

# Pensions & Investments

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## BACK IN STYLE

# Pension funds turn to asset, liability matching - again

By Joel Chernoff

Institutional investors are rediscovering that pension liabilities are just as important as assets.

General Motors Corp.'s \$86 billion pension fund has adopted a liability hedging strategy, though W. Allen Reed, president and CEO of General Motors Asset Management, New York, declined to provide further details.

According to one source, however, the strategy was implemented by midyear - just before the long bond interest rate declined. The effect was to boost pension fund returns in the third quarter, the source said. The strategy coincided with a major push into alternative assets by GM pension executives. Spokesman Jerry Dubrowski said the fund returned 6% in the first nine months of 2004, up from about 3% in the first half of the year.

Executives at other pension funds are looking closely at the subject, including Robert Hunkeler, vice president-investments at International Paper Co., Stamford, Conn., which has a \$6.5 billion defined benefit plan.

"The assets that we use do not track the liabilities very well, and therefore, can you find a strategy that can do a better job of asset-liability matching?" Mr. Hunkeler said.

One option now on the table: using derivatives to extend the duration of the fund's \$1.4 billion long-bond portfolio, which already has a duration of 10 years. The fund's average duration is about 12 years, he said.

The bear market of 2000 to 2003 and the concurrent drop in interest rates hit

pension funds with a double whammy, generating the most interest in asset-matching strategies since the 1980s.

### Not stuck in the '80s

The current discussion goes beyond the cash-matching and duration-matching bond strategies of the 1980s. (Cash-matching strategies match cash flows to expected pension payments, while duration-matching, or immunized, strategies line up bonds with the same duration as the liabilities so they move in tandem with interest-rate shifts.) Many pension experts now view those strategies as too expensive in today's low interest-rate environment and say they would lock in underfunding.

Instead, pension executives and money managers are trying to figure out how to lower the risk of mismatching assets with liabilities while still retaining chunky allocations to equities, hedge funds and alternative assets. Most solutions, however, involve substantial cuts to equity allocations - often to about 50% of assets, from an average of 70% today.

High-profile consultant Keith Ambachtsheer, president of K.P.A. Advisory Services Ltd., Toronto, is one of several observers calling for a "new paradigm." Mr. Ambachtsheer urges adopting an equity risk premium that varies over time and integrating pension fund finances with the needs of the plan sponsor and its stakeholders.

"In the 'new' paradigm, all mismatch risk is 'active' risk," he wrote in a paper for the Pension Research Council at the University of Pennsylvania's Wharton School, Philadelphia.

Pension funds are starting to bite. Jim Morris, senior vice president, retirement solutions, SEI Investments, Oaks, Pa., said the firm has picked up about \$6.5 billion from new and existing institutional clients for its new PensionConnect 360 strategy, which integrates pension data with corporate financial data and strategic goals. Clients outsource portfolio structure, manager selection and monitoring to SEI, which acts as co-fiduciary and invests through its manager-of-managers process.

U.S. clients include the pension plans of Cleveland-Cliffs Inc., Cleveland; Comcast Corp., Philadelphia; Independence Blue Cross, Philadelphia; Mikasa Inc., Secaucus, N.J.; Panasonic Corp., Secaucus, N.J.; and Saint Barnabas Healthcare System, Oceanport, N.J.; and SAP America Inc., Newtown Square, PA.

### More long-duration bonds

Meanwhile, other managers and consultants report that pension executives are displaying more interest in long-duration bond strategies - sometimes levered to extend durations to 20 years or more, effectively immunizing pension liabilities. Some pension funds are also increasing their long bond exposure at the expense of stocks, shifting toward a 50-50 split from 70% stocks and 30% bonds, experts said.

"There was a noticeable pickup at the end of July, as people saw assets and liabilities had gone sideways in the first half of the year, and interest rates had gone down," said James Moore, a senior vice president at Pacific Investment Management Co. LLC, Newport Beach, Calif.

With a super-long duration, a smaller fixed-income allocation can increase the duration of the portfolio as a whole.

For example, a pension fund that had liabilities with a duration of 12 years could invest half its assets in bonds. If the fund's bond portfolio had a typical duration of four years, "you need to, in effect, lever that portfolio six to one to get 24 (years)," said Carl Hess, global director, asset allocation, for Watson Wyatt Worldwide, New York.

"Most clients aren't comfortable with leveraged strategies as of yet," he said. While some are increasing duration through derivatives, some may never be ready, he added.

Karen McQuiston, vice president of JPMorgan Fleming Asset Management, New York, said a typical pension fund could lower its surplus volatility to about 5% from 13% to 14% by investing half the fund in long-duration bonds and extending the duration to cover the entire liability exposure, she said. That example assumes the pension fund had been 85% funded and invested 60% in stocks, 30% in bonds and 10% in alternatives.

#### **Fewer equities**

Lower equity allocations are part of the equation in lowering the risk of a mismatch between assets and

liabilities. With insurance companies typically holding an asset mix of 20% stocks and 80% bonds, "why are pension funds taking so much risk?" asked Barton Waring, managing director at Barclays Global Investors, San Francisco, who has been writing and speaking extensively on asset-liability management.

In one paper, published in the *Journal of Portfolio Management* this summer, he proposed a way to integrate duration-matching with surplus management techniques. "There is no need to consider the extreme positions of cash flow-matching or duration-matching in an all-bond context, as has been typical," he wrote.

By separating the duration of the liabilities into real interest rates and inflation, Mr. Waring argues that funds can obtain more risk control. Treasury inflation-protected securities and equities can be used in optimizing the surplus, avoiding duration mismatch, he wrote.

In a second paper, which he has submitted to the same journal, Mr. Waring looks at the economic liability from the defined benefit plan. This approach goes beyond the accumulated benefit obligation, which involves only liabilities accrued to date, and even the projected benefit

obligation, which takes in to account future accruals.

#### **Applying the optimizer**

Mr. Waring applies the traditional optimizer to both the assets and the liabilities. On the asset side, he first separates alpha - or the added value obtained from active management - from beta, the return from market exposure.

He then does the same for liabilities. The liability alpha, or residual return, stems from such things as liability growth from hiring more employees or hiking salaries or benefits - factors that are uncorrelated to the market, he writes. The liability beta - dependent on things such as interest rates - can be pretty much hedged, while the liability alpha cannot, he adds.

To manage the liability, Mr. Waring divides beneficiary groups into multiple constituencies. The liabilities for retirees and deferred vested employees are "very bond-like" and can be covered through long bonds and TIPS. But projected benefit accruals, for both current and future workers, might be more equity-like, allowing use of stocks and other assets in the portfolio, he adds.

"We're filling in the holes that have kept us from using surplus optimization all these years," he said.