Keep Your Eye on the Pension Prize
Controlling Risk for Your DB Plan

by Glen Gahan, FSA

It's not your father's pension plan anymore.

The 21st century is here. Baby Boomers are beginning to retire and Defined Benefit (DB) pension plans are facing new challenges. This article will identify a process to measure and minimize volatility risks of DB plans in accordance with the plan sponsor's objectives.

Pension plan assets have traditionally been allocated with 60-70 percent in equities and the remainder in fixed income or bonds. This allocation is consistent with modern portfolio theory, which seeks an efficient frontier based on the investor's risk tolerances. On a long-term basis, this allocation is appealing because it provides the highest expected return on assets for the given long-term level of risk. The higher the investment return, the lower the amount of employer contributions and accounting costs. However, this traditional type of risk analysis considers only investment risk, while ignoring liability risk.

Liability Risk

This type of risk refers to the volatility of liabilities resulting from fluctuating interest rates. Other predictions or assumptions of the pension plan will contribute some liability volatility, such as longevity, pay increases and incidence of early retirement. However, these other assumptions generally do not result in significant variances in plan liability from year to year. Interest rate risk has been a factor for many years under U.S. accounting standards through the selection of the annual discount rate. The discount rate is the rate used to determine the present value of benefits expected to be paid by the plan based on the current service of its participants. As discount rates decrease, the present value of benefits (liability) increases, creating volatility which may be significant on an annual basis. For example, a mere one percent change in the discount rate may affect the plan's liability by ten percent.

Interest rate risk is now more prominent in the funding rules and is similar to the discount rate concept used under accounting rules. Beginning in 2008, the plan liabilities used to determine employers' required contributions are based exclusively on corporate bond rates. Previously, they were based primarily on the employers' expected long-term rate of return on plan assets. For 2008, plan liabilities are based on an average interest rate of approximately six percent. For the same plan, liabilities were based on an interest rate of eight percent in prior years. This change results in an increase in plan liabilities, as well as an increased exposure to annual volatility in liability. The amount of the 2008 required contribution for most plans, however, is not significantly different under the new funding rules, due to offsetting changes in methods. The difference may become more significant in future years depending on the plan's investment return.

Bonds or Equities?

Some plan sponsors are developing a more holistic approach to asset allocation by considering the impact of changing interest rates on plan liabilities. To minimize a plan's volatility, plan sponsors could invest 100 percent in bonds of varying durations, matched to the durations of the plan's liabilities. Thus, as interest rates decrease, the plan's liability increases, but the value of the matched bonds increases by the same amount. This results in a more stable funded status for the plan. However, since bond returns are expected to be less than equities over the long term, employer contributions and accounting costs will be higher under a 100 percent bond strategy.

The other extreme—investing 100 percent in equities—generally produces the lowest expected long-term employer contributions and accounting costs, but the amount of annual volatility is often unbearable for the prudent investor.

Asset-Liability Modeling

Plan sponsors have begun utilizing Asset-Liability Modeling (ALM) to evaluate the risk/reward outcomes of numerous asset allocations under a variety of simulated economic scenarios. This analysis forecasts the investment return while simultaneously calculating the impact of these same economic factors on the plan's liability. With this information, plan sponsors can view the whole picture of what a plan's

likely costs, funded ratios and balance sheet implications will be within certain confidence intervals. Obviously, most sponsors will be successful by allocating assets to both equities and bonds. Strategies include matching bonds with a plan's short-term benefit obligations (Beta portfolio) and equities for long-term benefit obligations (Alpha portfolio).

Today's pension plans bear little resemblance to those of the past. The challenge for a plan sponsor comes in positioning the plan's asset allocation and liabilities to minimize the volatility of the funded status and maximize returns. Achieving this balance may seem like a daunting task and unless you have experts on staff, may require the help of an outside consultant. To ensure that your plan provides the benefits your retirees have earned and the protection your organization needs, be certain that the consultant you choose is qualified to perform the necessary calculations and has experience with the type of plan you have in place. Give SilverStone Group a call. We have the knowledge required to handle complex pension plans.

CONTACT GLEN GAHAN AT 402.964.5490 OR GGAHAN@SSGI.COM