13)	111	224
Non-interest income (loss)	871	1	131	9
Non-interest expense	632	(7)	38	52
Affordable Housing Program assessments	199	—	21	18
Net income	<u>\$ 1,699</u>	<u>\$ (5)</u>	<u>\$ 183</u>	<u>\$ 163</u>

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco	Seattle
\$ 289	\$ 266	\$ 276	\$ 100	\$ 137	\$ 362	\$ 97	\$ 111	\$ 223	\$ —
124	242	193	92	386	197	86	73	283	—
59	16	117	137	112	120	2	103	15	—
—	—	—	—	—	—	—	—	—	—
472	524	586	329	635	679	185	287	521	—
60	126	99	31	177	222	49	45	51	—
236	223	327	200	200	251	61	113	208	—
1	2	3	3	27	9	1	—	22	—
297	351	429	234	404	482	111	158	281	—
175	173	157	95	231	197	74	129	240	—
—	—	—	—	—	1	—	—	—	—
175	173	157	95	231	196	74	129	240	—
2	14	3	(3)	42	324	(2)	(21)	162	—
39	65	43	37	81	54	40	28	73	—
14	12	12	6	19	47	3	8	35	—
\$ 124	\$ 110	\$ 105	\$ 49	\$ 173	\$ 419	\$ 29	\$ 72	\$ 294	\$ —
\$ 156	\$ (18)	\$ 173	\$ 58	\$ 87	\$ 138	\$ 66	\$ 67	\$ 148	\$ 28
115	217	165	76	408	111	36	49	298	64
61	21	121	126	135	120	2	102	17	14
—	—	—	—	—	—	—	1	—	—
332	220	459	260	630	369	104	219	463	106
19	18	20	7	144	30	7	7	16	6
156	146	276	157	208	190	37	98	156	42
—	—	1	—	27	1	—	—	53	1
175	164	297	164	379	221	44	105	225	49
157	56	162	96	251	148	60	114	238	57
—	(1)	—	—	4	1	—	(2)	—	—
157	57	162	96	247	147	60	116	238	57
47	196	14	12	19	(3)	28	(23)	430	10
35	65	37	36	66	76	37	30	68	99
17	19	14	7	20	7	5	6	65	—
\$ 152	\$ 169	\$ 125	\$ 65	\$ 180	\$ 61	\$ 46	\$ 57	\$ 535	\$ (32)

FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF COMPREHENSIVE INCOME
THREE MONTHS ENDED JUNE 30, 2016 AND 2015
(Unaudited)

<i>(dollars in millions)</i>	Combined	Combining Adjustments	Boston	New York
June 30, 2016				
Net income	\$ 792	\$ (5)	\$ 47	\$ 92
Other comprehensive income				
Net unrealized gains/losses on available-for-sale securities	20	1	28	(1)
Net unrealized gains/losses on held-to-maturity securities transferred from available-for-sale securities	—	—	—	—
Net non-credit portion of other-than-temporary impairment losses on available-for-sale securities	83	1	—	—
Net non-credit portion of other-than-temporary impairment losses on held-to-maturity securities	24	(1)	10	2
Net unrealized gains/losses relating to hedging activities	(25)	—	(3)	(22)
Pension and postretirement benefits	(2)	(3)	(2)	—
Total other comprehensive income (loss)	100	(2)	33	(21)
Comprehensive income	<u>\$ 892</u>	<u>\$ (7)</u>	<u>\$ 80</u>	<u>\$ 71</u>
June 30, 2015				
Net income	\$ 684	\$ 3	\$ 149	\$ 75
Other comprehensive income				
Net unrealized gains/losses on available-for-sale securities	(175)	2	(15)	(1)
Net unrealized gains/losses on held-to-maturity securities transferred from available-for-sale securities	(1)	(1)	—	—
Net non-credit portion of other-than-temporary impairment losses on available-for-sale securities	(24)	1	—	—
Net non-credit portion of other-than-temporary impairment losses on held-to-maturity securities	32	(1)	13	2
Net unrealized gains/losses relating to hedging activities	117	—	19	31
Pension and postretirement benefits	2	(1)	—	1
Total other comprehensive income (loss)	(49)	—	17	33
Comprehensive income	<u>\$ 635</u>	<u>\$ 3</u>	<u>\$ 166</u>	<u>\$ 108</u>

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco	Seattle
\$ 67	\$ 60	\$ 57	\$ 22	\$ 104	\$ 232	\$ 21	\$ 32	\$ 63	\$ —
34	—	—	(1)	(60)	36	(15)	(2)	—	—
—	—	—	—	—	—	—	—	—	—
5	26	—	—	—	—	—	—	51	—
—	—	—	—	10	—	1	1	1	—
—	—	—	—	8	—	(8)	—	—	—
—	1	1	(1)	1	1	—	—	—	—
39	27	1	(2)	(41)	37	(22)	(1)	52	—
<u>\$ 106</u>	<u>\$ 87</u>	<u>\$ 58</u>	<u>\$ 20</u>	<u>\$ 63</u>	<u>\$ 269</u>	<u>\$ (1)</u>	<u>\$ 31</u>	<u>\$ 115</u>	<u>\$ —</u>
\$ 81	\$ 87	\$ 64	\$ 34	\$ 97	\$ 26	\$ 23	\$ 26	\$ 61	\$ (42)
(25)	—	—	(3)	(113)	(9)	3	—	—	(14)
—	—	—	—	—	—	—	—	—	—
(12)	(3)	—	1	—	—	—	—	(11)	—
—	—	—	—	13	—	2	1	2	—
—	—	—	—	67	—	—	—	—	—
—	1	—	(1)	—	1	—	—	1	—
(37)	(2)	—	(3)	(33)	(8)	5	1	(8)	(14)
<u>\$ 44</u>	<u>\$ 85</u>	<u>\$ 64</u>	<u>\$ 31</u>	<u>\$ 64</u>	<u>\$ 18</u>	<u>\$ 28</u>	<u>\$ 27</u>	<u>\$ 53</u>	<u>\$ (56)</u>

FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF COMPREHENSIVE INCOME
SIX MONTHS ENDED JUNE 30, 2016 AND 2015
(Unaudited)

<i>(dollars in millions)</i>	Combined	Combining Adjustments	Boston	New York
June 30, 2016				
Net income	\$ 1,617	\$ (10)	\$ 77	\$ 175
Other comprehensive income				
Net unrealized gains/losses on available-for-sale securities	26	(2)	80	(4)
Net unrealized gains/losses on held-to-maturity securities transferred from available-for-sale securities	1	1	—	—
Net non-credit portion of other-than-temporary impairment losses on available-for-sale securities	—	1	—	—
Net non-credit portion of other-than-temporary impairment losses on held-to-maturity securities	49	(1)	20	4
Net unrealized gains/losses relating to hedging activities	(149)	—	(13)	(78)
Pension and postretirement benefits	2	1	(2)	—
Total other comprehensive income (loss)	(71)	—	85	(78)
Comprehensive income	\$ 1,546	\$ (10)	\$ 162	\$ 97
June 30, 2015				
Net income	\$ 1,699	\$ (5)	\$ 183	\$ 163
Other comprehensive income				
Net unrealized gains/losses on available-for-sale securities	(85)	1	6	(2)
Net non-credit portion of other-than-temporary impairment losses on available-for-sale securities	(34)	(1)	—	—
Net non-credit portion of other-than-temporary impairment losses on held-to-maturity securities	75	—	25	4
Net unrealized gains/losses relating to hedging activities	61	1	11	10
Pension and postretirement benefits	(4)	—	—	1
Total other comprehensive income (loss)	13	1	42	13
Comprehensive income	\$ 1,712	\$ (4)	\$ 225	\$ 176

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco	Seattle
\$ 124	\$ 110	\$ 105	\$ 49	\$ 173	\$ 419	\$ 29	\$ 72	\$ 294	\$ —
61	—	—	(1)	(100)	(1)	(10)	3	—	—
—	—	—	—	—	—	—	—	—	—
(8)	17	—	(6)	—	—	—	—	(4)	—
—	—	—	—	21	—	2	1	2	—
—	—	—	—	(45)	—	(13)	—	—	—
—	1	1	(1)	1	—	—	—	1	—
53	18	1	(8)	(123)	(1)	(21)	4	(1)	—
<u>\$ 177</u>	<u>\$ 128</u>	<u>\$ 106</u>	<u>\$ 41</u>	<u>\$ 50</u>	<u>\$ 418</u>	<u>\$ 8</u>	<u>\$ 76</u>	<u>\$ 293</u>	<u>\$ —</u>
\$ 152	\$ 169	\$ 125	\$ 65	\$ 180	\$ 61	\$ 46	\$ 57	\$ 535	\$ (32)
(2)	—	—	(2)	(135)	(2)	3	—	—	48
(10)	(19)	—	(1)	—	—	—	—	7	(10)
—	—	—	—	26	—	3	2	4	11
—	—	—	—	39	—	—	—	—	—
—	1	1	(1)	(8)	1	—	—	1	—
(12)	(18)	1	(4)	(78)	(1)	6	2	12	49
<u>\$ 140</u>	<u>\$ 151</u>	<u>\$ 126</u>	<u>\$ 61</u>	<u>\$ 102</u>	<u>\$ 60</u>	<u>\$ 52</u>	<u>\$ 59</u>	<u>\$ 547</u>	<u>\$ 17</u>

FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF CAPITAL
SIX MONTHS ENDED JUNE 30, 2016 AND 2015
(Unaudited)

<i>(dollars in millions)</i>	Combined	Combining Adjustments	Boston	New York
Balance, December 31, 2014	\$ 47,003	\$ 49	\$ 2,878	\$ 6,526
Proceeds from issuance of capital stock	9,967	1	99	1,966
Capital stock issued from merger	894	—	—	—
Repurchases/redemptions of capital stock	(10,400)	—	(30)	(2,229)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(137)	—	—	(8)
Dividends of capital stock	33	—	—	—
Additional capital from merger	246	—	—	—
Comprehensive income (loss)	1,712	(4)	225	176
Capital stock canceled and other merger activity	(1,258)	—	—	—
Dividends				
Cash	(800)	(1)	(21)	(120)
Stock	(33)	—	—	—
Balance, June 30, 2015	\$ 47,227	\$ 45	\$ 3,151	\$ 6,311
Balance, December 31, 2015	\$ 48,070	\$ 30	\$ 3,023	\$ 6,719
Proceeds from issuance of capital stock	12,563	—	226	2,012
Repurchases/redemptions of capital stock	(10,069)	2	(209)	(1,918)
Net shares reclassified (to)/from mandatorily redeemable capital stock	(1,912)	(1)	—	(13)
Dividends of capital stock	46	—	—	—
Comprehensive income (loss)	1,546	(10)	162	97
Dividends				
Cash	(652)	—	(41)	(123)
Stock	(46)	—	—	—
Balance, June 30, 2016	\$ 49,546	\$ 21	\$ 3,161	\$ 6,774

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco	Seattle
\$ 4,002	\$ 6,991	\$ 4,939	\$ 2,376	\$ 4,525	\$ 4,312	\$ 1,920	\$ 1,586	\$ 5,693	\$ 1,206
1,628	2,891	79	77	131	1,255	577	684	527	52
—	—	—	—	—	894	—	—	—	—
(1,244)	(2,982)	—	(240)	(197)	(1,822)	(399)	(203)	(1,042)	(12)
—	(7)	(11)	—	(1)	89	(1)	(182)	(12)	(4)
—	—	—	—	—	—	2	31	—	—
—	—	—	—	—	246	—	—	—	—
140	151	126	61	102	60	52	59	547	17
—	—	—	—	—	—	—	—	—	(1,258)
(135)	(102)	(85)	(33)	(11)	(50)	—	—	(241)	(1)
—	—	—	—	—	—	(2)	(31)	—	—
<u>\$ 4,391</u>	<u>\$ 6,942</u>	<u>\$ 5,048</u>	<u>\$ 2,241</u>	<u>\$ 4,549</u>	<u>\$ 4,984</u>	<u>\$ 2,149</u>	<u>\$ 1,944</u>	<u>\$ 5,472</u>	<u>\$ —</u>
\$ 4,501	\$ 7,016	\$ 5,181	\$ 2,386	\$ 4,652	\$ 5,625	\$ 2,199	\$ 1,842	\$ 4,896	\$ —
1,368	2,954	36	52	707	3,232	653	670	653	—
(1,631)	(2,813)	—	—	(584)	(1,974)	(389)	(219)	(334)	—
(45)	(2)	(238)	(179)	(299)	(731)	—	(352)	(52)	—
—	—	—	—	—	—	7	39	—	—
177	128	106	41	50	418	8	76	293	—
(80)	(111)	(87)	(31)	(19)	(66)	—	—	(94)	—
—	—	—	—	—	—	(7)	(39)	—	—
<u>\$ 4,290</u>	<u>\$ 7,172</u>	<u>\$ 4,998</u>	<u>\$ 2,269</u>	<u>\$ 4,507</u>	<u>\$ 6,504</u>	<u>\$ 2,471</u>	<u>\$ 2,017</u>	<u>\$ 5,362</u>	<u>\$ —</u>

FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF CASH FLOWS
SIX MONTHS ENDED JUNE 30, 2016
(Unaudited)

<i>(dollars in millions)</i>	Combined	Combining Adjustments	Boston	New York
Operating activities				
Net cash provided by (used in) operating activities	\$ 1,806	\$ —	\$ 87	\$ 201
Investing activities				
Net change/net proceeds and payments in				
Premises, software, and equipment	(27)	—	(1)	(2)
Investments	(12,266)	12	(1,642)	(4,088)
Advances	(53,717)	2	(2,068)	(863)
Mortgage loans held for portfolio	(1,163)	—	(52)	(112)
Proceeds from sales of foreclosed assets	53	(2)	3	2
Principal collected on other loans	1	—	—	—
Net cash provided by (used in) investing activities	(67,119)	12	(3,760)	(5,063)
Financing activities				
Net change in				
Deposits and pass-through reserves	(1,089)	(16)	152	(228)
Net proceeds (payments) on derivative contracts with financing element	(201)	1	(7)	(37)
Net proceeds from issuance of consolidated obligations				
Discount notes	1,746,568	—	76,299	149,507
Bonds	254,686	3	9,716	29,753
Payments for maturing and retiring consolidated obligations				
Discount notes	(1,769,736)	(1)	(74,298)	(147,296)
Bonds	(173,092)	—	(7,998)	(26,788)
Payments for retirement of subordinated notes	(944)	—	—	—
Proceeds from issuance of capital stock	12,563	—	226	2,012
Payments for repurchases/redemptions of mandatorily redeemable capital stock	(811)	(2)	(7)	(2)
Payments for repurchases/redemptions of capital stock	(10,069)	2	(209)	(1,918)
Cash dividends paid	(652)	—	(41)	(123)
Net cash provided by (used in) financing activities	57,223	(13)	3,833	4,880
Net increase (decrease) in cash and due from banks	(8,090)	(1)	160	18
Cash and due from banks at beginning of the period	14,289	—	254	327
Cash and due from banks at end of the period	\$ 6,199	\$ (1)	\$ 414	\$ 345

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco	Seattle
\$ 100	\$ 169	\$ 159	\$ 111	\$ (8)	\$ 468	\$ 82	\$ 111	\$ 326	\$ —
(1)	(1)	(1)	(2)	(4)	(5)	(2)	(3)	(5)	—
1,805	(2,389)	14,746	(5,890)	(667)	(3,884)	(6,660)	123	(3,732)	—
8,196	(2,139)	(1,219)	557	(9,458)	(26,969)	(6,312)	(2,530)	(10,914)	—
(74)	63	(553)	(620)	161	103	(12)	(91)	24	—
5	7	—	—	24	9	—	3	2	—
—	—	—	—	—	—	—	1	—	—
9,931	(4,459)	12,973	(5,955)	(9,944)	(30,746)	(12,986)	(2,497)	(14,625)	—
(31)	62	101	107	(6)	(44)	(194)	(120)	(872)	—
(18)	(45)	(8)	(16)	(28)	(3)	(32)	(16)	8	—
52,975	275,195	173,694	153,113	231,170	143,494	159,472	265,946	65,703	—
33,134	32,518	28,842	17,767	14,341	49,439	11,370	8,111	19,692	—
(74,436)	(276,080)	(202,006)	(156,450)	(226,872)	(150,017)	(149,977)	(260,877)	(51,426)	—
(20,998)	(27,970)	(13,522)	(13,183)	(7,932)	(14,169)	(8,706)	(11,227)	(20,599)	—
—	—	—	—	(944)	—	—	—	—	—
1,368	2,954	36	52	707	3,232	653	670	653	—
(45)	(7)	(180)	(16)	(5)	(136)	(6)	(351)	(54)	—
(1,631)	(2,813)	—	—	(584)	(1,974)	(389)	(219)	(334)	—
(80)	(111)	(87)	(31)	(19)	(66)	—	—	(94)	—
(9,762)	3,703	(13,130)	1,343	9,828	29,756	12,191	1,917	12,677	—
269	(587)	2	(4,501)	(124)	(522)	(713)	(469)	(1,622)	—
2,377	1,751	10	4,932	499	982	837	683	1,637	—
\$ 2,646	\$ 1,164	\$ 12	\$ 431	\$ 375	\$ 460	\$ 124	\$ 214	\$ 15	\$ —

FEDERAL HOME LOAN BANKS
CONDENSED COMBINING SCHEDULES—STATEMENTS OF CASH FLOWS
SIX MONTHS ENDED JUNE 30, 2015
(Unaudited)

<i>(dollars in millions)</i>	Combined	Combining Adjustments	Boston	New York
Operating activities				
Net cash provided by (used in) operating activities	\$ 2,031	\$ 7	\$ 155	\$ 313
Investing activities				
Net change/net proceeds and payment in				
Loans to FHLBanks	—	125	—	—
Premises, software, and equipment	(24)	—	(1)	(2)
Investments	5,259	1	(768)	(189)
Advances	(22,461)	(3)	(660)	7,283
Mortgage loans held for portfolio	(1,281)	—	(102)	(257)
Proceeds from sales of foreclosed assets	66	2	4	1
Principal collected on other loans	1	—	—	—
Cash transferred for merger	—	—	—	—
Net cash provided by (used in) investing activities	(18,440)	125	(1,527)	6,836
Financing activities				
Net change in				
Deposits and pass-through reserves	328	(2)	35	(828)
Loans from FHLBanks	—	(125)	—	—
Net proceeds (payments) on derivative contracts with financing element	(411)	(2)	(8)	(117)
Net proceeds from issuance of consolidated obligations				
Discount notes	2,265,819	(1)	72,190	102,437
Bonds	155,603	—	5,263	23,362
Bonds transferred from other FHLBanks	—	(88)	88	—
Payments for maturing and retiring consolidated obligations				
Discount notes	(2,230,084)	(1)	(71,528)	(110,039)
Bonds	(185,722)	(2)	(4,755)	(27,863)
Bonds transferred to other FHLBanks	—	88	—	(88)
Proceeds from issuance of capital stock	9,967	1	99	1,966
Payments for repurchases/redemptions of mandatorily redeemable capital stock	(2,319)	1	(242)	(8)
Payments for repurchases/redemptions of capital stock	(10,400)	—	(30)	(2,229)
Cash dividends paid	(800)	(1)	(21)	(120)
Net cash provided by (used in) financing activities	1,981	(132)	1,091	(13,527)
Net increase (decrease) in cash and due from banks	(14,428)	—	(281)	(6,378)
Cash and due from banks at beginning of the period	26,421	—	1,125	6,459
Cash and due from banks at end of the period	\$ 11,993	\$ —	\$ 844	\$ 81

Pittsburgh	Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco	Seattle
\$ 50	\$ 138	\$ 158	\$ 135	\$ 316	\$ 68	\$ 113	\$ 92	\$ 532	\$ (46)
—	—	—	—	—	—	—	—	(125)	—
(2)	(1)	(1)	(2)	(5)	(3)	(3)	—	(4)	—
2,829	812	5,202	(1,608)	4,541	(3,697)	(2,760)	(5,215)	(1,708)	7,819
(8,133)	(2,943)	(720)	(3,555)	(2,094)	6,130	(2,729)	(5,009)	(11,231)	1,203
58	76	(759)	(1,112)	676	135	8	(96)	37	55
7	10	—	—	32	6	—	2	2	—
—	—	—	—	—	—	—	1	—	—
—	—	—	—	—	2,341	—	—	—	(2,341)
(5,241)	(2,046)	3,722	(6,277)	3,150	4,912	(5,484)	(10,317)	(13,029)	6,736
20	297	(6)	80	(28)	151	153	(5)	501	(40)
—	125	—	—	—	—	—	—	—	—
(16)	(49)	(13)	(30)	(30)	(4)	(120)	(21)	9	(10)
78,981	427,629	125,047	33,035	178,092	123,100	585,043	142,962	65,159	332,145
14,554	37,372	9,137	12,244	7,426	9,867	10,960	7,108	15,658	2,652
—	—	—	—	—	—	—	—	—	—
(74,982)	(415,041)	(118,019)	(33,802)	(174,603)	(123,097)	(585,540)	(135,675)	(53,118)	(334,639)
(10,689)	(48,627)	(23,110)	(8,103)	(13,035)	(13,851)	(6,422)	(6,113)	(17,048)	(6,104)
—	—	—	—	—	—	—	—	—	—
1,628	2,891	79	77	131	1,255	577	684	527	52
—	(10)	(9)	(2)	(2)	(541)	(2)	(182)	(589)	(733)
(1,244)	(2,982)	—	(240)	(197)	(1,822)	(399)	(203)	(1,042)	(12)
(135)	(102)	(85)	(33)	(11)	(50)	—	—	(241)	(1)
8,117	1,503	(6,979)	3,226	(2,257)	(4,992)	4,250	8,555	9,816	(6,690)
2,926	(405)	(3,099)	(2,916)	1,209	(12)	(1,121)	(1,670)	(2,681)	—
2,451	915	3,110	3,551	342	495	1,508	2,545	3,920	—
\$ 5,377	\$ 510	\$ 11	\$ 635	\$ 1,551	\$ 483	\$ 387	\$ 875	\$ 1,239	\$ —

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SELECTED FINANCIAL DATA

<i>(dollars in millions)</i>	2016		2015		
	June 30,	March 31,	December 31,	September 30,	June 30,
Selected Statement of Condition Data at					
Investments(1)	\$ 285,789	\$ 290,332	\$ 273,684	\$ 263,161	\$ 265,218
Advances	689,792	618,136	634,022	591,457	592,383
Mortgage loans held for portfolio	45,708	44,804	44,603	44,867	44,805
Allowance for credit losses on mortgage loans	(18)	(18)	(18)	(20)	(21)
Total assets	1,030,656	961,453	969,267	919,627	916,925
Consolidated obligations					
Discount notes	471,032	437,392	494,045	409,381	398,093
Bonds	494,158	460,702	411,851	448,906	456,012
Total consolidated obligations	965,190	898,094	905,896	858,287	854,105
Mandatorily redeemable capital stock	1,845	1,912	745	794	450
Subordinated notes(2)	—	944	944	944	944
Capital					
Total capital stock(3)	34,813	32,574	34,185	32,432	33,168
Additional capital from merger(4)	128	163	194	221	246
Retained earnings	15,310	14,839	14,325	13,965	13,797
Accumulated other comprehensive income (loss)	(705)	(805)	(634)	(363)	16
Total capital	49,546	46,771	48,070	46,255	47,227
Selected Statement of Income Data for the quarter ended					
Net interest income	\$ 900	\$ 928	\$ 1,007	\$ 880	\$ 738
Provision (reversal) for credit losses	1	1	1	1	3
Net interest income after provision (reversal) for credit losses	899	927	1,006	879	735
Non-interest income (loss)	254	268	51	(79)	391
Non-interest expense	270	276	307	260	359
Assessments	91	94	77	56	83
Net income	\$ 792	\$ 825	\$ 673	\$ 484	\$ 684
Selected Other Data for the quarter ended					
Cash and stock dividends	\$ 356	\$ 342	\$ 340	\$ 341	\$ 441
Dividend payout ratio(5)	44.95%	41.45%	50.52%	70.45%	64.47%
Return on average equity(6)	6.60%	6.94%	5.76%	4.10%	5.88%
Return on average assets	0.32%	0.34%	0.28%	0.21%	0.30%
Average equity to average assets	4.85%	4.87%	4.92%	5.09%	5.17%
Net interest margin(7)	0.37%	0.38%	0.43%	0.38%	0.33%
Selected Other Data at					
Combined GAAP capital-to-asset ratio	4.81%	4.86%	4.96%	5.03%	5.15%
Combined regulatory capital-to-assets ratio(8)	5.05%	5.15%	5.10%	5.16%	5.20%

(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) The subordinated notes, issued by the FHLBank of Chicago, matured on June 13, 2016.

(3) FHLBank capital stock is redeemable at the request of a member subject to the statutory redemption periods and other conditions and limitations. (See [Note 13 - Capital](#) to the accompanying combined financial statements for additional information on the statutory redemption periods and other conditions and limitations.)

(4) Additional capital from merger primarily represents the amount of the FHLBank of Seattle's closing retained earnings balance as of the merger date, adjusted for fair value and other purchase accounting adjustments, and identified intangible assets, and is net of dividends paid by the FHLBank of Des Moines subsequent to the merger date. (See [Note 13 - Capital](#) to the accompanying combined financial statements for additional information.)

(5) Dividend payout ratio is equal to dividends declared (excluding dividends on mandatorily redeemable capital stock) 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.

(6) Return on average equity is equal to net income expressed as a percentage of average total capital.

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

(8) 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 13 - 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, 2016, or for other interim periods. The unaudited 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, 2015, included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015.

Each FHLBank's Annual Report on Form 10-K and Quarterly Report on Form 10-Q filed with the SEC contains, 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 registrant's financial statements that enables investors to see the registrant 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 the individual FHLBanks. This Financial Discussion and Analysis does not generally include a separate description of how each FHLBank's operations affect the combined financial condition and combined results of operations. That level of information about each of the FHLBanks 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 records of the FHLBanks. (See [Condensed Combining Schedules](#) for information regarding each individual FHLBank's results.) Transactions among the FHLBanks have been eliminated in accordance with combination accounting principles related to consolidation under accounting principles generally accepted in the United States of America (GAAP). (See [Note 1 - Summary of Significant Accounting Policies](#) to the accompanying combined financial statements and [Interbank Transfers of Consolidated Bonds and Their Effect on Combined Net Income](#) for more information.)

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 future predictions of the FHLBanks and Office of Finance, may be "forward-looking statements." These statements may use forward-looking terminology, such as "anticipates," "believes," "could," "estimates," "may," "should," "will," 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 *Risk Factors* on pages 20 to 28 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, along with any changes disclosed in this report. 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;
- volatility of market prices, interest rates, and indices or other factors that could affect the value of investments or collateral held by the FHLBanks resulting from the effects of, and changes in, various monetary or fiscal policies and regulations, including those determined by the Federal Reserve Board and the Federal Deposit Insurance Corporation (FDIC), or a decline in liquidity in the financial markets;

- political events, including legislative, regulatory, judicial, or other developments that affect the FHLBanks, their members, counterparties, underwriters, or investors in the consolidated obligations of the FHLBanks, including changes in the Federal Home Loan Bank Act of 1932, as amended (FHLBank Act), housing finance and government-sponsored enterprise (GSE) reform, Federal Housing Finance Agency (FHFA) actions, or regulations that affect FHLBank operations, and regulatory oversight;
- 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 future 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 support from FHLBank debt underwriters, and changes resulting from any modification of credit ratings;
- 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; 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 overview 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, the fiscal agent of the FHLBanks, comprise the FHLBank System. All FHLBanks and the Office of Finance operate 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 and redeemed by members or repurchased by an FHLBank at the stated par value of \$100 per share. The FHLBanks are generally designed to 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 the joint and several obligation 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, other services, and dividend payments. The FHLBanks' primary sources of earnings are the net interest spread between the yield on total interest-earning assets and the yield on total interest-bearing liabilities, combined with earnings on invested capital. However, due to the FHLBanks' cooperative structures, the FHLBanks generally earn a narrow net interest spread.

Credit Ratings

The FHLBank System's 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 its 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 either the United States or any government agency. In addition to ratings on the FHLBanks' consolidated obligations, each FHLBank is rated individually by Moody's Investors Service (Moody's) and S&P Global Ratings (S&P). (See [Recent Rating Agency Actions](#) for more information.) Investors should note that a rating issued by a rating agency is not a recommendation to buy, sell, or hold securities, and that the ratings may be revised or withdrawn by the rating agency at any time. Investors should evaluate the rating of each rating agency independently. Moody's, S&P, or other rating organizations could downgrade or upgrade the credit rating of the U.S. government and, in turn, GSEs, including the FHLBanks and their consolidated obligations.

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) the conditions in the housing markets; (3) interest rate levels and volatility; and (4) the legislative and regulatory environment.

Economy and Financial Markets. The FHLBanks' members typically use wholesale funding in the form of advances along with other sources of funding, such as retail deposits, as sources of liquidity to make residential mortgage loans. The FHLBanks' overall results of operations are influenced by the economy and financial markets, and, in particular, by the FHLBanks' member demand for wholesale funding and the FHLBanks' ability to maintain sufficient access to diverse sources of funding at relatively favorable rates.

The FHLBanks' flexibility in utilizing various funding tools, in combination with a diverse investor base and their unique status as GSEs, have helped ensure reliable market access and demand for FHLBank consolidated obligations, despite market uncertainty and regulations affecting debt underwriters. The FHLBank System continued to meet its funding needs during the three and six months ended June 30, 2016, while maintaining its preference for short-term funding.

In July 2016, the Federal Open Market Committee expressed its view that, since it met in June 2016, information received suggests that economic activity has been expanding at a moderate pace. Inflation continued to run below the Federal Open Market Committee's longer-run objective of two percent; however, inflation is expected to rise to two percent over the medium term. The Federal Open Market Committee also stated that it is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities (MBS) back into agency MBS, and of rolling over maturing Treasury securities at auction.

The unemployment rate declined slightly to 4.9% in June 2016, compared to 5.0% in December 2015. U.S. real gross domestic product increased at an annual rate of 1.2% in the second quarter of 2016, according to the advance estimate released by the Bureau of Economic Analysis, compared to an increase at an annual rate of 0.9% in the fourth quarter of 2015, according to the annual update.

Conditions in 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. Total existing home sales in June 2016 increased 3.0% from June 2015, based on a seasonally adjusted annual rate. Additionally, the increased equity that has been gained from rising home prices reduced the number of homeowners whose mortgage loan balances exceed the fair market value of their homes and also reduced the number of distressed sales of

homes to 6% of existing-home sales in June 2016, compared to 8% in June 2015. Despite low mortgage rates and sustained job growth, limited housing inventory and strong demand have continued to push home prices higher, leading to declining affordability for prospective buyers in many markets. The share of first-time homebuyers increased to 33% of existing-home sales in June 2016, compared to 30% in June 2015, which is still low compared to the long-term average of 40%.

Interest Rate Levels and Volatility. The level and volatility of interest rates affect FHLBank member demand for wholesale funding. In addition, credit spreads and the shape of the yield curve affect investor demand for consolidated obligations. These factors also impact the FHLBanks' combined results of operations primarily through net interest income and the valuation of certain assets and liabilities.

Interest rate levels, volatility, and spreads were affected by several factors during the first half of 2016. There was uncertainty in the global markets driven by Great Britain's recent vote to leave the European Union, China's economic slowdown, and the negative interest rate policies of several European central banks, including the European Central Bank (ECB), as well as the Bank of Japan. In the United States, monetary policy, financial regulation, and heavy issuance of corporate debt were influencing factors.

Table 1 presents key interest rate data that illustrates the flattening of the yield curve, as average short-term interest rates were higher and average long-term interest rates were lower, in the three and six months ended June 30, 2016, compared to the same periods in 2015.

Table 1 - Key Interest Rates

	Three-Month Average		Six-Month Average		Ending Rate	
	June 30, 2016	June 30, 2015	June 30, 2016	June 30, 2015	June 30, 2016	December 31, 2015
Federal Funds Effective	0.37%	0.12%	0.37%	0.12%	0.30%	0.20%
3-month LIBOR	0.64%	0.28%	0.63%	0.27%	0.65%	0.61%
2-year swap rate	0.90%	0.86%	0.91%	0.85%	0.74%	1.18%
10-year swap rate	1.62%	2.24%	1.70%	2.16%	1.36%	2.19%
3-month U.S. Treasury yield	0.25%	0.01%	0.26%	0.01%	0.26%	0.17%
2-year U.S. Treasury yield	0.77%	0.60%	0.80%	0.60%	0.58%	1.05%
10-year U.S. Treasury yield	1.75%	2.16%	1.83%	2.06%	1.47%	2.27%
30-year residential mortgage note rate	3.82%	4.02%	3.89%	3.97%	3.75%	4.19%

Source: Bloomberg

The Federal Reserve Board, acting through its Federal Open Market Committee, decided in July 2016 to maintain the target range for the federal funds rate at 0.25% to 0.50%. In determining the timing and size of future adjustments to the target range for the federal funds rate, the Federal Open Market Committee will assess realized and expected economic conditions relative to its objectives of maximum employment and two percent inflation.

During the three and six months ended June 30, 2016, the cost of FHLBank consolidated obligations, as measured by the spread to comparative U.S. Treasury rates, has remained relatively stable. The average short-term funding spreads to three-month LIBOR improved in the three and six months ended June 30, 2016, compared to the same periods in 2015. However, the average long-term funding spreads deteriorated in the three and six months ended June 30, 2016, compared to the same periods in 2015. Table 2 presents the FHLBanks' funding spreads to three-month LIBOR.

Table 2 - Funding Spreads to Three-Month LIBOR
(in basis points)

Borrowing Term	Three-Month Average		Six-Month Average		Ending Rate	
	June 30, 2016	June 30, 2015	June 30, 2016	June 30, 2015	June 30, 2016	December 31, 2015
3-months	(25.2)	(16.2)	(23.2)	(15.8)	(28.9)	(20.2)
2-years	(2.8)	(12.6)	0.7	(12.6)	(2.6)	(0.2)
5-years	17.5	(0.7)	20.4	0.2	19.3	16.2
10-years	58.5	42.3	62.7	40.1	52.8	59.5

Legislative and Regulatory Environment. The legislative and regulatory environment in which each FHLBank and its members and underwriters operate continues to evolve as a result of regulations enacted pursuant to the Housing and Economic Recovery Act of 2008, as amended (Housing Act), and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act), as well as other rules and regulations issued by the FHFA. The FHLBanks' business operations, funding costs, rights, obligations, and/or 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 \$1.031 trillion at June 30, 2016, an increase of 6.3% from \$969.3 billion at December 31, 2015. Advances were \$689.8 billion at June 30, 2016, an increase of 8.8% from \$634.0 billion at December 31, 2015, due to higher member demand, particularly by large members. Investments were \$285.8 billion at June 30, 2016, an increase of 4.4% from \$273.7 billion at December 31, 2015, as a result of increases in investment securities and federal funds sold. Mortgage loans held for portfolio, net were \$45.7 billion at June 30, 2016, an increase of 2.5% from \$44.6 billion at December 31, 2015, primarily as a result of certain FHLBanks increasing purchases of mortgage loans from members.

Total liabilities were \$981.1 billion at June 30, 2016, an increase of 6.5% from \$921.2 billion at December 31, 2015. This increase was primarily the result of an increase in consolidated obligations and an increase in mandatorily redeemable capital stock. Total consolidated obligations were \$965.2 billion at June 30, 2016, an increase of 6.5% from \$905.9 billion at December 31, 2015. This increase resulted primarily from increased funding needs related to the growth in advances and consisted of a 20.0% increase in consolidated bonds, partially offset by a 4.7% decrease in consolidated discount notes. Mandatorily redeemable capital stock was \$1.8 billion at June 30, 2016, an increase of \$1.1 billion from \$0.7 billion at December 31, 2015. This increase was due primarily to the FHFA rule on FHLBank membership that, among other things, requires the FHLBanks to terminate the membership of captive insurance companies by specified dates, resulting in a reclassification of capital stock held by these members to mandatorily redeemable capital stock.

Total GAAP capital was \$49.5 billion at June 30, 2016, an increase of 3.1% from \$48.1 billion at December 31, 2015. This increase was due primarily to growth in retained earnings and an increase in capital stock outstanding. Retained earnings were \$15.3 billion at June 30, 2016, an increase of 6.9% from \$14.3 billion at December 31, 2015, resulting from net income of \$1,617 million, offset by dividends of \$632 million.

Combined Results of Operations. Net income was \$792 million for the three months ended June 30, 2016, an increase of \$108 million, or 15.8%, compared to the same period in 2015. This increase was driven by higher net interest income, partially offset by lower non-interest income. Net income was \$1,617 million for the six months ended June 30, 2016, a decrease of \$82 million, or 4.8%, compared to the same period in 2015. This decrease was primarily the result of lower non-interest income, partially offset by higher net interest income.

Net interest income after provision for credit losses was \$899 million and \$1,826 million for the three and six months ended June 30, 2016, increases of \$164 million and \$167 million, or 22.3% and 10.1%, compared to the same periods in 2015. Net interest margin was 0.37% for both the three and six months ended June 30, 2016, an increase of 4 basis points, compared to the three months ended June 30, 2015, and unchanged when compared to the six months ended June 30, 2015.

Interest income was \$2,629 million and \$5,166 million for the three and six months ended June 30, 2016, increases of \$770 million and \$1,295 million, or 41.4% and 33.5%, compared to the same periods in 2015. Interest expense was \$1,729 million and \$3,338 million for the three and six months ended June 30, 2016, increases of \$608 million and \$1,128 million, or 54.2% and 51.0%, compared to the same periods in 2015. These increases were due primarily to higher yields on interest-earning assets and interest-bearing liabilities resulting largely from the higher short-term interest rate environment and increases in the average balances of interest-earning assets and interest-bearing liabilities, compared to the same periods in 2015.

Non-interest income was \$254 million for the three months ended June 30, 2016, a decrease of \$137 million, or 35.0%, compared to the same period in 2015, due primarily to losses on derivatives and hedging activities, partially offset by gains on trading securities and higher gains on litigation settlements. Non-interest income was \$522 million for the six months ended June 30, 2016, a decrease of \$349 million, or 40.1%, compared to the same period in 2015, due primarily to losses on derivatives and hedging activities, partially offset by gains on trading securities.

Non-interest expense was \$270 million and \$546 million for the three and six months ended June 30, 2016, decreases of \$89 million and \$86 million, or 24.8% and 13.6%, compared to the same periods in 2015.

Affordable Housing Program assessments were \$91 million for the three months ended June 30, 2016, an increase of \$8 million, or 9.6%, compared to the same period in 2015. Affordable Housing Program assessments were \$185 million for the six months ended June 30, 2016, a decrease of \$14 million, or 7.0%, compared to the same period in 2015.

See [Combined Financial Condition](#) and [Combined Results of Operations](#) for further information.

Combined Financial Condition

Total assets were \$1.031 trillion at June 30, 2016, an increase of 6.3% from \$969.3 billion at December 31, 2015, consisting primarily of increases in advances and investments, partially offset by a decrease in cash. Total liabilities were \$981.1 billion at June 30, 2016, an increase of 6.5% from \$921.2 billion at December 31, 2015. This increase was primarily the result of increases in consolidated obligations and mandatorily redeemable capital stock. The following discussion contains information on the major categories of the Combined Statement of Condition: advances, investments, mortgage loans, consolidated obligations, deposits, and capital.

Advances

The FHLBanks provide liquidity 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.

Table 3 presents advances outstanding by product type, some of which include advances that contain embedded put or call options. A member either can sell an embedded option to an FHLBank or can purchase an embedded option from an FHLBank. (See [Note 7 - Advances](#) to the accompanying combined financial statements for additional information on putable and callable advances and their potential effect on advance maturities.)

Table 3 - Advances Outstanding by Product Type
(dollars in millions)

	June 30, 2016		December 31, 2015	
	Amount	Percentage of Total	Amount	Percentage of Total
Fixed-rate	\$ 302,916	44.2%	\$ 286,444	45.4%
Adjustable/variable-rate indexed	344,685	50.3%	307,181	48.7%
Hybrid(1)	20,668	3.0%	19,782	3.1%
Amortizing/mortgage-matched(2)	11,548	1.7%	11,346	1.8%
Convertible	4,052	0.6%	5,329	0.8%
Other advances	1,090	0.2%	1,151	0.2%
Total par value	684,959	100.0%	631,233	100.0%
Other(3)	4,833		2,789	
Total	\$ 689,792		\$ 634,022	

- (1) A hybrid advance contains a one-time option to embed either a floor or cap at any time during the life of the advance. A hybrid advance may be either fixed- or variable-rate at the date of issuance.
- (2) Amortizing advances are medium- or long-term loans with amortization schedules. These include but are not limited to index-amortizing advances, which require repayment in accordance with predetermined amortization schedules linked to various indices. Generally, as market interest rates rise (fall), the maturity of an index-amortizing advance extends (contracts).
- (3) Other consists of hedging and fair value option valuation adjustments, unamortized premiums, discounts, and commitment fees.

The carrying value of advances was \$689.8 billion at June 30, 2016, an increase of \$55.8 billion or 8.8%, from \$634.0 billion at December 31, 2015. This increase was driven primarily by higher member demand, particularly by large members. The percentage of members with outstanding advances was 58.1% at June 30, 2016, compared to 58.7% at December 31, 2015.

Table 4 presents cash flows related to advance originations and advance repayments, which illustrates advance originations exceeding repayments during the three and six months ended June 30, 2016 and 2015, resulting in growth in outstanding advances during those periods. The increase in both advance originations and advance repayments during the three and six months ended June 30, 2016, was driven primarily by certain FHLBanks issuing more advances with short-term maturities compared to the same period in 2015.

Table 4 - Advance Originations and Repayments
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Advances originated	\$ 1,886,557	\$ 1,403,681	\$ 482,876	\$ 3,428,186	\$ 2,496,028	\$ 932,158
Advances repaid	1,815,363	1,352,147	463,216	3,374,469	2,473,567	900,902
Net change	<u>\$ 71,194</u>	<u>\$ 51,534</u>		<u>\$ 53,717</u>	<u>\$ 22,461</u>	

The FHLBanks make advances primarily to their members. Table 5 presents advances at par value by type of borrower and Table 6 presents member borrowers by type of member.

Table 5 - Advances at Par Value by Type of Borrower
(dollars in millions)

	June 30, 2016		December 31, 2015	
	Par Value	Percentage of Total Par Value of Advances	Par Value	Percentage of Total Par Value of Advances
Commercial bank members	\$ 428,561	62.6%	\$ 381,983	60.5%
Insurance company members(1)	101,891	14.8%	98,410	15.6%
Thrift members	89,721	13.1%	84,138	13.3%
Credit union members	44,463	6.5%	44,650	7.1%
Community development financial institution members	106	—	115	—
Total member advances	664,742	97.0%	609,296	96.5%
Non-member borrowers	19,587	2.9%	21,295	3.4%
Housing associates	630	0.1%	642	0.1%
Total par value	<u>\$ 684,959</u>	<u>100.0%</u>	<u>\$ 631,233</u>	<u>100.0%</u>

(1) Includes \$33.8 billion and \$38.7 billion of advances outstanding at par value to captive insurance members at June 30, 2016 and December 31, 2015. At June 30, 2016, \$5.9 billion of advances outstanding at par value were related to captive insurance members that will have their memberships terminated no later than February 19, 2017.

Table 6 - Member Borrowers by Type of Member

	June 30, 2016		December 31, 2015	
	Number	Percentage of Total Member Borrowers	Number	Percentage of Total Member Borrowers
Commercial banks	2,925	70.2%	2,978	70.1%
Thrifts	562	13.5%	570	13.4%
Credit unions	499	12.0%	521	12.3%
Insurance companies	168	4.0%	163	3.9%
Community development financial institutions	12	0.3%	14	0.3%
Total member borrowers	<u>4,166</u>	<u>100.0%</u>	<u>4,246</u>	<u>100.0%</u>
Total members	<u>7,175</u>		<u>7,238</u>	

Table 7 presents the FHLBanks' top 10 advance holding borrowers at the holding-company level on a combined basis based on advances outstanding at par at June 30, 2016. The percentage of total advances for each holding company was computed by dividing the par value of advances by subsidiaries of that holding company by the total combined par value of 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, 2016
(dollars in millions)

Holding Company Name(1)	FHLBank Districts(2)	Par Value	Percentage of Total Par Value of Advances
JPMorgan Chase & Co.	Pittsburgh, Cincinnati, Chicago, Des Moines, San Francisco	\$ 69,489	10.1%
Wells Fargo & Company	Des Moines, San Francisco	59,005	8.6%
Capital One Financial Corporation	Atlanta, Dallas	20,147	2.9%
Citigroup, Inc.	New York, Dallas, San Francisco	18,551	2.7%
The PNC Financial Services Group, Inc.	New York, Pittsburgh, Atlanta, Cincinnati	18,055	2.6%
MetLife, Inc.	Boston, New York, Pittsburgh, Des Moines	16,760	2.4%
Navy Federal Credit Union	Atlanta	13,328	1.9%
Bank of America Corporation	Boston, Atlanta, Des Moines, San Francisco	13,166	1.9%
U.S. Bancorp	Cincinnati, Des Moines, Topeka	12,334	1.8%
New York Community Bancorp, Inc.	New York	11,614	1.7%
		<u>\$ 252,449</u>	<u>36.6%</u>

(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, 2016, 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. This investment income bolsters the FHLBanks' capacity to meet their commitments to affordable housing and community investment. Within the investment portfolio, the FHLBanks invest in investment quality securities to reduce their credit risk. Total investments were \$285.8 billion at June 30, 2016, an increase of \$12.1 billion or 4.4% from \$273.7 billion at December 31, 2015, driven by increases in investment securities and federal funds sold. FHFA regulations prohibit the FHLBanks from investing in certain types of securities and limit the FHLBanks' investment in mortgage-backed securities (MBS) and asset-backed securities (ABS). (See [Risk Management - Credit Risk - Investments](#) for additional information.)

The FHLBanks maintain short-term investment portfolios, 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;
- U.S. Treasury obligations;
- certificates of deposit; and
- GSE obligations.

The yield earned on these short-term investments is tied directly to short-term market interest rates. At June 30, 2016, the FHLBanks continued to maintain significant short-term investment balances as part of their ongoing 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 primarily to provide additional liquidity and to earn interest income. These investments generally provide the FHLBanks with higher returns than those available on short-term investments.

Table 8 presents the composition of investments and investment securities at June 30, 2016 and December 31, 2015. For disclosures related to an individual FHLBank investment holdings that exceed 10% of its respective total capital, see that FHLBank's 2015 SEC Form 10-K or its 2016 Second Quarter Form 10-Q for any updates.

Table 8 - Total Investments
(dollars in millions)

Carrying Value	June 30, 2016	December 31, 2015	Change
Interest-bearing deposits	\$ 2,908	\$ 1,836	\$ 1,072
Securities purchased under agreements to resell	46,910	47,827	(917)
Federal funds sold	45,671	42,380	3,291
Total Investment Securities by Major Security Type			
Investment securities non-mortgage-backed securities			
U.S. Treasury obligations	2,863	1,310	1,553
Certificates of deposit	1,200	700	500
Other U.S. obligations	6,751	7,023	(272)
GSE and Tennessee Valley Authority obligations	30,950	28,305	2,645
State or local housing agency obligations	3,785	3,910	(125)
Federal Family Education Loan Program ABS	4,834	5,299	(465)
Other	1,477	1,414	63
Total investment securities non-mortgage-backed securities	51,860	47,961	3,899
Investment securities mortgage-backed securities			
Other U.S. obligations single-family MBS	14,746	14,834	(88)
Other U.S. obligations multifamily MBS	699	767	(68)
GSE single-family MBS	56,401	58,003	(1,602)
GSE multifamily MBS	54,205	46,167	8,038
Private-label residential MBS	12,127	13,614	(1,487)
Manufactured housing loan ABS	77	86	(9)
Home equity loan ABS	185	209	(24)
Total investment securities mortgage-backed securities	138,440	133,680	4,760
Total investment securities	190,300	181,641	8,659
Total investments	\$ 285,789	\$ 273,684	\$ 12,105

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. An FHLBank may manage the prepayment and interest-rate risks by funding investment securities with consolidated obligations that have call features or by hedging the prepayment risk with caps or floors, callable swaps or swaptions. An FHLBank may manage prepayment and duration risk by funding investment securities with consolidated obligations that contain call features. An FHLBank may also manage the risk arising from changing market prices and volatility of investment securities by matching the cash outflow on the derivatives with the cash inflow on the investment securities. Derivatives held by an FHLBank that are associated with trading and held-to-maturity securities are designated as economic hedges, and derivatives held by an FHLBank associated with available-for-sale securities may qualify as either a fair value hedge, an economic hedge, or a cash flow hedge. (See [Note 10 - Derivatives and Hedging Activities](#) to the accompanying combined financial statements for additional information.)

Table 9 presents the interest-rate payment terms of investment securities at June 30, 2016 and December 31, 2015.

Table 9 - Interest-Rate Payment Terms of Investment Securities
(dollars in millions)

	June 30, 2016	December 31, 2015
Trading Securities at Fair Value		
Trading non-mortgage-backed securities		
Fixed-rate	\$ 5,391	\$ 4,554
Variable-rate	4,874	4,500
Total trading non-mortgage-backed securities	10,265	9,054
Trading mortgage-backed securities		
Fixed-rate	1,597	1,525
Variable-rate	164	181
Total trading mortgage-backed securities	1,761	1,706
Total trading securities	\$ 12,026	\$ 10,760
Available-for-Sale Securities at Amortized Cost		
Available-for-sale non-mortgage-backed securities		
Fixed-rate	\$ 22,536	\$ 19,462
Variable-rate	7,967	8,446
Total available-for-sale non-mortgage-backed securities	30,503	27,908
Available-for-sale mortgage-backed securities		
Fixed-rate	29,043	26,830
Variable-rate	22,452	20,571
Total available-for-sale mortgage-backed securities	51,495	47,401
Total available-for-sale securities	\$ 81,998	\$ 75,309
Held-to-Maturity Securities at Amortized Cost		
Held-to-maturity non-mortgage-backed securities		
Fixed-rate	\$ 4,937	\$ 4,425
Variable-rate	6,136	6,468
Total held-to-maturity non-mortgage-backed securities	11,073	10,893
Held-to-maturity mortgage-backed securities		
Fixed-rate	34,885	37,952
Variable-rate	50,163	46,647
Total held-to-maturity mortgage-backed securities	85,048	84,599
Total held-to-maturity securities	\$ 96,121	\$ 95,492

Net Unrealized Gains (Losses) on AFS and HTM Investment Securities. The FHLBanks held AFS and HTM securities in net unrealized gain (loss) positions. These net unrealized gains (losses) are due primarily to interest rates, credit spreads, volatility, and/or illiquidity.

Net unrealized gains, including the net effect of non-credit related other-than-temporary impairment (OTTI) recognized in accumulated other comprehensive income (loss) (AOCI), on AFS securities were \$633 million at June 30, 2016, an increase of \$26 million from December 31, 2015. (See [Note 4 - Available-for-Sale Securities](#) to the accompanying combined financial statements for additional information regarding AFS securities.)

Net unrealized gains, including the net effect of non-credit-related OTTI recognized in AOCI, on HTM securities were \$1,364 million, an increase of \$733 million from December 31, 2015. This increase was due primarily to higher net unrealized gains on GSE single-family MBS, GSE multifamily MBS, and other U.S. obligations single-family MBS. (See [Note 5 - Held-to-Maturity Securities](#) to the accompanying combined financial statements for additional information regarding HTM securities).

OTTI on Investment Securities. Each FHLBank evaluates its individual AFS and HTM investment securities holdings for OTTI on a quarterly basis. Private-label residential MBS, private-label commercial MBS, manufactured housing loan asset-backed securities (ABS), and home equity loan ABS (collectively referred to as private-label mortgage-backed securities) are those investment securities that generally carry the greatest risk of loss. (See [Note 6 - Other-than-Temporary Impairment Analysis](#) to the accompanying combined financial statements and [Risk Management - Credit Risk - Investments](#) for additional information.)

Mortgage-Backed Securities to Total Regulatory Capital Limit. Current regulatory policy prohibits an FHLBank from purchasing MBS if its investment in MBS exceeds 300% of that FHLBank's previous month-end regulatory capital on the day it intends to purchase the securities. At June 30, 2016, each of the FHLBanks of Chicago, Dallas, and Topeka was precluded from purchasing additional MBS investments until its respective MBS to total regulatory capital percentage declines below 300%. Each of these FHLBanks was not required to sell any previously purchased MBS. Each of the FHLBanks was in compliance with the regulatory limit at the time of its respective MBS purchases. On a combined basis, at June 30, 2016, the FHLBanks' percentage of MBS (net of regulatory excluded MBS) was 265% of total combined regulatory capital.

In addition to this limitation, the FHLBank of Chicago is required to obtain FHFA approval for any new investments that have a term to maturity in excess of 270 days, until such time as the FHLBank of Chicago's MBS portfolio is less than three times its total regulatory capital and its advances represent more than 50% of its total assets.

Mortgage Loans Held for Portfolio, Net

An FHLBank may purchase mortgage loans to support the FHLBank's housing mission, diversify its investments, and provide an additional source of liquidity to FHLBank members. 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.)

Table 10 - Mortgage Loans Held for Portfolio, Net
(dollars in millions)

	June 30, 2016	December 31, 2015	Change
Mortgage loans held for portfolio	\$ 45,708	\$ 44,603	\$ 1,105
Allowance for credit losses on mortgage loans	(18)	(18)	—
Total mortgage loans held for portfolio, net	<u>\$ 45,690</u>	<u>\$ 44,585</u>	<u>\$ 1,105</u>

Mortgage Loans Held for Portfolio. Mortgage loans were \$45.7 billion at June 30, 2016, an increase of 2.5% from \$44.6 billion at December 31, 2015, primarily as a result of certain FHLBanks increasing purchases of mortgage loans from members.

As of June 30, 2016, the FHLBank of Atlanta was not accepting additional master commitments to acquire loans for its own portfolio or purchasing additional mortgage loans under either the MPP or MPF Program. At June 30, 2016, the FHLBank of Des Moines was not accepting additional master commitments to purchase mortgage loans under the MPP and it expects the balance of existing loans, acquired through its merger with the FHLBank of Seattle, to decrease as these loans are paid off. However, the FHLBank of Des Moines continues to acquire mortgage loans under the MPF Program. The remaining FHLBanks participating in the MPP and MPF Program continue to have the ability to purchase both conventional and government-guaranteed or -insured fixed-rate mortgage loans.

Allowance for Credit Losses on Mortgage Loans. Table 11 presents the characteristics 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. As of June 30, 2016, the allowance for credit losses on mortgage loans remained flat at \$18 million compared to December 31, 2015.

Table 11 - Mortgage Loans Held for Portfolio - Characteristics and Credit Losses
(dollars in millions)

Unpaid Principal Balance	June 30, 2016	December 31, 2015
Total past due 90 days or more and still accruing interest	\$ 114	\$ 138
Non-accrual loans	\$ 275	\$ 335
Troubled debt restructurings (not included above)(1)	<u>\$ 111</u>	<u>\$ 117</u>

	Six Months Ended June 30, 2016	Year Ended December 31, 2015
Allowance for credit losses, beginning of period	\$ 18	\$ 52
Charge-offs, net of recoveries	(2)	(38)
Provision (reversal) for credit losses	2	4
Allowance for credit losses, end of period	<u>\$ 18</u>	<u>\$ 18</u>

(1) Represents troubled debt restructured loans that are still performing as of the period-end presented.

See [Note 9 - Allowance for Credit Losses](#) to the accompanying combined financial statements for more information.

Consolidated Obligations

Consolidated obligations consist of consolidated bonds and consolidated discount notes, which are debt instruments issued through the Office of Finance. Consolidated obligations are the principal funding source used by the FHLBanks to make advances and to purchase mortgage loans and investments. The carrying value of consolidated obligations was \$965.2 billion at June 30, 2016, an increase of \$59.3 billion or 6.5% from \$905.9 billion at December 31, 2015, due primarily to increased funding needs related to the growth in advances.

Consolidated bonds are issued to raise short-, intermediate-, and long-term funds. Consolidated bonds generally carry fixed- or variable-rate payment terms and have maturities ranging from one month to 30 years. The carrying value of consolidated bonds was \$494.2 billion at June 30, 2016, an increase of \$82.3 billion or 20.0% from \$411.9 billion at December 31, 2015. Consolidated bonds represented 51.2% and 45.5% of total consolidated obligations outstanding at June 30, 2016 and December 31, 2015.

Consolidated discount notes are issued primarily to provide short-term funding. These consolidated discount notes have a maturity range of one day to one year, are generally issued at or below par, and mature at par. A significant portion of consolidated discount note activity typically results from the refinancing of overnight discount notes. The carrying value of consolidated discount notes was \$471.0 billion at June 30, 2016, a decrease of \$23.0 billion or 4.7% from \$494.0 billion at December 31, 2015. Consolidated discount notes represented 48.8% and 54.5% of total consolidated obligations outstanding at June 30, 2016 and December 31, 2015.

Table 12 presents consolidated obligations outstanding due in one year or less compared to long-term consolidated obligations. Consolidated obligations due in one year or less were \$751.7 billion at June 30, 2016, an increase of \$64.7 billion or 9.4% from \$687.0 billion at December 31, 2015. This increase is the result of the FHLBanks preference for short-term funding to support the growth in advances.

Table 12 - Consolidated Obligations Outstanding
(dollars in millions)

	June 30, 2016	December 31, 2015	Change
Par value of consolidated obligations due in 1 year or less			
Consolidated discount notes	\$ 471,379	\$ 494,343	\$ (22,964)
Consolidated bonds	280,332	192,642	87,690
Total	751,711	686,985	64,726
Par value of long-term consolidated bonds(1)	211,871	217,939	(6,068)
Total par value	963,582	904,924	58,658
Other(2)	1,608	972	636
Total consolidated obligations	<u>\$ 965,190</u>	<u>\$ 905,896</u>	<u>\$ 59,294</u>

(1) Includes \$142 million and \$158 million of index-amortizing notes as of June 30, 2016 and December 31, 2015.

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

Table 13 presents cash flows related to consolidated obligations, which illustrates proceeds exceeding payments for the three and six months ended June 30, 2016 and 2015, resulting in higher consolidated obligations balances due to increased funding needs driven by higher member demand for advances.

Table 13 - Net Proceeds and Payments for Consolidated Obligations
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Net proceeds from issuance of consolidated obligations						
Discount notes	\$ 969,012	\$ 1,129,620	\$ (160,608)	\$ 1,746,568	\$ 2,265,819	\$ (519,251)
Bonds	136,368	79,351	57,017	254,686	155,603	99,083
Net proceeds	1,105,380	1,208,971	\$ (103,591)	2,001,254	2,421,422	\$ (420,168)
Payments for maturing and retiring consolidated obligations						
Discount notes	935,397	1,084,658	\$ (149,261)	1,769,736	2,230,084	\$ (460,348)
Bonds	103,057	83,746	19,311	173,092	185,722	(12,630)
Net payments	1,038,454	1,168,404	\$ (129,950)	1,942,828	2,415,806	\$ (472,978)
Net change	\$ 66,926	\$ 40,567		\$ 58,426	\$ 5,616	

Consolidated Bonds. 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 bonds 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 14 - Par Value of Consolidated Bonds Outstanding by Payment Terms
(dollars in millions)

	June 30, 2016		December 31, 2015	
	Par Value(1)	Percentage of Total	Par Value(1)	Percentage of Total
Fixed-rate, noncallable	\$ 231,248	47.0%	\$ 235,527	57.3%
Single-index, non-capped variable-rate	195,281	39.7%	95,122	23.2%
Fixed-rate, callable	52,751	10.7%	59,636	14.6%
Step-up/step-down	10,350	2.1%	16,991	4.1%
Index-amortizing notes	142	—%	158	—%
Other(2)	2,660	0.5%	3,425	0.8%
Total	\$ 492,432	100.0%	\$ 410,859	100.0%

- (1) Consolidated bonds outstanding have not been adjusted for interbank holdings totaling \$229 million at June 30, 2016, and \$278 million at December 31, 2015.
(2) Primarily consists of capped variable-rate and conversion consolidated bonds.

The types of consolidated bonds issued can fluctuate based on comparative changes in their cost levels, supply and demand conditions, advance demand, and the FHLBanks' individual balance sheet management strategies. During the three and six months ended June 30, 2016, investors in consolidated obligations preferred variable-rate bonds to fixed-rate bonds resulting from investor expectations that the Federal Reserve Board may raise interest rates later this year, as well as money market fund reform. Table 15 presents the bond types the FHLBanks relied on for their bond funding needs.

Table 15 - Percentage of Total Consolidated Bonds Issued by Bond Type

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Single-index, variable-rate	59.1%	13.0%	60.3%	7.9%
Fixed-rate, fixed-term, noncallable	25.8%	57.6%	26.4%	58.0%
Fixed-rate, callable	12.0%	19.4%	10.7%	24.5%
Step-up/step-down(1)	2.8%	8.2%	2.3%	8.5%
Other	0.3%	1.8%	0.3%	1.1%
Total	100.0%	100.0%	100.0%	100.0%

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

Deposits

The FHLBanks offer demand and overnight deposit programs to members and qualifying non-members. In addition, certain FHLBanks offer short-term interest-bearing deposit programs to members, and in certain cases, qualifying non-members. At June 30, 2016, deposits totaled \$8.7 billion, an increase of \$0.1 billion or 1.5% from December 31, 2015. These deposits represent a relatively small portion of the FHLBanks' funding. Deposits 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 91.5% and 89.5% of deposits at June 30, 2016 and December 31, 2015, with the remaining deposits primarily being term deposits and non-interest bearing deposits.

Capital

Table 16 - Total Capital and Capital-to-Assets Ratios
(dollars in millions)

	June 30, 2016	December 31, 2015	Change
Capital stock	\$ 34,813	\$ 34,185	\$ 628
Additional capital from merger	128	194	(66)
Retained earnings	15,310	14,325	985
AOCI	(705)	(634)	(71)
Total GAAP capital	49,546	48,070	1,476
Exclude: AOCI	705	634	71
Add: Mandatorily redeemable capital stock	1,845	745	1,100
Other(1)	2	—	2
Total regulatory capital(2)	\$ 52,098	\$ 49,449	\$ 2,649
Total assets	\$ 1,030,656	\$ 969,267	\$ 61,389
Combined GAAP capital-to-assets ratio	4.81%	4.96%	
Combined regulatory capital-to-assets ratio(3)	5.05%	5.10%	

(1) Represents rounding adjustments.

(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 13 - Capital](#) to the accompanying combined financial statements for a definition and discussion of regulatory capital.)

GAAP Capital. Total GAAP capital was \$49.5 billion at June 30, 2016, an increase of 3.1% from \$48.1 billion at December 31, 2015, due primarily to growth in retained earnings and an increase in capital stock outstanding. The combined GAAP capital-to-assets ratio was 4.81% at June 30, 2016, a decrease of 15 basis points from 4.96% at December 31, 2015.

Capital Stock. Capital stock increased 1.8% or \$0.6 billion due primarily to member activity, partially offset by the FHFA rule on FHLBank membership that, among other things, requires the FHLBanks to terminate the membership of captive insurance companies by specified dates, resulting in a reclassification of capital stock held by these members to mandatorily redeemable capital stock.

Retained Earnings. Retained earnings grew 6.9% due to net income of \$1,617 million, offset by dividends of \$632 million. Unrestricted retained earnings were \$11.1 billion at June 30, 2016, an increase of 6.4% from \$10.5 billion at December 31, 2015. Restricted retained earnings were \$4.2 billion at June 30, 2016, an increase of 8.2% from \$3.9 billion at December 31, 2015.

Table 17 - Capital Components as a Percentage of Total GAAP Capital

	June 30, 2016	December 31, 2015
Capital stock	70.2 %	71.1 %
Additional capital from merger	0.3 %	0.4 %
Retained earnings	30.9 %	29.8 %
AOCI	(1.4)%	(1.3)%
Total GAAP capital	100.0 %	100.0 %

Regulatory Capital. Total combined regulatory capital was \$52.1 billion at June 30, 2016, an increase of 5.4% from \$49.4 billion at December 31, 2015. This increase is the result of growth in retained earnings and an increase in regulatory stock outstanding, which consists of capital stock and mandatorily redeemable capital stock.

Mandatorily Redeemable Capital Stock. Mandatorily redeemable capital stock increased \$1.1 billion due primarily to the transfer of capital stock to mandatorily redeemable capital stock, resulting from the FHFA rule on FHLBank membership.

Combined Results of Operations

Net Income

Net income was \$792 million for the three months ended June 30, 2016, an increase of 15.8% compared to the same period in 2015. This increase was due primarily to higher net interest income, net gains on trading securities, and higher gains on litigation settlements, partially offset by net losses on derivatives and hedging activities.

Net income was \$1,617 million for the six months ended June 30, 2016, a decrease of 4.8% compared to the same period in 2015. This decrease was due primarily to net losses on derivatives and hedging activities, partially offset by net gains on trading securities and higher net interest income.

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

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Net interest income after provision (reversal) for credit losses	\$ 899	\$ 735	\$ 164	\$ 1,826	\$ 1,659	\$ 167
Non-interest income	254	391	(137)	522	871	(349)
Non-interest expense	270	359	(89)	546	632	(86)
Affordable Housing Program assessments	91	83	8	185	199	(14)
Net income	\$ 792	\$ 684	\$ 108	\$ 1,617	\$ 1,699	\$ (82)

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, investments, and mortgage loans, less the interest expense on consolidated obligations and other borrowings. Net interest income after provision (reversal) for credit losses was \$899 million and \$1,826 million for the three and six months ended June 30, 2016, increases of 22.3% and 10.1% compared to the same periods in 2015. Net interest margin for both the three and six months ended June 30, 2016, was 0.37%, an increase of 4 basis points compared to the three months ended June 30, 2015, and unchanged compared to the six months ended June 30, 2015.

Interest income was \$2,629 million and \$5,166 million for the three and six months ended June 30, 2016, increases of 41.4% and 33.5% compared to the same periods in 2015. Interest expense was \$1,729 million and \$3,338 million for the three and six months ended June 30, 2016, increases of 54.2% and 51.0% compared to the same periods in 2015. These increases were due primarily to higher yields on interest-earning assets and interest-bearing liabilities resulting largely from the higher short-term interest rate environment for the three and six months ended June 30, 2016, compared to the same periods in 2015.

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

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Interest income						
Advances	\$ 1,236	\$ 546	\$ 690	\$ 2,378	\$ 1,226	\$ 1,152
Prepayment fees on advances, net	35	23	12	47	49	(2)
Investments and other	971	880	91	1,955	1,777	178
Mortgage loans held for portfolio	387	410	(23)	786	819	(33)
Total interest income	2,629	1,859	770	5,166	3,871	1,295
Interest expense						
Consolidated obligations						
Discount notes	513	166	347	1,002	331	671
Bonds	1,179	901	278	2,264	1,792	472
Total consolidated obligations	1,692	1,067	625	3,266	2,123	1,143
Other borrowings	37	54	(17)	72	87	(15)
Total interest expense	1,729	1,121	608	3,338	2,210	1,128
Net interest income	900	738	162	1,828	1,661	167
Provision (reversal) for credit losses	1	3	(2)	2	2	—
Net interest income after provision (reversal) for credit losses	\$ 899	\$ 735	\$ 164	\$ 1,826	\$ 1,659	\$ 167

Table 20 presents average balances and annualized yields of the major categories of interest-earning assets and interest-bearing liabilities; net interest spread, which is the difference between the annualized yield on total interest-earning assets and the annualized yield on total interest-bearing liabilities; and net interest margin, which is net interest income expressed as a percentage of the average balance of total interest-earning assets. Due to the FHLBanks' cooperative structures, the FHLBanks generally earn a narrow net interest spread.

Table 20 - Spread and Yield Analysis
(dollars in millions)

	Three Months Ended June 30,					
	2016			2015		
	Average Balance	Interest	Annualized Yield	Average Balance	Interest	Annualized Yield
Advances(1)	\$ 659,587	\$ 1,271	0.78%	\$ 568,608	\$ 569	0.40%
Mortgage loans	45,111	387	3.45%	44,427	410	3.70%
Investments						
Interest-bearing deposits and other	8,346	8	0.39%	7,212	4	0.22%
Securities purchased under agreements to resell	22,256	20	0.36%	30,421	7	0.09%
Federal funds sold	66,999	63	0.38%	62,508	18	0.12%
Trading securities	12,025	49	1.64%	9,739	41	1.69%
Available-for-sale securities(2)	79,933	385	1.94%	78,162	362	1.86%
Held-to-maturity securities(2)	94,470	446	1.90%	95,178	448	1.89%
Total investment securities	186,428	880	1.90%	183,079	851	1.86%
Total investments	284,029	971	1.37%	283,220	880	1.25%
Total interest-earning assets	988,727	2,629	1.07%	896,255	1,859	0.83%
Other non-interest-earning assets	5,860			5,155		
Fair-value adjustment on investment securities(2)	409			1,249		
Total assets	\$ 994,996			\$ 902,659		
Consolidated obligations						
Discount notes	\$ 448,838	513	0.46%	\$ 375,956	166	0.18%
Bonds	476,384	1,179	1.00%	456,556	901	0.79%
Total consolidated obligations	925,222	1,692	0.74%	832,512	1,067	0.51%
Deposits and other borrowings(3)	10,982	37	1.36%	11,819	54	1.83%
Total interest-bearing liabilities	936,204	1,729	0.74%	844,331	1,121	0.53%
Non-interest-bearing liabilities	10,560			11,633		
Total liabilities	946,764			855,964		
Capital	48,232			46,695		
Total liabilities and capital	\$ 994,996			\$ 902,659		
Net interest income		\$ 900			\$ 738	
Net interest spread			0.33%			0.30%
Net interest margin			0.37%			0.33%

Six Months Ended June 30,

	2016			2015		
	Average Balance	Interest	Annualized Yield	Average Balance	Interest	Annualized Yield
Advances(1)	\$ 652,701	\$ 2,425	0.75%	\$ 565,277	\$ 1,275	0.45%
Mortgage loans	44,878	786	3.52%	44,102	819	3.74%
Investments						
Interest-bearing deposits and other	8,089	18	0.45%	7,575	8	0.21%
Securities purchased under agreements to resell	24,052	42	0.35%	32,548	14	0.09%
Federal funds sold	67,126	123	0.37%	68,326	38	0.11%
Trading securities	11,621	102	1.77%	9,650	82	1.71%
Available-for-sale securities(2)	78,448	776	1.99%	76,657	718	1.89%
Held-to-maturity securities(2)	94,729	894	1.90%	99,587	917	1.86%
Total investment securities	184,798	1,772	1.93%	185,894	1,717	1.86%
Total investments	284,065	1,955	1.38%	294,343	1,777	1.22%
Total interest-earning assets	981,644	5,166	1.06%	903,722	3,871	0.86%
Other non-interest-earning assets	6,085			5,456		
Fair-value adjustment on investment securities(2)	355			476		
Total assets	\$ 988,084			\$ 909,654		
Consolidated obligations						
Discount notes	\$ 462,517	1,002	0.44%	\$ 375,100	331	0.18%
Bonds	456,203	2,264	1.00%	463,609	1,792	0.78%
Total consolidated obligations	918,720	3,266	0.71%	838,709	2,123	0.51%
Deposits and other borrowings(3)	11,079	72	1.31%	12,330	87	1.42%
Total interest-bearing liabilities	929,799	3,338	0.72%	851,039	2,210	0.52%
Non-interest-bearing liabilities	10,270			11,661		
Total liabilities	940,069			862,700		
Capital	48,015			46,954		
Total liabilities and capital	\$ 988,084			\$ 909,654		
Net interest income		\$ 1,828			\$ 1,661	
Net interest spread			0.34%			0.34%
Net interest margin			0.37%			0.37%

(1) Interest income for advances includes prepayment fees on advances, net.

(2) The average balances of AFS securities and HTM securities are reflected at amortized cost; therefore, the resulting yields do not give effect to changes in fair value or the non-credit component of previously recognized OTTI reflected in AOCI.

(3) The average balances do not include non-interest-bearing deposits, but do include the average balances and the related interest expense of mandatorily redeemable capital stock and subordinated notes.

Changes in both 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 volume-related and rate-related factors. Changes in interest income and interest expense not identifiable as either volume-related or rate-related, but rather attributable to both volume and rate changes, have been allocated to the volume and rate categories based on the proportion of the absolute value of the volume and rate changes.

Table 21 - Rate and Volume Analysis
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016 vs. 2015			2016 vs. 2015		
	Volume	Rate	Total	Volume	Rate	Total
Interest Income						
Advances(1)	\$ 102	\$ 600	\$ 702	\$ 215	\$ 935	\$ 1,150
Mortgage loans	6	(29)	(23)	14	(47)	(33)
Investments	3	88	91	(62)	240	178
Total interest income	111	659	770	167	1,128	1,295
Interest Expense						
Consolidated obligations	125	500	625	222	921	1,143
Other borrowings(2)	(4)	(13)	(17)	(8)	(7)	(15)
Total interest expense	121	487	608	214	914	1,128
Changes in net interest income	\$ (10)	\$ 172	\$ 162	\$ (47)	\$ 214	\$ 167

(1) Includes prepayment fees on advances, net.

(2) The average balances do not include non-interest-bearing deposits, but do include the average balances and the related interest expense of mandatorily redeemable capital stock and subordinated notes.

Net interest income was \$900 million and \$1,828 million for the three and six months ended June 30, 2016, increases of 22.0% and 10.1% compared to the same periods in 2015. These increases were the result of 24 and 20 basis point increases in the yields on interest-earning assets and 10.3% and 8.6% increases in the average balances of interest-earning assets, partially offset by 21 and 20 basis point increases in the yields on interest-bearing liabilities and 10.9% and 9.3% increases in the average balances of interest-bearing liabilities, compared to the same periods in 2015.

Factors Affecting Net Interest Income.

Advances. Interest income on advances was \$1,271 million and \$2,425 million for the three and six months ended June 30, 2016, increases of \$702 million and \$1,150 million compared to the same periods in 2015, resulting from increases in both the yields on, and average balances of, advances. The yields on advances were 0.78% and 0.75%, increases of 38 and 30 basis points compared to the same periods in 2015. These increases in yields were due primarily to the higher short-term interest rate environment. The average balances of advances were \$659.6 billion and \$652.7 billion, increases of 16.0% and 15.5% compared to the same periods in 2015. These increases in average balances were the result of higher member demand, particularly by large members.

Investments. Interest income on investments was \$971 million and \$1,955 million for the three and six months ended June 30, 2016, increases of 10.3% and 10.0% compared to the same periods in 2015, resulting principally from increases in the yields on investments. The yields on investments were 1.37% and 1.38%, increases of 12 and 16 basis points compared to the same periods in 2015. These increases were driven primarily by higher yields on short-term investments, resulting from the higher short-term interest rate environment.

Mortgage Loans. Interest income on mortgage loans was \$387 million and \$786 million for the three and six months ended June 30, 2016, decreases of 5.6% and 4.0% compared to the same periods in 2015, resulting from decreases in the yields on mortgage loans, partially offset by increases in the average balances of mortgage loans. For the three and six months ended June 30, 2016, the yields on mortgage loans were 3.45% and 3.52%, decreases of 25 and 22 basis points compared to the same periods in 2015. The average balances of mortgage loans were \$45.1 billion and \$44.9 billion, increases of 1.5% and 1.8% compared to the same periods in 2015.

Consolidated Obligations. Interest expense on consolidated obligations was \$1,692 million and \$3,266 million for the three and six months ended June 30, 2016, increases of 58.6% and 53.8% compared to the same periods in 2015, resulting from increases in the yields on, and average balances of, consolidated obligations. The yields on consolidated obligations were 0.74% and 0.71%, increases of 23 and 20 basis points compared to the same periods in 2015. These increases in yields were due primarily to the higher short-term interest rate environment. The average balances of consolidated obligations were \$925.2 billion and \$918.7 billion, increases of 11.1% and 9.5% compared to the same periods in 2015. These increases in the average balances of consolidated obligations were driven by funding needs related to the growth in the average balances of advances and consisted primarily of increases of 19.4% and 23.3% in the average balances of consolidated discount notes.

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 certain FHLBanks' hedging strategies. The effect of derivatives and hedging activities on net interest income was a net reduction of \$471 million and \$975 million for the three and six months ended June 30, 2016, compared to a net reduction of \$625 million and \$1,137 million for the same periods in 2015. This improvement was primarily the result of lower amortization of hedging activities into net interest income related to advances.

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. In addition, 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. (See [Note 10 - Derivatives and Hedging Activities](#) to the accompanying combined financial statements for additional information on the effect of derivatives and hedging activities.)

Table 22 - Effect of Derivatives and Hedging Activities on Net Interest Income
(dollars in millions)

	Three Months Ended June 30, 2016					
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	\$ (32)	\$ 21	\$ (8)	\$ (7)	\$ —	\$ (26)
Net interest settlements included in net interest income(1)	(456)	(165)	—	236	(60)	(445)
Total effect on net interest income	<u>\$ (488)</u>	<u>\$ (144)</u>	<u>\$ (8)</u>	<u>\$ 229</u>	<u>\$ (60)</u>	<u>\$ (471)</u>
	Three Months Ended June 30, 2015					
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	\$ (198)	\$ 28	\$ (8)	\$ 5	\$ —	\$ (173)
Net interest settlements included in net interest income(1)	(719)	(169)	—	504	(68)	(452)
Total effect on net interest income	<u>\$ (917)</u>	<u>\$ (141)</u>	<u>\$ (8)</u>	<u>\$ 509</u>	<u>\$ (68)</u>	<u>\$ (625)</u>
	Six Months Ended June 30, 2016					
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	\$ (61)	\$ 41	\$ (15)	\$ (12)	\$ (1)	\$ (48)
Net interest settlements included in net interest income(1)	(983)	(337)	—	514	(121)	(927)
Total effect on net interest income	<u>\$ (1,044)</u>	<u>\$ (296)</u>	<u>\$ (15)</u>	<u>\$ 502</u>	<u>\$ (122)</u>	<u>\$ (975)</u>
	Six Months Ended June 30, 2015					
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Total
Net interest income						
Amortization and accretion of hedging activities in net interest income	\$ (264)	\$ 48	\$ (15)	\$ 21	\$ (1)	\$ (211)
Net interest settlements included in net interest income(1)	(1,452)	(339)	—	1,003	(138)	(926)
Total effect on net interest income	<u>\$ (1,716)</u>	<u>\$ (291)</u>	<u>\$ (15)</u>	<u>\$ 1,024</u>	<u>\$ (139)</u>	<u>\$ (1,137)</u>

(1) Represents interest income or expense on derivatives included in net interest income.

Non-Interest Income

Non-interest income was \$254 million for the three months ended June 30, 2016, a decrease of 35.0% compared to the same period in 2015. This decrease was due primarily to net losses on derivatives and hedging activities, partially offset by net gains on trading securities, and higher gains on litigation settlements. Non-interest income was \$522 million for the six months ended June 30, 2016, a decrease of 40.1% compared to the same period in 2015. This decrease was due primarily to net losses on derivatives and hedging activities, partially offset by net gains on trading securities.

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

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Net other-than-temporary impairment losses	\$ (6)	\$ (12)	\$ 6	\$ (15)	\$ (67)	\$ 52
Net gains (losses) on trading securities	46	(76)	122	148	(67)	215
Net realized gains (losses) from sale of available-for-sale securities	3	3	—	16	58	(42)
Net realized gains (losses) from sale of held-to-maturity securities	1	4	(3)	1	10	(9)
Net gains (losses) on financial instruments held under fair value option	(10)	(30)	20	—	(39)	39
Net gains (losses) on derivatives and hedging activities	(73)	326	(399)	(310)	285	(595)
Gains on litigation settlements, net	252	143	109	600	623	(23)
Net gains (losses) on debt extinguishments	(2)	—	(2)	(3)	(2)	(1)
Other, net	43	33	10	85	70	15
Total non-interest income (loss)	\$ 254	\$ 391	\$ (137)	\$ 522	\$ 871	\$ (349)

Other-than-Temporary Impairment Losses. The FHLBanks update their other-than-temporary impairment analysis each quarter to reflect current housing market conditions, changes in anticipated housing market conditions, observed and anticipated borrower behavior, and updated information on collateral underlying private-label mortgage-backed securities. This process includes updating key aspects of the FHLBanks' loss projection models.

Net other-than-temporary impairment losses were \$6 million and \$15 million for the three and six months ended June 30, 2016, and \$12 million and \$67 million for the three and six months ended June 30, 2015. The losses for the six months ended June 30, 2015, were due primarily to the FHLBank of Seattle classifying all investment securities as available-for-sale and recording a \$52 million other-than-temporary impairment charge based on the FHLBank of Seattle's intent to sell its private-label mortgage backed securities in connection with its merger with the FHLBank of Des Moines. The FHLBank of Seattle subsequently sold these private-label mortgage backed securities and realized a \$52 million gain from the sale of available-for-sale securities in March 2015. (See [Note 6 - Other-than-Temporary Impairment Analysis](#) to the accompanying combined financial statements, [Critical Accounting Estimates - OTTI for Investment Securities](#), and [Risk Management-Credit Risk-Investments](#) for additional information.)

Gains (Losses) on Trading Securities. The FHLBanks generally hold trading securities for liquidity purposes. 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 these securities, including changes in interest rates, credit spreads, the passage of time, and volatility. Net gains on trading securities were \$46 million and \$148 million for the three and six months ended June 30, 2016. Net losses on trading securities were \$76 million and \$67 million for the three and six months ended June 30, 2015. Certain trading securities are being economically hedged, and the gains (losses) on these securities are generally offset by the change in fair value of the associated derivatives. (See Table 24 for additional information regarding the effect of derivatives and hedging activities on non-interest income.)

Realized Gains (Losses) from Sale of Available-for-Sale Securities. Net realized gains from sale of available-for-sale securities were \$3 million and \$16 million for the three and six months ended June 30, 2016, and \$3 million and \$58 million for the three and six months ended June 30, 2015. The gains for the six months ended June 30, 2015, were due primarily to the FHLBank of Seattle's sale of its private-label mortgage-backed securities in connection with its merger with the FHLBank of Des Moines, resulting in a \$52 million gain.

Gains (Losses) on Derivatives and Hedging Activities. Fair value estimates for an FHLBank's derivatives and hedging positions fluctuate with changes in market conditions. In general, an FHLBank holds derivatives and associated hedged

instruments to the maturity, call, or put date. Therefore, as a matter of timing, nearly all of the cumulative net gains and losses for these financial instruments generally reverse over the remaining contractual terms of the hedged financial instruments. However, there may be instances when an FHLBank terminates these instruments prior to maturity or prior to the call or put dates. Terminating the financial instrument or hedging relationship may result in a realized gain or loss. Table 24 presents the effect of derivatives and hedging activities on non-interest income.

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

	Three Months Ended June 30, 2016							
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives and hedging activities								
Gains (losses) related to fair value hedge ineffectiveness	\$ 12	\$ (29)	\$ —	\$ 8	\$ (1)	\$ —	\$ —	\$ (10)
Gains (losses) related to cash flow hedge ineffectiveness	—	—	—	(1)	4	—	—	3
Gains (losses) related to derivatives not designated as hedging instruments	(33)	(86)	—	52	(1)	(6)	8	(66)
Total net gains (losses) on derivatives and hedging activities	(21)	(115)	—	59	2	(6)	8	(73)
Net gains (losses) on trading securities(1)	—	40	—	—	—	—	—	40
Net gains (losses) on financial instruments held at fair value	20	—	—	(24)	(5)	(1)	—	(10)
Total effect on non-interest income	\$ (1)	\$ (75)	\$ —	\$ 35	\$ (3)	\$ (7)	\$ 8	\$ (43)

	Three Months Ended June 30, 2015							
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives and hedging activities								
Gains (losses) related to fair value hedge ineffectiveness	\$ 209	\$ 23	\$ —	\$ (3)	\$ —	\$ —	\$ —	\$ 229
Gains (losses) related to cash flow hedge ineffectiveness	—	—	—	—	1	—	—	1
Gains (losses) related to derivatives not designated as hedging instruments	15	45	2	20	14	—	—	96
Total net gains (losses) on derivatives and hedging activities	224	68	2	17	15	—	—	326
Net gains (losses) on trading securities(1)	—	(75)	—	—	—	—	—	(75)
Net gains (losses) on financial instruments held at fair value	(38)	—	—	12	(4)	—	—	(30)
Total effect on non-interest income	\$ 186	\$ (7)	\$ 2	\$ 29	\$ 11	\$ —	\$ —	\$ 221

	Six Months Ended June 30, 2016							
	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives and hedging activities								
Gains (losses) related to fair value hedge ineffectiveness	\$ 30	\$ (42)	\$ —	\$ (28)	\$ (3)	\$ —	\$ —	\$ (43)
Gains (losses) related to cash flow hedge ineffectiveness	—	—	—	(1)	4	—	—	3
Gains (losses) related to derivatives not designated as hedging instruments	(117)	(251)	(8)	140	(30)	(12)	8	(270)
Total net gains (losses) on derivatives and hedging activities	(87)	(293)	(8)	111	(29)	(12)	8	(310)
Net gains (losses) on trading securities(1)	—	135	—	—	—	—	—	135
Net gains (losses) on financial instruments held at fair value	87	—	—	(73)	(14)	—	—	—
Total effect on non-interest income	\$ —	\$ (158)	\$ (8)	\$ 38	\$ (43)	\$ (12)	\$ 8	\$ (175)

Six Months Ended June 30, 2015

	Advances	Investment Securities	Mortgage Loans	Consolidated Bonds	Consolidated Discount Notes	Balance Sheet	Intermediary Positions and Other	Total
Net gains (losses) on derivatives and hedging activities								
Gains (losses) related to fair value hedge ineffectiveness	\$ 237	\$ 13	\$ —	\$ (19)	\$ —	\$ —	\$ —	\$ 231
Gains (losses) related to cash flow hedge ineffectiveness	—	—	—	—	1	—	—	1
Gains (losses) related to derivatives not designated as hedging instruments	(32)	(23)	(1)	104	8	(4)	1	53
Total net gains (losses) on derivatives and hedging activities	205	(10)	(1)	85	9	(4)	1	285
Net gains (losses) on trading securities(1)	—	(66)	—	—	—	—	—	(66)
Net gains (losses) on financial instruments held at fair value	(12)	—	—	(20)	(7)	—	—	(39)
Total effect on non-interest income	\$ 193	\$ (76)	\$ (1)	\$ 65	\$ 2	\$ (4)	\$ 1	\$ 180

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

Net losses on derivatives and hedging activities were \$73 million and \$310 million for the three and six months ended June 30, 2016, due primarily to changes in the fair value of derivatives not designated as qualifying accounting hedges under GAAP. Net gains on derivatives and hedging activities were \$326 million and \$285 million for the three and six months ended June 30, 2015, due primarily to fair value hedge ineffectiveness related to advances. Fair values are based on a wide range of factors, including current and projected levels of interest rates, credit spreads, the passage of time, and volatility. Hedge ineffectiveness occurs when changes in the fair value of the derivative and the associated hedged instrument do not perfectly offset. (See [Note 10 - Derivatives and Hedging Activities](#) to the accompanying combined financial statements for additional information on the financial effect of derivatives and hedging activities.)

Gains on Litigation Settlement, Net. Several of the FHLBanks have agreed to settle certain claims arising from investments in private-label mortgage-backed securities. Gains on litigation settlements, net of related legal expenses, were \$252 million and \$600 million for the three and six months ended June 30, 2016, due primarily to the FHLBank of San Francisco's settlement resulting in a net gain of \$211 million during the first quarter of 2016, and the FHLBank of Des Moines' settlements resulting in a net gain of \$137 million during the first quarter of 2016 and \$200 million during the second quarter of 2016. Gains on litigation settlements, net of related legal expenses, were \$143 million and \$623 million for the three and six months ended June 30, 2015, due primarily to the FHLBank of San Francisco's settlement resulting in a net gain of \$459 million during the first quarter of 2015, and the FHLBank of Boston's settlement resulting in a net gain of \$135 million during the second quarter of 2015.

Non-Interest Expense

Non-interest expense was \$270 million and \$546 million for the three and six months ended June 30, 2016, decreases of 24.8% and 13.6% compared to the same periods in 2015. These decreases were due primarily to expenses incurred during the three and six months ended June 30, 2015, related to certain private-label mortgage-backed securities litigation expenses and related charges incurred by the FHLBank of Seattle, and expenses incurred in connection with the merger of the FHLBank of Des Moines and the FHLBank of Seattle.

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

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Compensation and benefits	\$ 151	\$ 174	\$ (23)	\$ 304	\$ 325	\$ (21)
Other operating expenses	88	153	(65)	176	247	(71)
Federal Housing Finance Agency	13	14	(1)	29	30	(1)
Office of Finance	11	12	(1)	24	23	1
Other	7	6	1	13	7	6
Total non-interest expense	\$ 270	\$ 359	\$ (89)	\$ 546	\$ 632	\$ (86)

Affordable Housing Program Assessments

Affordable Housing Program (AHP) assessments were \$91 million for the three months ended June 30, 2016, an increase of 9.6% compared to the same period in 2015. AHP assessments were \$185 million for the six months ended June 30, 2016, a decrease of 7.0% compared to the same period in 2015. AHP assessments result from individual FHLBank income subject to assessments.

By regulation, the FHLBanks must annually set aside for the AHP the greater of the aggregate of \$100 million or 10% of the individual FHLBank's income subject to assessment. 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.

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.

Interbank Transfers of Consolidated Bonds and Their Effect on Combined Net Income

Combined net income of the FHLBanks is affected by interbank transfers of the liability on outstanding consolidated bonds. These transactions arise when one FHLBank transfers its direct liability on outstanding consolidated bonds to another FHLBank. By engaging in these transactions, two FHLBanks are able to better match their funding needs by transferring funds held by one FHLBank to another FHLBank that needs funds. Because the consolidated bonds are the joint and several obligation of all FHLBanks, these interbank transactions have no effect on the holders of the consolidated bonds.

There were no interbank transfers of consolidated obligations during the six months ended June 30, 2016. Total consolidated bonds of \$80 million at par value were transferred from an FHLBank to another FHLBank during the six months ended June 30, 2015. The amount of total interbank consolidated bonds transferred during a period depends on a variety of factors, such as (1) whether or not an assuming FHLBank can obtain equal or lower funding costs through interbank transfers as compared to issuing new debt, (2) an FHLBank's overall asset/liability management strategy, and (3) current market conditions.

The transferring FHLBank treats the transfer as a debt extinguishment because that FHLBank has been released from being the primary obligor. The transferring FHLBank records a gain or loss on the debt transferred to the assuming FHLBank based on the difference between the fair value and the carrying value of the consolidated bonds, including any unamortized premiums or discounts. The assuming FHLBank becomes the primary obligor because it now is directly responsible for repaying the debt. The assuming FHLBank records the fair value, including any premium or discount, as the initial carrying amount for the consolidated bond it received from the transferring FHLBank. However, under the principles of combination accounting, combining adjustments are required to reflect the transaction as if the transferring FHLBank continues to hold the consolidated bond for purposes of the FHLBanks' combined financial statements.

Table 26 presents the effect of interbank eliminations and rounding adjustments (collectively referred to as combining adjustments) on the Combined Statement of Income. Interbank adjustments include the elimination of:

- transfers of interbank consolidated bond liabilities;
- interest on purchased consolidated bonds, which is eliminated in interest income and interest expense; and
- fees related to the MPF Program that are eliminated in non-interest income and non-interest expense.

Table 26 - Effect of Combining Adjustments on Combined Statement of Income
(dollars in millions)

Effect on	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Interest income	\$ (2)	\$ (5)	\$ (7)	\$ (7)
Interest expense	2	(1)	3	7
Provision (reversal) for credit losses	—	—	—	(1)
Net interest income after provision (reversal) for credit losses	(4)	(4)	(10)	(13)
Non-interest income	(4)	6	(7)	1
Non-interest expense	(5)	—	(8)	(7)
Affordable Housing Program assessments	2	(1)	1	—
Net income	\$ (5)	\$ 3	\$ (10)	\$ (5)

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).

Other comprehensive income was \$100 million for the three months ended June 30, 2016, an increase of \$149 million compared to a loss of \$49 million for the same period in 2015. Other comprehensive income primarily consisted of fair value gains on AFS securities.

Other comprehensive income was a loss of \$71 million for the six months ended June 30, 2016, a decrease of \$84 million compared to a gain of \$13 million for the same period in 2015. The net loss recorded in other comprehensive income was driven primarily by net unrealized losses relating to cash flow hedging activities.

Table 27 - Comprehensive Income
(dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Net income	\$ 792	\$ 684	\$ 108	\$ 1,617	\$ 1,699	\$ (82)
Other comprehensive income						
Changes in fair value of AFS securities						
Net unrealized gains (losses) on AFS securities	20	(175)	195	26	(85)	111
Net change in fair value of other-than-temporarily impaired AFS securities	81	(20)	101	7	(15)	22
Total changes in fair value of AFS securities	101	(195)	296	33	(100)	133
Changes in non-credit OTTI losses						
Net amount of AFS and HTM impairment losses reclassified to (from) non-interest income	1	(6)	7	(6)	45	(51)
Reclassification of (gains) losses of the non-credit portion on AFS securities included in net income	1	3	(2)	—	(52)	52
Accretion of non-credit portion on HTM securities	24	31	(7)	48	63	(15)
Total changes in non-credit OTTI losses	26	28	(2)	42	56	(14)
Net unrealized gains (losses) relating to hedging activities	(25)	117	(142)	(149)	61	(210)
Other	(2)	1	(3)	3	(4)	7
Total other comprehensive income (loss)	100	(49)	149	(71)	13	(84)
Comprehensive income	\$ 892	\$ 635	\$ 257	\$ 1,546	\$ 1,712	\$ (166)

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, which have not been other-than-temporarily impaired, was due primarily to changes in interest rates, credit spreads, the passage of time, and volatility. The net change in the fair value of other-than-temporarily impaired AFS securities was driven by housing prices and the economic outlook, as well as changes in interest rates, credit spreads, the passage of time, and volatility. The distinction between the two categories is whether the AFS security has ever incurred an OTTI loss.

Changes in Non-Credit OTTI Losses. Changes in non-credit OTTI losses are comprised of the accretion of the non-credit portion on HTM securities, the reclassification of (gains) losses of the non-credit portion on AFS securities included in net income, and the net amount of AFS and HTM impairment losses reclassified to (from) non-interest income.

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, to the extent that the hedge is effective, until earnings are affected by the variability of the cash flows of the hedged transaction and the amounts are reclassified to non-interest income. 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 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 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 its assets and liabilities.

The FHLBanks may not be able to predict future trends in member credit needs because these trends 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 regularly monitors current trends and anticipates future debt issuance needs to be prepared to fund its members' credit needs and its investment opportunities. 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 may repurchase and retire outstanding consolidated obligations, allowing its balance sheet to shrink.

Sources and Uses of Liquidity. The FHLBanks' primary sources of liquidity are consolidated obligations and high-quality, short-, and intermediate-term investments. The FHLBanks' consolidated obligations are not obligations of the United States and are not guaranteed by either the United States or any government agency, but have historically received the same credit rating as the government bond credit rating of the United States. As a result, the FHLBanks generally have comparatively stable access to funding at relatively favorable spreads to U.S. Treasury rates. As of June 30, 2016, the FHLBanks' consolidated obligations were rated AA+/Aaa (with outlook stable) by S&P and Moody's.

The FHLBanks continue to maintain sufficient access to funding and adapt their debt issuance to meet the needs of their members. During the six months ended June 30, 2016, the FHLBanks maintained a preference for short-term funding through the issuance of consolidated discount notes and short-term consolidated bonds. Access to short-term debt markets has been reliable because investors, driven by increased liquidity preferences and risk aversion, have sought the FHLBanks' short-term debt as an asset of choice, which has led to advantageous funding opportunities and increased utilization of debt maturing in one year or less. However, due to the short maturity of the debt, the FHLBanks may be exposed to access to debt markets, refinancing, and investor concentration risks. (See [Combined Financial Condition - Consolidated Obligations](#) for more information on short-term consolidated obligations.)

Other sources of liquidity include payments collected on advances and mortgage loans, proceeds from the issuance of capital stock, and member deposits. In addition, by law, the U.S. Secretary of the Treasury may acquire up to \$4 billion 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 shall be repaid by the FHLBanks at the earliest practicable date.

The FHLBanks' primary uses of liquidity are the issuance of advances, purchase of mortgage loans and investments, repayment of consolidated obligations, payment of dividends, as well as 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.

Each FHLBank is focused on maintaining a liquidity and funding balance between its financial assets and financial liabilities. The FHLBanks work collectively to manage the system-wide liquidity and funding management and the FHLBanks jointly monitor the combined refinancing risk. In managing and monitoring the amounts of assets that require refunding, the FHLBanks may consider contractual maturities of the financial assets, as well as certain assumptions regarding expected cash flows (i.e., estimated prepayments and scheduled amortizations). See the notes to the accompanying combined financial statements for additional information regarding contractual maturities of certain financial assets and financial liabilities.

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:

- maintain contingency liquidity sufficient to meet liquidity needs that shall, at a minimum, cover five calendar days of inability to access consolidated obligations in the debt markets;
- 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, through short-term investments, an amount at least equal to its anticipated cash outflows under two hypothetical scenarios.

Each FHLBank also maintains a contingency liquidity plan designed to enable it to meet its obligations and the liquidity needs of members in the event of operational disruptions at the FHLBanks and/or the Office of Finance, or short-term capital market disruptions. During the six months ended June 30, 2016, each of the FHLBanks was in compliance with the FHFA's regulatory contingency liquidity requirements. As defined by FHFA regulations, contingency liquidity means the sources of cash an FHLBank may use to meet its operational requirements when its access to capital markets is impeded, and includes:

- marketable securities with a maturity of one year or less;
- self-liquidating assets with a maturity of seven days or less;
- assets that are generally accepted as collateral in the repurchase agreement market; and
- irrevocable lines of credit from financial institutions rated not lower than the second highest rating category by a nationally recognized statistical rating organization.

Office of Finance Funding Contingency Plan Policy. The Office of Finance has an allocation methodology for the proceeds from the issuance of consolidated obligations when consolidated obligations cannot be issued in sufficient amounts to satisfy all FHLBank demand for funding during periods of financial distress and when its existing allocation processes are deemed insufficient. The purpose and objective of this allocation methodology is to ensure that guidance is in place to facilitate the ability of the Office of Finance to meet the funding needs of FHLBanks when market conditions threaten to limit or prevent access to funding in periods of financial distress. In general, this methodology provides that the proceeds in these circumstances will be allocated among the FHLBanks based on relative FHLBank regulatory capital unless the Office of Finance determines that there is an overwhelming reason to adopt a different allocation method. As is the case during any instance of a disruption in an FHLBank's ability to access the capital markets, market conditions or this allocation could adversely impact an FHLBank's ability to finance its operations, which could thereby adversely impact that FHLBank's financial condition and results of operations.

Capital Resources

At June 30, 2016, each of the FHLBanks was in compliance with its statutory minimum capital requirements. (See [Note 13 - Capital](#) to the accompanying combined financial statements for additional information regarding minimum regulatory capital requirements.) Regulatory guidance requires each FHLBank to 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 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. (See [Note 13 - Capital](#) to the accompanying combined financial statements for more information.)

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 allocate 20% of its net income each quarter to a separate restricted retained earnings account until the balance of that account equals at least one percent of that FHLBank's average balance of outstanding consolidated obligations for the previous quarter. These restricted retained earnings are not available to pay dividends. (See [Note 13 - Capital - Restricted Retained Earnings](#) to the accompanying combined financial statements for more information.)

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, 2015, 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 report. These estimates and assumptions consist of those used in conjunction with (1) OTTI for investment securities; (2) fair value estimates; (3) derivative hedging relationships; (4) amortization of premiums and accretion of discounts on investment securities and purchased mortgage loans; and (5) calculation of allowance for credit losses for each identified portfolio segment of financing receivables. For a description of accounting policies related to these estimates and assumptions, see *Note 1 - Summary of Significant Accounting Policies* on pages F-11 to F-21 of the audited combined financial statements included in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015.

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, 2015. 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 69 to 78 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015. Each FHLBank describes its critical accounting estimates in its periodic reports filed with the SEC.

See the following for information relating to OTTI for investment securities at and for the three months ended June 30, 2016.

OTTI for Investment Securities

Uniform OTTI Framework. The FHLBanks have developed a uniform framework for completing their OTTI analyses in compliance with accounting guidance on the recognition and presentation of OTTI in the financial statements. To ensure consistency in the determination of OTTI for private-label MBS among all FHLBanks, the FHLBanks use a system-wide

governance committee and a formal process to ensure consistency in key OTTI modeling assumptions used for purposes of their cash flow analyses for the majority of these securities.

For a detailed discussion of the FHLBanks' uniform OTTI frameworks, including alternative procedures and approved key assumptions, see *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Critical Accounting Estimates* on pages 70 to 72 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015. Also, see [Note 6 - Other-than-Temporary Impairment Analysis](#) to the accompanying combined financial statements for additional information relating to OTTI, including the recognition and presentation of OTTI.

Table 28 presents the unpaid principal balances and the significant inputs used to assess private-label residential MBS and home equity loan ABS under the FHLBanks' uniform framework for OTTI, as well as related current credit enhancements as of June 30, 2016. The calculated averages represent the dollar-weighted averages of all private-label residential MBS and home equity loan ABS in each category shown.

Table 28 - Significant Inputs for Private-Label Residential MBS and Home Equity Loan ABS at June 30, 2016
(dollars in millions)

	Unpaid Principal Balance	Significant Inputs			Current Credit Enhancement
		Prepayment Rates	Default Rates	Loss Severities	Weighted-Average
		Weighted-Average	Weighted-Average	Weighted-Average	
Private-label Residential MBS(1)					
Prime	\$ 4,164	14.5%	6.4%	26.0%	7.9%
Alt-A	9,854	11.6%	20.8%	37.1%	7.6%
Subprime	519	2.7%	42.8%	60.8%	19.2%
Total private-label residential MBS	<u>\$ 14,537</u>	12.1%	17.5%	34.8%	8.1%
Home Equity Loan ABS(1)					
Subprime	\$ 77	5.3%	6.7%	53.4%	39.0%
Total home equity loan ABS	<u>\$ 77</u>	5.3%	6.7%	53.4%	39.0%

(1) The classification (prime, Alt-A, and subprime) is based on the model used to run the estimated cash flows for the individual securities, which may not necessarily be the same as the classification at the time of origination.

Adverse Case Scenario. In addition to evaluating its private-label MBS under a base case (or best estimate) scenario as discussed in [Note 6 - Other-than-Temporary Impairment Analysis](#) to the accompanying combined financial statements, each FHLBank performed a cash flow analysis for each of these securities under a more stressful scenario, or adverse case scenario. This adverse case scenario was primarily based on a short-term housing price forecast, which was five percentage points lower than the base case, followed by a recovery path with annual rates of housing price growth that included rates which were 33% lower than the base case. The credit losses on all other-than-temporarily impaired private-label MBS under the base case and adverse case scenarios were \$6 million and \$13 million for the three months ended June 30, 2016. The base case scenario represents actual OTTI-related credit losses recognized in earnings for the three months ended June 30, 2016.

The estimated cash flows of the adverse case scenario were generated to estimate what the OTTI charges would have been under a more stressful scenario for the three months ended June 30, 2016. The adverse case scenario and associated results do not represent each FHLBank's current expectations, and therefore should not be construed as a prediction of each FHLBank's future results, market conditions, or the actual performance of these securities. Rather, the results from this hypothetical adverse case scenario provide a measure of the credit losses that the FHLBanks might incur if home price declines (and subsequent recoveries) are more adverse than those projected in each FHLBank's base case OTTI assessment.

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

The legislative and regulatory environment in which each FHLBank and its members operate continues to evolve as a result of regulations enacted pursuant to the Housing Act and the Dodd-Frank Act. The FHLBanks' business operations, funding costs, rights, obligations, and/or the environment in which the FHLBanks carry out their mission could be significantly affected by these changes.

Certain regulatory actions since March 31, 2016, 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, 2015 and the quarterly period ended March 31, 2016, for a description of certain legislative and regulatory developments that occurred prior to the publication of those reports.

Joint Proposed Rule Regarding Net Stable Funding Ratio. On May 3, 2016, the Federal Reserve Board, the Department of Treasury, and the FDIC, jointly issued a proposed rule that would implement a stable funding requirement, the net stable funding ratio (NSFR), for large and internationally active banking organizations. The NSFR will require institutions to maintain liquidity to match their assets over a one-year time horizon. The Federal Reserve Board is proposing a modified NSFR requirement for bank holding companies and certain savings and loan holding companies that, in each case, have more than \$50 billion, but less than \$250 billion, in total consolidated assets and less than \$10 billion in total on-balance sheet foreign exposure. If adopted in its current form, the proposed rule would provide that secured funding with maturities between six months and one year, including FHLBank advances, would be assigned 50% liquidity credit for purposes of calculating compliance with the NSFR, which could affect demand for FHLBank advances. The Council of the FHLBanks provided comments to the proposed rule on August 2, 2016.

Joint Proposed Rule on Incentive-Based Compensation Arrangements. On April 26, 2016, the FHFA, jointly with five other federal regulators, issued the rule contemplated by Section 956 of the Dodd-Frank Act, which requires implementation of regulations or guidelines to: (1) prohibit incentive-based payment arrangements that these regulators determine encourage inappropriate risks by certain financial institutions by providing excessive compensation or that could lead to material financial loss; and (2) require those financial institutions to disclose information concerning incentive-based compensation arrangements to the appropriate federal regulator.

The proposed rule identifies three categories of institutions that would be covered by these regulations based on average total consolidated assets, applying less prescriptive incentive-based compensation program requirements to the smallest covered institutions (Level 3) and progressively more rigorous requirements to the larger covered institutions (Level 1). The proposed rule specifies that the FHLBanks would fall into the middle category, Level 2. The proposed rule would supplement existing FHFA executive compensation rules.

The proposed rule would prohibit each FHLBank from establishing or maintaining incentive-based compensation arrangements that encourage inappropriate risks by "senior executive officers" and "significant risk-takers" (each as defined in the proposed rule, together, "covered persons") that could lead to a material financial loss at an FHLBank.

If adopted in its current form, the proposed rule would, among other things, impose requirements related to each FHLBank's incentive-based compensation arrangements for covered persons, related to:

- mandatory deferrals of 50% and 40% of annual and long-term incentive-based compensation payments for senior executive officers and significant risk-takers, respectively, over no less than 3 years for annual incentive-based compensation and 1 year for compensation awarded under a long-term incentive plan;
- risk of downward adjustment and forfeiture of awards;
- clawbacks of vested compensation; and
- limits on the maximum incentive-based compensation opportunity.

The FHLBanks provided comments on the proposed rule on July 22, 2016. The proposed rule would affect the design and operation of FHLBank compensation policies and practices, including FHLBank incentive compensation policies and practices, if adopted as proposed.

Recent Rating Agency Actions

Since January 1, 2016, no rating agency actions occurred with regard to the FHLBanks or their consolidated obligations. At July 31, 2016, consolidated obligations are rated Aaa/P-1 by Moody's and AA+/A-1+ by S&P. Table 29 presents each FHLBank's long-term credit rating, short-term credit rating, and outlook at July 31, 2016.

Table 29 - FHLBanks' Long-Term Credit Ratings, Short-Term Credit Ratings, and Outlook at July 31, 2016

	S&P		Moody's	
	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 risk, operational risk, and business risk (see *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Risk Management*, pages 102 to 103 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, for more information). Each FHLBank has established policies and procedures to evaluate, manage, and control these risks, and must file periodic compliance reports with the FHFA. The FHFA has established regulations governing the risk management practices of the FHLBanks and conducts an annual on-site examination, interim on-site visits of each FHLBank and the Office of Finance, as well as off-site analyses.

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 conservative collateral and lending policies and procedures 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, 2016, 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. Eligible collateral values are determined by the market value for securities collateral, and the market value or unpaid principal balance for all loan collateral. Collateral verifications and on-site reviews are performed by the FHLBanks based on the risk profile of the borrower. At June 30, 2016, each FHLBank had rights to collateral with an estimated value greater than the related outstanding advances. (See *Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations - Risk Management - Credit Risk - Advances*, pages 81 to 85 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, for information on eligible collateral and effective lending values.)

As of June 30, 2016, there were 99 individual FHLBank borrowers (97 FHLBank members and 2 non-member financial institutions) that each held advance balances 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. The non-member borrower 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, outstanding 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 2.4 at June 30, 2016, which represents the total of these 99 individual FHLBank borrowers' eligible collateral divided by these borrowers' advances and other credit products outstanding. The collateralization ratio for all borrowers was 2.8 at June 30, 2016. However, individual borrower credit obligations to the FHLBanks are not cross-collateralized between borrowers.

Table 30 presents advances, other credit products (which primarily includes letters of credit), and collateral outstanding for borrowers with at least \$1.0 billion of advances outstanding as compared to all borrowers.

Table 30 - Advances, Other Credit Products, and Collateral Outstanding at June 30, 2016
(dollars in millions)

	Borrowers with at Least \$1.0 Billion of Advances Outstanding	All Borrowers	Percentage
Advances outstanding, at par	\$ 482,097	\$ 684,959	70.4%
Other credit products outstanding, at par	\$ 78,144	\$ 122,047	64.0%
Collateral outstanding	\$ 1,341,394	\$ 2,235,402	60.0%

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 in lieu of 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, to ensure its position as a first-priority secured creditor, an FHLBank will generally require insurance company borrowers to place physical possession of all pledged eligible collateral with the FHLBank or deposit it with a custodian or control agent. 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 31 presents information on a combined basis regarding the type of collateral securing advances and other credit products outstanding.

Table 31 - Type of Collateral Securing Advances and Other Credit Products Outstanding at June 30, 2016
(dollars in millions)

Collateral Type	Blanket Lien		Listing		Delivery		Total	
	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage
Single-family mortgage loans (1)	\$ 441,398	19.8%	\$ 742,564	33.2%	\$ 11,274	0.5%	\$ 1,195,236	53.5%
Commercial real estate loans	295,384	13.2%	91,637	4.1%	26,469	1.2%	413,490	18.5%
Multifamily mortgage loans	66,735	3.0%	113,891	5.1%	10,081	0.5%	190,707	8.6%
Home equity loans and lines of credit	88,626	4.0%	75,961	3.4%	437	—%	165,024	7.4%
U.S. agency MBS and collateralized mortgage obligations	N/A	N/A	N/A	N/A	104,845	4.7%	104,845	4.7%
Other real estate loans	45,265	2.0%	7,020	0.3%	3,031	0.1%	55,316	2.4%
Community Financial Institutions loans	36,799	1.6%	1,889	0.1%	122	—%	38,810	1.7%
Commercial MBS	N/A	N/A	N/A	N/A	19,675	0.9%	19,675	0.9%
U.S. agency securities (excluding MBS)	N/A	N/A	N/A	N/A	19,526	0.9%	19,526	0.9%
Private-label MBS and collateralized mortgage obligations	N/A	N/A	N/A	N/A	3,464	0.2%	3,464	0.2%
Other	588	—%	4,240	0.2%	24,481	1.0%	29,309	1.2%
Total collateral	\$ 974,795	43.6%	\$ 1,037,202	46.4%	\$ 223,405	10.0%	\$ 2,235,402	100.0%

(1) Includes Federal Housing Administration and Department of Veterans Affairs loans.
N/A Collateral is not pledged using this pledging method.

Member Failures. The financial condition of all members and housing associates is closely monitored for compliance with financial criteria as set forth in each FHLBank's credit policies. During the six months ended June 30, 2016, no FHLBank incurred any credit loss on any of its advances, including advances to failed borrowers. During the same period, four FDIC-insured institutions failed, which were members of the FHLBanks with approximately \$1 million of advances outstanding at the time of the failure, all of which were prepaid by the acquiring non-member institution.

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 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, 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 have unsecured credit exposure on certain investments.

The FHLBanks maintain long-term investment portfolios primarily to provide additional 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.

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 Operation - Risk Management* on page 86 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, for additional information regarding the regulatory restrictions on investments.)

Investment Quality and Ratings. The FHLBanks 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. Table 32 presents the credit rating of the investment securities held by the FHLBanks as of June 30, 2016 and December 31, 2015, 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.

Table 32 - Investment Ratings
(dollars in millions)

Carrying Value	June 30, 2016(1)(2)						Total
	Triple-A	Double-A	Single-A	Triple-B	Below Triple-B	Unrated	
Interest-bearing deposits	\$ —	\$ 1	\$ 2,872	\$ 35	\$ —	\$ —	\$ 2,908
Securities purchased under agreements to resell	6,800	24,658	2,950	9,009	500	2,993	46,910
Federal funds sold	—	14,600	29,220	1,738	—	113	45,671
Total investment securities by major security type							
Non-mortgage backed securities							
U.S. Treasury obligations	—	2,863	—	—	—	—	2,863
Certificates of deposit	—	1,000	200	—	—	—	1,200
Other U.S. obligations	—	6,751	—	—	—	—	6,751
GSE and Tennessee Valley Authority obligations	—	30,950	—	—	—	—	30,950
State or local housing agency obligations	1,554	1,816	415	—	—	—	3,785
Federal Family Education Loan Program ABS	62	4,772	—	—	—	—	4,834
Other	1,314	107	—	—	—	56	1,477
Total non-mortgage-backed securities	2,930	48,259	615	—	—	56	51,860
Mortgage-backed securities							
Other U.S. obligations single-family MBS	230	14,516	—	—	—	—	14,746
Other U.S. obligations multifamily MBS	—	699	—	—	—	—	699
GSE single-family MBS	—	56,381	12	—	8	—	56,401
GSE multifamily MBS	463	53,742	—	—	—	—	54,205
Private-label residential MBS	9	46	169	1,118	10,755	30	12,127
Manufactured housing loan ABS	—	—	77	—	—	—	77
Home equity loan ABS	1	9	86	27	62	—	185
Total mortgage-backed securities	703	125,393	344	1,145	10,825	30	138,440
Total investment securities	3,633	173,652	959	1,145	10,825	86	190,300
Total investments	\$ 10,433	\$ 212,911	\$ 36,001	\$ 11,927	\$ 11,325	\$ 3,192	\$ 285,789

December 31, 2015(2)(3)

Carrying Value	Triple-A	Double-A	Single-A	Triple-B	Below Triple-B	Unrated	Total
Interest-bearing deposits	\$ —	\$ 1	\$ 1,800	\$ 35	\$ —	\$ —	\$ 1,836
Securities purchased under agreements to resell	6,125	29,182	1,575	7,500	500	2,945	47,827
Federal funds sold	—	17,491	23,446	1,441	—	2	42,380
Total investment securities by major security type							
Non-mortgage backed securities							
U.S. Treasury obligations	—	1,310	—	—	—	—	1,310
Certificates of deposit	—	600	100	—	—	—	700
Other U.S. obligations	—	7,023	—	—	—	—	7,023
GSE and Tennessee Valley Authority obligations	—	28,305	—	—	—	—	28,305
State or local housing agency obligations	1,748	1,723	439	—	—	—	3,910
Federal family education loan program ABS	15	5,284	—	—	—	—	5,299
Other	890	103	372	—	—	49	1,414
Total non-mortgage-backed securities	2,653	44,348	911	—	—	49	47,961
Mortgage-backed securities							
Other U.S. obligations single-family MBS	248	14,586	—	—	—	—	14,834
Other U.S. obligations multifamily MBS	—	767	—	—	—	—	767
GSE single-family MBS	—	57,979	15	—	9	—	58,003
GSE multifamily MBS	464	45,703	—	—	—	—	46,167
Private-label residential MBS	10	39	238	1,231	12,064	32	13,614
Manufactured housing loan ABS	—	—	86	—	—	—	86
Home equity loan ABS	1	5	98	30	75	—	209
Total mortgage-backed securities	723	119,079	437	1,261	12,148	32	133,680
Total investment securities	3,376	163,427	1,348	1,261	12,148	81	181,641
Total investments	\$ 9,501	\$ 210,101	\$ 28,169	\$ 10,237	\$ 12,648	\$ 3,028	\$ 273,684

- (1) Does not reflect any changes in ratings, outlook, or watch status occurring after June 30, 2016.
(2) Investment amounts represent the carrying value and do not include related accrued interest.
(3) Does not reflect any changes in ratings, outlook, or watch status occurring after December 31, 2015.

Long-term Investments. Within the 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. The FHLBanks invested in private-label mortgage-backed securities, which consisted of private-label residential MBS and private-label commercial MBS, manufactured housing loan ABS, and home equity loan ABS. 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) insurance wrap. 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.

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.

Current credit enhancement percentages reflect the ability of subordinated classes of securities to absorb principal losses and interest shortfalls before the senior classes held by the FHLBanks are affected (i.e., the losses, expressed as a percentage of the outstanding principal balances, that could be incurred in the underlying loan pools before the securities held by the FHLBanks would be affected, assuming that all of those losses occurred on the measurement date). Depending on the timing and amount of losses in the underlying loan pools, it is possible that the senior classes held by the FHLBanks could have losses in scenarios where the cumulative loan losses do not exceed the current credit enhancement percentage.

Table 33 presents collateral performance and credit enhancement information related to private-label mortgage-backed securities at June 30, 2016. No FHLBank has purchased private-label mortgage-backed securities since 2008.

Table 33 - Credit Ratings of Private-Label Mortgage-Backed Securities at June 30, 2016
(dollars in millions)

	Total	Prime(1)	Alt-A(1)(2)	Subprime(1)
Unpaid Principal Balance (UPB) by credit rating(3)				
Triple-A	\$ 10	\$ —	\$ 9	\$ 1
Double-A	58	24	22	12
Single-A	332	89	75	168
Triple-B	1,151	882	224	45
Double-B	1,201	850	310	41
Single-B	1,341	549	735	57
Triple-C	4,341	880	3,363	98
Double-C	1,359	384	685	290
Single-C	320	107	101	112
Single-D	4,824	2,148	2,653	23
Unrated	32	28	3	1
Total	\$ 14,969	\$ 5,941	\$ 8,180	\$ 848
Amortized cost	\$ 12,622	\$ 5,245	\$ 6,764	\$ 613
Gross unrealized losses(4)	(548)	(228)	(263)	(57)
Fair value	12,902	5,402	6,798	702
Credit losses(5)				
Total OTTI	\$ (21)	\$ (2)	\$ (19)	\$ —
AOCI(6)	6	—	6	—
Credit losses	\$ (15)	\$ (2)	\$ (13)	\$ —
Weighted-average percentage				
Fair value to UPB	86.2%	90.9%	83.1%	82.7%
Original credit support(7)	18.6%	10.3%	22.5%	38.5%
Credit support(8)	9.0%	6.7%	8.9%	25.9%
Collateral delinquency(9)	14.7%	10.3%	17.2%	22.4%

- (1) The FHLBanks classify securities as prime, Alt-A, and subprime based on the originator's classification at the time of origination or based on classification by a nationally recognized statistical rating organization upon issuance of the securities.
- (2) The FHLBanks held a total of \$1,782 million in Alt-A option adjustable-rate mortgages, of which \$1,020 million are in a gross unrealized loss position based on their unpaid principal balance at June 30, 2016.
- (3) Represents the lowest rating available 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.
- (4) Represents total gross unrealized losses including non-credit-related other-than-temporary impairment recognized in AOCI. The unpaid principal balance and amortized cost of private-label mortgage-backed securities in a gross unrealized loss position was \$7,682 million and \$6,896 million at June 30, 2016.
- (5) The credit losses presented are for the six months ended June 30, 2016.
- (6) Represents the net amount of other-than-temporary impairment losses reclassified to/(from) AOCI.
- (7) Original weighted-average credit support is based on the credit support at the time of issuance and is determined based on the unpaid principal balance of the individual securities in the category and their respective original credit support.
- (8) Weighted-average credit support is based on the credit support as of June 30, 2016, and is determined based on the unpaid principal balance of the individual securities in the category and their respective credit support as of June 30, 2016.
- (9) Weighted-average collateral delinquency rate is determined based on the underlying loans that are 60 days or more past due and is determined based on the unpaid principal balance of the individual securities in the category and their respective delinquencies.

Monoline Bond Insurance. Certain FHLBank investment securities portfolios include a limited number of investments that are insured by monoline bond insurers. The monoline bond insurance on these investments guarantees the timely payment of principal and interest if these payments cannot be satisfied from the cash flows of the underlying mortgage collateral.

The monoline bond insurers continue to be subject to adverse ratings and weak financial performance measures, which imply an increased risk that the monoline bond insurer will fail to fulfill its obligations to reimburse the insured investor for claims made under the related insurance policies. There are five monoline bond insurers that insure the affected FHLBanks' investment securities. Of the five monoline bond insurers, the financial guarantee from Assured Guaranty Municipal Corp. is considered sufficient to cover all future claims and therefore excluded from the burnout period analysis. Conversely, the key

burnout period for monoline bond insurers Financial Guaranty Insurance Company and Syncora Guarantee Inc. are not considered applicable due to regulatory intervention that has suspended all claims, and the affected FHLBanks have placed no reliance on these monoline insurers. For the remaining monoline bond insurers, the affected FHLBanks established burnout periods ending on December 31, 2016 for MBIA Insurance Corp., and on June 30, 2020, for Ambac Assurance Corp. In addition, Ambac Assurance Corp. reimbursements are limited to 45% of new claims during the burnout period. The FHLBanks monitor the financial condition of these monoline bond insurers on an ongoing basis, and, as facts and circumstances change, the burnout period could significantly change.

As of June 30, 2016, total monoline bond insurance coverage was \$302 million, of which \$216 million represents the FHLBanks' private-label MBS covered by the monoline bond insurance that the FHLBanks were relying on at June 30, 2016, for modeling cash flows. Of the \$216 million, 88.0% represents subprime loans and 12.0% represents Alt-A loans. The FHLBanks classify securities as prime, Alt-A, and subprime based on the originator's classification at the time of origination or based on classification by a nationally recognized statistical rating organization upon issuance of the securities.

Short-term Investments. The FHLBanks maintain short-term investment portfolios, 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 liquidity 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 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 34 presents the FHLBanks' unsecured credit exposure with private counterparties by investment type. At June 30, 2016, the FHLBanks had aggregate unsecured credit exposure from investments of \$1 billion or more to each of 15 private counterparties. The aggregate unsecured credit exposure to these counterparties represented 80.7% of the FHLBanks' total unsecured investment credit exposure to private counterparties. The unsecured investment credit exposure presented in Table 34 does not reflect the average or maximum exposure during the period, as the balances presented reflect the balances at period end.

Table 34 - Unsecured Credit Exposure by Investment Type
(dollars in millions)

Carrying Value(1)(2)	June 30, 2016	December 31, 2015
Interest-bearing deposits	\$ 2,907	\$ 1,835
Federal funds sold	45,671	42,380
Certificates of deposit	1,200	700
Total	\$ 49,778	\$ 44,915

(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, 2016, 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, 2016, an FHLBank held full faith and credit U.S. guaranteed securities with foreign issuers totaling \$491 million. Other than these investments, the FHLBanks are in compliance with the FHFA regulation as of June 30, 2016.

As of June 30, 2016, 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, 2016, 90.2% of the FHLBanks' unsecured investments in federal funds sold and 75.0% of the FHLBanks' unsecured investment in certificates of deposit were to U.S. branches and agency offices of foreign commercial banks.

Table 35 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.

Table 35 - Ratings of Unsecured Investment Credit Exposure by Domicile of Counterparty at June 30, 2016⁽¹⁾
(dollars in millions)

Carrying Value(2)	Investment Grade			Unrated	Total
	Double-A	Single-A	Triple-B		
Domestic	\$ 640	\$ 4,104	\$ 1,773	\$ 113	\$ 6,630
U.S. subsidiaries of foreign commercial banks	—	1,037	—	—	1,037
Total domestic and U.S. subsidiaries of foreign commercial banks	640	5,141	1,773	113	7,667
U.S. branches and agency offices of foreign commercial banks					
Canada	200	7,745	—	—	7,945
Australia	6,745	—	—	—	6,745
Netherlands	—	6,180	—	—	6,180
Finland	5,415	—	—	—	5,415
France	—	4,170	—	—	4,170
Sweden	2,500	850	—	—	3,350
Germany	100	3,068	—	—	3,168
Norway	—	2,775	—	—	2,775
United Kingdom	—	1,360	—	—	1,360
Japan	—	1,003	—	—	1,003
Total U.S. branches and agency offices of foreign commercial banks	14,960	27,151	—	—	42,111
Total unsecured investment credit exposure	\$ 15,600	\$ 32,292	\$ 1,773	\$ 113	\$ 49,778

- (1) Does not reflect any changes in ratings, outlook, or watch status occurring after June 30, 2016. The ratings presented in this table represent the lowest long-term rating available 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.
- (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 36 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, 2016, 96.1% of the carrying value of the total unsecured investments held by the FHLBanks had overnight maturities.

Table 36 - Contractual Maturity of Unsecured Investment Credit Exposure by Domicile of Counterparty at June 30, 2016
(dollars in millions)

Carrying Value(1)	Overnight	Due 2 days through 30 days	Due 31 days through 90 days	Total
Domestic	\$ 6,330	\$ —	\$ 300	\$ 6,630
U.S. subsidiaries of foreign commercial banks	1,037	—	—	1,037
Total domestic and U.S. subsidiaries of foreign commercial banks	7,367	—	300	7,667
U.S. branches and agency offices of foreign commercial banks				
Canada	7,645	200	100	7,945
Australia	5,995	750	—	6,745
Netherlands	6,180	—	—	6,180
Finland	5,315	—	100	5,415
France	4,170	—	—	4,170
Sweden	3,050	—	300	3,350
Germany	3,068	—	100	3,168
Norway	2,675	—	100	2,775
United Kingdom	1,360	—	—	1,360
Japan	1,003	—	—	1,003
Total U.S. branches and agency offices of foreign commercial banks	40,461	950	700	42,111
Total unsecured investment credit exposure	\$ 47,828	\$ 950	\$ 1,000	\$ 49,778

(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 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. Members and eligible housing associates may apply to become a participating financial institution 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.

In addition to credit risk associated with mortgage loans purchased or funded through the Acquired Member Asset programs, the FHLBanks are exposed to the risk of non-performance of mortgage insurers that provide primary mortgage insurance and supplemental mortgage insurance coverage on mortgage loans.

Management at each FHLBank believes that it has adequate policies and procedures in place to manage the risks on mortgage loans appropriately. (See [Note 9 - Allowance for Credit Losses](#) to the accompanying combined financial statements for additional information about mortgage loan credit quality indicators, allowance for credit losses, and 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*, pages 93 to 100 of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, for information on 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 (uncleared derivatives) or cleared through a Futures Commission Merchant (i.e., clearing agent) with a Derivative Clearing Organization (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, including initial and variation margin. 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 depends 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 trigger point. 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, 2016.

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 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, 2016.

Table 37 presents the derivative positions with non-member counterparties and member institutions to which the FHLBanks had credit exposure at June 30, 2016.

Table 37 - Derivative Counterparty Credit Exposure at June 30, 2016
(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					
Double-A	\$ 1,741	\$ 6	\$ —	\$ (1)	\$ 5
Single-A	8,855	143	(22)	(106)	15
Cleared derivatives(2)	53,145	118	(3)	—	115
Liability positions with credit exposure					
Uncleared derivatives					
Double-A	1,201	(68)	69	—	1
Single-A	17,140	(295)	293	12	10
Triple-B	3,013	(443)	—	449	6
Cleared derivatives(2)	306,749	(3,453)	4,373	745	1,665
Total derivative positions with credit exposure to non-member counterparties	391,844	(3,992)	4,710	1,099	1,817
Member institutions(3)	1,586	13	—	—	13
Total	\$ 393,430	\$ (3,979)	\$ 4,710	\$ 1,099	\$ 1,830

(1) This chart does not reflect any changes in rating, outlook, or watch status occurring after June 30, 2016. 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.

(2) Represents derivative transactions cleared with Clearinghouses, which are not rated.

(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. 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 *Qualitative and Quantitative Disclosures about Market Risk*, pages 104 to 109, of the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015, for additional information.)

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. 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 developed a market-risk model that calculates the market-risk component of this requirement.

Table 38 presents each FHLBank that includes quantitative market value of equity and duration of equity information in its individual 2016 Second Quarter SEC Form 10-Q.

Table 38 - Individual FHLBank's Market Value of Equity and Duration of Equity Disclosures

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

- (1) The FHLBank of Pittsburgh monitors and measures market value of equity to par value of capital stock, as described in its 2016 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.
- (2) The FHLBank of Chicago disclosed the dollar limits on changes in market value under parallel interest rate shocks in addition to duration of equity in its 2016 Second Quarter SEC Form 10-Q.
- (3) 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 risk measures. The FHLBank of Des Moines disclosed, in its 2016 SEC Second Quarter Form 10-Q, market value of capital stock (MVCS) and projected income sensitivity as key risk measures and economic value of capital stock (EVCS) as its key capital adequacy measure.
- (4) 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 2016 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.
- (5) 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 39 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 39 - Duration of Equity
(in years)

FHLBank	June 30, 2016			December 31, 2015		
	Down	Base	Up	Down	Base	Up
Boston	(2.2)	(2.5)	3.6	(4.1)	0.1	3.5
New York	(0.3)	(1.1)	0.6	1.9	(0.6)	0.8
Pittsburgh	3.0	0.1	1.1	3.3	(0.6)	0.8
Atlanta	(0.2)	0.6	3.8	(0.3)	0.2	3.9
Cincinnati	(0.7)	(3.3)	3.0	(5.7)	0.6	3.3
Indianapolis	(0.1)	(0.2)	2.1	(3.2)	2.2	3.2
Chicago	2.5	1.1	0.6	2.8	0.6	0.7
Des Moines	(0.8)	(1.6)	1.3	(2.5)	(1.8)	1.4
Dallas	5.2	(1.0)	0.6	3.5	(0.5)	2.2
Topeka	1.0	(1.4)	2.1	2.0	1.0	2.0
San Francisco	1.8	1.9	2.1	2.2	2.3	3.0

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 40 include the effect of derivative transactions.

Table 40 - Duration Gap
(in months)

FHLBank	June 30, 2016	December 31, 2015
Boston	(1.6)	0.1
New York	(1.0)	(0.8)
Pittsburgh	(0.2)	(0.6)
Atlanta	0.1	(0.1)
Cincinnati	(0.2)	0.0
Indianapolis	(0.5)	0.7
Chicago	0.8	0.5
Des Moines	(1.0)	(1.1)
Dallas	(0.7)	(0.6)
Topeka	(0.8)	0.5
San Francisco	1.1	1.4

Use of Derivatives to Manage Interest-Rate Risk

An FHLBank enters into derivatives to manage interest-rate risk, prepayment risk, and exposure inherent in otherwise unhedged asset and liability positions. An FHLBank attempts to use derivatives to reduce interest-rate exposure in the most cost-efficient manner. Derivatives are used to manage the effective maturity, repricing frequency, or option characteristics of financial instruments to achieve risk-management objectives. (See [Note 10 - 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.)

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, 2015, based on the criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management of each FHLBank, other than the FHLBank of Des Moines, concluded, as of December 31, 2015, that its individual internal control over financial reporting is effective based on the criteria established in *Internal Control-Integrated Framework (2013)*. Additionally, the independent registered public accounting firm of each FHLBank, other than the FHLBank of Des Moines, opined that the respective individual FHLBank maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015. (See *Part II. Item 8 - Financial Statements and Supplementary Data* or *Item 9A - Controls and Procedures* of each FHLBank's 2015 SEC Form 10-K for its *Management's Report on Internal Control over Financial Reporting*.)

Each FHLBank, other than the FHLBank of Des Moines, indicated that there were no changes to its internal control over financial reporting during the quarter ended June 30, 2016, that materially affected, or are reasonably likely to affect, its internal control over financial reporting. Additionally, management of each of these FHLBanks concluded that its disclosure controls and procedures were effective at a reasonable assurance level as of the quarter ended June 30, 2016. (See *Part I. Item 4 - Controls and Procedures* of each FHLBank's 2016 Second Quarter SEC Form 10-Q.)

FHLBank of Des Moines

The FHLBank of Des Moines' management identified three material weaknesses in its internal control over financial reporting as of December 31, 2015: 1) ineffective control over multiple changes within its business environment during 2015, including certain implications of the merger; 2) ineffective controls over spreadsheets used in its financial close and reporting process; and 3) failure to consistently conform to its existing internal control procedures established to ensure appropriate logical access to its information technology systems. (See *Part II. Item 8 - Financial Statements and Supplementary Data* and *Item 9A - Controls and Procedures of the FHLBank of Des Moines' 2015 SEC Form 10-K* for additional information.)

During the quarter ended June 30, 2016, the management of the FHLBank of Des Moines continued to take steps to remediate the material weaknesses identified at December 31, 2015. Other than these remediation steps, there were no changes to its internal control over financial reporting during the quarter ended June 30, 2016, that materially affected, or are reasonably likely to affect, its internal control over financial reporting. Additionally, the management of the FHLBank of Des Moines concluded, based on its identification of material weaknesses in its internal control over financial reporting, that its disclosure controls and procedures were not effective at a reasonable assurance level as of the quarter ended June 30, 2016. (See *Part I. Item 4 - Controls and Procedures* of the FHLBank of Des Moines' 2016 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 www.fhlf-of.com. This web site address is provided as a matter of convenience only, and its contents are not made part of this report and are not intended to be 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 are not a party to, nor are they subject to, any pending legal proceedings, except the following identified 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 or that are otherwise material to the FHLBanks. (See each FHLBank's 2016 Second Quarter SEC Form 10-Q under *Part II. Item 1 - Legal Proceedings* for additional information, including updates, to its legal proceedings.)

Legal Proceedings Relating to the Purchase of Certain Private-label MBS

As of June 30, 2016, each of the FHLBanks of Boston, Chicago, Des Moines, and San Francisco is a plaintiff in continued legal proceedings that relate to the purchases of certain private-label MBS. Defendants in these lawsuits include entities and their affiliates that buy, sell, or distribute the FHLBanks' consolidated obligations or are derivative counterparties. These defendants and their affiliates may be members or former members of the plaintiff FHLBanks or other FHLBanks. As a result of its merger with the FHLBank of Seattle, the FHLBank of Des Moines became involved in a number of legal proceedings initiated by the FHLBank of Seattle against various entities relating to its purchases and subsequent impairment of certain private-label MBS. Although the FHLBank of Seattle sold all private-label MBS during the three months ended March 31, 2015, the FHLBank of Des Moines continues to be involved in these legal proceedings.

Legal Proceedings Relating to the Lehman Bankruptcy

See [Note 16 - Commitments and Contingencies - Lehman Bankruptcy](#) to the accompanying combined financial statements for information on legal proceedings relating to bankruptcy proceedings involving Lehman Brothers Holdings, Inc.

RISK FACTORS

There were no material changes to the risk factors disclosed in the Federal Home Loan Banks Combined Financial Report for the year ended December 31, 2015. (See each FHLBank's 2016 Second Quarter Form 10-Q for any updates to the risk factors included in such FHLBank's 2015 Form 10-K under *Part I. Item 1A - Risk Factors.*)

OTHER INFORMATION

PricewaterhouseCoopers LLP (PwC) serves as the independent registered public accounting firm for the FHLBanks. Rule 2-01(c)(1)(ii)(A) of SEC Regulation S-X (the Loan Rule) prohibits an accounting firm, such as PwC, from having certain financial relationships with its audit clients and affiliated entities. Specifically, the Loan Rule provides, in the relevant part, that an accounting firm generally would not be independent if it receives a loan from a lender that is a “record or beneficial owner of more than ten percent of the audit client’s equity securities.”

PwC has advised certain FHLBanks that, as of December 31, 2015 and June 30, 2016, it has borrowing relationships with certain FHLBank members (referred below as the “lenders”) who own more than 10% of the affected FHLBanks' capital stock, which under the Loan Rule, would call into question PwC's independence with respect to the affected FHLBanks. This disclosure is intended to explain the facts and circumstances, as well as conclusions of PwC and the Audit Committee of each affected FHLBank, concerning PwC's objectivity and impartiality with respect to the audit of each affected FHLBank.

PwC advised the Audit Committee of each affected FHLBank that it believes that, in light of the facts of each borrowing relationship, its ability to exercise objective and impartial judgment on all matters encompassed within PwC's audit engagements has not been impaired and that a reasonable investor with knowledge of all relevant facts and circumstances would reach the same conclusion. PwC has advised the Audit Committee of each affected FHLBank that this conclusion is based in part on the following considerations:

- the borrowings are in good standing and the lenders do not have the right to take action against PwC, as borrower, in connection with the financings;
- the debt balances outstanding are immaterial to PwC and to the lenders;
- PwC has borrowing relationships with a diverse group of lenders, therefore PwC is not dependent on any single lender or group of lenders; and
- PwC audit engagement teams have no involvement in PwC's treasury function and PwC's treasury function has no oversight or ability to influence PwC audit engagement teams.

Additionally, each affected FHLBank and its Audit Committee reviewed PwC's analysis and continue to conclude that PwC has maintained objectivity and impartiality in connection with its audit of the respective FHLBank's financial statements. The conclusion is based on the unique nature and status of the FHLBanks, and due to the ownership structure of the FHLBanks and the limited voting rights of the FHLBanks' members.

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 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 [Note 13 - Capital](#) to the accompanying combined financial statements for more information.)

At June 30, 2016, the FHLBanks had 367 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.

Table 41 presents combined regulatory capital stock, which includes mandatorily redeemable capital stock, held by type of member and Table 42 presents FHLBank membership by type of member.

Table 41 - Regulatory Capital Stock Held by Type of Member
(dollars in millions)

	June 30, 2016		December 31, 2015	
	Amount	Percentage of Regulatory Capital Stock	Amount	Percentage of Regulatory Capital Stock
Commercial banks	\$ 22,494	61.4%	\$ 21,070	60.4%
Thrifts	4,993	13.6%	4,892	14.0%
Insurance companies	3,919	10.7%	4,821	13.8%
Credit unions	3,399	9.3%	3,394	9.7%
Community development financial institutions	8	—	8	—
Total GAAP capital stock	34,813	95.0%	34,185	97.9%
Mandatorily redeemable capital stock	1,845	5.0%	745	2.1%
Total combined regulatory capital stock	\$ 36,658	100.0%	\$ 34,930	100.0%

Table 42 - Membership by Type of Member

	June 30, 2016		December 31, 2015	
	Number	Percentage of Total Members	Number	Percentage of Total Members
Commercial banks	4,615	64.3%	4,688	64.8%
Credit unions	1,342	18.7%	1,319	18.2%
Thrifts	794	11.1%	818	11.3%
Insurance companies	381	5.3%	372	5.1%
Community development financial institutions	43	0.6%	41	0.6%
Total	7,175	100.0%	7,238	100.0%

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, 2016
(dollars in millions)

Holding Company Name(1)	FHLBank Districts(2)	Regulatory Capital Stock(3)	Percentage of Total Regulatory Capital Stock	Mandatorily Redeemable Capital Stock
JPMorgan Chase & Co.	Pittsburgh, Cincinnati, Chicago, Des Moines, San Francisco	\$ 2,532	6.9%	\$ 663
Wells Fargo & Company	Des Moines, Dallas, Topeka, San Francisco	2,411	6.6%	37
Citigroup, Inc.	New York, Dallas, San Francisco	1,038	2.8%	81
MetLife, Inc.	Boston, New York, Pittsburgh, Des Moines	898	2.4%	33
Capital One Financial Corporation	Atlanta, Dallas	886	2.4%	—
The PNC Financial Services Group, Inc.	New York, Pittsburgh, Atlanta, Cincinnati	831	2.3%	32
New York Community Bancorp, Inc.	New York	587	1.6%	—
Navy Federal Credit Union	Atlanta	581	1.6%	—
Bank of America Corporation	Boston, Atlanta, Des Moines, San Francisco	571	1.6%	7
U.S. Bancorp	Cincinnati, Des Moines, Topeka	478	1.3%	2
		<u>\$ 10,813</u>	<u>29.5%</u>	<u>\$ 855</u>

(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, 2016, 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. Effective May 31, 2015, the FHLBank of Seattle merged with and into the FHLBank of Des Moines, with the FHLBank of Des Moines surviving the merger as the continuing FHLBank. As a result of the merger, the selected financial data and financial ratios for the FHLBank of Seattle are not presented in the following table.

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

<i>(dollars in millions)</i>	Boston	New York	Pittsburgh
Selected Statement of Condition Data(1)			
At June 30, 2016			
Assets			
Investments(2)	\$ 19,676	\$ 29,988	\$ 14,529
Advances	38,242	95,273	66,336
Mortgage loans held for portfolio	3,629	2,632	3,160
Allowance for credit losses on mortgage loans	(1)	(1)	(6)
Total assets	62,160	128,726	86,906
Consolidated obligations(3)			
Discount notes	30,484	49,072	20,814
Bonds	27,139	70,900	60,769
Total consolidated obligations	57,623	119,972	81,583
Mandatorily redeemable capital stock	35	30	6
Subordinated notes(4)	—	—	—
Total capital			
Capital stock(5)	2,354	5,666	3,232
Additional capital from merger(6)	—	—	—
Retained earnings	1,165	1,322	925
Accumulated other comprehensive income (loss)	(358)	(214)	133
Total capital	3,161	6,774	4,290
Asset composition (as a percentage of the individual FHLBank's total assets)			
Investments(2)	31.7%	23.3%	16.7%
Advances	61.5%	74.0%	76.3%
Mortgage loans held for portfolio, net	5.8%	2.0%	3.6%
Total retained earnings as a percentage of FHLBank's total assets	1.9%	1.0%	1.1%
FHLBank's total assets as a percentage of FHLBank System's total assets	6.0%	12.5%	8.4%
At June 30, 2015			
Assets			
Investments(2)	\$ 17,768	\$ 25,566	\$ 13,915
Advances	34,106	91,296	71,489
Mortgage loans held for portfolio	3,576	2,381	3,059
Allowance for credit losses on mortgage loans	(1)	(1)	(6)
Total assets	56,450	119,567	94,039
Consolidated obligations(3)			
Discount notes	25,973	42,456	41,061
Bonds	26,075	68,945	47,553
Total consolidated obligations	52,048	111,401	88,614
Mandatorily redeemable capital stock	57	19	1
Subordinated notes(4)	—	—	—
Total capital			
Capital stock(5)	2,482	5,309	3,425
Additional capital from merger(6)	—	—	—
Retained earnings	1,064	1,126	855
Accumulated other comprehensive income (loss)	(395)	(124)	111
Total capital	3,151	6,311	4,391
Asset composition (as a percentage of the individual FHLBank's total assets)			
Investments(2)	31.5%	21.4%	14.8%
Advances	60.4%	76.4%	76.0%
Mortgage loans held for portfolio, net	6.3%	2.0%	3.2%
Total retained earnings as a percentage of individual FHLBank's total assets	1.9%	0.9%	0.9%
FHLBank's total assets as a percentage of FHLBank System's total assets	6.2%	13.0%	10.3%

- (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 [Financial Discussion and Analysis - Combined Results of Operations - Interbank Transfers of Consolidated Bonds and Their Effect on Combined Net Income](#).
- (4) The subordinated notes, issued by the FHLBank of Chicago, matured on June 13, 2016.

Atlanta	Cincinnati	Indianapolis	Chicago	Des Moines	Dallas	Topeka	San Francisco
\$ 36,842	\$ 22,850	\$ 16,040	\$ 28,964	\$ 44,143	\$ 22,982	\$ 13,444	\$ 36,578
106,926	74,563	26,465	46,424	116,294	31,123	26,183	61,963
520	8,511	8,773	4,670	6,641	67	6,474	632
(2)	(1)	(1)	(3)	(1)	—	(1)	—
146,093	106,142	52,001	80,662	167,860	54,438	46,491	99,430
68,585	48,894	15,920	45,876	92,521	30,047	26,888	41,930
68,560	50,458	32,467	29,091	66,599	20,748	16,754	50,924
137,145	99,352	48,387	74,967	159,120	50,795	43,642	92,854
9	96	178	302	698	3	4	486
—	—	—	—	—	—	—	—
5,240	4,227	1,401	1,774	5,241	1,811	1,347	2,520
—	—	—	—	128	—	—	—
1,839	783	853	2,884	1,220	784	685	2,828
93	(12)	15	(151)	(85)	(124)	(15)	14
7,172	4,998	2,269	4,507	6,504	2,471	2,017	5,362
25.2%	21.5%	30.8%	35.9%	26.3%	42.2%	28.9%	36.8%
73.2%	70.2%	50.9%	57.6%	69.3%	57.2%	56.3%	62.3%
0.4%	8.0%	16.9%	5.8%	4.0%	0.1%	13.9%	0.6%
1.3%	0.7%	1.6%	3.6%	0.7%	1.4%	1.5%	2.8%
14.2%	10.3%	5.0%	7.8%	16.3%	5.3%	4.5%	9.6%
\$ 35,806	\$ 20,811	\$ 12,147	\$ 28,080	\$ 42,754	\$ 20,339	\$ 14,846	\$ 33,480
102,208	71,108	24,318	34,553	68,181	21,648	23,288	50,188
664	7,732	7,934	5,377	7,030	63	6,317	671
(2)	(2)	(1)	(3)	(1)	—	(2)	—
139,716	99,802	45,236	69,760	118,758	42,552	45,506	85,962
49,759	48,263	11,803	34,552	70,227	18,634	21,507	33,859
80,814	45,230	29,647	28,672	41,974	20,618	21,212	45,597
130,573	93,493	41,450	63,224	112,201	39,252	42,719	79,456
16	65	14	8	119	4	4	142
—	—	—	944	—	—	—	—
5,052	4,335	1,388	1,835	3,885	1,402	1,304	2,751
—	—	—	—	246	—	—	—
1,813	729	810	2,575	731	745	654	2,653
77	(16)	43	139	122	2	(14)	68
6,942	5,048	2,241	4,549	4,984	2,149	1,944	5,472
25.6%	20.9%	26.9%	40.3%	36.0%	47.8%	32.6%	38.9%
73.2%	71.2%	53.8%	49.5%	57.4%	50.9%	51.2%	58.4%
0.5%	7.7%	17.5%	7.7%	5.9%	0.1%	13.9%	0.8%
1.3%	0.7%	1.8%	3.7%	0.6%	1.8%	1.4%	3.1%
15.2%	10.9%	4.9%	7.6%	13.0%	4.6%	5.0%	9.4%

- (5) FHLBank capital stock is redeemable at the request of a member subject to the statutory redemption periods and other conditions and limitations. (See [Note 13 - Capital](#) to the accompanying combined financial statements.)
- (6) Additional capital from merger primarily represents the amount of the FHLBank of Seattle's closing retained earnings balance as of the merger date, adjusted for fair value and other purchase accounting adjustments, and identified intangible assets, and is net of dividends paid by the FHLBank of Des Moines subsequent to the merger date. (See [Note 13 - Capital](#) to the accompanying combined financial statements.)

Individual FHLBank Selected Financial Data and Financial Ratios (continued)

<i>(dollars in millions)</i>	Boston	New York	Pittsburgh
Selected Other Data			
June 30, 2016			
Advance concentrations - top five borrowers	38%	56%	70%
Capital stock concentrations - top five stockholders	31%	51%	63%
Regulatory capital-to-assets ratio(7)	5.7%	5.5%	4.8%
Cash and stock dividends			
Quarter-to-date June 30, 2016	\$ 21	\$ 62	\$ 40
Quarter-to-date June 30, 2015	\$ 10	\$ 56	\$ 35
Year-to-date June 30, 2016	\$ 41	\$ 123	\$ 80
Year-to-date June 30, 2015	\$ 21	\$ 120	\$ 135
Weighted average dividend rate			
Quarter-to-date June 30, 2016	3.63%	4.50%	4.71%
Quarter-to-date June 30, 2015	1.76%	4.10%	4.79%
Year-to-date June 30, 2016	3.53%	4.50%	4.75%
Year-to-date June 30, 2015	1.75%	4.10%	5.65%
Return on average equity(8)			
Quarter-to-date June 30, 2016	6.09%	5.56%	6.35%
Quarter-to-date June 30, 2015	19.57%	4.90%	7.79%
Year-to-date June 30, 2016	5.00%	5.33%	5.77%
Year-to-date June 30, 2015	12.35%	5.23%	7.59%
Return on average assets			
Quarter-to-date June 30, 2016	0.32%	0.30%	0.30%
Quarter-to-date June 30, 2015	1.11%	0.25%	0.37%
Year-to-date June 30, 2016	0.26%	0.28%	0.27%
Year-to-date June 30, 2015	0.67%	0.27%	0.36%
Net interest margin(9)			
Quarter-to-date June 30, 2016	0.37%	0.42%	0.43%
Quarter-to-date June 30, 2015	0.42%	0.36%	0.37%
Year-to-date June 30, 2016	0.38%	0.42%	0.39%
Year-to-date June 30, 2015	0.41%	0.37%	0.37%
Net interest spread			
Quarter-to-date June 30, 2016	0.33%	0.37%	0.40%
Quarter-to-date June 30, 2015	0.38%	0.34%	0.36%
Year-to-date June 30, 2016	0.33%	0.38%	0.36%
Year-to-date June 30, 2015	0.37%	0.35%	0.36%

(7) 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 13 - Capital](#) to the accompanying combined financial statements.)

(8) Return on average equity is net income expressed as a percentage of average total capital.

(9) 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
54 %	71%	42%	62%	63%	28%	54%	60%
48 %	56%	34%	44%	50%	20%	50%	35%
4.9 %	4.8%	4.7%	6.2%	4.3%	4.8%	4.4%	5.9%
\$ 59	\$ 44	\$ 14	\$ 10	\$ 35	\$ 4	\$ 20	\$ 49
\$ 51	\$ 42	\$ 15	\$ 6	\$ 24	\$ —	\$ 16	\$ 182
\$ 111	\$ 87	\$ 31	\$ 19	\$ 66	\$ 7	\$ 39	\$ 94
\$ 102	\$ 85	\$ 33	\$ 11	\$ 50	\$ 2	\$ 31	\$ 241
4.87 %	4.00%	4.25%	2.11%	2.94%	1.02%	5.30%	8.90%
4.26 %	4.00%	4.00%	1.23%	2.94%	0.38%	5.22%	22.65%
4.63 %	4.00%	4.25%	2.02%	2.88%	0.98%	5.31%	8.46%
4.44 %	4.00%	4.00%	1.23%	2.94%	0.38%	5.21%	14.58%
3.55 %	4.51%	4.15%	9.38%	15.34%	3.46%	5.82%	4.98%
5.54 %	5.10%	5.82%	8.51%	2.35%	4.75%	5.56%	4.27%
3.28 %	4.17%	4.40%	7.58%	14.15%	2.54%	6.78%	11.90%
5.26 %	5.04%	5.19%	7.93%	2.80%	4.81%	6.30%	18.39%
0.17 %	0.22%	0.18%	0.53%	0.59%	0.17%	0.26%	0.28%
0.27 %	0.26%	0.31%	0.56%	0.10%	0.22%	0.25%	0.29%
0.16 %	0.19%	0.20%	0.46%	0.55%	0.12%	0.30%	0.67%
0.26 %	0.25%	0.29%	0.50%	0.12%	0.22%	0.28%	1.35%
0.24 %	0.30%	0.36%	0.57%	0.24%	0.30%	0.53%	0.51%
(0.15)%	0.34%	0.43%	0.71%	0.30%	0.28%	0.54%	0.53%
0.26 %	0.29%	0.38%	0.61%	0.26%	0.31%	0.54%	0.55%
0.09 %	0.32%	0.45%	0.71%	0.29%	0.29%	0.56%	0.61%
0.21 %	0.25%	0.32%	0.50%	0.21%	0.26%	0.49%	0.47%
(0.16)%	0.30%	0.37%	0.63%	0.28%	0.27%	0.50%	0.48%
0.23 %	0.25%	0.33%	0.54%	0.23%	0.27%	0.50%	0.51%
0.07 %	0.29%	0.39%	0.63%	0.27%	0.27%	0.53%	0.56%

INDEX OF TABLES CONTAINED IN THE COMBINED FINANCIAL REPORT

	Page
Tables Included in Notes to Combined Financial Statements	
Table 3.1 - Trading Securities by Major Security Type	F-12
Table 3.2 - Net Gains (Losses) on Trading Securities	F-12
Table 4.1 - Available-for-Sale (AFS) Securities by Major Security Type	F-13
Table 4.2 - AFS Securities in a Continuous Unrealized Loss Position	F-14
Table 4.3 - AFS Securities by Contractual Maturity	F-15
Table 4.4 - Proceeds from Sale and Gross Gains and Losses on AFS Securities	F-15
Table 5.1 - HTM Securities by Major Security Type	F-15
Table 5.2 - HTM Securities in a Continuous Unrealized Loss Position	F-16
Table 5.3 - HTM Securities by Contractual Maturity	F-17
Table 5.4 - Proceeds from Sale and Gains and Losses on HTM Securities	F-17
Table 6.1 - Total MBS Other-than-Temporarily Impaired during the Life of the Security at June 30, 2016	F-19
Table 6.2 - Rollforward of the Amounts Related to Credit Losses Recognized into Earnings	F-19
Table 7.1 - Advances Redemption Terms	F-20
Table 7.2 - Advances by Year of Contractual Maturity or Next Call Date and Next Put or Convert Date	F-21
Table 7.3 - Advances by Current Interest Rate Terms	F-21
Table 8.1 - Mortgage Loans Held for Portfolio	F-21
Table 8.2 - Mortgage Loans Held for Portfolio by Collateral/Guarantee Type	F-22
Table 9.1 - Rollforward of Allowance for Credit Losses on Conventional MPF/MPP Mortgage Loans	F-23
Table 9.2 - Allowance for Credit Losses and Recorded Investment by Impairment Methodology on Conventional MPF/MPP Mortgage Loans	F-23
Table 9.3 - Recorded Investment in Delinquent Mortgage Loans	F-23
Table 9.4 - Individually Evaluated Impaired Conventional MPF/MPP Mortgage Loans	F-24
Table 9.5 - Average Recorded Investment of Individually Impaired Conventional MPF/MPP Mortgage Loans and Related Interest Income Recognized	F-24
Table 10.1 - Fair Value of Derivative Instruments	F-27
Table 10.2 - Net Gains (Losses) on Derivatives and Hedging Activities	F-28
Table 10.3 - Effect of Fair Value Hedge-Related Derivative Instruments	F-28
Table 10.4 - Effect of Cash Flow Hedge-Related Derivative Instruments	F-29
Table 10.5 - Offsetting of Derivative Assets and Derivative Liabilities	F-31
Table 11.1 - Deposits	F-32
Table 12.1 - Consolidated Discount Notes Outstanding	F-32
Table 12.2 - Consolidated Bonds Outstanding by Contractual Maturity	F-33
Table 12.3 - Consolidated Bonds Outstanding by Call Features	F-33
Table 12.4 - Consolidated Bonds Outstanding by Contractual Maturity or Next Call Date	F-33
Table 13.1 - Risk-Based Capital Requirements at June 30, 2016	F-34
Table 13.2 - Regulatory Capital Requirements at June 30, 2016	F-34
Table 13.3 - Leverage Capital Requirements at June 30, 2016	F-35
Table 13.4 - Retained Earnings	F-36
Table 13.5 - Mandatorily Redeemable Capital Stock Rollforward	F-36
Table 13.6 - Mandatorily Redeemable Capital Stock by Contractual Year of Redemption	F-37
Table 14.1 - Accumulated Other Comprehensive Income (Loss)	F-38
Table 15.1 - Fair Value Summary	F-41
Table 15.2 - Fair Value Measurements	F-43
Table 15.3 - Rollforward of Level 3 Assets and Liabilities	F-46
Table 15.4 - Fair Value Option - Financial Assets and Liabilities	F-48
Table 15.5 - Aggregate Fair Value and Aggregate Unpaid Balance	F-48
Table 16.1 - Off-Balance Sheet Commitments	F-49

Tables Included in Financial Discussion and Analysis of Combined Financial Condition and Combined Results of Operations	
Table 1 - Key Interest Rates	5
Table 2 - Funding Spreads to Three-Month LIBOR	5
Table 3 - Advances Outstanding by Product Type	7
Table 4 - Advance Originations and Repayments	8
Table 5 - Advances at Par Value by Type of Borrower	8
Table 6 - Member Borrowers by Type of Member	8
Table 7 - Top 10 Advance Holding Borrowers by Holding Company at June 30, 2016	9
Table 8 - Total Investments	10
Table 9 - Interest-Rate Payment Terms of Investment Securities	11
Table 10 - Mortgage Loans Held for Portfolio, Net	12
Table 11 - Mortgage Loans Held for Portfolio - Characteristics and Credit Losses	12
Table 12 - Consolidated Obligations Outstanding	13
Table 13 - Net Proceeds and Payments for Consolidated Obligations	14
Table 14 - Par Value of Consolidated Bonds Outstanding by Payment Terms	14
Table 15 - Percentage of Total Consolidated Bonds Issued by Bond Type	15
Table 16 - Total Capital and Capital-to-Assets Ratios	15
Table 17 - Capital Components as a Percentage of Total GAAP Capital	16
Table 18 - Changes in Net Income	17
Table 19 - Net Interest Income after Provision (Reversal) for Credit Losses	17
Table 20 - Spread and Yield Analysis	18
Table 21 - Rate and Volume Analysis	20
Table 22 - Effect of Derivatives and Hedging Activities on Net Interest Income	21
Table 23 - Changes in Non-Interest Income	22
Table 24 - Effect of Derivatives and Hedging Activities on Non-Interest Income	23
Table 25 - Changes in Non-Interest Expense	24
Table 26 - Effect of Combining Adjustments on Combined Statement of Income	26
Table 27 - Comprehensive Income	26
Table 28 - Significant Inputs for Private-Label Residential MBS and Home Equity Loan ABS at June 30, 2016	30
Table 29 - FHLBanks' Long-Term Credit Ratings, Short-Term Credit Ratings, and Outlook at July 31, 2016	32
Table 30 - Advances, Other Credit Products, and Collateral Outstanding at June 30, 2016	33
Table 31 - Type of Collateral Securing Advances and Other Credit Products Outstanding at June 30, 2016	34
Table 32 - Investment Ratings	35
Table 33 - Credit Ratings of Private-Label Mortgage-Backed Securities at June 30, 2016	37
Table 34 - Unsecured Credit Exposure by Investment Type	38
Table 35 - Ratings of Unsecured Investment Credit Exposure by Domicile of Counterparty at June 30, 2016	39
Table 36 - Contractual Maturity of Unsecured Investment Credit Exposure by Domicile of Counterparty at June 30, 2016	40
Table 37 - Derivative Counterparty Credit Exposure at June 30, 2016	41
Tables Included in Quantitative and Qualitative Disclosures about Market Risk	
Table 38 - Individual FHLBank's Market Value of Equity and Duration of Equity Disclosures	42
Table 39 - Duration of Equity	43
Table 40 - Duration Gap	43
Tables Included in Market for Capital Stock and Related Stockholder Matters	
Table 41 - Regulatory Capital Stock Held by Type of Member	49
Table 42 - Membership by Type of Member	49
Table 43 - Top 10 Regulatory Capital Stockholders by Holding Company at June 30, 2016	50