# Pension De-Risking Outlook for Canada

## The Role of Reinsurance

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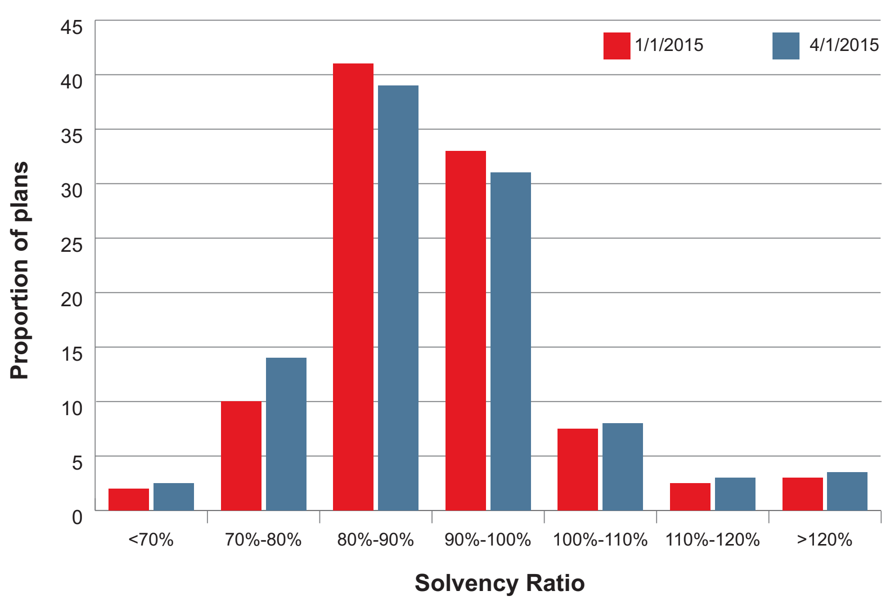
Defined benefit pension plans are excellent retirement savings vehicles for employees but can submit employers to significant risks, which are usually outside the scope of their core expertise and mission. Corporate pension sponsors, by and large, have very significant pension obligations on their financial statements and typically do not want to be pension fund fiduciaries. They do not want to deal with the financial statement volatility, all of the administrative responsibilities, or the legal and regulatory risks that such an obligation demands. In short, companies really should not be in the pension business. They generally do not possess the necessary expertise to manage the related risks, and only the largest and the most sophisticated have the resources to properly oversee the accumulated pension assets and obligations.

As a result, the de-risking of defined benefit pension plans is a significant global trend. The volatility of global capital markets, depressed interest rates, changing regulatory environment and increased life expectancy are bringing this trend to the forefront in Canada, where many defined benefit pension plans have solvency deficiencies. The insurance and reinsurance industries are well-positioned to help manage such risks.

## Current state of pension solvency

2014 was a disappointing year for pension plan sponsors. The year started in a strong position, with many pension plans at or close to a fully funded status. Unfortunately, the solvency-funded status of the typical pension plan deteriorated by about 10% over the course of 2014, and financial statements will consequently reflect significantly higher year-end 2014 pension liabilities and 2015 pension costs.[1]

The chart below compares the distribution of the estimated solvency ratios of clients of Mercer, a global pension consulting leader, covering 600 plans as of January 1, 2015, and March 31, 2015. This illustrates that approximately 70% of Canadian pension plans are between 80-100% funded as of March 31, 2015:




*Source: Mercer, April 1, 2015*

The latest pension plan solvency ratio survey by Aon Hewitt, another leading provider of pension consulting services, also shows that the health of Canadian defined benefit pension plans has been declining. Aon Hewitt's Median Solvency Ratio is developed using a database of 449 pension plans from all sectors (public, semi-public and private), and from most Canadian provinces. On March 30, 2015, according to Aon Hewitt's survey, the median solvency funded ratio stood at 89% — a two-percentage-point decline from the previous quarter, and a six-point drop from a year ago. Only 18% of surveyed plans were more than fully funded at the end of Q1, roughly equivalent to the previous quarter, but down significantly from 26% at the end of 2013.[2]

While funding levels have improved for many plan sponsors since the financial crisis in 2008, the risk factors that caused significant financial pain have not disappeared and, if not addressed, could surface again. Now is a good time to de-risk. The chart above indicates that approximately half of the plans have solvency ratios in excess of 90%, meaning that plans are in sufficiently strong financial shape to execute transactions, thus minimizing any required deficit funding upon execution.

## The perfect storm

### *Market volatility*

In the past, de-risking strategies were largely focused on the management of investment risk related to interest rates and equity markets. With interest rates at unprecedented lows, this definitely continues to be a priority. However, there are a couple of additional forces at play that also need to be considered with current de-risking strategies.

### *Increased accounting transparency*

Canadian accounting standards governing pensions have materially changed. During the period of 2011-2013, pension accounting underwent significant reform with the introduction of International Financial Reporting Standards (IFRS) and International Accounting Standard 19 – Employee Benefits (IAS 19), which eliminated several of the risk-masking features of the previous accounting standard.

The old regime generated financial reporting that concealed the true underlying risks of the plan in three key areas.

1) experience gains and losses could be deferred and amortized into income over time;
2) a smoothed value of assets, under which investment gains and losses were recognized over time, could be used to calculate the expected returns on assets (EROA); and
3) the EROA calculation was based on the expected long-term rate of return on the pension plan assets, which could include anticipated additional returns from investing in higher risk assets.[3]

In contrast, IAS 19 is based on the principle that the cost of providing pension benefits should be recognized in the period in which the benefit is earned, rather than when it is paid or payable. IAS 19 requires:

1) the immediate recognition on the balance sheet of all changes to pension plan surpluses or deficits (deferral and amortization of experience gains and losses are no longer permitted);

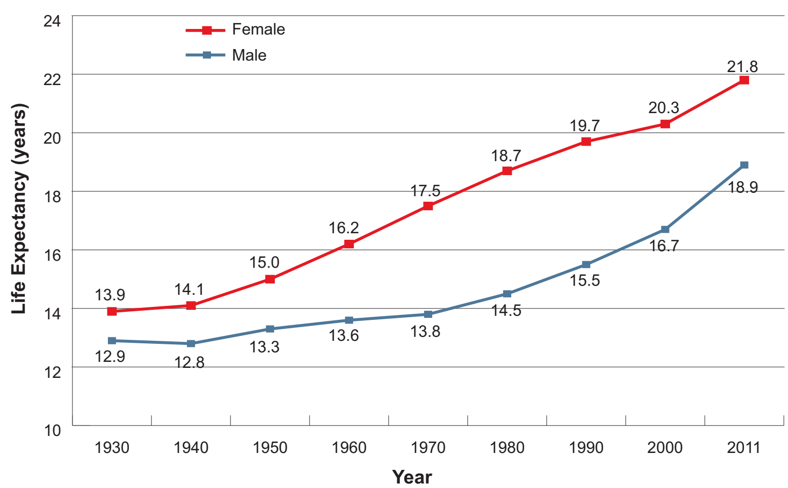
2) the fair value (normally market value) of plan assets must be used to calculate the EROA (the use of a smoothed value of plan assets is no longer permitted); and

3) the annual expected rate of return on pension plan assets is equal to the liability discount rate, which is based on high quality corporate bond yields (anticipated incremental returns from risky assets are no longer permitted in the rate of return). Any incremental investment returns due to the investment in risky assets that actually emerge over time will be recognized once the incremental returns are actually earned.

Application of IAS 19 provides greater transparency in financial statement reporting but also leads to increased volatility, and thus IAS 19 may actually be a catalyst, in some cases, for de-risking.

## Increased awareness of longevity risk

Life expectancy in Canada has increased — a trend that poses a threat for plan sponsors who can most certainly expect to pay benefits for longer than they would have liked. The chart below clearly shows that a recently retired 65-year-old will live longer than a 65-year-old who retired years ago. In fact, the rate of improvement has increased substantially. Over the last decade, life expectancy for males increased by 2.2 years as opposed to 1.2 years in the decade prior. Although it is common knowledge that people are living longer — and pension plan sponsors do realize this as well — the challenge is in estimating the extent to which this trend will continue.




*Source: Statistics Canada*

In February 2014, the Canadian Institute of Actuaries (CIA) published the Canadian Pensioners Mortality Report (CPM Report), which presented new base mortality tables and mortality improvement scales for a broad range of Canadian pension plans. These tables and scales have been adopted for purposes of funding and accounting valuations, and they are expected to be adopted in August 2015 under actuarial standards of practice for the determination of pension-commuted values.

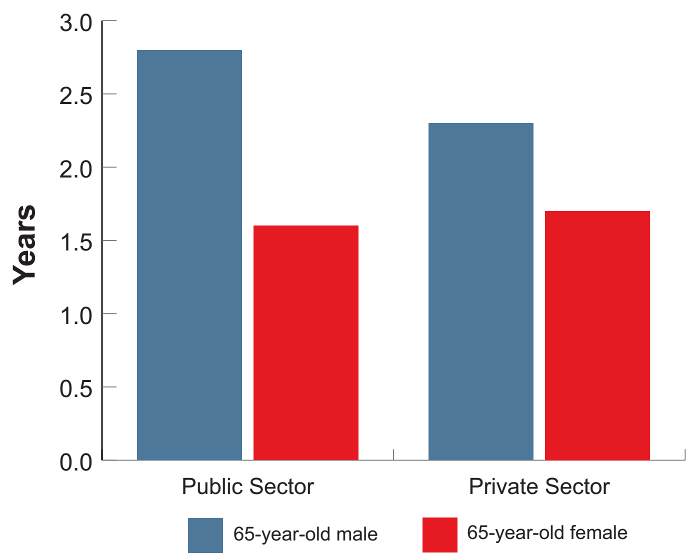
For the past 20 years, the only real choice that Canadian plan sponsors had for projecting future increases in life expectancy was a U.S.-based scale. This scale was developed in 1994 by looking at U.S. experience between 1977 and 1993, and it has not kept pace with recent experience.[5]

The CPM Report presented findings of a review that concluded Canadian mortality experience is different than the U.S. experience — data that has often been referenced to value Canadian pension plans — and that the development of Canadian-based mortality tables and mortality improvement scales was indeed warranted.[6]

Below is an illustration of the impact at age 65 of the difference between using the new CIA mortality tables and the mortality assumption typically used for defined benefit plans prior to the study's release. Assuming a one-year increase in life expectancy results and approximately a 3% increase in liabilities for a typical private-sector defined benefit plan, the new mortality table could translate into a low- to mid-single-digit percentage increase in pension obligations.[7]

"Although the effect will vary from plan to plan, adoption of the proposed mortality tables and acceptance of the study's prediction of future mortality improvements could also immediately increase pension accounting liabilities by 5% to 10% for many plans, potentially impacting corporate income statements and balance sheets," according to a Towers Watson press release issued in response to the new data.

This increase in life expectancy will be costly and a major negative for the solvency of pension funds. In terms relative to interest rate changes, a 0.7-year increase in life expectancy at age 65 would have the same impact as a 21-basis-point decrease in the discount rate, according to Manulife's 2014 annual report.[8]




*Source: Towers Watson calculations based on published mortality tables*

The assumption of longevity risk has historically gone unrewarded. In contrast, assuming investment risks, despite market volatility, has yielded a net reward over time. However, longevity risk has consistently been misestimated in an unfavorable direction — people have consistently lived longer than anticipated — and to date, those who have assumed this risk have experienced only losses. Canadian defined benefit plan sponsors will have to increase their attention to the life expectancy of their plan members as it is clearly evident that longevity risk matters.

In Canada, the economic environment, coupled with increased accounting transparency and the heightened awareness of mortality improvement, is revealing with much greater evidence than ever before, the true amount of risk embedded within pension funds. All of these conditions, in combination with pensions liabilities in the trillions, justify significant anticipated increase in pension risk transfer activity.

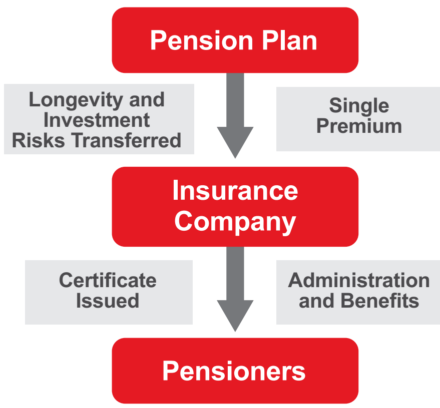
## Pension Risk-Mitigating Strategies

Companies can use a range of strategies to manage and lower their pension risk, including a transfer of all or some risks to third parties. The structures most commonly used in Canada have been buy-outs and buy-ins, schemes where the plan purchases annuities for its retirees and thereby transfers the mortality and investment risks to an insurance company.

### *Buy-out annuity*

In a buy-out annuity contract, the plan sponsor transfers the pension plan's liabilities to the insurance company by way of payment of a single premium. The insurance company makes pension payments directly to plan members and takes responsibility for all associated investment and longevity risks.

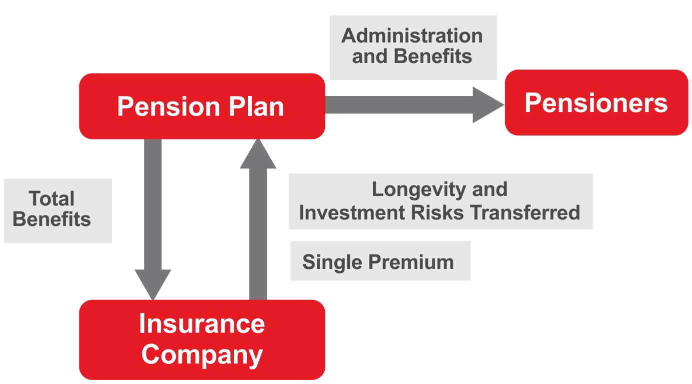
**Pension (DB) Buy-Out Structure**




### *Buy-in annuity*

A buy-in annuity is similar to the annuity buy-out contract, including payment of a single premium and the transfer of longevity and investment risk to the insurance company. However, under the buy-in, the assets and liabilities remain on the sponsor's balance sheet. The buy-in annuity is regarded as an investment by the plan to match some or all of a pension plan's liabilities to reduce risk. The plan sponsor retains the formal, contractual obligation to the participants and beneficiaries. The sponsor also continues to make pension payments to plan members but is reimbursed by the insurance company for the exact amount of benefit payments made each month.

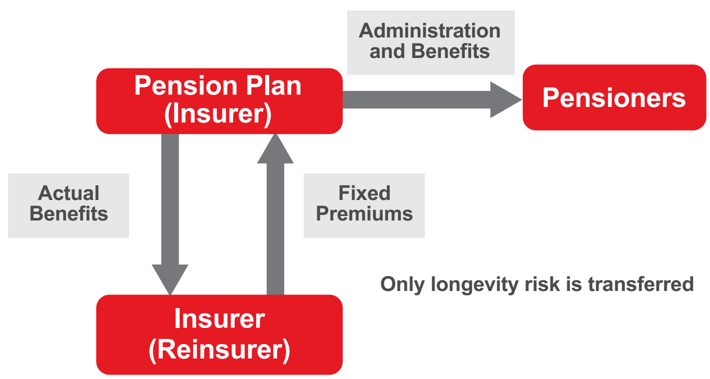
**Pension (DB) Buy-In Structure**



### *Longevity insurance*

Longevity insurance is a newer and more innovative structure that transfers longevity risks to insurance companies. These transactions have typically been much larger in scale and are usually supported by the capacity of reinsurance companies. In a longevity insurance arrangement, the plan sponsor pays fixed monthly premium payments to the insurer and the insurer pays the actual benefits. The employer stays responsible for investing assets but eliminates any variability in future payments.

**Risk transfer solutions: Longevity insurance**




The plan sponsor retains the formal, contractual obligation to the participants and beneficiaries. The sponsor is responsible for the transactions and continues to make the monthly benefit payments, as plan administrator, but is reimbursed by the insurance company for the exact amount of longevity benefits paid out each month.

The U.K. was the first market to embrace this type of transaction and is widely acknowledged as the leader in this area. Many factors came together to encourage U.K. plan sponsors to proactively manage their risk, including strict funding regulations, increased accounting transparency, heightened awareness of longevity risk, and a full range of creative solutions to reduce and remove risk.[9] Sound familiar? These are all the same conditions that are currently prevalent in Canada.

Another reason for the success over the past seven to eight years in the U.K. market is the introduction of reinsurance companies into the longevity market to support direct writers of longevity risk. This permitted competitive pricing and provided more choice and better value for such longevity transactions and facilitated the entry of an attractive alternative to buy-outs and buy-ins.[10]

However, longevity insurance in the North American market is still in its infancy but starting to gain traction. The recent Towers Watson survey of pension risk showed that 12% of survey participants are likely to consider such transactions in the next one to three years.[11]

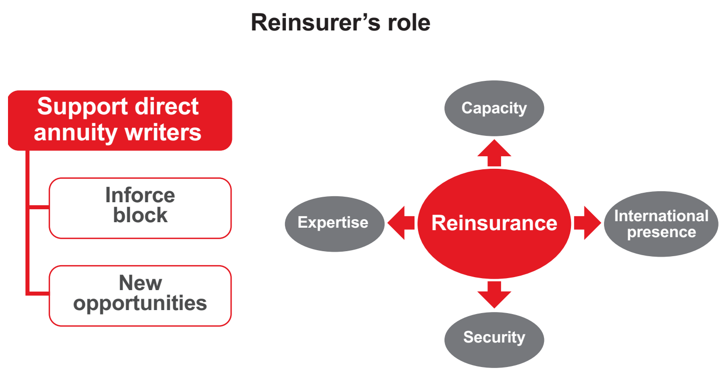
The first quarter of 2015 was highlighted by the groundbreaking pension longevity insurance transaction between Bell Canada and Sun Life, covering $5 billion in liabilities. This is the first such agreement of its kind in North America. Under the transaction, RGA Life Reinsurance Company of Canada (RGA) is reinsuring the longevity risks associated with a significant share of the $5 billion block of pension obligations, uniting the pension, insurance and reinsurance worlds for the first time. RGA's deep global expertise in longevity risk played a critical role in securing an innovative, sophisticated risk management solution for Sun Life.

## Role of reinsurance

The Sun Life/Bell Canada transaction illustrates the increasing attention that plan sponsors are paying to longevity risk and the availability of new solutions to manage this risk.

There is significant demand for longevity risk transfer in Canada. It is an ideal solution for plan sponsors who have addressed their concerns with their investment risk but are now becoming preoccupied with longevity risk, especially in light of the recent publication of new Canadian-based mortality tables and mortality-improvement scales emphasizing increased life expectancy. With over $1.4 trillion of defined benefit liabilities in Canada, the demand will likely exceed the capacity of the insurers alone.

Reinsurance will play a critical role in these solutions, bringing capacity and expertise to the market.




Currently, most long-term mortality risks are already underwritten by reinsurers globally. The reinsurance sector is a natural home for longevity risks. Life reinsurers are experts at accepting, evaluating and assessing such risk. Research teams within reinsurers are continually looking at mortality and mortality improvement trends, as well as innovative ways to underwrite this risk. Some reinsurers, such as RGA, also possess more specific expertise in annuitant (pension) mortality. They employ forward-looking approaches (e.g., cause of death models) rather than looking at historical data alone.

Covering risks related to mortality is at the heart of the life reinsurance business, and reinsurers are already accustomed to accept risks until natural expiry.[12] Life insurers and reinsurers carry exposure to long-dated mortality risk through long-term or permanent life insurance products. It is unlikely that the same lives would be covered under both mortality and longevity insurance policies, but at a larger level, the exposure to mortality trends should be partially offsetting. This generates anti-correlation, reducing risk and economic capital requirements across a portfolio and incorporating both liabilities,[13] which leads to more attractive pricing for de-risking strategies.

In addition, the global reach of reinsurers results in well-balanced geographic and product risk diversification, which also contributes to further reductions in capital. This benefits the competitiveness of the pricing and the capacity of reinsurance available.

Plan sponsors must assure themselves that they are transacting with suitable counterparties as they enter de-risking transactions. Global life reinsurers offer the necessary security as the diversification of global reinsurers contributes to the already considerable stability and financial strength of reinsurers, most of which operate in highly regulated environments.

The large global life reinsurers, such as RGA, have developed significant expertise in longevity insurance transactions across several markets and are able to transfer the skills and learnings to different jurisdictions. RGA participated in several longevity transactions in the U.K., and is well-positioned to leverage its experience to offer bespoke solutions for each individual Canadian transaction. Its recent participation in the Sun Life/Bell Canada deal is evidence of this. Reinsurers can ultimately support direct annuity writers by sharing both the longevity and investment risks from the underlying pension plan.

Needless to say, Canadian pension plan sponsors should continue to focus on taking a responsible path toward the protection and support of retirees' long-term benefits and should be implementing or fine-tuning their de-risking strategies. There are several different paths toward the end goal of lowering risk, and insurance and reinsurance companies play a critical role in providing risk-mitigating solutions to manage these risks and thereby bring additional confidence and stability to employers.

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[1] *Lump of coal for pension plan sponsors, Mercer, December 22, 2014.*

[2] *Solvency of Canadian pension plans falls to lowest level since 2013, according to Aon Hewitt's latest quarterly survey, AON Hewitt, March 31, 2015.*

[3] *Barriers to Pension Plan De-Risking, Gavin Benjamin, Towers Watson, September 2014.*

[4] *Ibid.*

[5] *Ibid.*

[6] *Canadian Institute of Actuaries, Final Report, Canadian Pensioners' Mortality.*

[7] *What can employers do to mitigate longevity risk? Geoffrey Melbourne and Ian Markham, Benefits Canada, October 30, 2014.*

[8] *New mortality tables will have negative impact on pension fund solvency: Aon Hewitt, Barry Critchley, FPStreet, October 1, 2014.*

[9] *Taking Flight: Why Canadian De-Risking Is Poised to Take Off, Brent Simmons and Heather Wolfe, Sun Life Financial, Fall 2013.*

[10] *Longevity swaps: The new (way into the) black?, Louise Farrand, Pensions Insight, May 31, 2012.*

[11] *2014 Canadian Pension Risk Flash Survey Report, Towers Watson, November 2014.*

[12] *The Role of Reinsurers in Longevity Risk Transfer, Cord-Roland Rinke, Hannover Life Re, September 2011.*

[13] *Longevity Risk and Reinsurance, Gavin Jones, July 2013.*

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