

DWIGHT ASSET MANAGEMENT COMPANY

LIABILITY DRIVEN INVESTING (LDI) BACKGROUND AND EVOLUTION

Until recently, defined benefit (DB) plan sponsors and their consultants took a long term view when deciding on the asset allocation for the plan's investment portfolio. And why not, since most of the plan's liability payments were expected to occur many years into the future. This conventional wisdom argued that over the long haul, equities would outperform bonds, so the plan's allocation should be skewed toward equities. Plan sponsors and their consultants analyzed the asset allocation decision by focusing on projected long term returns, and their correlations, of various asset classes, with little consideration given to the plan's liabilities. Equities vs. bonds allocations were typically in the 60%–40% to 70%–30% range. Certain actuarial smoothing techniques that mitigated volatile returns in any given year facilitated the continuation of this practice.

Then in 2000, the perfect storm arrived. For two years, equities lost money and interest rates plummeted to historically low levels. The falling interest rates resulted in soaring actuarial pension liability estimates, and many previously healthy pension plans became significantly underfunded. After a few high profile bankruptcies like Enron and WorldCom, Congress jumped into the fray and passed the Pension Protection Act of 2006 (PPA). Also, the Financial Accounting Standards Board issued FAS 158, which affects the accounting for pension plans. The result of the new regulations presents new challenges to plan sponsors and their consultants. The ability to actuarially smooth out volatile periods of investment returns is greatly reduced. The degree of a plan's underfunding will now be shown directly on a corporation's balance

sheet. And a plan's underfunding can incur additional, onerous penalties.

LDI Strategies

Many plan sponsors are responding to the changing regulatory landscape by considering asset allocation strategies that directly account for the risk of changes in the plan's liability or funded status. In other words, the risk of a plan is now being measured by looking at potential changes in funded status. This requires analyzing potential changes to both the assets and the liability. This is LDI for pension plans.

There are many strategies a plan sponsor may adopt, depending on funded status, plan demographics, risk tolerance, and a host of other factors unique to each plan. We have listed below some of the common alternatives that have been discussed and implemented in the new PPA era.

1. Some plan sponsors have increased allocations to long duration fixed income securities. This approach can involve shifting more assets to long duration fixed income assets, or shifting existing fixed income assets from a shorter duration strategy, e.g., a core type portfolio benchmarked against the Lehman Brothers Aggregate Index, or both. The most popular benchmark for long duration fixed income assets is currently the Lehman Brothers Long Government/Credit Index. This approach is based on an asset-related benchmark and does not directly attempt to reflect the plan's actual liability.

2. Some plan sponsors have considered investing all or part of a plan's assets in a fixed income portfolio whose duration matches that of the liability.

continued on page 2

Liability Driven Investing, continued from page 1

For more information:

Fixed Income & Stable Value

Greg Prisk
Executive Vice President
802.383.4104
gprisk@dwight.com

David Richardson, CFA
Managing Director
802.383.4024
drichardson@dwight.com

Insurance

Donald Hill
Senior Vice President
802.383.4062
dhill@dwight.com

John Loud
Vice President
802.383.4047
jloud@dwight.com

Consultant Relations

Lisa Trubiano, CFA
Senior Vice President
802.383.4066
ltrubiano@dwight.com

Anicia Mendez
Vice President
802.383.4067
amendez@dwight.com

100 Bank Street
Suite 800
Burlington, VT 05401
802.383.4000

One SW Columbia
Suite 1720
Portland, OR 97258
800.929.4427

www.dwight.com

► This approach tries to immunize the portfolio against changes in the liability resulting from interest rate fluctuations. There are two major drawbacks to this approach. First, the immunization may not work well if interest rates change by different amounts for different maturities, i.e., the yield curve changes shape. Also, there are relatively few securities with long durations appropriate for a long duration liability, and most of those securities are U.S. Treasury Strips, which are quite expensive due to the U.S. Government's credit guarantee and their relatively small supply.

3. Some plan sponsors have considered analyzing the key rate durations of their liability, i.e., how the liability's duration is distributed along the yield curve. Then, the plan sponsor tries to have an investment manager construct a fixed income portfolio that closely matches the liability's key rate durations. This approach can involve creating a custom benchmark for the liability. This approach, if done correctly, should result in changes in the fixed income portfolio that mirror changes in the plan's liability, even if the yield curve changes shape. If the portfolio is constructed using securities available in the cash market, then the portfolio will likely have an over-reliance on Treasury Strips as in (2).

4. Some plans have used derivative instruments in conjunction with a key rate duration approach as described in (3). Futures, options, and interest rate swaps can be used to adjust duration along the yield curve to match up against the key rate durations of the liability. One advantage of this approach is that it can be implemented on an overlay basis, with minimal disruption to existing asset allocation, investment managers, and portfolios. One disadvantage is that certain changes in interest rates could

create margin calls (requests for additional collateral). For more information on interest rate swaps, see Dwight's Interest Rate Swap Primer at <http://www.dwight.com/lprimers.shtml>.

Summary

The regulatory landscape has changed for plan sponsors. The focus on assets is changing to a focus on both assets and liabilities. There are many strategies that a plan sponsor might adopt to mitigate funded status risk. An investment manager's ability to understand and analyze a pension plan liability can help a plan sponsor to customize an investment strategy that's the best fit for a plan. Dwight's resources and experience in managing assets versus liabilities should be very useful to plan sponsors and their consultants as they evaluate various LDI strategies. ■

This information reflects the viewpoint of Dwight Asset Management Company as of January 2008 and is subject to change. This article was prepared for general informational purposes only, without respect to the investment objectives, financial profile, or risk tolerance of any specific person or entity who may receive it. Investors should seek financial advice regarding the appropriateness of investing in any investment strategy or security discussed or recommended in this article and should understand that statements regarding future performance may not be realized. Investors should note that income, if any, from any investment strategy or security may fluctuate and that underlying principal values may rise or fall. Past performance is not necessarily a guide to future performance. Lehman data courtesy of Lehman Brothers Global Family of Indices.