"Advancing Your Investments"
NEW ENGLAND PENSION CONSULTANTS

To: NEPC Corporate DB Clients

From: NEPC Asset Allocation Committee

Date: August 9, 2006

Subject: Risk Management – Interest Rate Hedging

We recommend that corporate defined benefit plan sponsors revisit the use of interest rate hedging as a way to reduce risk in their portfolios. We have been advocating discussion of this topic for some time, but recent changes in the pension landscape have made this strategy more attractive. Specifically:

1) Interest rates have risen during the first half of the year, reducing the present value of liabilities and improving funding status. At the same time, the return expectations of fixed income strategies have improved. Through June 30th, we estimate that liabilities have declined by roughly 10% due to the rise in interest rates.
2) Congress passed the Pension Protection Act of 2006, increasing the visibility and impact of a mismatch in assets and liabilities. Proposed FASB changes will have the same effect.
3) There has been a significant increase in new strategies to serve this market as investment managers are developing liability-driven investment products to address interest rate risk without locking-in low rates of return.

As a result of these changes, we believe that interest rate hedging and Asset Liability Management (ALM) are more attractive alternatives today than they have been in the last few years. Adopting these strategies requires a significant change in the mindset typically associated with pension management. Specifically, clients need to change their approach to measuring success and also need to focus more on the embedded interest rate risk in their plan.

Selecting the Appropriate Benchmark

We believe defined benefit pension funds should think of investment risk within an asset-liability framework. In an ALM framework, risk and return are measured in terms of their potential impact on a plan's funded status, that is, *the gap between assets and liabilities on a mark-to-market basis*. This is quite different than the long accepted practice of peer group rankings. Peer group benchmarking is concerned with the performance of other plans on an asset-only

basis, with little regard for liabilities. The result of this has been that plans in general have maintained the status-quo of a 60/40 portfolio, exposing pension plans to two big risks: interest rate risk and equity risk.

Interest Rate Risk

Benefit payments are largely fixed obligations, with a liability (market value) that increases as interest rates fall. This liability varies in proportion to the duration (a measure of interest rate sensitivity) of a plan's obligations, which typically ranges from 12 to 15 years for a corporate DB plan. In contrast, the typical 60/40 asset mix seen in many pension plans has a duration of roughly two years (five-year duration of core bond portfolio x 40%). This implies that a one percent decline in interest rates will increase plan assets by two percent while liabilities are increasing from 12% to 15%. Put simply, most pension plans are highly leveraged to changes in interest rates, an exposure that is very beneficial to a plan's surplus when rates rise, but potentially devastating when rates fall.

Interest rates have risen substantially in 2006 and asset returns are generally positive, so it is likely that your funded status has materially improved. As such, now may be the time to begin extending duration to reduce future surplus volatility. However, we are not recommending 100% hedging at this time, and thus even if you begin to extend the duration of your fund, a positive risk exposure to rising rates will remain; it simply will be tempered.

Longer term, the natural starting position for a DB investment program is a liability matched long duration bond portfolio. This is also the natural ending for a plan that has been frozen. Fortunately, your portfolio's duration can be extended synthetically and overlay programs can be incorporated to enhance a structured bond portfolio's natural returns, thus retaining ample room in the fund for equities and equity-like strategies to target higher returns.

We recommend that clients examine their exposure to interest rates and make an active decision as to whether or not to bear that risk. Importantly, clients should consider what circumstances would lead to reducing the asset-liability mismatch and design an implementation plan for extending the duration of the plan's assets in the event those circumstances arise.