Managing Pension Investment Risk: A Business Imperative

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Many employers that provide a Defined Benefit pension plan for their employees may find themselves having to double their contributions – or more – this year in order to meet their solvency funding requirements. The median pension solvency funded ratio – the ratio of the market value of plan assets to liabilities – was approximately 15 per cent lower in January 2012 than at the start of 2011 due to lower interest rates and the stock market decline.

With the solvency position of these plans only in the 68 per cent range – down from around 83 per cent a year ago – plan sponsors that file an actuarial valuation in 2012 will need to add extra funds to comply with minimum funding rules that assure DB plans can meet their pension promises (See Chart 1).

Not all DB plan sponsors will find themselves having to significantly increase their contributions, however. Organizations that have taken steps to manage their plan’s risk exposure are likely better funded. While no single de-risking strategy is appropriate for all plans, a focused approach to managing risk will help plan sponsors avoid having to fund such large shortfalls.

Strategies For Lowering Risk

Measures that plan sponsors are adopting to reduce risk include making plan design modifications and changing investment policy – increasing diversification out of Canadian equities and intermediate bonds and shifting to global equities, long bonds, and alternatives. In addition, many organizations are revisiting their funding policy and contribution strategy.

If plan sponsors had adopted some of the following simple de-risking measures at the beginning of 2011, there might have been less impact on their solvency ratio a year later:

- Taking less risk: If plan sponsors invested more in bonds and less in equities, they would have experienced a lower drop in their solvency ratio. Increasing the investment in bonds from 40 per cent to 60 per cent would have meant a drop to only a 71 per cent solvency ratio, rather than 68 per cent.
  
  While a three per cent difference may not sound like much, it means a $3 million smaller shortfall to fund on a $100 million pension plan.

- Having a better match between bond and liability duration: Pension plans typically invest in universe bonds with terms of mainly between five and 10 years. Switching to long bonds, with maturities between 10 and 30 years, more closely matches the plan’s liabilities cash flows and helps assets and liabilities behave in tandem when interest rates fluctuate. If plan sponsors had taken this step in 2011, they would have experienced a 72 per cent solvency ratio.

- Adopting a less-risk/long bonds approach: Implementing both measures would have resulted in a solvency ratio of approximately 77 per cent at the end of 2011 – an improvement over the average 68 per cent, but still down from 83 per cent from a year ago.

Of course, taking these concepts further, either removing all investment risk from the plan and/or investing in derivative products that extend the duration of the assets to fully hedge interest rates, may mean a plan would have experienced little or
no drop in solvency ratio. Plan sponsors have historically avoided such measures, partially due to the low interest rate environment that currently prevails.

**Prudent Course Of Action**

Dynamic investment policies are also becoming more prevalent in these uncertain economic times. The traditional approach of implementing a strategic asset allocation and then re-evaluating it every three to five years with an asset-liability study is no longer sufficient in the current environment. According to Aon Hewitt’s 2011 ‘Global Pension Risk Survey,’ more than a third (35 per cent) of Canadian DB plan sponsors believe that having a dynamic investment policy is a prudent course of action.

A dynamic investment policy is an objective-based process in which the target asset allocation of the plan varies based on specific criteria – generally, improvements in the funded ratio of the plan. As the funded ratio improves, the assets are moved from growth assets (mainly equities) to liability-hedging assets (mainly bonds). Not only do dynamic investment policies reduce equity market risk as the funded ratio improves, they also reduce interest rate risk by adding to the assets that hedge the interest rate risk in the liabilities. A major advantage of these policies is that they take the emotional element out of asset mix decisions.

In implementing a dynamic investment policy, plan sponsors employ a decision-making framework that is continuously aligned to the investment strategy of the plan and the plan sponsor’s stated goals and objectives. In doing so, the pension risk management process differs from the traditional approach in at least three key ways:

- Asset allocation is linked more clearly and directly to the plan liabilities.
- Plan sponsors measure and monitor the key asset-liability variables on a more frequent basis.
- Plan sponsors develop specific strategies based on changes to those key asset-liability variables (as opposed to a static asset mix or one based purely on capital market expectations).

Some plan sponsors may be hesitant to put a dynamic policy in place that is strictly responsive to increases in a plan’s funded ratio. They may not want to shift assets into long duration bonds and be protected against interest rate risk when yields on long duration bonds are at an all-time low. These sponsors may want to add a second dimension to their policy, creating what is referred to as a ‘two-dimensional dynamic investment policy.’ Here, within their liability hedging assets, they would hold more short duration bonds when rates are expected to rise and high duration bonds when rates are expected to fall. By setting an explicit two-dimensional dynamic policy that defines the desired bond duration based on the level of long bond yields, the sponsor minimizes the temptation for uncontrolled market timing bets on interest rates. Chart 2 illustrates what a glide path to implement a two-dimensional dynamic investment policy would look like.

The greater the funded ratio, the greater the allocation to liability hedging assets and the greater the hedge ratio (a measure of how aligned assets and liabilities are – a ratio of 100 per cent means that assets and liabilities would respond in tandem to interest rate movements). At any funded ratio level, the hedge ratio...
can be above or below the target (within limits) depending on the level of interest rates at that point in time.

Mismatch Risk
Assuming some asset/liability mismatch risk is common in building retirement funds. Ensuring the return is maximized for the risk taken is key. With the events of the last few years, plan sponsors are increasingly seeking reduced volatility, without sacrificing return. In particular, they are looking for diversification, not only in 'regular' markets, but also in times of severe market stress. As such, plan sponsors have been increasingly investing in alternative asset classes such as infrastructure, private equity, and hedge funds.

Unfortunately, there are often minimum investment requirements, even in pooled structures, that are prohibitive to small pension plans. Additionally plan sponsors may not have the time to fully understand the pitfalls and risks associated with such asset classes. However, it is possible for sponsors to gain access to such investments via delegated investment providers that assume the plan’s investment management and related fiduciary operations to effectively manage the plan’s cost, risks, and governance.

For those plan sponsors who do not have the appetite or investment time frame for alternative assets classes, low volatility equity strategies are starting to pick up traction. These strategies construct portfolios of stocks that have historically had, and are expected to continue to have, lower volatility. They are not focused on trying to beat a particular market index.

Last year, Canadian plan sponsors responding to the ‘Global Pension Risk Survey’ showed a great deal of interest in hedging longevity risk, but providers of risk solutions were not as enthusiastic. The corresponding ‘Global Pension Risk Provider Survey,’ conducted around the same time, clearly demonstrated that longevity risk was the risk attracting the least attention from providers. This may change as the Canadian Institute of Actuaries has adopted new standards for the calculation of commuted value of pension benefits that require the use of generational mortality. Many plan sponsors will see an increase in their funding requirements as a result and this will bring more attention to the cost of improving mortality rates. In the future, sponsors may well develop an appetite for hedging against the risk of stronger than expected mortality improvements.

Since 2001, pension plan sponsors have experienced three once-in-a-lifetime events (2001, 2008, and 2011) and the perfect storm of 2011 will be much worse for most plans than 2008 was. As a result, there will be many difficult pension committee meetings in the coming months as the financial impact of 2011 is measured and the realities of increased funding requirements sink in.

The main question for CFOs and risk managers coming out of 2012 has to be ‘What can we do to avoid a recurrence of 2011?’ Recent history (since 2008) has shown that just waiting for the markets to turn things around is not an actionable strategy. Even though interest rates are very low, no one knows when they will go up, by how much, and at what points along the yield curve. If nothing else, sponsors seeking to avoid a repeat of 2011 should be conducting a risk review of their plans to understand where the greatest risks are and what strategies can be implemented to address them. Having an approved plan ready to implement that takes the plan sponsor from the current state to its desired long-term state will ensure it is ready to take the appropriate actions at the appropriate points in time. Without that, all plan sponsors can do is hope for the best and get out their lucky rabbit’s foot.