



LDI Helps Pension Funds Weather the Storm

By Tony Williams

Pension funds that are currently underfunded on either a going-concern or a solvency basis due to the unraveling of global capital markets since August 2007 should seriously consider liability-driven investing to immunize them from market volatility.

Although the current unprecedented financial crisis has affected all investors, some pension funds that follow a liability-driven investment and funding strategy have successfully maintained their funded position.

For example, the Teamsters Canadian Pension Plan has subscribed to an LDI strategy for more than 10 years, and TCPP results to the end of 2007 reveal the pension fund is in a strong financial position.

In addition to reporting surplus on a going-concern basis and no solvency deficiency at the end of last year, the chairman of the TCPP Board of Trustees, Louis Lacroix, was advised that the events of 2008 have had a relatively minor effect on the plan's overall financial health.

How LDI Works

LDI begins with the premise that fund assets should be invested to earn a return each year equal to or greater than the return required to support the liabilities of the plan. A large portion, or perhaps the entire fund, is invested in bonds and other fixed income investments that match the anticipated liability cash flows over time.

For the TCPP, 80% of the fund is invested in a fixed income portfolio that matches the projected future liability cash flows of the plan. The balance of the fund is primarily invested in diversified real estate and commercial mortgage portfolios, and other return-enhancing investments.

Over the years 2002 through 2007, the TCPP fund had a rate of return of over 10% per year. Over the same period, research from Watson Wyatt Worldwide shows the median Canadian pension fund had an annual return of 7.6%.

More important, the TCPP return exceeded the required liability return over this period. Yet the typical Canadian pension fund underperformed its liability return by about 2.5% per year, contributing to deficits and solvency deficiencies.

A Typical Investment Policy

The majority of pension funds do not use LDI. Instead, with their advisers, they develop investment policies that mandate that a high percentage of assets (typically 50%-60%) is allocated to Canadian and foreign equities, with the balance of the fund invested in short- to midterm bonds.

Although equities are expected to outperform bonds over longer time periods, they are volatile. There is nothing wrong with a pension plan investing in equities, as long as the plan sponsor can accept the risk of short-term returns being below the liability return.

However, for negotiated-cost multi-employer pension plans like the TCPP, funding shortfalls, which could arise if fund returns are lower than expected, may lead to benefit cuts for plan beneficiaries, as there is no method of increasing contributions rapidly to address funding shortfalls.

Reducing the variance between asset and liability returns is a key objective of LDI that, in turn, provides high benefit security for plan beneficiaries. An LDI strategy will not guarantee solvency deficiencies or unfunded liabilities won't arise, but the strategy can make such deficiencies much less likely.



Pain Now or Pain Later

Despite the growing realization of the power of LDI, many pension fund managers have been reluctant to consider LDI because of a concern about the potentially higher initial costs of benefits as a result of current low interest rates.

An investment policy with high allocations to equities usually means the actuary can use a higher interest rate to value the liabilities because of the assumed equity risk premium (resulting in lower liabilities and a better funded ratio). In contrast, implementing LDI may trigger the need to cut benefits because of the lower expected return on the bonds in the portfolio, and hence a lower interest rate assumption for valuing liabilities.

Snapshot of an LDI policy

Adoption of an LDI strategy involves some or all of the following changes to investment policy:

More bonds and longer bonds

■ Increase the portion of the fund allocated to bonds and other fixed income investments and lengthen the duration of the fixed income portfolio to be closer to the liability duration.

Reduce stocks

■ Reduce the amount of the fund allocated to stocks. Having a portion of the fund in stocks can increase expected fund return, but the stock allocation must consider the plan's ability to withstand periods of negative equity returns.

Add alternative investments

■ Real estate and infrastructure investments with a stable, long-term income stream can increase the expected return without disrupting the liability-matching strategy. Adding an overlay strategy of absolute return investments (portable alpha) with a stable and high return can also improve the total fund's expected return.

This reality may require plan sponsors to phase in the move toward LDI. For example, changing the bonds in the fund to match the duration of the liabilities — without changing the equity weighting — will improve liability tracking, but not result in a significantly lower interest rate being used by the actuary. As the financial condition of the plan improves over time, the move to LDI would continue by reducing equities and increasing liability-matching bonds in the asset mix.

The alternative of sticking with the current investment policy leaves the plan exposed to further risk due to lower bond yields and poor equity returns. LDI can also be phased in over time by applying the strategy to a portion of the plan's liabilities (i.e., retired lives) and directing future contributions toward additional fixed income investments that are more closely matched in terms of duration to the liabilities.

However, even with the suspension of solvency funding in some jurisdictions, many multiemployer pension plans will still have going-concern unfunded liabilities that will force benefits cuts. In these circumstances, implementing LDI at the same time can ensure, with a high degree of certainty, that only one cut will be required. The same cannot be said of maintaining a portfolio heavily invested in equities.

Although with LDI a pension fund may realize lower returns than where there is an asset allocation heavily weighted to equities, the returns should also be more stable. Further, over time, returns will match the returns required to match the change in the liabilities, and provide a high level of security for plan beneficiaries. With LDI, the focus shifts from the rate of return, and how it compares to other funds, to stability of the net-funded position.

More stable plan funding and a good night's sleep. Isn't it time to seriously consider LDI?

About PBI

PBI Actuarial Consultants is an employee-owned firm specializing in providing pension plan actuarial consulting, health and welfare plan consulting and investment consulting services to Canadian sponsored plans managed by Boards of Trustees.

PBI's actuaries and consultants have extensive experience in plan design, funding, administration, documentation and regulatory issues, investment policy, implementation, monitoring and risk management. The firm serves clients across Canada in both official languages from its head office in Vancouver, BC and its office in Montréal, Québec.

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