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REWARD WITHOUT RISK MANAGEMENT

Debt and income trusts help smaller plans generate alpha and match liabilities.

Many of the largest pension plans in Canada have adopted an enterprise-wide risk management framework. The result of this evolution is a reduction in the weighting of traditional marketable securities in the asset mix in favour of long-term investment strategies such as real estate, private equity, infrastructure and timberland. Why has comprehensive risk management led to increasing allocations to these assets? Are there acceptable substitutes within traditional asset management that small plans can use to generate similar benefits?

The swing from surplus to deficit over the past few years was a result of an excessive mismatch between the expected pattern of the present value of liabilities through time, as well as the expected return pattern of the offsetting assets, 60% to 70% of which were common stocks. Asset/liability studies relying on the Ibbotson database overstated the potential of equities compared to inflation or long-term bonds. Arnott and Bernstein proved this point in their paper, "What Risk Premium Is 'Normal'?" This overestimation of equity market potential led to the dangerous view that the excess return on stocks trumped their high volatility relative to the change in liability values, if your time horizon was long enough. The reality is that the pension plan sponsor has multiple time horizons, some of which have been shortened significantly by recent accounting changes.

It is not surprising that organizations with sophisticated risk management technology have sought out asset classes that are less volatile or are better matches for their liabilities. Who can afford to experience a surplus decline in excess of 15% every seven or eight years?

The problem, of course, is that a portfolio of long-term bonds and real return bonds designed to match the dynamics of the liabilities will not provide enough yield to meet the actuarial return assumptions. The answer for large plans has become long-term illiquid investments, such as real estate and infrastructure, in place of some of the marketable bond allocation, and private equity and hedge funds supplementing common stocks. The diversifying properties of these alternative asset classes allow plan sponsors to develop an asset mix policy that more closely matches the dynamics of the liabilities, at an acceptable level of expected return.

The challenge for plans which lack the resources to create an appropriate risk management infrastructure is finding alternative assets or strategies that provide return patterns similar to these illiquid investments without the administrative and supervisory requirements.

A potential solution to this question involves combining the return patterns of Government of Canada real return bonds (RRBs), high-yield bonds and income trusts. We assumed a passively rebalanced mix of 40% RRBs and 30% for each of the other asset classes to create our stable return portfolio (SRP). Compared to a simple 60/40 mix of Canadian stocks and bonds over a 10-year period the risk reduction was impressive. The annual standard deviation was 6.6% for the SRP versus the 10.4% for the traditional asset mix, and the returns from the SRP were 300 basis points per year higher. Even when we adjusted SRP returns to remove the capital appreciation from RRBs it still outperformed the traditional portfolio by 140 basis points per annum.

The true test, however, is the performance of the strategy against pension liabilities. We simulated a typical defined benefit pension liability stream and measured the volatility of surplus for each combination over the 10-year span. The standard deviation of the surplus using the traditional asset mix was 11.8% and the deficit grew at an annual rate of 3.75% per year. The surplus under the stable return portfolio had a volatility of only 8.5% and the plan was in balance at the end of the period. The 10-year surplus differential for a defined benefit plan starting with $500 million would have been $117 million.

There were lots of data challenges with this study. However, we believe it supports the case for combining real return bonds with higher-yielding marketable securities to create a portfolio with excellent liability matching properties and acceptable return potential. ■