National Association of Insurance Commissioners & The Center for Insurance Policy and Research

Capital Markets Special Report

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U.S. Insurer Exposure to the Federal Home Loan Banking System as of Year-End 2015

This report is an update of the NAIC Capital Markets Bureau Special Report titled *The U.S. Insurance Industry's Exposure to the Federal Home Loan Banking System*, published Dec. 14, 2012. That report discussed the purpose and structure of the Federal Home Loan Banking System (FHLB), allowing members, including U.S. insurers, to meet the goals of investing in residential real estate and generating spread income, while also serving as a source of liquidity, and it concluded with an analysis of U.S. insurer exposure to FHLB borrowing, debt and capital stock.

The FHLB consists of the Office of Finance and 11 autonomous district banks, each a government-sponsored entity: 1) Atlanta; 2) Boston; 3) Chicago; 4) Cincinnati; 5) Dallas; 6) Des Moines, IA; 7) Indianapolis; 8) New York; 9) Pittsburgh; 10) San Francisco; and 11) Topeka, KS. The May 2015 merger of the Federal Home Loan Bank of Seattle with the Federal Home Loan Bank of Des Moines reduced the number of banks from 12 to 11. According to an FHLB Des Moines June 1, 2015, press release, the merger was voluntary and would result in a "larger and more geographically diverse membership base." The FHLB operates under the regulatory oversight of the Federal Housing Finance Agency (FHFA) and is a financial institution, organized under authority of the Federal Home Loan Bank Act of 1932 (Bank Act) for the purpose of increasing the availability of residential housing finance and community lending credit through members. The FHLB carries out its function primarily by providing low-cost loans, known as advances, to its members. In addition, through the "acquired member asset" (AMA) programs, the FHLB purchases qualifying residential mortgage loans from members, or it facilitates the sale of such loans to third-party investors.

Advances—loans, letters of credit (LOCs) or other short-term funding agreements—to members are primarily collateralized by commercial and residential mortgage loans, commercial mortgage-backed securities (CMBS) and government and agency securities, such as the Government National Mortgage Association (GNMA), Federal Home Loan Mortgage Corporation (FHLMC) and Federal National Mortgage Association (FNMA), and prior to 2008, non-agency residential mortgage-backed securities (RMBS). Advances also may be secured by small business, agriculture or community development loans, or securities backed by such loans if the financial institution posting the collateral is insured under the Federal Deposit Insurance Act and over the prior three-years had average total assets of no more than $1.128 billion (e.g., small community banks).

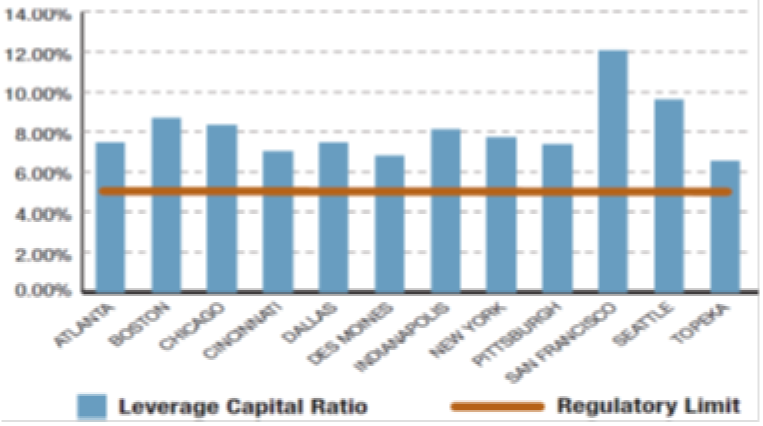
The amount of activity-based stock and capital (or membership) stock held are determinants of how much each member may take as total advances. Activity-based stock are shares purchased by members in proportion to their FHLB advances. In addition, the FHLB limits advances to between 20% and 55% of member total assets. Advances must be collateralized with sufficient assets based on their market value and a discount, or haircut, to ensure a level of overcollaterization.

Only financial institutions designated under the Bank Act, such as depository institutions and insurance companies, can become members of the FHLB bank in their respective geographic region by purchasing a specified amount of mandatorily redeemable shares, known as capital stock. The minimum number of shares required for membership varies by district bank; the required minimum number of shares notwithstanding, the stock requirement (that is, the total of activity-based and capital [membership] stock) is 5% of member advances. The capital stock cannot be sold to others; i.e., they are not publicly traded, in part because they confirm membership in the branch. The total stock may be redeemed for repayment at par at the member's respective district bank, but only after a notice period and only after all advanced amounts are repaid in full. The FHLB offers two classes of capital stock: 1) Class A; and 2) Class B. Class A shares require six months' written notice of redemption, and Class B requires five years' written notice. Each FHLB may pay a dividend in cash, additional capital stock, or combination of cash and capital stock to each member from previously retained earnings or current net earnings that are classified as unrestricted retained earnings. The FHLB average dividend was 4.26 in 2015. The FHLB may not redeem shares or declare a dividend if, following redemption, it would not satisfy its minimum capital requirements or deemed to be undercapitalized as determined by the FHFA. As of year-end 2015, the FHFA reported that 372 insurers (which included 54 captive insurers) were members of the FHLB, out of a total of 7,235 members. The remaining FHLB membership consisted of 4,669 commercial banks; 1,318 credit unions; and 835 thrifts. A ruling on FHLB membership published in January 2016 will result in some captive insurers losing membership. These are primarily captive insurers of real estate investment trusts (REITs). The new rule will be phased in over one year to four years based on when membership was obtained.

The FHLB funds its operations principally through the issuance of consolidated obligations (COs), which are debt instruments issued on its behalf by the Office of Finance and for which all of the FHLB banks are jointly and severally liable. While not considered "full faith and credit of the U.S. government," the FHLB does benefit from federal government support, which enables it to raise funds in the capital markets at interest rates only slightly higher than those on comparable U.S. Department of the Treasury (Treasury Department) instruments.

As of year-end 2015, the FHLB had total assets of $969.6 billion, up $56 billion from year-end 2014. About 65% of its assets were comprised of advances; 30% was in cash and investments, and 5% was in mortgages. A major change in the FHLB's capital structure has been the rapid build-up of undivided retained earnings over the last decade. Prior to 2005, the FHLBs had very little in the way of retained earnings. Between Dec. 31, 1996, and March 31, 2016, the retained earnings for the FHLB system increased from 2% to 32% of total capital. The addition of retained earnings has helped the FHLB's safety and soundness, dividend earnings power, and pricing power, and it has enabled FHLBs the ability to reduce the activity requirement below 5% for borrowing. In addition, each FHLB bank must maintain a leverage capital-to-assets ratio of at least 5%. (See Chart 1.) The leverage capital-to-assets ratio is calculated as leveraged capital divided by total assets. Leverage capital is the sum of permanent capital multiplied by 1.5. Permanent capital is the amount paid-in for Class B stock, plus the accumulated surplus.

Chart 1: FHLB Leverage Capital Ratios (as of Dec. 31, 2015)



Source: FHFA

U.S. Insurer FHLB Advances

FHLB advances are a stable source of low-cost funding with maturities from one day to 10 or more years. Liquidation of outstanding advances prior to stated maturity may result in significant penalties. Advances can be in the form of debt or funding agreements. *SSAP No. 15—Debt and Holding Company Obligations* requires that advances that are structured as funding agreements and whose funds are invested in higher yielding investments than is paid under the agreement be treated as funding agreements. U.S. insurers must disclose the total policy reserves established under the funding agreement, the maximum aggregate borrowing and whether the borrowing is subject to a prepayment penalty.

Analysis from 2003 to 2015 shows that FHLB advances to U.S. insurers were at a relative low of $22.5 billion in 2004 but experienced a steady increase to a pre-financial crisis high of about $36 billion in 2007. This was followed by decreases in 2008 and 2009. In its 2009 year-end report, the FHLB attributed the 2009 decrease in advances to the recession for all members and "availability of federal government programs that provided members with more attractively priced sources of funding and liquidity and/or lower collateral requirements." FHLB advances to U.S. insurers fell to a post-financial crisis low of about $27 billion in 2010. As of year-end 2015, U.S. insurers reported $48.8 billion in FHLB advances, representing 25% of estimated borrowing capacity, based on the amount of member stock held. The $48.8 billion was 7.7% of total advances ($634.0 billion) to all members. In comparison, the top four borrowers (each a bank holding company) accounted for 24% of all advances, or about $148.8 billion at year-end 2015. JP Morgan Chase was the largest borrower at $71.5 billion. The vast majority of FHLB advances to U.S. insurers (90.4%) were to life companies. The gradual decline in the federal government's role as a funding and liquidity source (i.e., the termination of the quantitative easing program) contributed to the large increase in post-financial crisis FHLB advances.

Among the insurers that filed a financial statement at year-end 2015, only 139 of the 372 insurer members reported FHLB advances. Of those that reported advances, 83 were life companies, 41 were property/casualty (P/C) companies, and 12 were health companies. Fraternal and title companies made up the remaining three insurer types reporting advances as of year-end 2015. Insurers with total cash and invested assets greater than $10 billion accounted for 77%, or $37.8 billion of FHLB advances at year-end 2015 as shown in Table 1. Life companies accounted for about $37 billion of the $37.8 billion. U.S. insurers with total cash and invested assets of $1 billion or more accounted for approximately 97% of the U.S. insurance industry's FHLB advances.

Table 1: U.S. Insurer Year-End 2015 FHLB Advances by Total Cash and Invested Assets ($mil. BACV)

Insurer Type	Less Than $250mm	Between $250mm and $500mm	Between $500mm and $1B	Between $1B and $2.5B	Between $2.5B and $5B	Between $5B and $10B	Greater than $10B
Life	212	5	603	868	1,748	3,741	36,966
Health	-	-	230	628	-	1,747	-
P/C	62	96	246	585	36	170	764
Fraternal	-	46	-	-	-	-	76
Title	4	-	-	-	-	-	-
Total	**278**	**148**	**1,079**	**2,081**	**1,784**	**5,658**	**37,806**
Pct of Total	1%	0%	2%	4%	4%	12%	77%

SSAP No. 1—Disclosure of Accounting Policies, Risks and Uncertainties, and Other Disclosures requires U.S. insurers to disclose amounts that are reported in the financial statements but held for others or restricted (i.e., pledged collateral). FHLB capital stock held and assets that are pledged as collateral to FHLB are subject to this requirement. In addition, under *SSAP No. 30—Investments in Common Stock*, insurers must report FHLB capital stock that is eligible for redemption and the anticipated redemption timeframe.

In the *Notes to the Financial Statements,* U.S. insurers reported assets pledged as collateral to the FHLB with a book/adjusted carrying value (BACV) of $73 billion as of year-end 2015. (See Table 2.) As previously mentioned, each member must pledge collateral for advances from FHLB. The market value of pledged collateral is customarily greater than the amount of the FHLB advance, which is intended to serve as an additional cushion in the event of a member default.

Table 2: U.S. Insurer Year-End 2015 FHLB Pledged Collateral ($mil.)

Insurer Type	BACV	Pct of Total
Life	65,789	90%
P/C	4,170	6%
Health	2,795	4%
Fraternal	211	0%
Title	5	0%
Total	**72,970**	**100%**

U.S. Insurer Exposure to FHLB Capital Stock

U.S. insurers reported exposure to FHLB capital stock with a BACV of $3.59 billion as of year-end 2015, a slight increase from $3.36 billion in 2014. (See Table 3.) Not surprisingly, life insurers, as the largest FHLB borrowers, are also the largest holders of FHLB capital stock (across the five major insurer types), accounting for 90% of reported year-end 2015 exposure. (Recall that borrowing capacity is determined by capital stock ownership.) Ownership of capital stock is required for FHLB membership, and only members can request advances. U.S. insurer capital stock exposure consisted of activity-based stock ($2.2 billion), Class A stock ($122 million), Class B ($1.2 billion) and Excess ($48 million). Excess capital stock is any amount held that is greater than required under the particular district bank capital requirement.

Table 3: U.S. Insurer Year-End 2015 Exposure to FHLB Capital Stock ($mil. BACV)

Insurer Type	Capital Stock	Pct of Total
Life	3,217	89.7%
P/C	232	6.5%
Health	134	3.7%
Fraternal	5	0.1%
Total	**3,588**	**100.0%**

Life insurers accounted for 90% ($3.2 billion) of total FHLB capital stock exposure at year-end 2015. Large life insurers (greater than $10 billion in total cash and invested assets) held $2.8 billion of the $3.2 billion. Large P/C insurers (greater than $10 billion of total cash and invested assets) accounted for a smaller concentration of FHLB capital stock exposure (among all P/C insurers) at 44%. Large insurers across all insurer types accounted for 80% of total U.S. insurer exposure to FHLB capital stock. (See Table 4.)

Table 4: U.S. Insurer Year-End 2015 Exposure to FHLB Capital Stock by Total Cash and Invested Assets ($mil. BACV)

Insurer Type	Less Than $250mm	Between $250mm and $500mm	Between $500mm and $1B	Between $1B and $2.5B	Between $2.5B and $5B	Between $5B and $10B	Greater Than $10B	Insurer Type Total	Insurer Type Total/Total (%)
Life	12	3	30	48	149	205	2,770	3,217	90%
P/C	9	9	21	61	10	24	99	232	6%
Health	0	-	11	47	-	76	-	134	4%
Fraternal	0	2	0	0	-	-	3	5	0%
Title	0	-	-	-	-	-	-	0	0%
Total	**21**	**13**	**62**	**157**	**159**	**305**	**2,872**	**3,588**	**100%**
Pct of Total	1%	0%	2%	4%	4%	8%	80%	100%	

U.S. Insurer Exposure to FHLB Bonds

In addition to the advances and capital stock holdings, U.S. insurers also invest in bonds issued by the FHLB. U.S. insurers reported exposure to FHLB bonds with a BACV of $11.1 billion as of year-end 2015, a 13% decrease from 2014 ($12.7 billion). FHLB had $906 billion in bonds outstanding as of year-end 2015. In comparison, U.S. insurers reported exposure to Fannie Mae and Freddie Mac direct debt with a BACV of $20.6 billion in the same period. As of year-end 2015 Fannie and Freddie has $5.2 trillion in bonds outstanding. Life and P/C insurers held about 88% of the industry's FHLB bonds at year-end 2015. (See Table 5.)

Table 5: U.S. Insurer Year-End 2015 Exposure to FHLB Bonds ($mil.)

Insurer Type	YE2015 BACV	Pct of Total	YE2014 BACV	Pct of Total
P/C	5,036	45%	5,817	46%
Life	4,519	41%	5,314	42%
Healthy	1,272	11%	1,263	10%
Fraternal	266	2%	316	2%
Title	22	0%	20	0%
Total	**11,116**	**100%**	**12,729**	**100%**

U.S. insurers with total cash and invested assets greater than $10 billion comprised 40% of insurers' reported exposure to FHLB bonds (in terms of BACV). U.S. insurers with between $1 billion and $2.5 billion total cash and invested assets under management accounted for 14% of FHLB bond exposure, followed by insurers with less than $250 million total cash and invested assets, and insurers with between $500 million and $1 billion total cash and invested assets under management accounting for 13% and 12%, respectively. (See Table 6.)

Table 6: U.S. Insurer Year-End 2015 Exposure to FHLB Bonds by Total Cash and Invested Assets ($mil.)

Insurer Type	Less Than $250mm	Between $250mm and $500mm	Between $500mm and $1B	Between $1B and $2.5B	Between $2.5B and $5B	Between $5B and $10B	Greater Than $10B	Total	Pct of Total
P/C	967	497	851	872	180	517	1,152	5,036	45%
Life	147	92	270	239	295	327	3,149	4,519	41%
Health	322	168	179	378	131	93	-	1,272	11%
Fratemal	34	18	4	38	42	-	130	266	2%
Title	2	-	-	20	-	-	-	22	0%
Total	**1,473**	**775**	**1,305**	**1,547**	**647**	**937**	**4,431**	**11,116**	**100%**
Total (%)	13%	7%	12%	14%	6%	8%	40%	100%	

The distribution of FHLB bond maturities (with respect to those held by U.S. insurers) was tilted toward the shorter end, with 50% of bonds having maturities of five years or less. This, however, varied based on insurer type. FHLB bonds held by life and fraternal insurers were more weighted toward longer-dated bonds: Sixty-three percent and 57% of their exposures, respectively, had maturities greater than 10 years. The difference in the concentration of maturities across insurer types is a function of asset liability matching. Ninety-eight percent of FHLB bonds held by health companies matured in 10 years or less. (See Table 7.)

Table 7: U.S. Insurer Year-End 2015 Exposure to FHLB Bonds by Maturity (%)

Insurer Type	Less than 1yr	1yr to 5yrs	6yrs to 10yrs	11yrs to 20yrs	Greater Than 20yrs
P/C	32%	32%	21%	14%	0%
Life	15%	14%	9%	54%	9%
Health	35%	33%	30%	1%	0%
Fraternal	25%	8%	11%	55%	2%
Title	48%	8%	7%	37%	0%
Total	**26%**	**24%**	**17%**	**30%**	**4%**

Summary

The FHLB provides residential mortgage liquidity through direct purchases or by facilitating (as agent) third-party sales of mortgage loans from member banks. The FHLB also provides members with advances collateralized by mortgage loans, government debt or cash. U.S. insurers accounted for 7.7% of FHLB total advances at year-end 2015. The majority (90%) of advances were to life companies. Among the five insurer types, life companies also had the largest exposure to FHLB capital stock with a BACV of $3.1 billion out of $3.4 billion as reported by U.S. insurers at year-end 2015. U.S. insurer capital stock exposure consisted of activity-based stock ($2.2 billion), Class A stock ($122 million), Class B ($1.2 billion) and Excess ($48 million). Due in part to the restriction on sale, the six-month and five-year notification requirement for redemption of Class A and Class B capital stock, respectively, results in FHLB capital stock being illiquid.

FHLB bonds are not guaranteed by the U.S. government as to the payment of interest and principal; they are a joint and several obligation of the 11 banks comprising the system and benefit from federal government support. U.S. insurer exposure to FHLB bonds decreased 13% to $11.1 billion at year-end 2015.

The potential impact of loss to U.S. insurers from FHLB default on its debt is minimal given their status as a "quasi-government" agency, and U.S. insurer exposure to FHLB bonds accounted for less than 1% of the U.S. insurance industry's total cash and invested assets of $5.85 trillion as of year-end 2015. Despite a notice of proposed rulemaking (June 2016) by the Federal Reserve Bank, which does not include available credit to U.S. insurers in liquidity stress testing, insurers benefit anyway from access to FHLB low-cost funding as demonstrated in part during the 2008 financial crisis, when traditional capital market sources of funding were unavailable.

The Capital Markets Bureau will continue to monitor trends in exposure to FHLB and report on any developments as deemed appropriate.

September 9, 2016 Major Insurer Share Prices		Close	Change % Week	Change % QTD	Change % YTD	Prior Week	Prior Quarter	Prior Year
Life	Aflac	$72.40	(2.3)	0.0	20.9	$74.08	$72.37	$59.90
	Ameriprise	99.41	(1.6)	10.7	(6.6)	100.98	89.81	106.42
	Genworth	4.88	0.8	90.3	30.8	4.84	2.57	3.73
	Lincoln	46.97	(2.3)	21.2	(6.5)	48.10	38.76	50.26
	MetLife	43.91	1.5	11.2	(8.9)	43.28	39.47	48.21
	Principal	48.37	(1.3)	17.7	7.5	49.01	41.10	44.98
	Prudential	79.18	(0.5)	11.6	(2.7)	79.60	70.93	81.41
	UNUM	35.25	(0.3)	11.5	5.9	35.37	31.61	33.29
PC	Axis Capital	55.54	(2.5)	2.3	(1.2)	56.96	54.31	56.22
	Allstate	67.96	(1.4)	(2.4)	9.5	68.90	69.60	62.09
	Arch Capital	80.58	(1.3)	12.8	15.5	81.62	71.44	69.75
	Cincinnati	75.50	(2.9)	1.3	27.6	77.73	74.55	59.17
	Chubb	124.28	(2.7)	(4.5)	(6.3)	127.71	130.15	132.64
	Everest Re	189.31	(1.6)	4.5	3.4	192.48	181.16	183.09
	Progressive	31.24	(3.8)	(5.9)	(1.8)	32.49	33.21	31.80
	Travelers	114.44	(3.6)	(3.6)	1.4	118.76	118.68	112.86
	WR Berkley	57.04	(2.9)	(3.8)	4.2	58.76	59.32	54.75
	XL	34.29	(1.4)	3.3	(12.5)	34.79	33.21	39.18
Other	AON	$108.93	(2.7)	(0.9)	18.1	$111.99	$109.90	$92.21
	AIG	58.67	(2.0)	11.1	(5.3)	59.87	52.81	61.97
	Assurant	89.23	(1.0)	1.6	10.8	90.17	87.80	80.54
	Fidelity National	37.70	0.6	1.5	8.7	37.46	37.14	34.67
	Hartford	41.05	0.3	(7.1)	(5.5)	40.93	44.19	43.46
	Marsh	65.99	(3.3)	(3.2)	19.0	68.21	68.20	55.45
Health	Aetna	$115.55	(0.8)	(3.7)	6.9	$116.46	$120.02	$108.12
	Cigna	128.45	0.4	(1.1)	(12.2)	127.93	129.82	146.33
	Humana	176.50	(0.3)	1.4	(1.1)	177.00	174.10	178.51
	United	133.62	(2.1)	(5.3)	13.6	136.44	141.07	117.64
Monoline	Assured	$27.80	0.5	8.6	5.2	$27.65	$25.61	$26.43
	MBIA	7.93	(0.8)	15.4	22.4	8.00	6.87	6.48
	MGIC	8.10	(1.3)	34.7	(8.3)	8.21	6.02	8.83
	Radian	13.66	(2.2)	30.8	2.0	13.97	10.44	13.39
	XL Capital	34.29	(1.4)	3.3	(12.5)	34.79	33.21	39.18

September 9, 2016 Major Market Variables		Close	Change % Week	Change % QTD	Change % YTD	Prior Week	Prior Quarter	Prior Year
Dow Jones Ind		18,085.45	(2.2)	0.8	3.8	18,487.34	17,950.09	17,425.03
S&P 500		2,127.81	(2.4)	1.2	4.1	2,179.03	2,102.47	2,043.94
S&P Financial		323.25	(2.2)	5.3	0.5	330.55	306.85	321.73
S&P Insurance		317.13	(1.9)	2.5	3.1	323.22	309.31	307.71
US Dollar $			Change %			Prior		
	/ Euro	$1.12	0.7	1.0	3.4	$1.12	$1.11	$1.09
	/ Crude Oil bbl	45.66	3.1	(6.1)	23.1	44.29	48.64	37.09
	/ Gold oz	1,328.70	0.3	(0.8)	25.4	1,324.80	1,339.30	1,059.60
Treasury Ylds %		%	Change bp			%	%	%
	1 Year	0.57	(0.02)	0.12	(0.04)	0.59	0.45	0.60
	10 Year	1.68	0.07	0.23	(0.60)	1.60	1.45	2.27
	30 Year	2.39	0.12	0.17	(0.62)	2.28	2.23	3.02
Corp Credit Spreads -bp			Change %			Prior		
	CDX IG	76.07	4.9	(1.7)	(13.8)	72.54	77.42	88.24

Questions and comments are always welcome. Please contact the Capital Markets Bureau at **CapitalMarkets@naic.org**.