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Federal Home Loan Banks

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Major Rating Factors

Strengths:

- Government-related entity (GRE) with an almost certain likelihood of extraordinary government support
- Critical public-policy role as one of the primary liquidity providers to U.S. mortgage market participants, especially in times of stress
- Integral link to the U.S. government, given its special public status as a U.S. government-sponsored enterprise (GSE) and unusual credit advantages conveyed by the related legal framework
- Excellent asset quality in the fully collateralized wholesale lending portfolio

None

Weaknesses:

- Longer-term uncertainty related to potential legislative changes associated with broader housing finance reform
- Challenges to broad-based growth in advances
- Small, but growing, exposure to nondepository financial institutions

Rationale

S&P Global Ratings' ratings on the senior debt of the Federal Home Loan Banks (FHLB System) reflect our view of the almost certain likelihood that the FHLB System would receive extraordinary support from the U.S. government, if needed, based on its integral link with the government and its critical role in promoting homeownership. Therefore, our ratings on the system's debt are at the same level as the U.S. sovereign ratings, even though the U.S. government does not explicitly guarantee the FHLB System's debt.

We view the FHLB System as one of the most important U.S. GREs. In our opinion, promoting homeownership is a central and long-standing aspect of U.S. policy, which we do not expect will change. We believe that within the U.S. housing finance framework, the FHLB System has a critical public-policy role as one of the most important national liquidity providers to U.S. mortgage lenders, particularly during stressful conditions, when private-sector liquidity often proves unreliable.

We view the FHLB System as having an integral link to the U.S. government, given its special public status as a U.S. GSE and unusual advantages conveyed by the related legal framework. These advantages include lien priority over other creditors in the event of the failure of an insured depository member to whom the system had loans outstanding. We also believe the Federal Housing Finance Agency (FHFA; the Federal Home Loan Banks' regulator) has clear and robust processes and procedures in place that enable effective governance, monitoring, and control of the FHLB System, including administrative capacity and mechanisms for responding to any financial distress the system might

encounter in a timely manner.

The FHLB System has a diverse and global investor base, and it readily sells its debt at a small spread to U.S. Treasury obligations. In our opinion, the FHLBanks' exceptionally favorable funding advantages are likely to continue so long as their policy role remains critical, and their link integral, to the U.S. government. Moreover, based on the track record of plentiful funding for the FHLB System during the market stress of 2008, we believe access to funding is unlikely to be problematic, even in stress scenarios. The system has increased its reliance on short-term funding in response to its members' demands. However, given the generally match-funded approach to issuance, as well as the overcollateralization of advances to members, we believe that the tenor of the system's funding remains manageable. The FHLBanks' principal investments are GSE and private-label mortgage-backed securities, federal funds sold, interest-bearing deposits, reverse repurchase agreements, and municipal and Treasury securities.

The FHLB System consists of the combination of the 11 Federal Home Loan Banks (FHLBanks). We assign stand-alone credit profiles (SACPs) to each of the FHLBanks, but not to the system as a whole. Because the system issues consolidated debt obligations on behalf of its component FHLBanks, and in light of their joint and several liability for these obligations, we assign issue ratings to the debt issued by the system.

The issuer credit ratings on the FHLBanks are one to two notches higher than their 'aa' or 'aa-' SACPs because, in our view, the likelihood of the government providing extraordinary support to them, if needed, is very high.

We view the FHLBanks' business positions as strong, reflecting their established market positions in their districts, recurring business volumes, and public policy role, which we believe offset some of the risks associated with their lack of business diversity. We view the FHLBanks' capitalization as very strong, based on their member-capitalized co-op structure and low-risk collateralized lending business, which result in S&P Global Ratings' risk-adjusted capital ratios we expect to remain higher than 15%. Another factor supporting our ratings is that none of the FHLBanks has ever suffered a loss on a collateralized advance to a member (reflecting both the lien priority and substantial collateral held against advances).

(For more information, see the full analysis on each FHLBank.)

Outlook

Our outlook on the FHLB System debt ratings is stable, in line with the stable outlook on the U.S. sovereign rating. We expect the likelihood of extraordinary government support for the FHLB System, if needed, to remain almost certain for at least the next two years. If we changed our rating or outlook on the U.S., we would reflect that change in our ratings and outlook on the FHLB System's debt. Longer term, the FHLB System is subject to uncertainty related to potential legislative changes associated with broader reform of U.S. housing finance policies. If initiatives were to gain momentum and target substantial changes to the FHLB System, such that the role of the FHLB System in housing finance is diminished, we could lower our ratings on the system's debt. To date, however, such initiatives have neither succeeded in gathering substantial political momentum, nor targeted the FHLB System.

GRE Analysis: Critical Public-Policy Role And Integral Link To The Government

We view the FHLB System as one of the most important U.S. GREs. In our opinion, promoting home ownership is a central and long-standing U.S. policy, evidenced by the tax-deductibility of mortgage interest and the various activities of the U.S. Department of Housing and Urban Development, for example. Notwithstanding the contribution such policies arguably made to past U.S. housing market excesses, we do not expect this essential policy orientation to substantially change, given its widespread political appeal and the importance of consumption to U.S. economic growth (and home ownership to consumption, via wealth effects).

In our opinion, the FHLB System's critical public-policy role within the U.S. housing finance policy framework was clearly demonstrated in the U.S. mortgage crisis of 2008, during which advances (loans to client-owner members) outstanding peaked at \$1 trillion. Since then, with the ebb in financial stress, advances have declined as member institutions regained access to alternative funding sources, particularly deposits. In addition, the system provides some support for affordable housing and community investment programs. The FHLB System's combined assets were \$1.088 trillion and advances totaled \$697 billion as of March 31, 2018.

Although the government does not guarantee the FHLB System's obligations, the system's status as a U.S. GSE provides several advantages, such as the eligibility of GSE securities for collateral the U.S. Federal Reserve Banks (the U.S. monetary authority) are required to hold against currency they have put into circulation. The FHLB System is also exempt from almost all corporate taxation, and the securities it issues are exempt from state and local income tax. In addition to these advantages, the U.S. legal framework gives the FHLB System lien priority over other creditors (including depositors) in the event of the failure of an insured depository member to whom the system had loans outstanding.

Reinforcing these links to the government, the FHFA has what we consider clear and robust processes and procedures in place that enable effective governance, monitoring, and control of the FHLB System, including administrative capacity and mechanisms for responding to any financial distress the system might encounter in a timely manner. We believe the FHFA oversees all strategic decisions the system makes, and it has and uses the capacity to closely monitor the system's financial condition.

We view the GSE Credit Facility (GSECF), temporarily established by the U.S. Treasury Department in 2008, as a clear indicator of the government's willingness and ability to provide extraordinary support to the FHLB System in time of stress. The GSECF proactively offered government-loan liquidity to the FHLB System (along with Fannie Mae and Freddie Mac), if needed, asking nothing more than the system's own advances as collateral.

Finally, despite the absence of a government guarantee, we believe a close association between the system and the government is well-entrenched in the minds of investors and other financial-market participants. Together with a substantial amount of system securities outstanding (\$1.02 trillion as of March 31, 2018), this association could mean, we believe, that substantial financial distress for the system could negatively affect the U.S. government's reputation, providing it additional incentive to support its GSEs. Supporting this belief, FHLBank consolidated obligations continue

to price at a narrow spread over U.S. Treasuries, affording the FHLBanks and their member institutions low funding costs, despite the substantial volume outstanding.

In our rating analysis, we differentiate between the aggregate FHLB System and the individual FHLBanks. We classify an individual FHLBank's role as very important and its link to the government as very strong. Because the 11 FHLBanks have joint and several liability for the senior unsecured debt obligations that the FHLBanks Office of Finance issues, we believe that weakness in a single FHLBank could have an impact on investors' perception of the strength of the FHLB System as a whole. That is one reason we judge the link between each of the FHLBanks and the government as very strong. On the other hand, we believe each FHLBank is less important, from a policy perspective, than the FHLB System as a whole. This is reflected in our assessing both the role and the link of each individual FHLBank as one degree weaker than our assessment for the system as a whole.

Profile And Ownership: A Cooperative Owned By Its Member Institutions

Each FHLBank is owned by its private-sector member financial institutions. The member institutions are primarily commercial and savings banks, though they have expanded to include credit unions, insurance companies, and community-development financial institutions (CDFIs). The membership mix as of March 31, 2018, was 67.4% commercial banks, 13.9% credit unions, 13.4% savings institutions, 4.8% insurance companies, and 0.5% CDFIs. A member institution must purchase capital to belong to an FHLBank. The member institution's stock requirement is generally based on its use of FHLBank products, subject to a minimum requirement. In return, the member institution may borrow on a secured basis at typically attractive rates from its FHLBank. In addition, member institutions may receive dividends on their shares in the FHLBank, which helps to lower their total transaction funding costs.

FHLBanks provide their members with a reliable source of funding for housing finance, community lending, and asset-liability management, as well as liquidity for members' short-term needs. This funding is in the form of long-term and short-term secured loans, called "advances," to their members. These advances are primarily collateralized by residential mortgage loans, as well as government and agency securities. Community financial institutions may also pledge small business, small farm, small agri-business, and community development loans as collateral for advances. In addition to advances, letters of credit by the FHLBanks have increased significantly in the past several years. Such letters of credit totaled \$149.9 billion as of March 31, 2018, a \$95.3 billion increase since the first quarter of 2011. Letters of credit are typically used by members to secure public unit deposits and would be converted to an advance if drawn. However, draws on letters of credit are rare.

Although privately owned, the system is run as a cooperative for the benefit of its member-owners (private-sector financial services companies), with more emphasis on retaining the capacity to quickly increase liquidity provision when needed than on maximizing current profits. We believe the FHFA's close oversight reinforces this strategic orientation.

The FHLBs have recently been moving toward floating-rate bonds replacing discount notes in response to market demand and to address the FHFA's concerns regarding maturity gaps, though in many cases the bonds are short term. Short-term funding (funding with a remaining maturity of less than one year) made up 75.9% of consolidated

obligations as of March 31, 2018.

Peer Comparison For Federal Home Loan Banks											
(Mil. \$)	Atlanta	Boston	Chicago	Cincinnati	Dallas	Des Moines	Indianapolis	New York	Pittsburgh	San Francisco	Topeka
Cash and due from banks	80	27	40	1,853	39	194	77	87	253	15	25
Investments, including MBS	28,038	9,455	18,432	16,601	16,946	24,209	13,222	20,907	11,082	18,562	10,069
Securities purchased under agreements to resell	6,000	2,999	6,250	1,636	4,950	3,500	2,673	4,050	500	6,250	3,206
Interest-bearing deposits+Federal funds sold	13,445	6,276	10,136	17,775	6,675	5,661	1,636	11,300	6,905	15,020	5,163
Advances	91,733	37,988	50,840	63,883	35,304	108,253	32,965	112,202	70,278	66,642	26,978
Mortgage loans, net	416	4,027	5,357	9,731	1,019	7,112	10,496	2,880	4,019	2,376	7,466
Other	748	186	336	230	166	418	323	456	333	360	243
Total assets	140,460	60,958	91,391	111,709	65,100	149,347	61,392	151,881	93,369	109,225	53,150
Asset composition (% total assets)											
Cash and due from banks	0.1	0.0	0.0	1.7	0.1	0.1	0.1	0.1	0.3	0.0	0.0
Investments, including MBS	20.0	15.5	20.2	14.9	26.0	16.2	21.5	13.8	11.9	17.0	18.9
Securities purchased under agreements to resell	4.3	4.9	6.8	1.5	7.6	2.3	4.4	2.7	0.5	5.7	6.0
Interest-bearing deposits+Federal funds sold	9.6	10.3	11.1	15.9	10.3	3.8	2.7	7.4	7.4	13.8	9.7
Advances	65.3	62.3	55.6	57.2	54.2	72.5	53.7	73.9	75.3	61.0	50.8
Mortgage loans	0.3	6.6	5.9	8.7	1.6	4.8	17.1	1.9	4.3	2.2	14.0
Other	0.5	0.3	0.4	0.2	0.3	0.3	0.5	0.3	0.4	0.3	0.5
Advance concentrations: top 5 concentrations											
Q1 2018	61.0	29.0	61.0	65.0	35.0	65.0	43.0	60.0	77.0	61.0	53.0
Dec' 2017	56.0	30.0	59.0	62.0	29.0	59.0	44.0	64.0	77.0	62.0	52.0
Q3 2017	56.0	32.0	60.0	64.0	28.0	63.0	44.0	63.0	76.0	63.0	53.0
Q2 2017	52.0	32.0	60.0	67.0	29.0	65.0	45.0	60.0	75.0	66.0	52.0
Q1 2017	58.0	32.0	58.0	72.0	28.0	70.0	45.0	61.0	77.0	65.0	57.0
Dec' 2016	54.0	39.0	59.0	70.0	26.0	70.0	43.0	64.0	80.0	65.0	53.0
Q3-2016	56.0	39.0	58.0	71.0	26.0	67.0	43.0	63.0	77.0	60.0	54.0
Q2-2016	54.0	38.0	62.0	71.0	28.0	63.0	42.0	56.0	70.0	60.0	54.0
Q1 2016	55.0	37.0	60.0	74.0	24.0	63.0	44.0	55.0	74.0	64.0	56.0
AR 2015	59.0	39.0	60.0	72.0	26.0	57.0	43.0	55.0	74.0	62.0	55.0
Q3-2015	53.0	37.0	63.0	71.0	24.0	52.0	41.0	54.0	78.0	62.0	54.0
Q2-2015	56.0	36.0	62.0	74.0	24.0	52.0	42.0	53.0	74.0	63.0	52.0

Peer Comparison For Federal Home Loan Banks (cont.)

(Mil. \$)	Atlanta	Boston	Chicago	Cincinnati	Dallas	Des Moines	Indianapolis	New York	Pittsburgh	San Francisco	San Topeka
Q1 2015	54.0	35.2	66.0	78.0	25.3	67.0	42.0	55.0	73.0	57.0	55.0
Dec' 2014	60.6	37.3	64.9	78.4	23.8	65.6	40.4	62.2	73.9	53.1	47.1
Net income											
Q1 2018	114	55	74	83	42	118	48	126	79	81	40
AR-2017	349	190	317	314	150	518	156	479	340	376	197
Q3 2017	95	46	77	78	40	132	41	134	84	81	50
Q2 2017	86	39	79	87	44	130	37	131	88	80	45
Q1 2017	75	37	73	65	35	140	32	70	87	148	54
AR-2016	278	173	327	268	79	649	113	401	260	712	162
Q3-2016	79	37	76	61	21	74	23	103	55	291	48
Q2-2016	60	47	104	61	21	232	23	92	67	63	32
Q1 2016	50	30	69	57	8	187	27	83	57	231	40
AR 2015	301	289	349	254	67	131	121	415	257	638	93
Q3-2015	61.0	30.5	72.0	66.8	5.6	38.9	28.0	83.0	50.3	46.0	15.0
Q2-2015	87.0	150.0	97.0	58.7	23.9	26.8	34.1	75.2	80.6	61.0	26.6
Q1 2015	82.0	33.6	83.0	64.9	23.1	34.6	30.6	88.2	71.1	474.0	31.1
2014	271.0	150.0	392.0	254.0	49.0	121.0	117.0	315.0	256.0	205.0	106.0
2013	338.0	212.0	343.0	240.0	88.0	110.0	203.0	305.0	148.0	308.0	119.0
2012	270.0	207.0	375.0	215.0	81.0	111.0	140.0	361.0	130.0	491.0	110.0
2011	184.0	159.6	224.0	138.3	47.8	77.8	110.1	244.5	38.0	216.0	77.3
Return on average assets (%)											
Q1 2018	0.29	0.36	0.33	0.30	0.26	0.32	0.31	0.31	0.33	0.26	0.28
AR-2017	0.25	0.32	0.38	0.31	0.25	0.31	0.26	0.32	0.35	0.36	0.37
Q3 2017	0.27	0.31	0.36	0.30	0.25	0.31	0.26	0.34	0.34	0.30	0.36
Q2 2017	0.25	0.26	0.39	0.35	0.30	0.31	0.25	0.36	0.37	0.33	0.35
Q1 2017	0.21	0.25	0.36	0.26	0.25	0.31	0.23	0.19	0.36	0.63	0.43
AR-2016	0.20	0.29	0.42	0.25	0.15	0.40	0.22	0.31	0.28	0.77	0.33
Q3-2016	0.22	0.25	0.38	0.23	0.15	0.17	0.18	0.32	0.24	1.20	0.39
Q2-2016	0.17	0.32	0.53	0.24	0.17	0.59	0.18	0.30	0.30	0.28	0.26
Q1 2016	0.15	0.20	0.38	0.20	0.07	0.50	0.21	0.27	0.24	1.08	0.34
AR 2015	0.23	0.52	0.49	0.24	0.16	0.12	0.27	0.34	0.29	0.76	0.21
Q3-2015	0.18	0.22	0.42	0.25	0.05	0.13	0.24	0.27	0.22	0.21	0.13
Q2-2015	0.27	1.11	0.56	0.23	0.22	0.10	0.31	0.25	0.37	0.29	0.25
Q1 2015	0.25	0.24	0.44	0.26	0.23	0.14	0.26	0.28	0.34	2.51	0.32
2014	0.21	0.29	0.55	0.25	0.14	0.14	0.30	0.25	0.36	0.24	0.30
2013	0.28	0.54	0.53	0.26	0.27	0.20	0.51	0.27	0.24	0.35	0.33
2012	0.22	0.45	0.54	0.32	0.23	0.23	0.34	0.35	0.23	0.48	0.32
2011	0.15	0.30	0.28	0.21	0.14	0.15	0.26	0.24	0.07	0.15	0.21
Duration gap (in months)											
Q1 2018	0.4	0.7	0.9	0.0	0.0	0.6	1.2	(0.4)	(0.2)	0.8	0.3

Peer Comparison For Federal Home Loan Banks (cont.)

(Mil. \$)	Atlanta	Boston	Chicago	Cincinnati	Dallas	Des Moines	Indianapolis	New York	Pittsburgh	San Francisco	Topeka
AR-2017	0.2	(0.3)	0.9	0.0	(0.2)	0.5	1.2	(0.5)	(0.2)	1.1	(1.0)
Q3 2017	0.0	0.0	0.8	(0.1)	0.0	0.2	1.6	(0.5)	(0.2)	1.4	(0.6)
Q2 2017	0.2	0.5	0.8	0.0	0.2	0.3	0.4	(0.4)	(0.2)	1.4	(0.3)
Q1 2017	0.4	0.9	1.1	0.0	(0.6)	0.7	0.4	(0.3)	0.1	1.1	(0.6)
AR-2016	0.4	1.2	1.0	0.0	(0.7)	0.4	0.3	(0.2)	(0.1)	1.2	(0.6)
Q3-2016	0.4	(1.7)	0.9	(0.2)	(1.0)	(0.7)	(1.3)	(0.6)	0.4	1.2	(1.3)
Q2-2016	0.1	(1.6)	0.8	(0.2)	(0.7)	(1.0)	(0.5)	(1.0)	(0.2)	1.1	(0.8)
Q1 2016	(0.1)	0.1	0.9	0.0	(0.6)	(0.9)	1.2	(0.9)	0.0	1.2	0.5
AR-2015	(0.1)	0.1	0.5	0.0	(0.6)	(1.1)	0.7	(0.8)	(0.6)	1.4	0.5
Q3-2015	(0.8)	0.0	1.0	0.0	(0.8)	(0.6)	1.2	(1.0)	(0.7)	1.1	0.7
Q2-2015	(0.1)	1.1	0.8	0.1	(0.1)	0.2	0.3	(0.6)	0.1	0.3	0.4
Q1 2015	(0.4)	0.6	0.5	0.0	(0.6)	(0.5)	0.9	(0.9)	(0.7)	0.4	(0.1)
2014	(0.4)	0.0	(0.2)	0.0	0.2	(0.6)	(0.9)	(0.8)	(0.5)	0.4	(0.6)
2013	(0.1)	1.0	0.7	0.1	3.1	0.2	(3.3)	0.0	0.4	1.0	(0.2)
Regulatory capital ratio (%)											
Q1 2018	4.84	6.06	5.74	4.94	5.11	5.11	4.95	5.20	5.05	6.09	4.62
AR-2017	4.88	6.01	5.99	4.88	4.77	5.03	4.81	5.23	4.84	5.51	5.17
Q3 2017	4.87	5.86	5.81	4.92	4.72	4.75	4.65	5.28	4.83	5.83	4.64
Q2 2017	4.95	6.08	6.09	4.72	4.82	4.72	4.60	5.29	4.80	6.16	4.48
Q1 2017	4.87	6.58	6.13	5.25	4.88	4.57	4.63	5.21	4.79	6.39	4.51
AR-2016	4.94	5.95	6.40	4.80	4.74	4.48	4.73	5.40	4.69	6.40	4.34
Q3-2016	4.86	5.86	6.52	5.01	4.60	4.38	4.69	5.49	4.70	6.22	4.41
Q2-2016	4.85	5.72	6.15	4.81	4.77	4.34	4.68	5.45	4.79	5.87	4.38
Q1 2016	4.89	5.92	6.81	4.87	4.77	4.21	4.78	5.57	4.59	6.39	4.48
AR 2015	4.89	6.04	6.63	4.38	5.49	4.23	4.70	5.58	4.60	6.26	4.19
Q3-2015	4.99	6.38	6.50	4.68	5.16	4.34	4.90	5.25	4.51	6.27	4.33
Q2-2015	4.93	6.40	6.33	5.11	5.06	4.19	4.89	5.40	4.55	6.45	4.31
Q1 2015	5.04	6.40	6.29	5.10	5.34	4.28	5.45	5.23	4.43	7.99	4.30
2014	5.00	6.60	6.00	4.68	5.10	4.40	5.60	5.00	4.50	8.38	4.40
2013	5.40	9.60	5.40	5.23	5.90	4.63	6.24	5.10	5.16	9.24	5.40
2012	5.20	10.60	4.80	5.81	5.00	5.70	6.50	5.60	5.90	12.44	5.20
2011	5.80	8.50	6.40	6.40	5.20	5.50	6.23	5.40	7.44	10.72	5.24
Private-label mortgage-backed securities											
Residential PLMBS - AFS - amortized cost	935	0	39	0	0	0	178	0	431	3,334	0
OTTI in AOCI	(1)	0	0	0	0	0	(0)	0	0	(24)	0
Gross unrealized gains	119	0	9	0	0	0	29	0	73	376	0
Gross unrealized losses	0	0	0	0	0	0	0	0	(0)	0	0

Peer Comparison For Federal Home Loan Banks (cont.)

(Mil. \$)	Atlanta	Boston	Chicago	Cincinnati	Dallas	Des Moines	Indianapolis	New York	Pittsburgh	San Francisco	San Topeka
Estimated fair value	1,053	0	48	0	0	0	207	0	504	3,686	0
Residential PLMBS - HTM - amortized cost	532	791	625	0	89	12	35	9	261	767	76
OTTI in AOCI	0	(151)	(136)	0	(13)	0	0	(0)	0	(5)	(4)
Carrying value	532	640	489	0	76	12	35	8	261	762	72
Gross unrealized gains	8	276	279	0	16	0	0	0	4	15	5
Gross unrealized losses	(1)	(3)	0	0	(0)	0	(0)	(0)	(0)	(7)	(1)
Estimated fair value	539	913	768	0	91	12	35	8	265	770	76
Capital											
Actual risk-based capital	6,803	3,696	5,248	5,513	3,324	7,632	3,038	7,905	4,713	6,650	2,290
Min required risk-based capital	1,619	715	1,131	949	976	1,172	914	862	1,322	2,045	487
Excess over minimum risk-based capital required	5,184	2,980	4,117	4,564	2,348	6,460	2,124	7,043	3,391	4,605	1,802
Other-than-temporary impairments in accumulated other comprehensive income											
Q1 2018	118.0	(150.8)	(136.0)	0.0	(12.8)	0.0	29.3	(13.9)	73.1	347.0	(3.9)
AR-2017	134.0	(158.2)	(143.0)	0.0	(13.6)	0.0	29.3	(14.8)	73.0	331.0	(4.2)
Q3 2017	141.0	(166.5)	(152.0)	0.0	(14.4)	0.0	30.3	(21.8)	75.3	324.0	(4.4)
Q2 2017	132.0	(175.1)	(160.0)	0.0	(15.2)	0.0	28.6	(23.1)	74.1	243.0	(5.0)
Q1 2017	124	(184)	(168)	0	(16)	0	27	(24)	66	159	(5)
Ar-2016	124	(192)	(177)	0	(17)	0	27	(30)	67	127	(6)
Q3-2016	119	(202)	(187)	0	(18)	0	24	(32)	68	99	(6)
Q2-2016	112	(210)	(196)	0	(19)	0	24	(33)	65	27	(7)
Q1 2016	86	(220)	(206)	0	(20)	0	24	(35)	60	(25)	(7)
AR-2015	95	(230)	(217)		(21)		30	(37)	73	29	(8)
Q3-2015	92	(240)	(227)		(23)		34	(39)	81	53	(9)
Q2-2015	99	(251)	(238)	0	(24)	0	36	(40)	84	79	(10)
Q1 2015	102	(264)	(251)	0	(26)	0	36	(42)	97	88	(11)
2014	118	(276)	(264)	0	(27)	0	38	(44)	94	68	(12)
2013	125	(325)	(320)	0	(33)	0	26	(53)	78	(138)	(16)
2012	(41)	(385)	(389)	0	(41)	0	(10)	(63)	19	(782)	(21)
2011	(398)	(451)	(492)	0	(51)	0	(120)	(76)	(168)	(1,882)	(24)
Retained earnings											
Q1 2018	2,052	1,336	3,358	961	972	1,904	994	1,575	1,180	3,273	854
AR-2017	2,003	1,308	3,297	940	942	1,839	976	1,546	1,158	3,245	840
Q3 2017	1,972	1,265	3,219	915	921	1,774	949	1,498	1,119	3,226	816

Peer Comparison For Federal Home Loan Banks (cont.)

(Mil. \$)	Atlanta	Boston	Chicago	Cincinnati	Dallas	Des Moines	Indianapolis	New York	Pittsburgh	San Francisco	San Topeka
Q2 2017	1,935	1,245	3,153	891	890	1,684	925	1,449	1,077	3,189	790
Q1 2017	1,910	1,231	3,083	853	853	1,590	903	1,395	1,031	3,150	768
Ar-2016	1,892	1,217	3,020	834	824	1,450	887	1,412	986	3,056	735
Q3-2016	1,863	1,180	2,951	788	801	1,294	862	1,361	942	3,067	713
Q2-2016	1,839	1,165	2,884	768	784	1,220	853	1,323	925	2,828	685
Q1 2016	1,838	1,139	2,790	751	767	988	845	1,292	898	2,814	673
AR-2015	1,840	1,129	2,730	737	762	801	835	1,270	881	2,628	652
Q3-2015	1,824	1,074	2,640	717	749	770	822	1,156	867	2,627	650
Q2-2015	1,813	1,064	2,575	694	745	731	810	1,126	855	2,653	654
Q1 2015	1,777	925	2,484	677	722	729	791	1,107	809	2,774	644
2014	1,746	902	2,406	656	701	720	778	1,083	838	2,359	628
2013	1,657	789	2,028	578	655	678	730	999	686	2,394	567
2012	1,435	588	1,691	516	572	622	584	894	559	2,247	482
2011	1,254	398	1,321	444	495	569	498	746	435	1,803	402
OTTI in AOCI/retained earn (%)											
Q1 2018	5.8	(11.3)	(4.1)	0.0	(1.3)	0.0	2.9	(0.9)	6.2	10.6	(0.5)
AR-2017	6.7	(12.1)	(4.3)	0.0	(1.4)	0.0	3.0	(1.0)	6.3	10.2	(0.5)
Q3 2017	7.2	(13.2)	(4.7)	0.0	(1.6)	0.0	3.2	(1.5)	6.7	10.0	(0.5)
Q2 2017	6.8	(14.1)	(5.1)	0.0	(1.7)	0.0	3.1	(1.6)	6.9	7.6	(0.6)
Q1 2017	6.5	(14.9)	(5.4)	0.0	(1.9)	0.0	3.0	(1.7)	6.4	5.0	(0.7)
AR-2016	6.6	(15.8)	(5.9)	0.0	(2.1)	0.0	3.0	(2.1)	6.8	4.2	(0.8)
Q3-2016	6.4	(17.1)	(6.3)	0.0	(2.3)	0.0	2.8	(2.3)	7.2	3.2	(0.9)
Q2-2016	6.1	(18.0)	(6.8)	0.0	(2.5)	0.0	2.8	(2.5)	7.0	1.0	(1.0)
Q1 2016	4.7	(19.3)	(7.4)	0.0	(2.7)	0.0	2.9	(2.7)	6.7	(0.9)	(1.1)
AR-2015	5.2	(20.4)	(7.9)	0.0	(2.8)	0.0	3.6	(2.9)	8.3	1.1	(1.2)
Q3-2015	5.0	(22.4)	(8.6)	0.0	(3.0)	0.0	4.1	(3.3)	9.4	2.0	(1.4)
Q2-2015	5.5	(23.6)	(9.2)	0.0	(3.2)	0.0	4.5	(3.6)	9.9	3.0	(1.5)
Q1 2015	5.7	(28.6)	(10.1)	0.0	(3.6)	0.0	4.5	(3.8)	11.9	3.2	(1.7)
2014	6.8	(30.6)	(11.0)	0.0	(3.9)	0.0	4.9	(4.1)	11.3	2.9	(1.9)
2013	7.5	(41.2)	(15.8)	0.0	(5.1)	0.0	3.5	(5.3)	11.3	(5.8)	(2.8)
2012	(2.9)	(65.5)	(23.0)	0.0	(7.2)	0.0	(1.7)	(7.1)	3.4	(34.8)	(4.3)
2011	(31.7)	(113.3)	(37.2)	0.0	(10.4)	0.0	(24.0)	(10.2)	(38.6)	(104.4)	(5.9)

Note: Information is as of March 2018 unless otherwise indicated.

Related Criteria

- Criteria - Governments - Sovereigns: Sovereign Rating Methodology, Dec. 18, 2017
- Criteria - Financial Institutions - General: Risk-Adjusted Capital Framework Methodology, July 20, 2017
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017

- Criteria - Financial Institutions - Banks: Bank Hybrid Capital And Nondeferrable Subordinated Debt Methodology And Assumptions, Jan. 29, 2015
- Criteria - Financial Institutions - General: Issue Credit Rating Methodology For Nonbank Financial Institutions And Nonbank Financial Services Companies, Dec. 9, 2014
- Criteria - Financial Institutions - General: Nonbank Financial Institutions Rating Methodology, Dec. 9, 2014
- Criteria - Financial Institutions - Banks: Quantitative Metrics For Rating Banks Globally: Methodology And Assumptions, July 17, 2013
- Criteria - Financial Institutions - Banks: Banking Industry Country Risk Assessment Methodology And Assumptions, Nov. 9, 2011
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria - Financial Institutions - Banks: Commercial Paper I: Banks, March 23, 2004

Ratings Detail (As Of August 1, 2018)

Federal Home Loan Banks

Senior Unsecured	AA+
Senior Unsecured	AA+/A-1+
Senior Unsecured	AA+/Stable
Short-Term Debt	A-1+

Sovereign Rating

United States	AA+/Stable/A-1+
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Related Entities

Federal Home Loan Bank of Atlanta

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of Boston

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of Chicago

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of Cincinnati

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of Dallas

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of Des Moines

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of Indianapolis

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of New York

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of Pittsburgh

Issuer Credit Rating	AA+/Stable/A-1+
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Federal Home Loan Bank of San Francisco

Issuer Credit Rating	AA+/Stable/A-1+
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Ratings Detail (As Of August 1, 2018) (cont.)

Federal Home Loan Bank of Topeka

Issuer Credit Rating

AA+/Stable/A-1+

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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