A TALE OF TWO APPROACHES

Does risk management have to be an either-or proposition?

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During the bull market of the 1990s, pension plan funding levels were generally high, and most plans focused on maximizing risk-adjusted returns with little consideration given to the link between investment performance and liabilities. As funding levels have deteriorated with the end of the worldwide equity boom and a decline in North American interest rates, pension funds have shifted their focus to investment strategies known broadly as asset-liability matching which constrain funding status volatility. For many plans today, the best solution combines elements of both approaches.

The Asset-Liability Matching Approach

The present discounted value of a pension fund liability stream can be thought of as having the same structure as a bond. The liabilities due in each period correspond to the coupons paid by the bond, and the discount factor corresponds to the bond's yield to maturity. The aim of asset-liability matching is to form a fixed income portfolio to match the liability cash flows.

Exact cash flow-matching—using a portfolio of zero coupon bonds, for example—can be very effective but can also be complex, since any change in the liability stream requires the portfolio to be rebalanced.

Alternatively, a fixed income portfolio can be created to match the duration of the liability stream, insuring against short-term interest rate risk. The portfolio can be formed to match both the duration and the convexity of the liability stream to prevent funding gaps when large interest rate changes occur. While less effective than cash flow-matching, duration- and convexity-matching strategies should be less costly to implement.

In practice, a successful asset-liability matching strategy is challenging and costly to implement. Long durations required to match liabilities are not readily available in fixed income investments. A portfolio focused exclusively on duration and convexity matching may overemphasize interest rate risk relative to other risks. An effective strategy requires accurate prediction of many uncertain factors, such as employee turnover rates, mortality rates, quit rates, retirement dates, salary increases, corporate actions and economic factors. An incorrect assumption or an unexpected change in these variables can result in an asset-liability mismatch.

The Total Return Approach

The total return approach is likely to yield assets which outperform liabilities over long periods if the equity risk premium remains positive. Potentially higher returns can make future liabilities more affordable and lead to a less expensive plan over time if aggregate contributions decrease.

In the best outcomes, higher returns provide the potential for higher employee benefit payments. Since portfolio turnover is often lower than with a matching strategy, portfolio management costs can be lower. Over time, these cost savings can accumulate, enhancing plan return and reducing the cost of the plan.

In exchange for these benefits, sponsors accept the risk that plan funding levels will fluctuate with asset levels. One way to mitigate this risk is to increase contributions during good times in anticipation of weaker future markets. Without pre-emptive contributions, pension funds are likely to be required to make contributions during times when plan asset levels—and often, corporate earnings—are down.

A Spectrum of Choice

Although often presented as an either-or proposition, our analysis indicates that for most funds, the optimum investment framework will be some combination of the two approaches. Exactly where a plan falls along the spectrum should reflect an appropriate balance of the risks inherent in each approach. The factors that influence the appropriate balance between the risks and opportunities of each approach include initial funding status, the nature of a plan's liabilities, corporate financial health, and the plan's objectives. ■