

# PENSION RISK TRANSFER REPORT

NOVEMBER 2017



# **NAVIGATING THE CANADIAN PENSION RISK TRANSFER MARKET**

Over the past decade, against a backdrop of elevated investment volatility and sustained low interest rates, many defined benefit (DB) pension plan sponsors have developed comprehensive strategies for managing their pension risks. Certainly, the increased focus on pension risk management has helped fuel the remarkable growth and innovation seen within the Canadian pension risk transfer (PRT) market in recent years.

In this report, we explore some of the key themes driving the Canadian PRT landscape. Given its rapid evolution, it's critical that plan sponsors have the tools and information they need to navigate today's PRT market. That's why we sat down with each of the insurers currently active in the Canadian PRT market for an in-depth discussion on the current state of the market and their thoughts on the future. Through these discussions, our own reflections on the PRT market and our ongoing risk transfer consulting for our clients, we've assembled the following four thought pieces:

**1 Market growth, players and innovation**  
Developments that have shaped today's PRT market

**2 Key PRT market trends**  
What to expect in the coming years

**3 What's the big deal?**  
The impact of transaction size on the risk transfer journey

**4 The importance of longevity**  
A critical element of risk transfer

As the Canadian PRT market has grown and evolved, it has also gained increased recognition within the Canadian pension industry. However, there is often a steep learning curve, particularly when it comes to staying informed about market players and deciphering the PRT lexicon. To address this gap, the Appendices at the end of the report include:

- **Insurer fact sheets** – Your quick reference guide to the insurers currently active in the Canadian PRT market
- **Pension risk transfer glossary** – Covering everything from the basics of buy-outs and buy-ins to the lesser-known concepts of in-kind asset transfers and top-slicing

Whether you're winding up a plan or just starting out on your de-risking journey, this report offers key insights and resources to help you better achieve your risk transfer goals.

# MARKET GROWTH, PLAYERS AND INNOVATION

The Canadian PRT market has seen many changes in recent years, making it difficult for even the most plugged-in plan sponsors to keep up to speed with the latest developments. We have therefore provided an overview of the Canadian PRT landscape, focusing on market growth, the key insurance players and the considerable examples of innovation.



## Stellar growth

In Canada, the amount of pension obligations transferred to insurers annually via buy-in and buy-out annuities has increased by more than 250% over the last eight years.

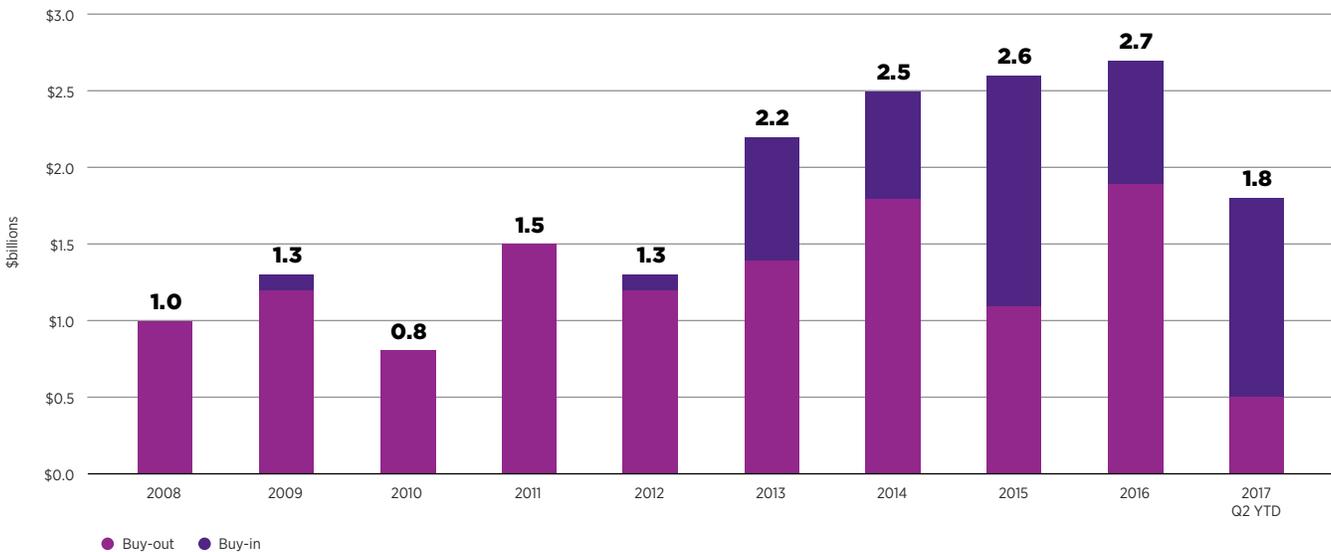
Until 2013, the annual amount of DB pension risk being annuitized fluctuated at around \$1 billion. After a large jump in 2013, the annual size of the PRT market has grown steadily, with \$2.7 billion being transacted in 2016. And 2017 is also shaping up to be a record-breaking year. Historically, the PRT market has been quieter during the first part of the year. However, over the first two quarters of 2017, \$1.8 billion of DB pension risk had already been transferred to insurers via buy-in and buy-out annuities – approximately triple the amount observed for the first half of 2016.

Annual increases in the Canadian group annuity market have primarily stemmed from much greater participation by ongoing plans, whereas the market was previously dominated by terminating plans.

In particular, as shown in the chart below, buy-in annuities have become much more prevalent over the past five years, both for ongoing plans and as an interim strategy for plans in the process of terminating. Indeed, the availability and growing acceptance of buy-ins has helped support a growing PRT market.

As pension plans continue to de-risk and funded levels rise, the Canadian PRT market is primed for continued growth and expansion. In fact, while most of the insurers we surveyed estimated that the Canadian group annuity market could see between \$8 and \$10 billion in risk transferred over the next three years, some estimates reached as high as \$15 billion.

### Annual Canadian group annuity transactions



## The risk-takers

The insurance companies transacting with pension plans to take on their pension risk are a critical element of the PRT market. While some insurers have a long history of participating in the Canadian PRT market, the past decade has seen numerous acquisitions, exits and new entrants.

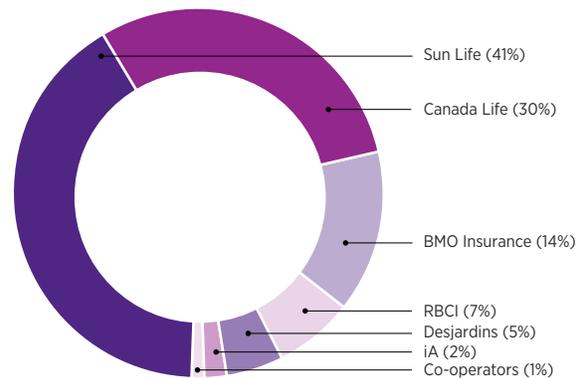
Only four insurers, The Canada Life Assurance Company (Canada Life), Desjardins Insurance (Desjardins), Industrial Alliance Insurance and Financial Services Inc. (Industrial Alliance or iA) and Sun Life Assurance Company of Canada (Sun Life), have remained consistently active in the Canadian PRT market over the past decade.

BMO Insurance entered the Canadian PRT market through its acquisition of AIG Life Insurance Company of Canada (AIG) in 2009, with AIG being active in the Canadian PRT market since 2006. The next key change was Manulife Financial's unofficial departure from the PRT market, as it hasn't been actively quoting on PRT transactions since 2012. Since 2014, the same has held true for Standard Life Insurance Company following its acquisition by Manulife Financial.

The last number of years have also seen several new entrants. Two insurers have expanded their insurance business to include PRT: Co-operators Life Insurance (Co-operators) in 2010 and RBC Life Insurance Company (RBCI) in 2015. Moreover, in late 2016, a newly created insurer, Brookfield Annuity Company (Brookfield), entered the PRT market. Brookfield is wholly owned by Brookfield Asset Management, and unlike other present and past players in the Canadian PRT market, PRT is Brookfield's only line of business.

The following chart shows the market share of each insurer active in the Canadian PRT market in 2016 based on the total amount of buy-in and buy-out annuity transactions. Notably, Sun Life has consistently held the largest share of the market since 2008. Based on buy-in and buy-out transactions over the past three years, the four leading insurers made up 85% of the market (Sun Life - 42%, Canada Life - 20%, BMO Insurance - 13% and RBCI - 9%).

**2016 group annuity market share by insurer**



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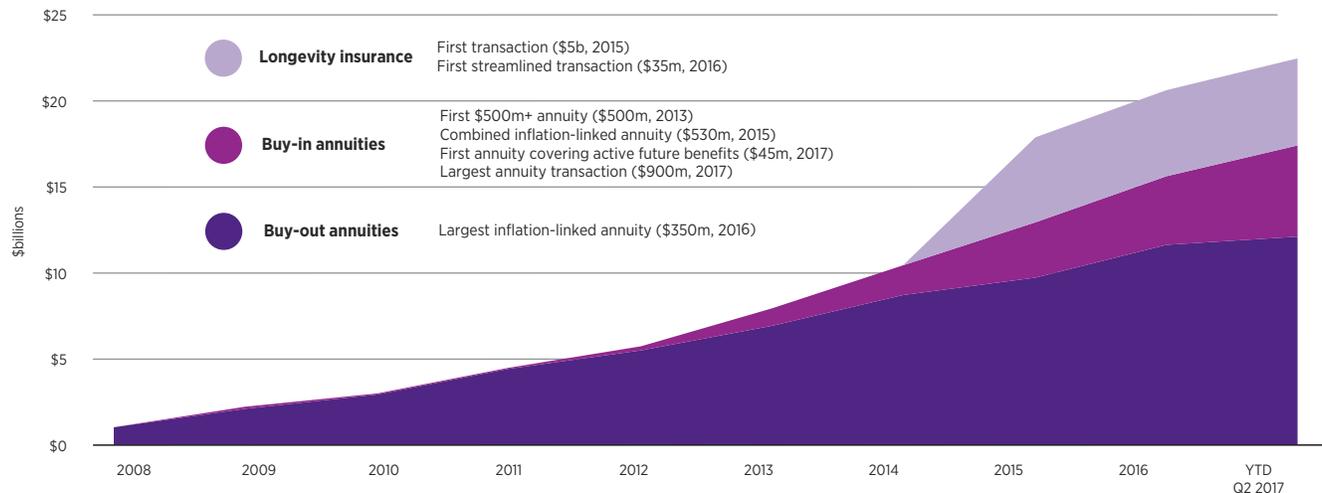
**While some insurers have a long history of participating in the Canadian PRT market, the past decade has seen numerous acquisitions, exits and new entrants.**

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## Innovative approaches

Aleem Qureshi, Director, Pension Risk Transfer at Canada Life, noted that, “insurers have moved away from just providing standardized products, to delivering customized solutions based on a plan’s specific needs.”

### Cumulative Canadian PRT market and key innovations



The willingness of plan sponsors and insurers to create new and innovative risk transfer solutions is highlighted in the chart above, which outlines Canadian PRT market firsts experienced over recent years against the backdrop of the cumulative market growth over the past decade. Many of these firsts were a result of innovative approaches that have allowed pension plans to better achieve their de-risking objectives and open the Canadian PRT market up to a wider universe of plans. Three key areas of innovation include longevity insurance, inflation-linked annuities and transferring risk for active members.

### MANAGING LONGEVITY RISK

We believe that the introduction of longevity insurance is one of the most significant innovations in the Canadian PRT market. With Canadians consistently living longer, plan sponsors are becoming increasingly aware of the significance of longevity risk. Longevity insurance provides

Canadian plan sponsors a means of protecting specifically against longevity risk, whereas in the past longevity risk could only be transferred along with other risks via a buy-in or buy-out annuity. In the UK, longevity risk transfer transactions have grown substantially since their emergence in 2009. To date, UK longevity risk transfer transactions have exceeded £60 billion (approximately \$100 billion). Part of the appeal of longevity risk transfer transactions lies in the ability to target longevity risk specifically, as other pension risks (e.g., interest rate risk) can be addressed through alternative means, such as liability driven investing (or LDI).

Longevity insurance first emerged in Canada in the spring of 2015, when BCE Inc. agreed to transfer \$5 billion of pension plan longevity risk to Sun Life. Viewed by industry players as the first step in the growth of the country’s longevity risk transfer market, another deal soon followed. In late 2016, Canadian Bank Note Company, Limited and Canada Life announced an agreement to transfer

\$35 million of longevity risk for 200 pensioners – the first streamlined longevity insurance agreement of its kind in Canada. Key innovations introduced by this transaction include the absence of collateral requirements (subject to credit underwriting) and simplified contracting, with these items being key sources of complexity for more customized longevity insurance transactions. Both transactions demonstrate the viability of Canada’s longevity risk hedging market. While such transactions had previously only been entertained by very large plans, small plans can also reap the benefits of longevity insurance.

### **INFLATION-LINKED ANNUITIES**

Inflation-linked annuities have largely been perceived as either unavailable or cost-prohibitive, particularly for sponsors of large plans. However, 2015 saw the introduction of the combo annuity, with Sun Life announcing a \$530 million annuity purchase involving two unrelated inflation-linked pension plans with pricing conditional on both

purchases occurring simultaneously. The pooling of inflation risk afforded Sun Life a more efficient asset strategy, generating significant cost savings not available with separate annuity purchases.

In late 2016, another significant inflation-linked annuity was completed, with Loblaw Companies Limited transferring \$350 million to two insurers: Sun Life and BMO Insurance.

### **TRANSFERRING RISK FOR ACTIVE MEMBERS**

A very recent innovation occurred in the second quarter of 2017, with Sun Life completing a buy-in annuity covering past and future benefits for active members. The transaction was priced using underlying assumptions for items such as future benefit accruals, terminations and retirements, and included a robust process to adjust the price upon the termination of the plan. This transaction is significant because it means ongoing plans now have the option of transferring risk for all plan members.

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## **A robust and thriving market**

The combination of a wide range of plans looking to transfer risk, a competitive insurance market and the willingness of both sides to develop innovative and mutually beneficial approaches, has led to a robust and thriving Canadian PRT market.

# KEY PRT MARKET TRENDS

Many factors influence how, when and why plan sponsors transfer pension risk to an insurer. On the following pages, we explore relevant trends and recent and upcoming changes, and discuss how these developments could shape the Canadian PRT market over the coming years. The following table summarizes our views regarding the expected impact of different key trends on the future of the Canadian PRT market.

Trends	Estimated impact
Eliminating boomerang risk	Positive
Growth in inflation-linked annuities	Positive
Improving funded ratios	Positive
Changes to funding rules	Neutral
New insurance capital and financial reporting requirements	Neutral to slightly negative
Increasing role of reinsurers	Positive

## Doing away with boomerang risk

Boomerang risk is the risk that some of the obligations previously transferred to an insurer may revert to the plan sponsor should the insurer become insolvent.

Boomerang risk is generally referred to in the context of a buy-out annuity for an ongoing plan. Under a plan wind-up, the purchase of a buy-out annuity is a full discharge of obligations; however, when it comes to ongoing plans, this is not always the case.

Boomerang risk has caused some plan sponsors to be hesitant about executing risk transfer transactions. However, Paul Forestell, President and CEO at Brookfield Annuity Company, notes that, “while boomerang risk is still a concern for many plans, things are moving in the right direction in jurisdictions across Canada.” Paul refers to the various jurisdictions that have already eliminated boomerang risk for buy-out transactions for ongoing plans, or, in the case of Ontario, jurisdictions that have communicated their intent to do so.

Jurisdiction	Boomerang risk status
British Columbia	Eliminated
Alberta	Has considered elimination <sup>1</sup>
Saskatchewan	Remains
Manitoba	Remains
Ontario	Considering elimination
Quebec	Elimination pending
Nova Scotia	Considering elimination
New Brunswick	Remains
Newfoundland	Remains
Federal	Considering elimination

<sup>1</sup> Bill 10 proposed elimination but was not passed before the current Alberta government came into power.

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**“ While boomerang risk is still a concern for many plans, things are moving in the right direction in jurisdictions across Canada. ”**

PAUL FORESTELL, BROOKFIELD ANNUITY COMPANY

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Boomerang risk still exists for buy-in annuities and tends to be larger than that under an equivalent buy-out because of the nature of the guarantees provided under Assuris (see Appendix B for more on Assuris). However, we believe that the surge in buy-in annuities in Canada over recent years offers evidence that plan sponsors are increasingly realizing that the very low risk of insurer insolvency is greatly outweighed by the benefits of risk transfer.

## Growth in inflation-linked annuities

Sun Life estimates that over 2015 to 2016, there was over \$1.2b of buy-in and buy-out annuity transactions with inflation-linked pension increases for the majority of the plan membership.

In contrast, we estimate that less than \$200m of inflation-linked annuities were transacted in the five years prior to 2015. Further, several of the insurers we surveyed commented on the increasing popularity of inflation-linked annuity transactions.

We believe that the increase in inflation-linked annuity transactions is not only a result of innovative solutions to improve typical pricing,

but also due to plan sponsors with inflation-linked pensions recognizing the benefits of transferring risk, which in this case includes future inflation risk. Currently, not all insurers active in the Canadian PRT market quote on inflation-linked annuities; however, we expect to see more insurers participating in the future if demand from plan sponsors continues to grow.

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## Improving solvency funded ratios

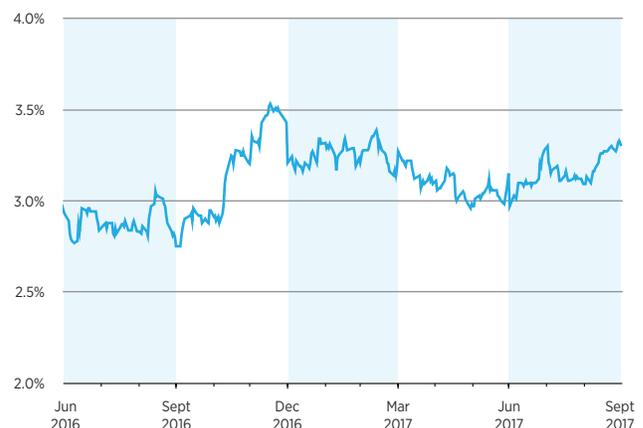
Solvency funded ratios are enjoying their healthiest levels in many years.

The improvements in funded positions have been a result of strong equity market returns in recent years, combined with cash contributions and an uptick in bond yields over the past year (i.e., leading to lower solvency liabilities). Plans who have developed a de-risking glide path based on increasing funded levels are therefore moving toward their de-risking end game, which in many cases involves some form of PRT transaction. Olivier Adam-Bruneault, Actuarial Advisor and Team Leader, Insured Annuities at Industrial Alliance, noted that, “bond yields and funded levels continue to be a significant factor for many plans.” Many plans have moved slowly along their de-risking glide paths due to sustained low bond yields, even considering recent increases.

The Canadian Institute of Actuaries estimates quarterly a benchmark discount rate that indicates the relative cost of annuitization (see the Annuity purchase proxy in Appendix B for more). As

shown below, the annuity purchase discount rate increased materially over the last quarter of 2016 and has remained elevated throughout most of 2017. This bump in the annuity purchase discount rate has likely been a contributing factor behind the record-breaking level of PRT transactions in Canada over the first half of 2017.

**Annuity purchase discount rate**



Notes: Rates shown are those based on the highest duration category, incorporating quarterly guidance from the Canadian Institute of Actuaries up until June 30, 2017.

We expect that the level of bond yields will continue to be an important influencing factor in the Canadian PRT market. That is, if yields increase substantially from their current levels, we could see a significant surge of plans looking to transfer risk. If yields remain at their current levels, it will have a neutral impact on PRT activity;

while a decline in yields would likely have a modest dampening impact on Canadian PRT activity. As plan sponsors who are serious about risk transfer take steps to significantly reduce their asset-liability mismatch risk, we expect that yield declines will have a lessening impact on market activity.

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## Changes to funding rules

As mentioned earlier, solvency funding requirements are directly linked with the cost of transferring risk to an insurer.

With recent changes to Quebec funding rules that lessen the focus on solvency, along with similar proposed changes for Ontario, it is natural to think this may have implications for the Canadian PRT market. Other jurisdictions are also considering changes, and some are looking at or indeed have already introduced target benefit plans.

While a reduced focus on solvency funding may influence a plan sponsor's desire to transfer risk, a number of other key drivers would remain

unchanged. First, many plan sponsors are keen to reduce the amount of internal resources focused on pension plan management, as managing a pension fund is not a core business operation for the majority of plan sponsors. This is especially true for plans that have shifted to providing DC pension benefits instead of DB. Another driver behind de-risking is the accounting implications of sponsoring a DB plan, which are largely unaffected by changes to funding rules.

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## New insurance capital and financial reporting requirements

The Canadian life insurance industry is undergoing a significant evolution regarding the additional capital that insurers are required to hold for their risk exposures (i.e., their capital requirements).

As of January 1, 2018, the current Minimum Continuing Capital and Surplus Requirements (MCCSR) guideline, which was first introduced in 1992, will be replaced by the new Life Insurance Capital Adequacy Test (LICAT) guideline. Needless to say, this represents a major change for the Canadian insurance industry.

The life insurance industry has been carefully assessing the implications of the move from MCCSR to LICAT for some time. It is expected that the insurance industry as a whole will hold similar levels of capital under LICAT as it does under MCCSR (i.e., the aggregate amount of capital will remain about the same). However, the net impact on capital requirements may vary significantly

across companies, and within companies by business line. Paul Gobeil, Senior Director of Pricing & Product Support at Co-operators, noted that, “LICAT brings some significant changes in the amount of capital required for specific risks (e.g., credit and longevity risk), and therefore we took some time in early 2017 to carefully assess LICAT’s implications specifically for our PRT business.” LICAT may result in price increases (or decreases) for PRT transactions if additional (or less) capital is required to be held for an insurer’s PRT line of business (i.e., to maintain the same targeted return on capital).

Another significant development in the insurance industry is a recent change to the mortality assumptions that insurers are required to use as a baseline for financial statement reporting (i.e., in setting their reserves), with the changes coming into effect at year-end 2017. This development stemmed from a research paper published by the Canadian Institute of Actuaries, which includes a new longevity improvement assumption called MI-2017, and which results in higher liabilities compared to its predecessors. These revised assumptions for future longevity improvements could result in increased pricing for some PRT transactions.

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## **The growing role of reinsurers in providing market capacity**

In the PRT market, capacity generally refers to how much pension risk can be taken on by the participating insurers.

To date, the Canadian market capacity has largely been provided by direct insurers, whereas in the UK market, reinsurers have become a critical supplier of capacity, especially when it comes to longevity risk. Therefore, it wasn’t surprising that, given its very large size, the \$5 billion BCE Inc. longevity insurance transaction announced in

2015 involved reinsurance (via RGA Canada and SCOR Global Life).

As the Canadian PRT market continues to expand, we expect that reinsurers will not only play an increasing role in providing capacity, but also help facilitate further innovation.

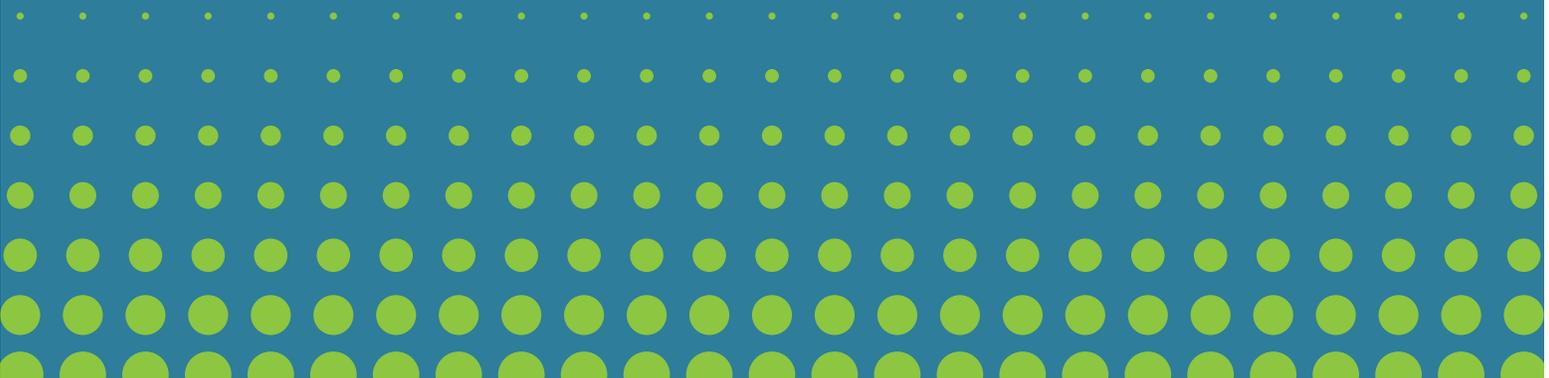
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## **Positioned for continued growth**

The current themes playing out in the Canadian PRT market generally support continued growth and development. Ultimately, much of the market’s future rests on plan sponsors’ appetite for transferring their pension risk.

## WHAT'S THE BIG DEAL?

In the US and UK PRT markets, billion-dollar transactions are commonplace. In Canada, however, these mega deals have largely been absent – with the notable exception of the BCE Inc. \$5b longevity insurance transaction in 2015. Currently, most larger Canadian plans seeking to transfer risk have opted to divide transactions into smaller tranches to garner wider insurer interest in the hopes of more competitive pricing. However, recent years have seen an increasing number of Canadian transactions in the hundreds of millions, and 2017 may well mark a turning point. In the second quarter of 2017, a \$900 million buy-in transaction was completed for an undisclosed plan sponsor, with the deal being split between three insurers (Sun Life, Canada Life and RBCI).



In the past, the prevailing view was that single billion-dollar transactions were too large for the Canadian market. However, we agree with Heather Wolfe, Managing Director of Client Relationships at Sun Life, who commented that, “plan sponsors are wanting to do larger transactions and insurers are responding by offering more capacity and creative solutions.” Plan sponsors should realize that while very large PRT transactions come with a different set of considerations, they also offer unique benefits.

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### Key influencers

Very large PRT transactions generally work quite differently from those at the smaller end of the market.

Small to medium transactions (e.g., less than \$50m) attract a wide range of insurers, who quote with relatively little notice (e.g., 2-3 weeks). In contrast, very large transactions often require customized solutions and much longer timelines. As Rohit Thomas, Vice President at BMO Insurance, notes, “For larger transactions, it’s a matter of tailoring a solution based on the plan sponsor’s

pain points.” Rohit adds that, “for a customized approach for a larger deal, the timeframe could vary from three to nine months or longer.” Paul Purcell, Managing Director and Head of Pension De-Risking at RBC, noted that, “very large PRT transactions are more akin to a merger and acquisition negotiation, with transparent discussions of return on investment.”

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**“ For larger transactions, it’s a matter of tailoring a solution based on the plan sponsor’s pain points. ”**

ROHIT THOMAS, VICE PRESIDENT AT BMO INSURANCE

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The table below outlines the reasons why plan sponsors need to take extra care and budget additional time for large transactions.

Factors	Considerations
<b>Insurer interest</b>	<ul style="list-style-type: none"> <li>• Not all insurers participating in the Canadian PRT market are currently active at the larger end</li> <li>• Therefore, although 6 to 8 quotes may be received for a \$50m annuity buy-in or buy-out, 2 to 4 quotes are likely a more reasonable number for large transactions</li> </ul>
<b>Much higher insurer engagement</b>	<ul style="list-style-type: none"> <li>• Larger transactions generally require much more detailed discussions between the plan sponsor, their consultant and the insurer to determine the objectives and challenges on both sides</li> <li>• Given the time and effort involved, plan sponsors often select preferred providers</li> <li>• Plan sponsors and preferred providers then engage in detailed discussions to determine the optimal solution</li> </ul>
<b>Reinsurance</b>	<ul style="list-style-type: none"> <li>• For large deals, reinsurance may be included as part of the transaction, as the insurer may have limits on how much pension risk they want to, or are able to, take on in a given period</li> <li>• An insurer’s desire for reinsurance may also stem from concerns about concentration risk – that is, a very large transaction may make up a large proportion of an insurer’s entire book of business</li> <li>• Additional time is needed for the insurer to engage with a reinsurer(s) and to finalize the required reinsurance agreement(s)</li> </ul>
<b>Greater due diligence</b>	<ul style="list-style-type: none"> <li>• For smaller buy-in and buy-out transactions, providing historical mortality experience for the covered group is uncommon; however, as transaction sizes grow, actual mortality experience becomes increasingly important to insurers</li> <li>• The collection of high-quality mortality experience data and the analysis by the insurers (and reinsurers, if any) can significantly increase the transaction timeline</li> </ul>
<b>Sourcing assets</b>	<ul style="list-style-type: none"> <li>• The assets insurers use to back buy-in and buy-out annuities are a key determinant of their prices</li> <li>• Large transactions pose a greater risk that insurers will not be able to offer as favourable pricing as smaller transactions, due to insufficient supply of optimal assets (e.g., private placements)</li> <li>• This risk can be mitigated through the use of in-kind transfers, in which the plan sponsor pays a portion of the premium for a buy-in or buy-out through the transfer of securities, most often after creating a unique portfolio in line with the insurer’s desired characteristics</li> </ul>

It is worth noting that the sourcing of assets is an issue that extends beyond just large PRT transactions in Canada, as the Canadian fixed income market is not nearly as deep as that of the US and the UK. Jonathan Bilodeau, Advisor, Pricing and Investment Strategies at Desjardins, commented that, “the availability of higher yielding private placement fixed income investments used to back PRT business can materially influence pricing.” For pension benefits that receive annual inflation increases, the challenges are even greater, given the extremely limited supply of

Canadian inflation-linked bonds. Consequently, the ability to transfer assets in-kind to an insurer can also serve as an important tool for small to medium inflation-linked annuity transactions. However, the asset portfolio that is transferred should align as closely as possible with the insurer’s desired portfolio characteristics in order to achieve the maximum benefit. It’s therefore essential to take the time to review the portfolio holdings with the insurer to create what can be referred to as an insurer-ready portfolio.

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## The benefits of going big

Transferring a significant amount of pension risk in one transaction offers some unique benefits to plan sponsors, including:

- Giving plan sponsors the ability to negotiate a custom solution that meets the plan’s objectives.
- Achieving greater certainty about the costs and benefits of transferring risk compared to a long-term, phased risk transfer strategy that can last for an extended period.
- Freeing up internal resources and reducing administrative costs, and potentially reducing consulting costs compared to a long-term, phased risk transfer strategy.
- Providing marketing and branding opportunities for plan sponsors. For larger public companies in particular, a large one-time transaction may positively influence the views of investment analysts and rating agencies.

The added challenges and complexity of very large buy-in and buy-out transactions means potentially higher pricing for transferring risk relative to smaller, more straightforward transactions. However, by carefully accounting for the considerations of larger transactions and taking a holistic view of the costs and benefits, plan sponsors may determine that transferring risk in a single transaction is the ideal solution.

Plan sponsors should be aware that dividing larger transactions into smaller pieces is not the only, or even necessarily the best, option. Indeed, PRT transactions are possible for plans of all shapes and sizes.

# THE IMPORTANCE OF LONGEVITY

Many plan sponsors have spent the past decade attempting to more effectively measure and manage their investment and interest rate risks. It's thus hardly surprising that the recent growth of the PRT market has largely been driven by plan sponsors taking steps to offload some or all of their investment and interest rate risks. However, while it's widely understood that longevity risk is transferred to the insurer as part of buy-in and buy-out transactions, we believe that longevity measurement and risk are not getting the attention they deserve.

## What are the longevity characteristics of your plan?

The longevity characteristics of the members covered by a PRT transaction are a key determinant of the insurer’s price; thus, insurers carefully consider a range of longevity factors during their underwriting.

In contrast, many plans fail to investigate the longevity characteristics of their members anywhere close to the same degree. The table to the right outlines our views on the prevalence of the use of various longevity factors by pension plans and insurers. The table is based on our work with pension plans and discussions with insurers active in the PRT market. Interestingly, the most commonly used factor for pension plans is whether the sponsoring organization operates in the public or private sector; however, insurers are unlikely to use this factor, partly because the PRT market consists predominantly of private sector plans. Further, recent research from Eckler’s longevity risk analytics’ subsidiary, Club Vita Canada, has revealed that other factors are much better at explaining differences in longevity than if plan members come from the public versus private sector.

Factor	Pension plans	Insurers
Public/private	✓	✗
Collar/job type	Some	✓
Industry	Some	✓
Pension amount	Some	✓
Pensioner type	✗	Some
Postal code	✗	Some
Pre-retirement salary	✗	Some
Marital status	✗	Some

✓ - very wide use  
 Some - used by some plans/insurers  
 ✗ - very limited use

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**Club Vita Canada Inc. was created by Eckler Ltd. in 2015. It is an extension of Club Vita LLP, a longevity centre of excellence launched in the UK in 2008 by Hymans Robertson LLP. By pooling robust data from a wide range of pension plans, Club Vita provides its members with leading-edge longevity analytics, equipping them with the tools and insights needed to measure and manage their longevity risk.**



Using the factors above and potentially others, including actual historical mortality experience of large plans, insurers develop a unique view of the longevity expectations and longevity risk of each transaction. Adopting a similar approach enables plan sponsors to design better risk transfer strategies that have a higher probability of execution. In the case of a longevity insurance transaction, this longevity assessment is critical, as longevity risk is the only risk being transferred. However, there are also benefits in the context of buy-in and buy-out annuities.

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## The impact of longevity on buy-in/buy-out pricing

When estimating the cost of annuitizing a plan, pension actuaries primarily focus on the interest rate environment (i.e., the level of bond yields) – and rightly so, as the cost of an annuity purchase tends to align with changes in market bond yields. However, as discussed earlier, longevity is also a key consideration.

By incorporating information regarding the longevity profile of the members covered by a buy-in or buy-out transaction, plan sponsors can:

- **Better assess the optimal point at which to request quotes from insurers.** Accounting for the unique longevity characteristics of plan members means a plan’s estimate of the cost to annuitize should more closely align with that of insurers. With this approach, plan sponsors can better understand how much their plan’s unique longevity characteristics may affect prices and can request quotes when there is a greater likelihood that targeted financial metrics will be met.
- **Ensure the appropriate data is provided to insurers.** The ability to gain insight into the longevity characteristics of pensioners is largely dependent on the data available. By conducting a detailed longevity assessment, data deficiencies that may have otherwise adversely influenced insurer pricing can be identified and addressed.
- **Better assess insurer quotes, increase the probability of execution and gain greater confidence in the decision to transfer risk.** In the absence of longevity considerations, uncertainty around whether prices appropriately reflect the longevity of the plan will remain.

The following example illustrates the implications on buy-in or buy-out pricing. In the table, we consider two hypothetical plans with the same population in terms of age, gender and pension amounts. One plan covers pensioners who formerly held blue-collar jobs, while the other covers former white-collar workers.

	Plan A	Plan B
Estimated buy-out/buy-in cost without considering longevity characteristics of the plan	\$41.2m	\$41.2m
Average annual pension <sup>1</sup> per member	\$10,000	\$10,000
Job type prior to retirement	Blue collar	White collar
Estimated buy-in/buy-out cost after reflecting job type <sup>2</sup>	\$40.5m	\$42.2m
Change in estimated buy-in/buy-out cost	\$0.7m reduction	\$1.0m increase

<sup>1</sup> No future pension increases.

<sup>2</sup> Based on analysis by Club Vita Canada when only accounting for the impact of job type on baseline mortality.

The table above demonstrates that by simply accounting for the nature of the pensioners’ job type prior to retirement, the estimated cost of annuitizing could vary in the range of +/-2%. While this may not appear to be a large differential, in many cases it may be enough to determine whether a transaction is executed. In the case of Plan B, if the best quote was \$0.5 million higher than the estimated cost without considering longevity, the quote may seem unfavourable when it is, in fact, better than expected when accounting for a more accurate longevity profile of the covered members.

In practice, better estimation of the cost of annuitizing isn't as simple as incorporating job type. In many instances, plans have a mix of job types that require subjectivity when classifying as blue or white collar. Club Vita Canada has found that considering a range of factors,

including socio-economics captured through postal codes, affluence and occupation, can lead to differences in the liabilities of individual plans upwards in the range of +/-4% when compared with not considering members' specific longevity characteristics.

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## Careful consideration of longevity risk results in better-informed risk transfer strategies

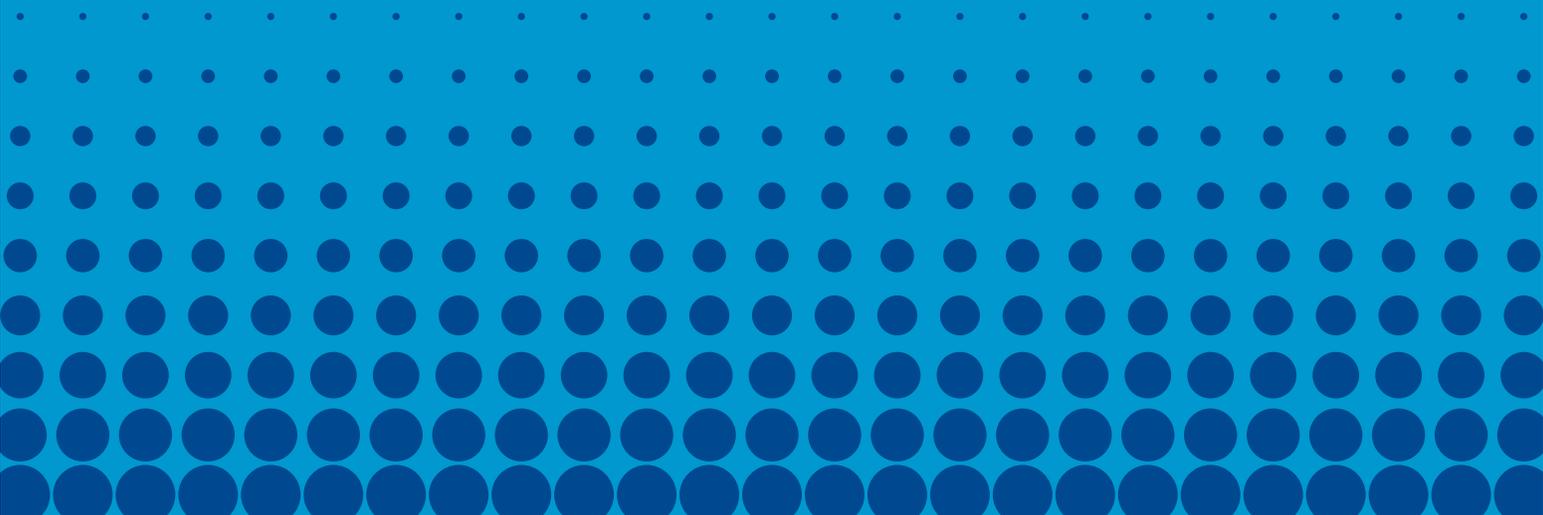
Thus far, we've focused on assessing the longevity of plan members based on what we know today; this helps us better assess longevity expectations and reduce the risk of making misinformed decisions. However, another key source of longevity risk is the uncertainty about whether plan members will live longer than expected in the future. Plan sponsors generally do not factor in the cost of protection against future longevity improving more than expected; whereas, insurers are required to do so through reserve and capital requirements.

By more carefully considering the financial impact of longevity risk, plan sponsors can develop better-informed risk transfer strategies. With the advent of longevity insurance in Canada and the availability of alternative approaches to hedging investment and interest rate risk, plans can design risk transfer solutions that achieve cost efficiencies and better align with their goals. As the Canadian PRT market continues to evolve, we expect that sponsors will assess and manage their longevity risk quite differently than they have in the past.

# APPENDIX A: INSURER FACT SHEETS

Your quick reference guide to the insurers currently active in the Canadian PRT market.

*Fact sheets present information provided to us by each individual insurance company from whom we requested comparable data, and includes commentary based on the data submitted. Eckler Ltd. has not independently verified the information received.*



# BMO INSURANCE

## COMMENTARY

BMO Insurance entered the Canadian PRT market through its acquisition of AIG Life Insurance Company of Canada in 2009. AIG and then BMO Insurance have consistently been active in the PRT market since 2006. Over the last four years, BMO Insurance's PRT appetite has increased, which can be seen by the larger volumes of transactions over this period. Buy-ins are absent from past transactions since BMO Insurance only began offering them in the second quarter of 2017.

BMO Insurance's transactions are typically \$25 million or greater. BMO Insurance was recently involved with the very sizable \$350 million inflation-linked buy-out annuity for Loblaw Companies Limited, which was a joint transaction with Sun Life.



Notes: While BMO Insurance has only pursued ratings with AM Best, BMO Financial Group is rated by other rating agencies. Two layers of Assuris coverage can be provided, one through BMO Life Assurance Company and the other through BMO Life Insurance Company.

## GROUP ANNUITY ACTIVITY FOR CALENDAR YEAR 2016

Market share.....	<b>14%</b>
Number of transactions.....	<b>9</b>
Average transaction size.....	<b>\$41m</b>

## GROUP ANNUITY ACTIVITY FROM 2014 TO Q2 2017

Market share.....	<b>13%</b>
Value of transactions .....	<b>\$1.3b</b>
Average transaction size (since 2015).....	<b>\$34m</b>

## MOST RECENT FINANCIAL STRENGTH RATINGS

S&P.....	<b>n/a</b>
Moody's.....	<b>n/a</b>
AM Best .....	<b>A</b>
Fitch.....	<b>n/a</b>
DBRS.....	<b>n/a</b>

## PROTECTION OF BENEFITS

MCCSR ratio (July 31, 2017).....	<b>234%</b>
Assuris.....	<b>2x</b>

## SIZE OF EXISTING CANADIAN ANNUITY BUSINESS

	Group	Individual
Membership data		
Number of pensioners	<b>17k</b>	<b>Not disclosed</b>
Monthly pension payments	<b>\$16m</b>	<b>Not disclosed</b>
Actuarial reserves	<b>\$2.3b</b>	<b>\$3.2b</b>

## ADMINISTRATION (Annuitant services staff)

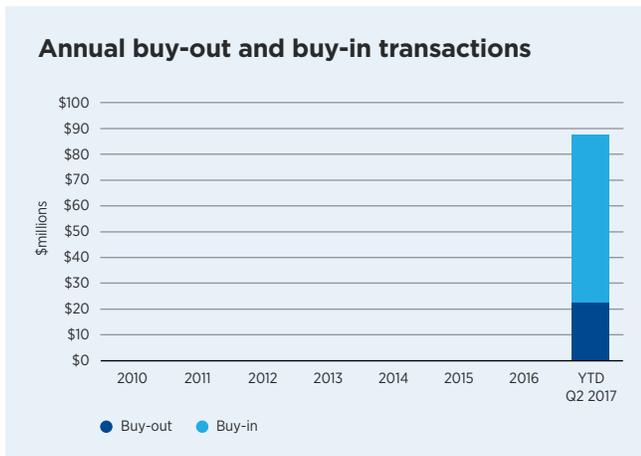
Staff size.....	<b>10</b>
Location.....	<b>Toronto, ON</b>
Language spoken .....	<b>English, French</b>

# BROOKFIELD ANNUITY COMPANY

## COMMENTARY

Brookfield Annuity Company is a newly created life insurer, and the newest to enter the Canadian PRT market. It was launched under the leadership of Paul Forestell, who joined as President & CEO from Mercer in 2015. Brookfield Annuity Company obtained its license to write pension risk transfer business in late 2016, and completed its first two transactions in the first quarter of 2017.

The addition of Brookfield Annuity Company marks the first pension risk transfer specialist insurer (i.e., it is their only line of business) to enter the Canadian PRT market. That is, it only writes pension risk transfer business, whereas all other insurers active in the Canadian PRT market operate multiple lines of business.



Notes: Brookfield Annuity Company is currently not rated by any rating agency. Currently only provides group annuities. Annuitant services are outsourced.

## GROUP ANNUITY ACTIVITY FOR CALENDAR YEAR 2016

Market share.....	<b>0%</b>
Number of transactions.....	<b>0</b>
Average transaction size.....	<b>n/a</b>

## GROUP ANNUITY ACTIVITY FOR 2017 Q2 YTD

Market share.....	<b>5%</b>
Value of transactions .....	<b>\$88m</b>
Average transaction size.....	<b>\$18m</b>

## MOST RECENT FINANCIAL STRENGTH RATINGS

S&P.....	<b>n/a</b>
Moody's.....	<b>n/a</b>
AM Best .....	<b>n/a</b>
Fitch.....	<b>n/a</b>
DBRS.....	<b>n/a</b>

## PROTECTION OF BENEFITS

MCCSR ratio (June 30, 2017).....	<b>&gt;1,600%</b>
Assuris.....	<b>1x</b>

## SIZE OF EXISTING CANADIAN ANNUITY BUSINESS

	Group	Individual
Membership data		
Number of pensioners	<b>&lt;1k</b>	<b>n/a</b>
Monthly pension payments	<b>\$0.5m</b>	<b>n/a</b>
Actuarial reserves	<b>&lt;\$100m</b>	<b>n/a</b>

## ADMINISTRATION (Annuitant services staff)

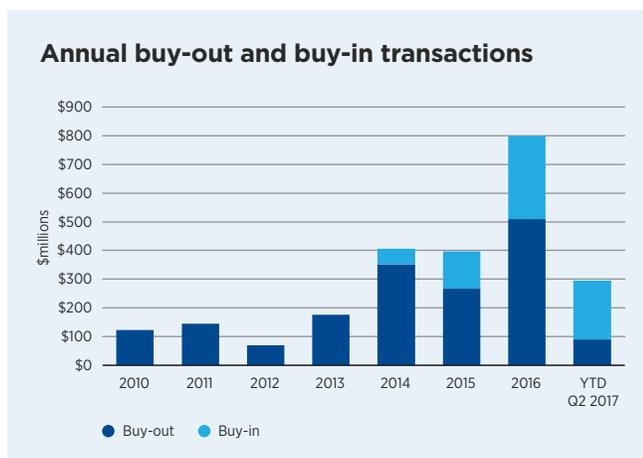
Staff size.....	<b>144</b>
Location.....	<b>Toronto, ON</b>
Language spoken .....	<b>English, French</b>

# THE CANADA LIFE ASSURANCE COMPANY

## COMMENTARY

The Canada Life Assurance Company (Canada Life) is a subsidiary of The Great-West Life Assurance Company. It has been active in the Canadian PRT market for over a decade. Over the past three years, Canada Life’s transaction volumes have grown substantially, with 2016 effectively doubling that of 2015. Canada Life has the second largest share of the Canadian PRT market based on the cumulative value of annual transactions.

In late 2016, the Canadian Bank Note Company, Limited (CBN) entered into a \$35 million longevity insurance transaction with Canada Life. This was only the second longevity insurance transaction executed in the Canadian PRT market to date. Through a streamlined approach and absence of collateral requirements, the transaction paves the way for more longevity insurance transactions for plans of all sizes. Previously, longevity insurance was thought to be feasible only for very large plans (e.g., \$1 billion+). Most recently, in the second quarter of 2017, Canada Life participated in the largest single Canadian annuity transaction to date, with \$900 million of pension risk from an undisclosed company being transferred between Canada Life, Sun Life and RBCI.



Notes: DBRS credit rating represents ability to pay claims. Additional level of Assuris coverage provided through The Great-West Life Assurance Company. Information on the size of Canada Life’s existing Canadian annuity business was provided with group and individual combined.

## GROUP ANNUITY ACTIVITY FOR CALENDAR YEAR 2016

Market share.....	<b>30%</b>
Number of transactions.....	<b>36</b>
Average transaction size.....	<b>\$22m</b>

## GROUP ANNUITY ACTIVITY FROM 2014 TO Q2 2017

Market share.....	<b>20%</b>
Value of transactions .....	<b>\$1.9b</b>
Average transaction size (since 2016) .....	<b>\$22m</b>

## MOST RECENT FINANCIAL STRENGTH RATINGS

S&P.....	<b>AA</b>
Moody’s.....	<b>Aa3</b>
AM Best .....	<b>A+</b>
Fitch.....	<b>AA</b>
DBRS.....	<b>AA</b>

## PROTECTION OF BENEFITS

MCCSR ratio (June 30, 2017).....	<b>239%</b>
Assuris.....	<b>2x</b>

## SIZE OF EXISTING CANADIAN ANNUITY BUSINESS

	Group + Individual
<b>Membership data</b>	
Number of pensioners	<b>143k</b>
Monthly pension payments	<b>\$68m</b>
<b>Actuarial reserves</b>	<b>\$9.0b</b>

## ADMINISTRATION (Annuitant services staff)

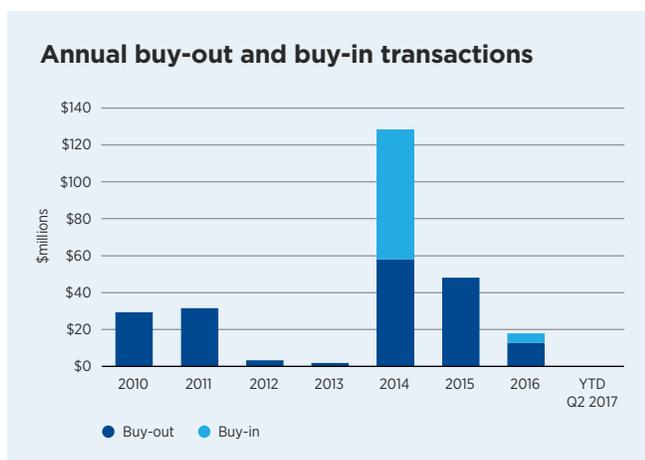
Staff size.....	<b>15</b>
Location.....	<b>London, ON</b>
Language spoken .....	<b>English, French</b>

# CO-OPERATORS LIFE INSURANCE

## COMMENTARY

Co-operators Life Insurance (Co-operators) entered the Canadian PRT market in 2010. Co-operators has tended to have only a small share of the annual Canadian PRT market, with the exception of 2014. The business written in 2014 accounts for half of Co-operators' total business to date.

While some insurers are starting to focus on larger transaction sizes, Co-operators remains focused on smaller transactions, with a target transaction size of \$40 million and lower.



Notes: Additional level of Assuris coverage provided through CUMIS Life Insurance Company. Information on the size of Co-operators' existing Canadian annuity business was provided with group and individual combined.

## GROUP ANNUITY ACTIVITY FOR CALENDAR YEAR 2016

Market share.....	<b>1%</b>
Number of transactions.....	<b>6</b>
Average transaction size.....	<b>\$3m</b>

## GROUP ANNUITY ACTIVITY FROM 2014 TO Q2 2017

Market share.....	<b>2%</b>
Value of transactions .....	<b>\$0.2b</b>
Average transaction size.....	<b>\$12m</b>

## MOST RECENT FINANCIAL STRENGTH RATINGS

S&P.....	<b>A-</b>
Moody's.....	<b>n/a</b>
AM Best .....	<b>A</b>
Fitch.....	<b>n/a</b>
DBRS.....	<b>n/a</b>

## PROTECTION OF BENEFITS

MCCSR ratio (June 30, 2017).....	<b>240%</b>
Assuris.....	<b>2x</b>

## SIZE OF EXISTING CANADIAN ANNUITY BUSINESS

	Group + Individual
<b>Membership data</b>	
Number of pensioners	<b>6k</b>
Monthly pension payments	<b>\$4m</b>
<b>Actuarial reserves</b>	<b>\$700m</b>

## ADMINISTRATION (Annuitant services staff)

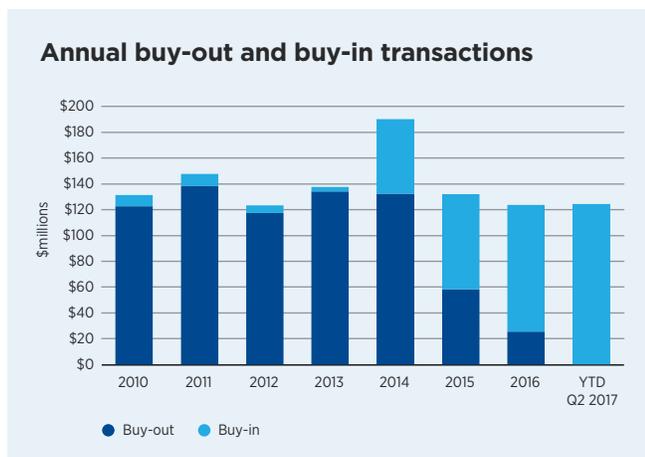
Staff size.....	<b>6</b>
Location.....	<b>Regina, SK</b>
Language spoken .....	<b>English, French</b>

# DESJARDINS INSURANCE

## COMMENTARY

Desjardins Insurance (Desjardins) is a long-time participant in the Canadian PRT market. Desjardins has also been the most consistent over time in terms of annual PRT transaction volumes. However, their annual new business has shifted noticeably from buy-outs to buy-ins. Desjardins was one of the early adopters of buy-ins, with their first buy-in transaction in 2010. While the buy-in concept was not new, these types of contracts only emerged in their current form in 2009.

Similar to some other insurers, Desjardins prefers relatively small proportions of deferred vested members (i.e., less than 30% of members). When larger plans are divided into tranches, they prefer different groups to be homogenous in terms of their age and longevity profile. Larger proportions of deferred vested members and/or heterogenous tranches may then negatively impact pricing.



Notes: Credit ratings are those of medium- and long-term debt securities issued for Caisse centrale Desjardins. Annuitant services staff service both group and individual annuity products.

## GROUP ANNUITY ACTIVITY FOR CALENDAR YEAR 2016

Market share.....	<b>5%</b>
Number of transactions.....	<b>10</b>
Average transaction size.....	<b>\$12m</b>

## GROUP ANNUITY ACTIVITY FROM 2014 TO Q2 2017

Market share.....	<b>6%</b>
Value of transactions .....	<b>\$0.6b</b>
Average transaction size.....	<b>\$15m</b>

## MOST RECENT FINANCIAL STRENGTH RATINGS

S&P.....	<b>A+</b>
Moody's.....	<b>Aa2</b>
AM Best .....	<b>n/a</b>
Fitch.....	<b>AA-</b>
DBRS.....	<b>AA</b>

## PROTECTION OF BENEFITS

MCCSR ratio .....	<b>Not disclosed</b>
Assuris.....	<b>1x</b>

## SIZE OF EXISTING CANADIAN ANNUITY BUSINESS

	Group	Individual
<b>Membership data</b>		
Number of pensioners	<b>28k</b>	<b>15k</b>
Monthly pension payments	<b>\$16m</b>	<b>\$7m</b>
<b>Actuarial reserves</b>	<b>\$2.5b</b>	<b>\$0.7b</b>

## ADMINISTRATION (Annuitant services staff)

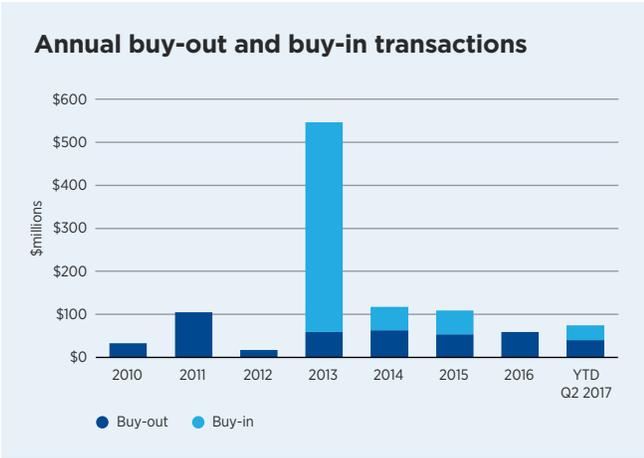
Staff size.....	<b>75</b>
Location.....	<b>Québec City, QC</b>
Language spoken .....	<b>English, French</b>

# INDUSTRIAL ALLIANCE INSURANCE AND FINANCIAL SERVICES INC.

## COMMENTARY

Industrial Alliance Insurance and Financial Services Inc. (iA) has been active in the Canadian PRT market for over a decade. Early in the last decade, iA made up a significant portion of the annual business, with approximately 20% - 25% market share in 2007 and 2008. Since then, iA's share of the annual PRT market has fluctuated around 5%, with the exception of 2013.

The spike in iA's transactions in 2013 was a result of a \$500 million buy-in annuity deal with an undisclosed corporation. At the time, this was the largest single pension risk transfer transaction to be completed in Canada.



## GROUP ANNUITY ACTIVITY FOR CALENDAR YEAR 2016

Market share.....	<b>2%</b>
Number of transactions.....	<b>5</b>
Average transaction size.....	<b>\$12m</b>

## GROUP ANNUITY ACTIVITY FROM 2014 TO Q2 2017

Market share.....	<b>4%</b>
Value of transactions.....	<b>\$0.4b</b>
Average transaction size.....	<b>\$4m</b>

## MOST RECENT FINANCIAL STRENGTH RATINGS

S&P.....	<b>A+</b>
Moody's.....	<b>n/a</b>
AM Best.....	<b>A+</b>
Fitch.....	<b>n/a</b>
DBRS.....	<b>A</b>

## PROTECTION OF BENEFITS

MCCSR ratio (March 31, 2017).....	<b>222%</b>
Assuris.....	<b>1x</b>

## SIZE OF EXISTING CANADIAN ANNUITY BUSINESS

	Group	Individual
<b>Membership data</b>		
Number of pensioners	<b>48k</b>	<b>11k</b>
Monthly pension payments	<b>\$20m</b>	<b>\$4m</b>
<b>Actuarial reserves</b>	<b>\$3.0b</b>	<b>\$0.5b</b>

## ADMINISTRATION (Annuitant services staff)

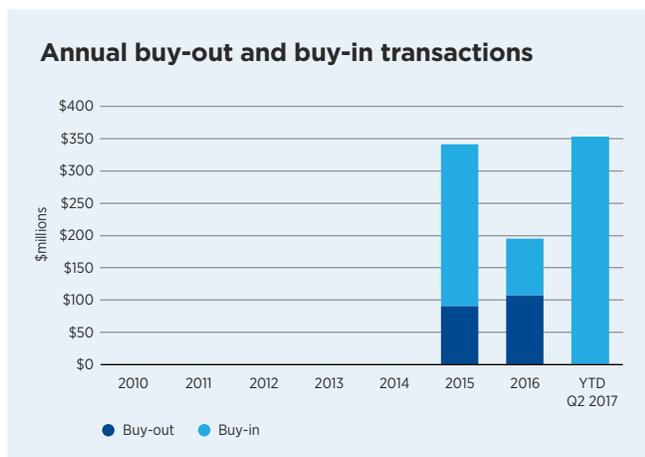
Staff size.....	<b>8</b>
Location.....	<b>Québec City, QC</b>
Language spoken.....	<b>English, French</b>

# RBC LIFE INSURANCE COMPANY

## COMMENTARY

RBC Life Insurance Company (RBCI) entered the Canadian PRT market in 2015, and had a very strong start with the third-largest market share (13%) in its first year. While RBCI is relatively new to the Canadian PRT market, RBCI's UK longevity swap team has been participating in the UK PRT market for over a decade. In setting up RBCI's PRT business, RBCI leveraged both their UK PRT experience and the pension administration capabilities supporting RBC's pension plans.

To date, RBCI has tended to do less transactions but at a higher average size compared to other insurers. This is evidenced by their average transaction size since 2015. Most recently, in the second quarter of 2017, RBCI participated in the largest single Canadian annuity transaction to date, with \$900 million of pension risk from an undisclosed company being transferred between RBCI, Sun Life and Canada Life.



## GROUP ANNUITY ACTIVITY FOR CALENDAR YEAR 2016

Market share.....	<b>7%</b>
Number of transactions.....	<b>7</b>
Average transaction size.....	<b>\$28m</b>

## GROUP ANNUITY ACTIVITY FROM 2015 TO Q2 2017

Market share.....	<b>13%</b>
Value of transactions .....	<b>\$0.9b</b>
Average transaction size.....	<b>\$49m</b>

## MOST RECENT FINANCIAL STRENGTH RATINGS

S&P.....	<b>AA-</b>
Moody's.....	<b>A1</b>
AM Best .....	<b>A</b>
Fitch.....	<b>AA</b>
DBRS.....	<b>AA</b>

## PROTECTION OF BENEFITS

MCCSR ratio (January 31, 2017) .....	<b>224%</b>
Assuris.....	<b>1x</b>

## SIZE OF EXISTING CANADIAN ANNUITY BUSINESS

	Group	Individual
<b>Membership data</b>		
Number of pensioners	<b>6k</b>	<b>Not disclosed</b>
Monthly pension payments	<b>\$5m</b>	<b>Not disclosed</b>
Actuarial reserves	<b>Not disclosed</b>	<b>Not disclosed</b>

## ADMINISTRATION (Annuitant services staff)

Staff size.....	<b>121</b>
Location.....	<b>Mississauga, ON</b>
Language spoken .....	<b>English, French</b>

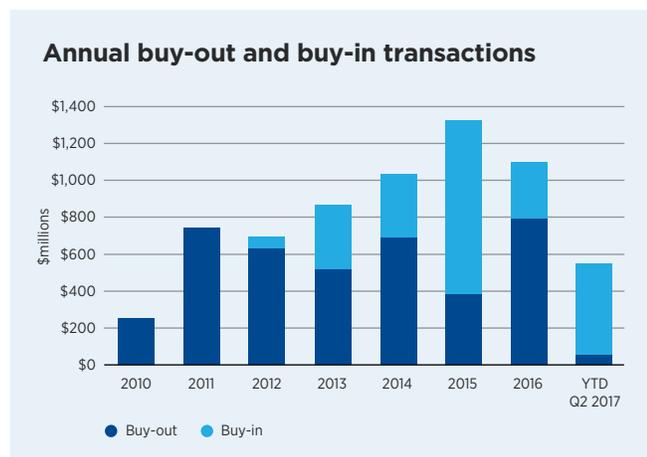
Notes: Credit ratings relate to senior debt. Number of pensioners includes deferred vested annuitants. Annuitant services staff also support RBC's pension plans.

# SUN LIFE ASSURANCE COMPANY OF CANADA

## COMMENTARY

Sun Life Assurance Company of Canada (Sun Life) has had a significant presence in the Canadian PRT market for some time. Sun Life has had the largest share of the annual Canadian PRT market for the nine years ending 2016. Their market share has been in the range of 40% to 60% in each of the past six years.

Sun Life has been involved with a number of significant transactions over the past few years. In early 2015, Sun Life announced that it had entered into the first-ever Canadian longevity insurance transaction with BCE Inc., covering the longevity risk on \$5 billion of its pension obligations. At the end of 2015, Sun Life finalized a “combined” annuity buy-in transaction worth \$530 million, where two separate plan sponsors benefited from complimentary inflation indexation provisions. In 2016, Sun Life announced a \$350 million inflation-linked buy-out annuity for Loblaw Companies Limited, which was a joint transaction with BMO Insurance. Most recently, in the second quarter of 2017, Sun Life participated in the largest single Canadian annuity transaction to date, with \$900 million of pension risk from an undisclosed company being transferred between Sun Life, Canada Life and RBCI. The second quarter of 2017 also saw Sun Life complete a unique buy-in annuity covering past and future benefits for active members.



Notes: Credit ratings applicable to Sun Life Assurance Company of Canada. Information on the size of Sun Life's existing Canadian annuity business was provided with group and individual combined.

## GROUP ANNUITY ACTIVITY FOR CALENDAR YEAR 2016

Market share.....	<b>41%</b>
Number of transactions.....	<b>20</b>
Average transaction size.....	<b>\$55m</b>

## GROUP ANNUITY ACTIVITY FROM 2014 TO Q2 2017

Market share.....	<b>42%</b>
Value of transactions.....	<b>\$4.0b</b>
Average transaction size.....	<b>\$58m</b>

## MOST RECENT FINANCIAL STRENGTH RATINGS

S&P.....	<b>AA-</b>
Moody's.....	<b>Aa3</b>
AM Best.....	<b>A+</b>
Fitch.....	<b>n/a</b>
DBRS.....	<b>AA</b>

## PROTECTION OF BENEFITS

MCCSR ratio (June 30, 2017).....	<b>229%</b>
Assuris.....	<b>1x</b>

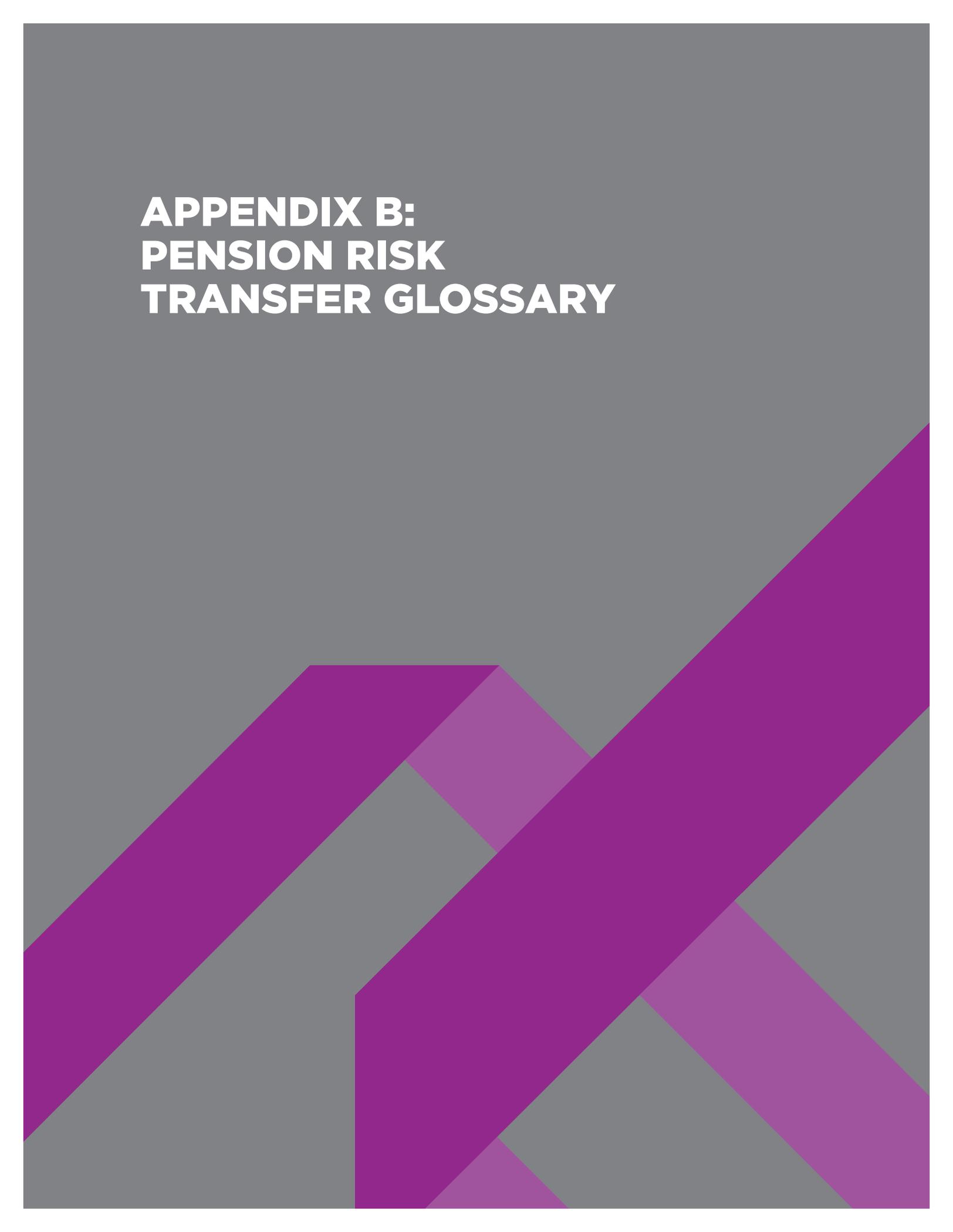
## SIZE OF EXISTING CANADIAN ANNUITY BUSINESS

	Group + Individual
<b>Membership data</b>	
Number of pensioners	<b>225k</b>
Monthly pension payments	<b>\$88m</b>
<b>Actuarial reserves</b>	<b>\$12.3b</b>

## ADMINISTRATION (Annuitant services staff)

Staff size.....	<b>24</b>
Location.....	<b>Montréal, QC</b>
Language spoken.....	<b>English, French</b>

**APPENDIX B:  
PENSION RISK  
TRANSFER GLOSSARY**

The background of the page is a solid grey color. In the lower half, there is a decorative graphic consisting of several overlapping, angular shapes in various shades of purple and magenta. These shapes are arranged in a way that creates a sense of depth and movement, with some shapes appearing to be in front of others. The overall aesthetic is modern and professional.

## **ANNUITY PURCHASE PROXY**

Unlike stocks and bonds, plan sponsors do not have access to a public market that can assess the price of transferring risk to an insurer. Currently, the only way to determine the true cost of transferring risk is to request a quote from insurers. However, plans subject to solvency funding require a means of estimating the cost of fully settling their plan; this process involves annuitizing at least a portion of their plan. Therefore, the Canadian Institute of Actuaries publishes the annuity purchase proxy quarterly to allow the calculation of solvency liabilities. The annuity purchase proxy is determined through a combination of hypothetical annuity quotes as of the end of the quarter and actual live quotes that occurred throughout the quarter.

## **ASSURIS**

Assuris is a Canadian organization funded by life insurers to protect policyholders if an insurer becomes insolvent. Assuris' role is to facilitate the transfer of policies from an insolvent insurer to a solvent insurer or insurers. Assuris provides protection up to specific limits based on the type of insurance product. In the case of buy-out annuities, Assuris guarantees that annuitants will receive their full pension income if the amount is less than \$2,000 per month; otherwise, they receive the greater of \$2,000 per month and 85% of the monthly pension income promised by the insolvent insurer. For buy-in annuities, only the 85% coverage generally applies. However, it's important to note that these are guaranteed minimum levels, and the liquidation of the insolvent insurer may therefore result in higher benefits being provided. Finally, when two life insurance entities exist within one larger organization, some insurers provide two levels of Assuris coverage. Please refer to the [Assuris website](#) for more information.

## **BOOMERANG RISK**

Boomerang risk refers to the risk that some of the obligations previously transferred to an insurer through a buy-out or buy-in annuity may revert to the plan sponsor if the insurer becomes insolvent (i.e., the pension income that is not transferred to a solvency insurer(s) through Assuris). British Columbia and Quebec have introduced legislation to eliminate boomerang risk for buy-out annuities, with Ontario announcing similar plans and other jurisdictions looking at this as well.

## **BUY-IN ANNUITIES**

Similar to a buy-out annuity, under a buy-in the plan pays a single premium to the insurer. In return, the insurer becomes responsible for paying the members' pensions and assumes all related risks. However, in contrast to a buy-out, the pension plan continues to administer the benefits. Instead of the insurer paying the members' pensions, the insurer makes the payments to the plan; in turn, the plan pays the members. Thus, there is no change from a plan member perspective. A buy-in is generally viewed as investment decision, whereas a buy-out is a settlement of obligations. This difference is a key distinction when it comes to the funding and accounting implications of buy-ins versus buy-outs.

## **BUY-OUT ANNUITIES**

Under a buy-out annuity, the plan sponsor pays a single premium to the insurer. The insurer then assumes all obligations for the insured members, including the payment and administration of benefits. Each member receives an individual annuitant certificate that outlines their benefits and receives pension benefits from the insurer instead of their pension plan. Sometimes referred to as a "traditional group annuity," a buy-out annuity is what is purchased when a plan is winding up, but it is increasingly being used by ongoing plans.

## **INFLATION-LINKED ANNUITIES**

Inflation-linked annuities are buy-out or buy-in annuities in which pension benefits are subject to contractual pension increases over time, where the increases are linked with inflation.

## **IN-KIND ASSET TRANSFER**

Under an in-kind asset transfer, instead of the buy-out or buy-in premium being paid in cash, the premium is paid to the insurer through a transfer of securities, which may also include a cash portion. The plan saves on transaction costs due to not having to liquidate securities, and there may be additional pricing benefits to the extent that the insurer can use the securities within their own assets.

## **LONGEVITY IMPROVEMENTS**

Longevity improvements refers to changes in how long people will live in the future relative to how long they are currently living.

## **LONGEVITY INSURANCE**

Under a longevity insurance contract, the pension plan agrees to a pre-determined series of fixed future premium payments to an insurer based on agreed-upon longevity assumptions and additional charges. In return, the insurer provides the pension plan with the actual pension payments payable to the plan members covered by the transaction. Therefore, the pension plan's future payments are certain and won't increase (decrease) if plan members live longer (shorter) than expected.

## **QUOTE**

A quote refers to the process of obtaining pricing and other information from insurers for the purchase of a buy-out or buy-in annuity. The process begins with a request for quotation, or RFQ, being sent to insurers. It ends with insurers providing responses to the RFQ, including pricing information that is typically valid only until the afternoon of the day the quote is received.

## **REINSURANCE**

Reinsurance is effectively insurance purchased by an insurance company for specific risks. For example, an insurer may reinsure all or a portion of the longevity risk for a particular PRT transaction with a reinsurer.

## **TOP-SLICING**

Top-slicing is a buy-out or buy-in annuity that covers a subset of plan members with large pension amounts. These members are targeted because they make up a disproportionate share of liabilities. This creates concentration risk, which can magnify longevity risk, especially since these members tend to have the longest longevity expectations as a result of their high affluence.

## **TRANCHING AND TRANCHES**

Tranching refers to dividing a larger transaction into smaller pieces, with the resulting smaller pieces referred to as tranches that may go to different insurers.

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