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# Defined benefit pension plan derisking strategies

leadership beyond finance

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## Defined benefit pension plan risks and de-risking strategies

Readers will recall from the first article in this series, *'Are Your Pension Risks Being Managed – Is it Time to De-risk'*, that pension arrangements in Canada have evolved over the years from two basic models, the defined benefit (DB) plan and the Capital Accumulation Plan (including defined contribution or DC plans, group RRSPs and Deferred Profit Sharing Plans or DPSPs). This second article in the series will discuss risks specific to defined benefit pension plans.

Risks associated with defined benefit plans are typically the concern of human resource and finance executives within the private sector; whereas in the public sector they are the concern of one or more executive branches of governments (such as the Department of Finance). The responsibility to fund the pension plan resides largely, if not exclusively, with the plan sponsor (the employer). However, it is not unusual for employees to contribute a portion of their earnings toward their DB pension plan, and employees and pensioners both have obvious concerns regarding the ability of their pension plan to honour their employer's pension promise. Nevertheless, the task of pro-actively managing pension risks in the best interests of employees, pensioners and the employer rests almost exclusively with the management team assigned the responsibility on behalf of the employer.

### Pension risks – what could possibly go wrong?

The short answer is that plenty can go wrong. The underlying premise of a DB plan is that assets are placed in a trust fund, invested to earn returns that will reduce future funding contributions, maintaining contribution rates and ultimately help pay the promised pensions over time. Since pension contributions are generally invested in publicly-listed financial assets (stocks, bonds, etc.), the value of the pension fund fluctuates daily. The regulations applicable to pension plans require a minimum ratio of pension assets to pension liabilities. The greater the liabilities, the greater amount of matching assets are required to satisfy the benefit obligation. Not only do asset values fluctuate, but pension liabilities also fluctuate; influenced by, among other factors, the level of long-term interest rates and the rate pension entitlements are being earned by current employees. The fluctuations in the value of assets, combined with fluctuations in the value of liabilities can combine to create pension deficits that are even more volatile than either of the assets or liabilities.

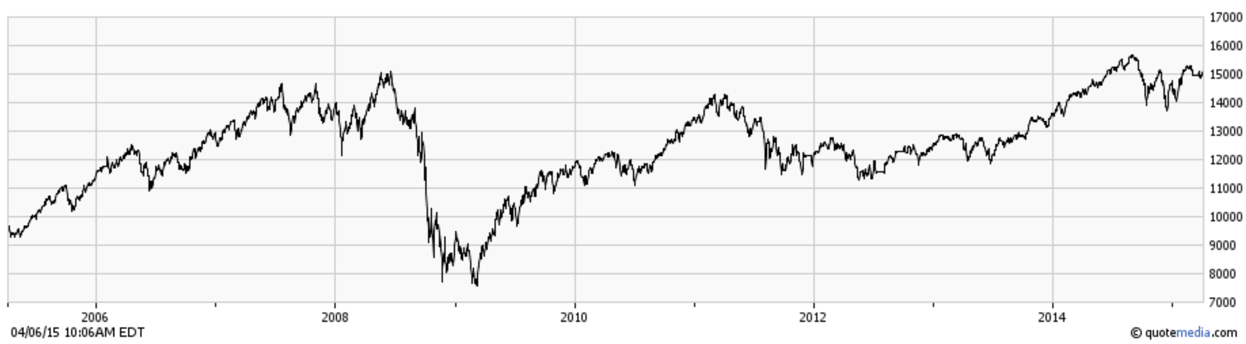
In order for management teams and trustees to satisfy themselves that pension plans under their control are effectively managing risks, they need to measure and compare the value of assets against the value of pension liabilities. A host of external factors beyond the employer's control influences assets and liabilities, therefore a shortfall between pension liabilities and available pension assets can grow quickly. This could trigger additional mandatory company contributions to the pension plan at a time when the employer may need its cash to meet its own business needs. Indeed, pension liabilities can be very substantial in comparison to other liabilities in an organization. This is why DB pensions represent one of the most important and complex set of risks faced by CFOs, corporate treasurers and other senior executives.

## What risks are we talking about?

### Risk #1 – Inadequate investment returns

A huge worry for pension executives is poor investment returns, or worse, negative investment returns. Investment losses can create huge solvency deficits for pension sponsors that can take years to recover. The basic assumption is that assets will generate positive returns over time; but all asset classes including equity, fixed income, real estate, infrastructure and hedge funds are capable of delivering large negative returns. For example, the 10-year TSX Composite Index graph below shows that Canadian equity returns suffered a loss of approximately 50% from the peak values in mid-2008 to the trough values recorded in early 2009.

**S&P/TSX Composite Index**




Poor or negative returns can occur over extended periods of time and be the result of general market sentiment, or they could represent specific economic events that affect certain sectors of the market (events such as the asset-backed paper crisis and the U.S. housing market crash, both associated with the 2008/2009 global financial crisis). During the global financial crisis, the entire financial sector was under duress, negatively affecting both market liquidity and investment returns.

### Risk #2 – Unfavourable changes to pension liabilities

Another worry for pension plan sponsors is unfavourable changes to the value of solvency pension liabilities, which is used to calculate the solvency deficit and required pension funding. If economic conditions are weak and projected to remain weak, long term interest rates could remain low for an extended period of time, which has the effect of increasing the value of pension liabilities. Therefore, pension sponsors fear interest rate decreases because they increase pension liabilities, resulting in employers being required to increase their pension contributions in order to match the higher liabilities. Ironically, increases in interest rates can also create worries for plan sponsors as high interest rates deflate pension liabilities, which can generate unexpected pension surpluses. This can trigger additional pressures and potentially costly demands from plan members for improved pension benefits (such as indexation), or sharing of any available surplus.

### Risk #3 – Longer life expectancies of plan beneficiaries

Longevity risk is a further concern of plan sponsors. Readers will recall that the pension promise is for the lifetimes of the plan beneficiaries (retiree and spouse). Recent improvements in lifestyles, health and medical care have resulted in consistent improvements in people's life expectancies. If people live longer, it costs more for plan sponsors to honour their pension promises. This can be a significant concern to companies with large pension obligations relative to other company liabilities.

### Risk #4 – Regulatory and governance risk

An additional risk of a different nature is regulatory and governance risk. DB pension plans are subject to significant government regulation and the existence and interaction of multiple levels of stakeholders arising from the separation and delegation of the administration functions. There is a usually a single plan sponsor who is the employer. Multi-employer plans also exist where several employers combine to offer a single plan to employees of several companies. There are formally constituted pension committees that have a fiduciary role and responsibility to protect the interests of plan members. These committees can be comprised of active or retired plan members, management representatives appointed by the plan sponsor and/or independent members. Pension committees also work with a variety of service providers such as plan administrators, actuaries, auditors, asset custodians, investment managers, performance measurement, and various pension management advisors. There are significant risks of legal actions if plan beneficiaries and/or other stakeholders believe there has been a breach of duty among the various service providers.

As can be seen, the pension regulatory and compliance landscape is complex and the cost of making an error can be very high. Pension plan sponsors need competent execution at all levels of pension administration. An excellent source to gain a better understanding of regulatory, compliance and fiduciary responsibilities can be located in Guideline 4 of the Canadian Association of Pension Supervisory Authorities (CAPSA), entitled "Pension Plan Governance Guidelines and Self-Assessment Questionnaire".

## Are strategies available to de-risk DB pension plans?

Absolutely, there are several strategies that well-informed plan sponsors can implement to help mitigate pension plan risks. Not all risks can be eliminated. There are costs associated with pursuing some of these strategies and employers will usually select one or a combination of strategies that can help reduce pension risk outcomes, all within their ability to manage costs and mitigate risk.

### Strategy #1 – Competent governance and pension management

It is extremely important to have an effective governance structure in place and a capable management team to oversee all aspects of pension plan administration. A functioning governance structure is like an early-warning system that flags important issues early enough to trigger corrective actions. Having capable managers will ensure the early warning signals are recognized and acted upon before the situation deteriorates into a crisis.

### Strategy #2 – Sound investment management

Having sound asset management and an appropriate investment policy are key building blocks of a risk-managed pension plan. Two fundamental risk reduction strategies are (i) diversification of pension investments and (ii) an appropriate matching of pension assets and liabilities. The former is a defensive strategy that protects asset values from overexposure to any one company or sector whereas the latter focuses on hedging liabilities with matching assets. A clear investment policy is critical, as this will define the pension plan's attitude towards, and ability to bear, risk. Plan sponsors need to decide the appropriate proportions of return-seeking assets (equities) versus value-protection or liability-matching assets (fixed income). A pension plan can significantly reduce the volatility of its pension deficit by selecting an investment policy that specifies a target proportion of financial assets with features similar to the plan's pension liabilities in terms of duration and interest rates. This is referred to as an immunization strategy whereby a target portion of the pension assets change in value in an exactly equal and offsetting manner as changes to pension liabilities, thus reducing volatility of the pension deficit. This approach is referred to as 'Liability Driven Investing'. There are more sophisticated approaches such as dynamic investment policies; this approach progressively decreases the volatility of the pension deficit by increasing the proportion of liability-matching assets according to a pre-determined de-risking glide path. Readers are encouraged to contact their pension advisor or plan consultant for assistance in defining their plan de-risking objectives and evaluating the pros and cons of the various de-risking strategies.

### Strategy #3 – Transfer some risk to third parties

An additional de-risking strategy is to transfer some pension risk to third parties. For instance, insurance companies are now entering the longevity insurance markets. Purchasing longevity insurance can allow a pension plan to cap its downside risk of plan beneficiaries living longer than expected. There is a recent example of a large Canadian employer, BCE Inc., which contracted with an insurance company, Sun Life Assurance Company of Canada, to take on BCE's longevity risk. This is essentially a transfer of risk from BCE to Sun Life (at a cost to BCE). It is likely we will see more of this kind of pension risk transfer in the future.

Another strategy to transfer pension risk to third parties is to purchase annuities outright for some (or all) employees, effectively transferring the pension liability and longevity risk to the insurance company. The purchase of annuities does require substantial amounts of cash because, in effect, you are making large upfront cash payments to the insurance company in exchange for the insurance company taking on responsibility for all future pension payments to that pensioner. A pension plan needs to be fully funded or in a surplus position to have sufficient assets to make the annuity purchases for all plan members. As most pension plans are not fully funded, this approach may not be widely used. Nevertheless, some fiduciary responsibilities will always remain with the employer such as plan governance and oversight.

### Strategy #4 – Change the design of the pension plan

If the above pension de-risking strategies still result in an unacceptable cost or risk to your company, there are more aggressive strategies that can be pursued. These include changing the design of the existing pension scheme. Pension plan design ultimately determines the magnitude and character of pension liabilities so, if an organization's liabilities are unacceptably high, a change in plan design might be warranted. Design changes that could be envisaged include reducing the pension entitlement, shifting more of the pension funding burden to the employee and partially or completely converting the pension plan to a target benefit plan (TBP) or a DC plan (defined contribution). Introducing such changes cannot be done unilaterally, and normally requires negotiation with other stakeholders.

Changing the pension plan design may be a strategy of last resort, but many organizations have actively pursued the path of redefining the pension promise to both reflect modern needs and the plan sponsor's ability to pay. This trend is particularly true in the public sector, as has been seen with certain provincial government and municipal pension plans (i.e. Quebec and New Brunswick). A good example is the 2012 change to the New Brunswick government's pension scheme which resulted in the conversion of a defined benefit plan into a target benefit plan. In this example, the design work commenced in 2010 when, faced with large pension deficits, the government mandated a task force to assess the sustainability of the government's pension plan. The study concluded the previous plan was not sustainable for many of the reasons discussed in this article and a new shared-risk target benefit plan design was developed collaboratively with union leadership and pension plan experts. The government believes the new plan is safer for plan members because it discourages riskier investment practices while ensuring that public sector pensions are affordable for taxpayers in the long run.

## Surely there are costs to de-risk?

It is not possible to de-risk at zero cost. There are indeed costs associated with de-risking. For instance, a liability-hedging strategy will typically result in a higher asset allocation to fixed income. Since fixed income has a lower long term expected return than equity, this lowers the average expected portfolio return, which will in turn result in higher required pension contributions. The transfer of risk to third parties also has a cost. The purchase of longevity insurance has a price, and the plan sponsor needs to be willing to bear the cost of such a risk-reduction strategy. Similarly, the transfer of pension obligations to an insurance company by purchasing annuities for plan members could actually cost more to a plan sponsor than if the pensions were paid by the pension fund directly. What is important for pension sponsors and managers to know is that costs associated with de-risking strategies can be quantified. This enables management to compare the cost of a de-risking strategy with the associated risk-reduction benefit, and to choose the point on the risk/return spectrum that it wishes to occupy. Choices can be made which lower pension risk, but at a cost that is acceptable to the company. There is not a 'one-size-fits-all-approach' to de-risking. Different companies can make different de-risking choices and they can all be equally valid. However, there is one strategy with perhaps the highest benefit-to-cost ratio that all plan sponsors can benefit from, and that is to have a good governance structure for your pension plan for the reasons previously mentioned.

## Conclusion: There are ways to de-risk your DB pension plan

The above discussion highlights several approaches that, through capable management and good governance, are available to plan sponsors to mitigate pension risk. They involve trade-offs, but properly evaluated and implemented – including costs and benefits, management teams responsible for overseeing company pension plans can indeed implement effective de-risking strategies. Given the multi-stakeholder nature of DB pension plans; plan sponsors, management and fiduciaries need to thoroughly understand the roles and responsibilities of each player in the pension plan management process. Obtaining expert advice on pension administration is recommended as well as seeking input as required from all stakeholders. This will better prepare management to undertake often difficult choices to secure quality pension outcomes that achieve income security for employees while not burdening employers with unsustainable cost or risk.

The third and final article in this series on Pension Plan De-risking will discuss risks and available management strategies for Capital Accumulation Plans (CAP) such as Defined Contribution (DC) and Group Registered Retirement Savings Plans.

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