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Enhancing Investment Spread Through a Federal Home Loan Bank Program

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Many insurance companies have been using Federal Home Loan Bank ("FHLB") programs where a qualified financial institution can borrow funds at attractive rates. As of June 30, 2023, there were 569 insurance companies that are members of the FHLB system. The FHLB system consists of 11 regional member banks which are government-sponsored enterprises organized under the Federal Home Loan Bank Act of 1932 and regulated by the Federal Housing Finance Agency. Each regional bank covers multiple states and territories; the appropriate bank is determined by the insurer's principal place of business (PPOB). There are several criteria to determine the PPOB. Refer to **Appendix B – Gaining FHLB Membership** for more details.

The FHLB's mission is to provide reliable liquidity to its member institutions which support housing finance, community investments and lending, and asset and liability management ("ALM"). The FHLB provides members with long-term and short-term advance structures.

The program's popularity is not a surprising phenomenon, especially in the midst of the elevated risks prompted by the turbulence in the economy. An FHLB program can be helpful to a company in many ways and can play a vital role in a company's investment philosophy and strategy. A company can leverage the program to boost the investment returns on their asset portfolio. From a liquidity management standpoint, access to FHLB advances can also be utilized by insurers as a reliable, cost-effective liquidity backstop. Furthermore, the rating agencies and regulators look favorably upon FHLB membership partly because it helps with managing market risk by strengthening ALM.

The boost in investment return is of great interest to all insurance company managers, especially to companies with a substantial portfolio of investment-type products, like deferred annuities. Companies are faced with excess surrenders by policyholders looking to take advantage of higher interest rates. Given that the market values of portfolio assets are typically lower than their book values, funding the excess surrenders through sale of assets creates additional cost in the form of realized losses.

This paper illustrates how a company can take advantage of an FHLB program to improve its investment returns. Members of the FHLB program can secure a loan or line of credit at attractive rates by pledging qualifying assets such as commercial loans, municipals, and mortgage-backed securities. The company can then use the proceeds from the secured loan to invest in the market, thereby improving the rate of return of the initial asset position.

The scenario described on the following pages uses a simplified but representative set of assumptions that may or may not apply to your company.

Scenario:

Company XYZ has become a member of the FHLB and would like to take advantage of the program to improve its yields. The company uses $15MM of qualifying collateral assets for pledging and takes an advance of $12.75MM, after a 15% collateral haircut, to invest in the market. The following tables illustrate the spread improvement mechanics.

The first table below summarizes the investment income from the pledged asset. For illustration purposes, a 30-year Freddie-Mac bond with a 5.5% coupon rate is used. Additionally, it is assumed that 15 basis points are allocated to cover investment expenses. The cost of the default is zero since the US government backs the bond.

Based on the bond characteristics and expenses, the annual net investment income from the asset is $802.5k.

Income on Pledged Asset		Commentary
FHLB Qualified Asset	Fed Mortgage	
A. Par Value	$15MM	
B. Gross Yield	5.50%	
C. Investment Expense	15bps	
D. Default Risk Expenses	0	
E. Net Yield	5.35%	E = B – C – D
F. Net Income	$802.5k	F = A x E

The company then pledges the Freddie-Mac bond to FHLB as collateral and takes an advance of $12.75MM, reflecting a 15% collateral haircut. There is no restriction on how the proceeds may be invested*. Let us assume the company purchases a 7-year AAA CLO paying 6.00%.

For demonstration purposes, the advance costs used were published by FHLB Chicago, as of August 30, 2023. Further, we assume that the company chooses an advance with a Bermudan put option. The put option allows the bank to unlock the cost should the yield significantly increase. For illustrative purposes, it is assumed the company chooses a 7-year term fixed rate with a 3-month puttable Bermudan option structure at a cost of 3.41%.

The net income on the assets reflecting the investment expenses, defaults and the cost of the loan is $285,600. The tables on the next page illustrate the calculation.

* Note: There are no restrictions on the use of the funds, but if the advance is longer than 5 years, the member must hold on its balance sheet the same amount of residential mortgage related assets. This does not apply for an advance that is 5 years or less.

Purchase with Advance		Commentary
FHLB Qualified Asset	Fed Mortgage	
A. Par Value	$12.75MM = $15MM x 0.85%	15% collateral haircut
B. Gross Yield	6.00%	7-year AAA CLO
C. Investment Expense	15 bps	
D. Default Risk Expenses	20 bps	Based on NAIC PBR default table
E. FHLB Cost	3.41%	7-year, 3-month Bermudan
F. Net Yield	2.24%	F = B – C – D – E
G. Net Income	$285.6K	G = A x F

When a company becomes a member of the FHLB, it is required to purchase "membership stock" and hold it as a condition of membership at the FHLB. This stock pays a dividend. FHLB of Chicago declared as of the 2nd quarter of 2023 a dividend of 5% (annualized) for the "membership stock." Additionally, once an advance is taken out, the stock associated with the advance is classified as "activity-based stock" which also pays dividends. The cost of the stock is typically between 4% to 5% of the value of the advance taken. FHLB of Chicago declared as of the 2nd quarter of 2023 a dividend of 8% (annualized) for its "activity-based stock" and is hopeful it will continue at that rate for the remainder of 2023 given their current economic outlook and projections.

Dividend		Commentary
A. Stock = 4.5% of Advance	$574k= 4.5% * $12.75MM	15% collateral haircut
B. Annual Dividend	8.00%	
C. Net Income	$45.9k	C = A x B

The following table compares the return before and after the leveraged position:

Total Return		Commentary
A. Total Net Income	$1,134,000	Net Income on Pledged Asset plus Net Income on the Purchased Asset from FHLB advances plus Dividend Income
B. Total Net Yield	7.56%	Total Income divided by the Par Value of Pledged Asset
C. Spread Enhancement	2.21%	Total Net Yield minus Pledged Asset Net Yield

The above example illustrates the spread enhancement for a single position. Using similar assumptions, for example, on 5% borrowed of the $500MM portfolio, the expected portfolio yield enhancement is roughly 17 bps. Refer to the **Portfolio Yield Enhancement** example in **Appendix A**.

Considerations

The following is a general list of considerations management should be aware of when considering FHLB membership. This is not an exhaustive list; it is best to consult with your FHLB advisor, investment managers and actuarial team.

1) FHLB programs are similar in nature but have some variations based on the specific bank. For example, the cost of advancements and dividend declaration. A company should refer to the bank that has jurisdiction, which is based on the insurer's PPOB (see Appendix B).
2) A company must possess a minimum level of mortgage-related assets that fit FHLB's criteria. This may include US Treasuries, agency debt, agency and non-agency mortgage-backed (MBS), commercial MBS, municipal bonds (with proof that these are housing-related), residential loans, commercial loans, and other real estate-related assets. Corporate bonds, private debt, and equities are not accepted as collateral.
3) Maximum borrowing limits for advances vary by regional bank, but typically fall between 20% and 50% of total admitted assets. A company should consult their FHLB office for more information. Additionally, the rating agencies have operating leverage guidelines that should be heeded.
4) The duration of pledged assets dictates the borrowing terms (shorter-term investments may prohibit a company from taking an advance that is longer).
5) There is market sensitivity in which you may need to shore up the collateral position, so it may be best to keep additional collateral in the FHLB account that is unused.
6) Members cannot trade within their FHLB account, but collateral is fungible. The pledged assets can be swapped out and then sold – this is done regularly across all FHLB banks.
7) Management of advances must be prudent and maintain tight ALM within the company's guidelines. The company should choose a cost structure that fits well with its strategy and a view of the future. The FHLB advisor and representative could also help to choose the option based on the experience of other companies.
8) Once the company gains FHLB membership it is required to purchase "membership stock" and hold it as a condition of membership at the FHLB. This stock pays a dividend.
9) For each advance, "activity-based stock" is required to be purchased and held in order to obtain the advance and to engage in other transactions at the FHLB. This stock also pays a dividend. The amount of stock to be purchased typically equals 4% to 5% of the amount available for borrowing.
10) Depending on your state of domicile, advances are categorized on a life insurer's statutory balance sheet as either borrowed money or a deposit-type contract.

Bruce & Bruce has assisted several clients in taking advantage of FHLB programs. Whether a company is looking to boost their investment returns on their asset portfolio or have a source of liquidity, access to FHLB advances can be utilized by insurers as a reliable, cost-effective solution.

Should you have further questions or want to learn more, we will be happy to discuss the program and how it can benefit your company.

Appendix A – Asset Portfolio Spread Enhancement Example

A company's initial portfolio consists of $500MM at a portfolio rate of 4.30%. To highlight the impact to the total portfolio using the FHLB strategy, the company swaps a $25MM asset that had 4.30% yield (MV=BV) with a FHLB eligible asset earning 5.50%. Using the FHLB strategy, the table below demonstrates the original 6 bps impact can be enhanced to 17 bps on the total portfolio.

Initial Position	Figures	Comments
Portfolio	$500,000,000	
Portfolio Net Yield	4.30%	Net of default and investment expenses
Income	$21,500,000	
Step 1 – Income on Pledgeable Assets		
Assets Excluding Assets for Pledging	$475,000,000	
Pledgeable Assets Purchased	$25,000,000	Company purchases pledgeable assets equal to 5% of the portfolio
Pledgeable Asset Yield	5.50%	Net of investment expense and defaults
New Portfolio Yield	**4.36%**	
Step 2		
Borrow 85% of Pledgeable Assets	$21,250,000	15% collateral haircut: $25MM x (1-0.15)
Purchase Assets w/Borrowed Money	$21,250,000	
Purchased Asset Yield	5.70%	
FHLB Lending Rate	3.41%	Bermudan puttable cost structure
Dividend		
Active Stock	$956,250	Active Stock = 4.5% x $21.25MM
Dividend %	8.00%	FHLB Chicago 2023 quarterly dividend
Dividend $	$76,500	Annualized
Total Income on amount borrowed, including dividend	$1,277,125	
Interest Paid to FHLB	$724,625	
Net income from borrowing and investing	**$552,500**	
Summary of Results:		
Original Portfolio Income	$20,425,000	Income = $475MM x 4.30%
Income from Pledgeable Assets	$1,375,000	Income = $25MM x 5.50%
Income on assets purchased after borrowing	$476,000	
FHLB Dividend Income	$76,500	
Total Income:	**$22,352,500**	
Total Portfolio Yield	**4.47%**	
Yield Enhancement	**0.17%**	
Additional Income	**$852,500**	

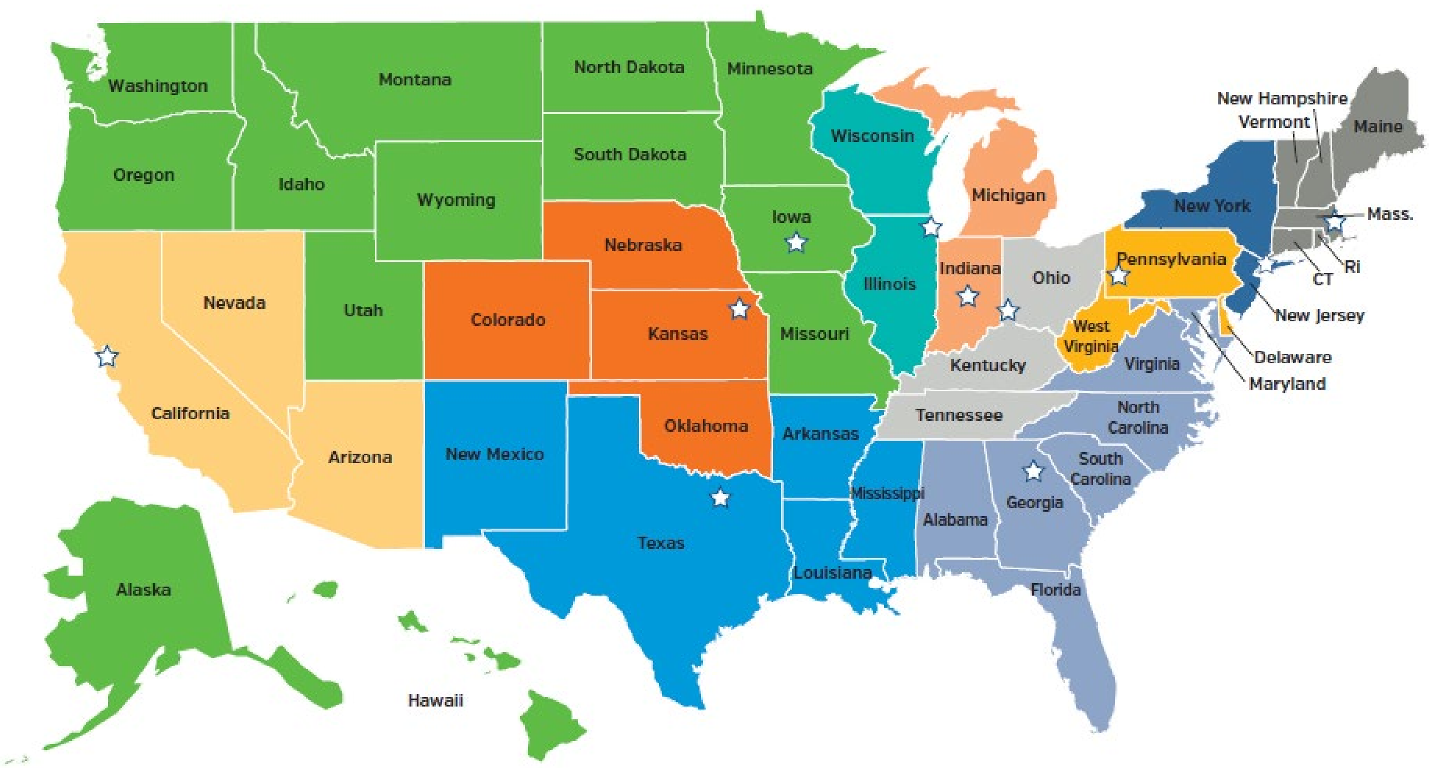
Appendix B – Gaining FHLB Membership

To become a member, an institution must: (1) be an insurance company; (2) hold mortgage-related assets on the insurer's balance sheet; (3) purchase FHLB stock; and (4) meet certain credit-rating metrics of the FHLB [for detailed criteria, refer to Section 1263.6].

Membership is applied for and maintained at the entity level. The location in which an insurer conducts its principal course of business (e.g., the location of the executive team or majority of its employees) typically determines that company's regional or "home" FHLB. Multiple memberships are allowed within an insurance organization. Like any bank, the financial condition and credit profile of the borrowing company (insurer) will be evaluated when joining as a member and is monitored prospectively. Independent rating agency opinions are often considered.

The amount of FHLB stock required to be purchased varies across FHLB, but typically is a small percentage of an insurer's invested assets. FHLB stock is not publicly traded but can be redeemed for par at the issuing bank under each bank's conditions.

Once a company has met the membership requirements, it is able to apply for a secured loan, referred to as an "advance" by the FHLB. FHLB advance terms are flexible and are offered in fixed and floating rate structures with maturities ranging from overnight to 30 years. This gives an insurer the flexibility to select the terms that best meet its specific needs.



The stars signify the FHLBanks for each region (west to east): San Francisco, Dallas, Topeka, Des Moines, Chicago, Indianapolis, Cincinnati, Atlanta, Pittsburgh, New York, and Boston.