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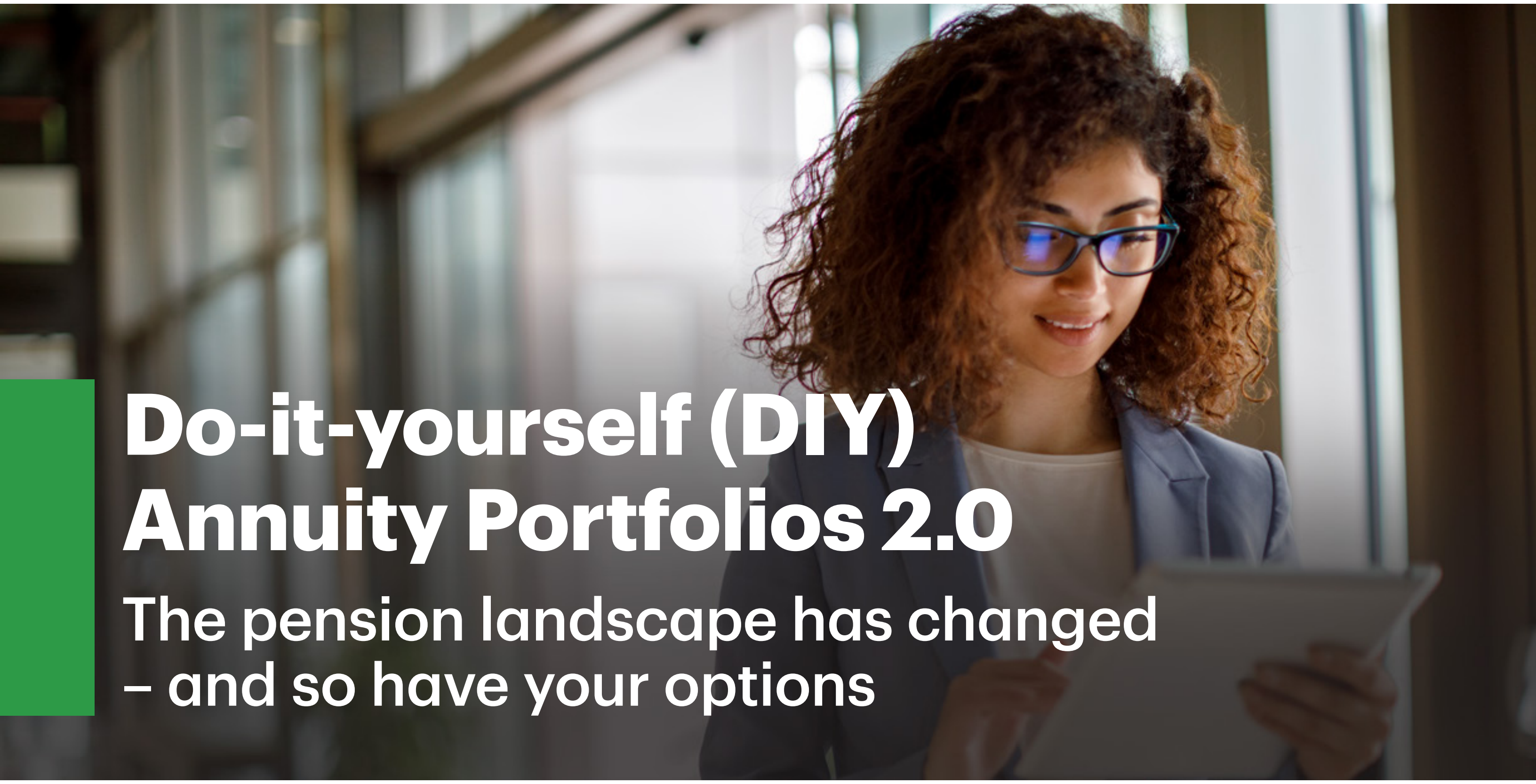


Do-it-yourself (DIY) Annuity Portfolios 2.0

The pension landscape has changed – and so have your options

At a glance

- Retiree solutions emphasizing cost-effective cashflow generation are gaining in importance; as they can now offer savings of between 15% to 30% over traditional buy-in annuities
- Barriers to accessing private fixed income instruments have come down allowing plan sponsors to create attractive, DIY annuity portfolios
- Commercial mortgages are an attractive addition to TD Asset Management's (TDAM) next generation of DIY annuity portfolios

Defined benefit (DB) pension plan demographics are changing. Retirees now make up a larger portion of many plans, with active contributing membership in decline – as a result, the potential for serious cash management challenges has never been greater.[1] Meeting pensioner cashflows through redemptions and disinvestment can result in transaction costs and are only possible when the assets are sufficiently liquid. In times of market stress, the cost of trading 'liquid' assets can increase significantly, and some funds can even restrict trading. Moreover, arranging cashflow disinvestments in a timely manner can be a governance burden for sponsors.

The cashflow certainty many plans seek in traditional fixed income solutions can be expensive. Central banks have pledged to ensure public bond yields remain at historically low levels, with little expectation for meaningful rate rises in the near term. Similarly, the appealing cashflow certainty of a traditional buy-in annuity requires a significant and costly replacement of plan assets. For example, in the case of indexed plans, indicative annuity pricing currently requires plan sponsors lock-in a negative credited rate.

Fortunately, the breadth of investment instruments now available and a Liability Driven Investment (LDI) practitioner's ability to combine them with purpose can create opportunities in an otherwise challenging environment. This article will explore innovations in structuring retiree focused portfolios that challenge conventional wisdom around the merits and costs of transferring risk versus retaining and managing it.

What is the cost of annuitization?

For many plan sponsors, the costs associated with a full pension buyout have been an obstacle to transacting. Evaluating the cost of annuitization is relative. For some, "cost" is relative to the plan's funded status. This is relatively easy to evaluate.

For others, "cost" is an economic or opportunity cost. In the case of buy-in annuities "cost" can also be framed as a question around the equitable treatment of plan participants and the security of benefits for the remaining plan members for whom annuities are not being purchased. In either of these cases the cost of purchasing annuities is measured against how a plan sponsor could otherwise invest their plan assets while minimizing the risk retained. This is a little more difficult to evaluate.

Using price discovery for transparency

The general lack of transparency on annuity pricing requires plan sponsors or their consultants to perform periodic price discovery directly with providers. Another option is to use the data collected and published quarterly by the Canadian Institute of Actuaries ("CIA"). This data includes actual annuity purchases that have taken place and bona fide annuity quotations where the purchase does not take place, both of which inform the guidance the CIA provides around proxy annuity rates.

For example, at April 30, 2020, the three most competitive annuity providers quoted an illustrative medium duration (duration 11.4), non-indexed group of annuitants at an average credited rate of 2.36%.[2] This data allows for a comparison to other investment instruments/options as shown in **Figure 1**. For a plan sponsor considering purchasing an annuity for a similar duration profile group of plan members, the 2.36% rate would be equivalent to the yield they could expect to earn by investing in a fairly conservative liability matching portfolio of 65% provincial bonds and 35% corporate bonds. However, note the significant incremental yield pick-up of 244 bps when the investor has access to the private fixed income markets.

Figure 1: Investment option yields (nominal)

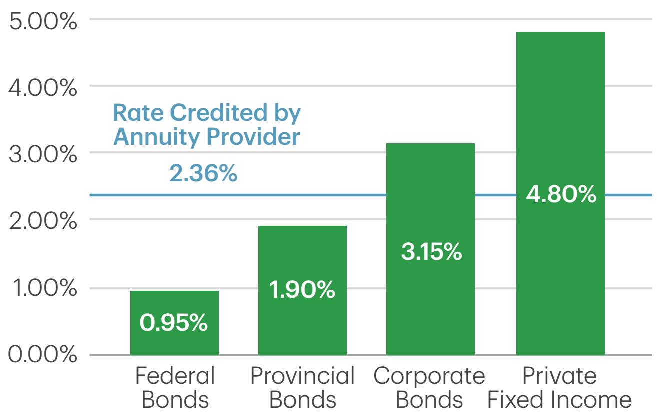
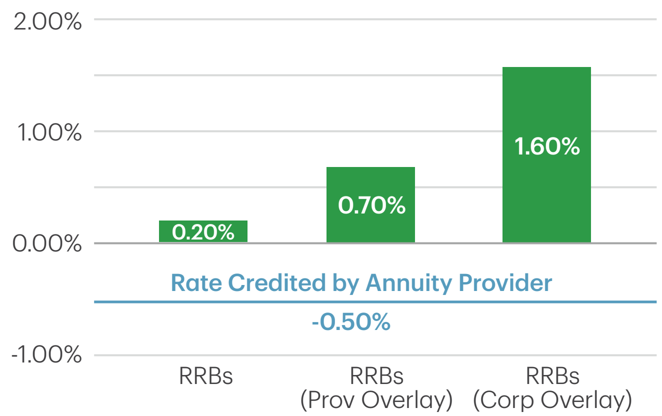


Figure 2: Investment option yields (CPI-indexed)



Source: TD Asset Management. As of April 30, 2020. For illustrative purposes only.

For a CPI-indexed group of annuitants, the average credited rate of negative 50bps shown in **Figure 2** is quite interesting. Putting this rate in context, an investor could expect to earn 70bps more on a portfolio of Government of Canada real return bonds, compared to what a traditional annuity provider would offer. Perhaps this is a reason the market has seen so little CPI-indexed annuity transactions and the market capacity for such annuities is so much lower.[3]

This may also be a reason real return bond (RRB) overlay strategies are gaining traction. The incremental 120bps and 210bps offered on RRB-plus type strategies (RRBs with provincial and corporate bond spread overlays respectively) could further entice a plan sponsor to retain their fixed income assets as opposed to liquidating them to fund the relatively sizeable premium or handing them over to an annuity provider.

Opportunity

Rationalizing the rate

To better understand the rates annuity providers are willing to offer the plan sponsor, it is important to understand their risk management model. Life insurers tend to place a high priority on minimizing short term earnings volatility. For example, Canadian insurers are required to perform periodic tests to ensure that the expected cash flows from their investment portfolios will sufficiently meet their expected liability obligations. To the extent that the insurers are not perfectly cash flow matched, they are exposed to costly reinvestment and/or disinvestment risk.

In addition, regulators require insurers to hold additional capital (surplus assets) to ensure the company can remain solvent in future, potentially volatile environments. While typically never drawn upon, the pledged capital comes at a cost which is often referred to as the “capital drag”.

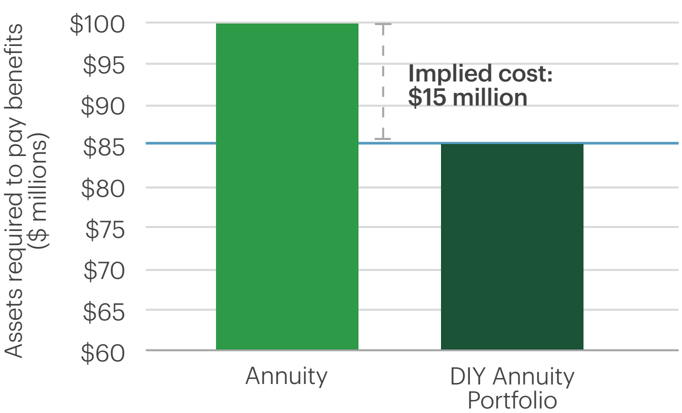
To mitigate these risks, life insurers generally adopt strict cash flow matching (or slightly less onerous key-rate duration matching) strategies composed of fixed income or liability hedging assets only. Because return-seeking assets, such as equities, do not have liability cash flow matching properties and attract significant additional regulatory capital requirements, they are generally excluded from a life insurer’s asset mix.

Moreover, since insurance companies operate within smaller risk budgets, portfolios are constructed with prudence and conservatism. As a result, this low tolerance for volatility and capital drag may be passed along in their product pricing.

Opportunity cost – an example

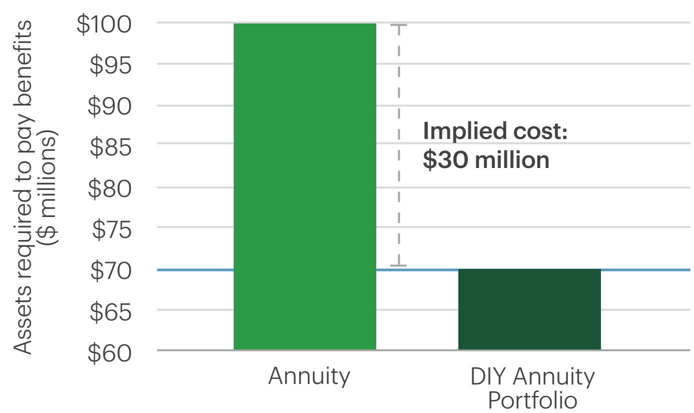
Consider a plan sponsor seeking to purchase $100mm of the medium duration group annuity. Again, using the information shown in **Figure 1**, if the annuity provider were to invest in a combination of public and private fixed income, they may be able to earn a yield of approximately 3.76% (net of fees). From the insurer’s perspective, the 140 bps difference between what they earn and what they credit to the plan sponsor is required to cover expenses, asset defaults, profit margins and capital charges. From the perspective of a plan sponsor who is comfortable with retaining some risk, but would also consider the purchase or exchange of $100mm worth of plan assets for these annuities, this represents an opportunity cost of approximately $15mm[5] as shown in **Figure 3**.

Figure 3: Comparing non-indexed annuity costs



$100 million annuity purchase may cost $15 million

Figure 4: Comparing CPI-indexed annuity costs



$100 million annuity purchase may cost $30 million

Source: TD Asset Management. As of April 30, 2020. For illustrative purposes only.

In the case of fully consumer price index (CPI)-indexed annuities, **Figure 4** shows that for every $100mm of annuities, the opportunity cost could be as high as $30mm.[6]

Against this backdrop, the question for the plan sponsor becomes: “Can I invest directly in the same assets as the annuity providers?” Or put differently, “How can I do this myself?”

A Do-it-yourself annuity portfolio

While plan sponsors have long had access to alternative assets such as real estate, infrastructure and private equity, the high-barrier-to-entry primary ingredient in an insurer's annuity portfolio is private debt. Fortunately, improved access to private debt, through investment vehicles like pool fund trusts, means that plan sponsors can invest directly in the underlying instruments and build their own annuity portfolio—a DIY annuity portfolio.[7]

Since the group payout annuity has no surrender, withdrawal or portability features, annuity providers typically match these illiquid liabilities with a high allocation to illiquid credit. If a plan sponsor were to structure their plan's assets similarly, it might look something like the illustration within **Figure 5**:

- private fixed income (including commercial mortgages and private debt) to harvest uniqueness premiums
- public corporate bonds for diversification
- government bonds & strips for rebalancing liquidity and long liability tail protection

The obvious benefit to creating a DIY annuity portfolio is that a plan sponsor can save the $15mm to $30mm opportunity cost. The other benefit is that the savings can be used to help manage the harder to hedge, longer duration actives and/or deferred vested liabilities that often remain after annuitization. Putting everything together, from an actuarial valuation perspective, with many jurisdictions moving to modified going concern funding regimes, the strategy may also help support setting a potentially higher liability discount rate.[8,9]

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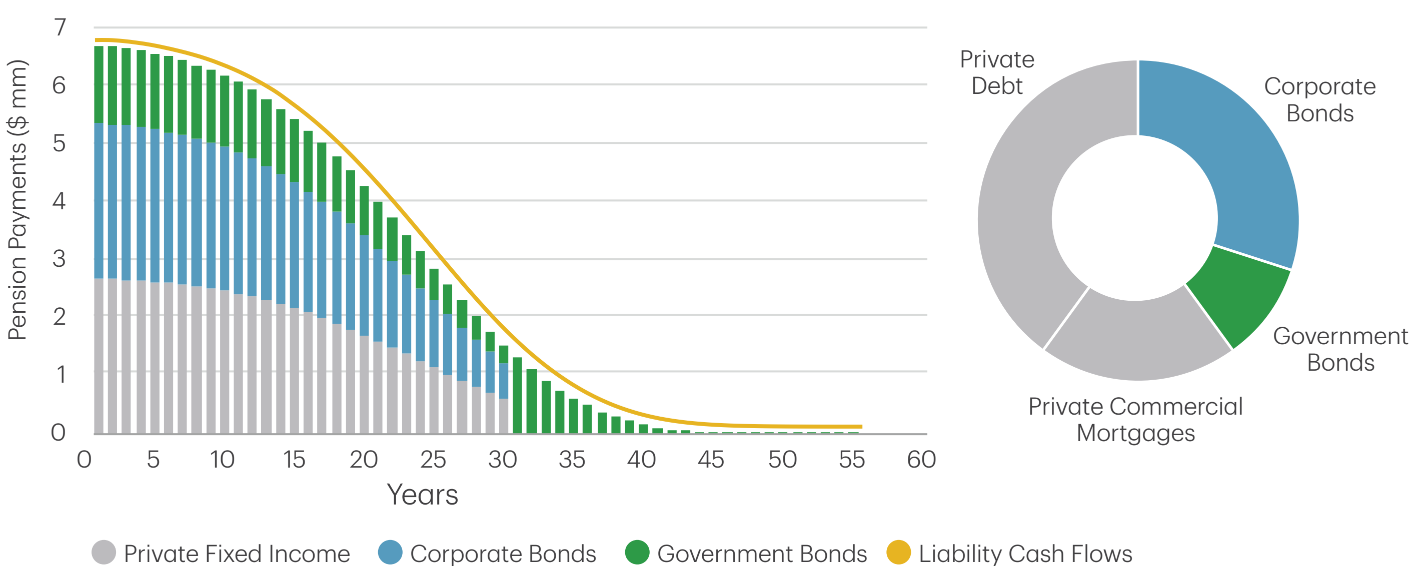
Figure 5: Diversified cashflow generation strategy to help meet expected retiree pension payments



Source: TD Asset Management. For illustrative purposes only.

The Power of Private Fixed Income

A comprehensive private fixed income platform encompasses both private commercial mortgages and private debt.

Private commercial mortgages:
In its simplest terms, a commercial mortgage is a mortgage on a property other than a single-family residence. It includes loans secured by office, retail, industrial and multi-residential rental properties. As a fixed income instrument, commercial mortgages can offer a great fit to **shorter-term** liabilities.

Private debt:
An investment grade quality private debt strategy can consist of a broad range of financings such as infrastructure debt, power & energy projects, credit tenant leases, ground leases and private securitizations. Filling the gap between bank financings and the public bond markets, private debt deals are typically structured with very bespoke covenants and security packages, terms and repayment schedules. As a fixed income instrument, private debt can offer a great fit to **mid- and longer-term** liabilities.

Yield, safety & diversification:
Private fixed income investments earn a “uniqueness” premium over comparably rated public bonds. Investors are compensated for both giving up liquidity and the degree of customization in structuring each transaction. The terms of the transactions are negotiated directly between the borrower and the investor, and the ability to dictate conditions can allow investors to become price makers rather than price takers. In this way a well structured private transaction tends to have stronger covenants and security packages than the typical unsecured public bond.

Private fixed income can also provide access to companies or projects that do not issue publicly and to sectors that my be underrepresented in the index. Less correlated loan risk can help to further reduce portfolio risk. The yield enhancement, safety and diversification of private fixed income investments are the cornerstone of an attractive DIY annuity portfolio.

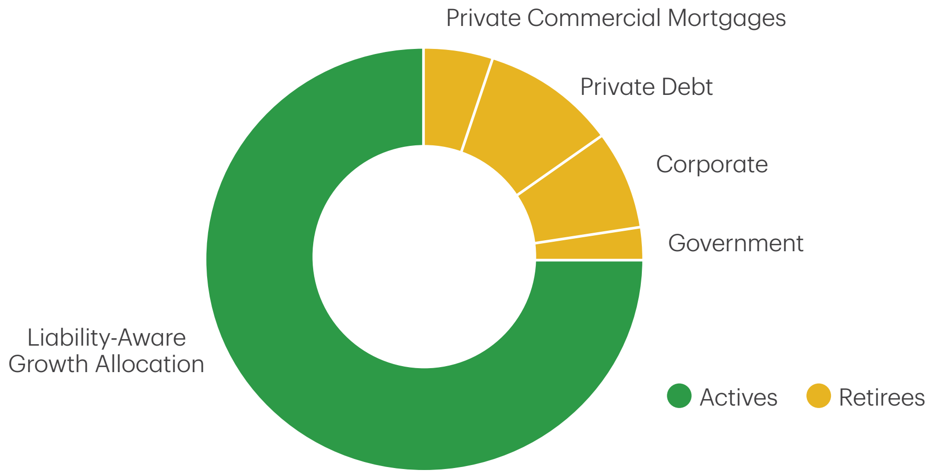
Getting paid to wait

Should a plan still ultimately seek a buyout, we believe the optimal time to purchase annuities is after your plan has no more active members. The DIY annuity portfolio allows you to capture additional returns while significantly reducing interest rate and inflation risk until such time as you are in a position to wind up your plan. These additional returns can be used to cover the cost of additional service accruals, reducing the additional contributions needed to be made to the plan.

Consider a plan with 25% retirees, 75% actives and deferred vested members as shown in **Figure 6.** Like a traditional buy-in annuity, the DIY annuity portfolio backs the retiree liabilities. The allocation to private fixed income assets provides diversification to the total plan mix, while at the same time generating the cashflows required to help meet the monthly payments to its retirees. While a traditional buy-in annuity may be viewed as part of the asset portfolio, it unfortunately cannot be used as collateral for any sort of overlay that might be part of the liability-aware growth allocation. However, when the plan continues to own the assets, flexibility is retained and overlays remain possible.

> **We believe the optimal time to purchase annuities** is after your plan has no more active members.

Figure 6: DIY annuity portfolio as innovative alternative to a traditional buy-in annuity



Source: TD Asset Management. For illustrative purposes only.

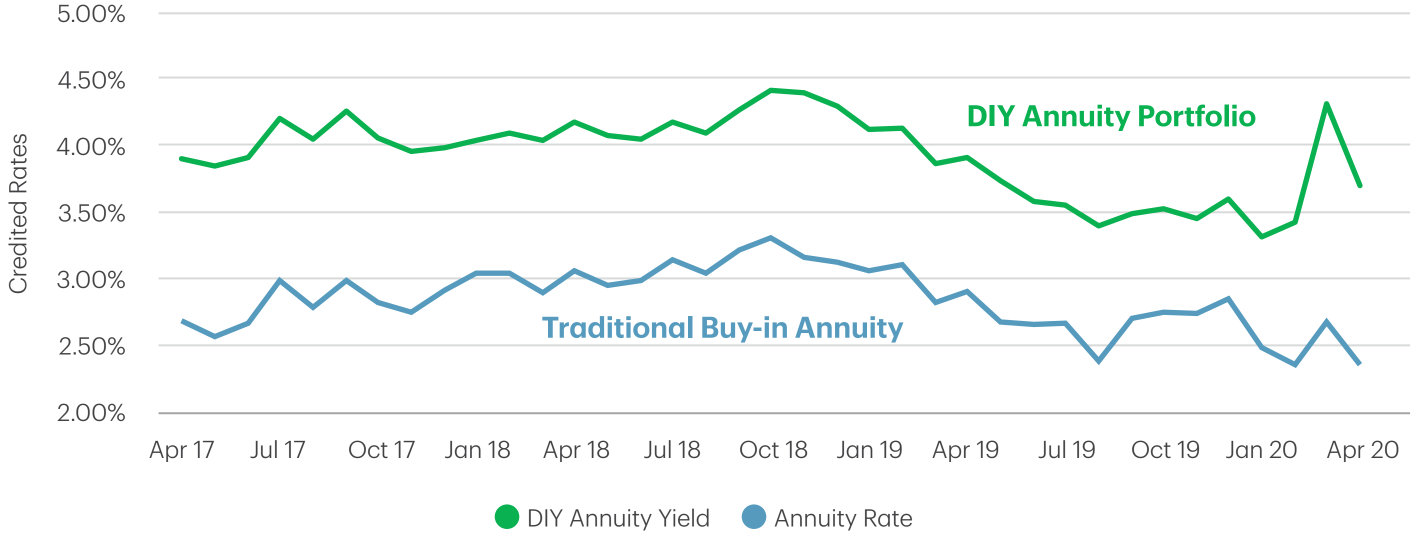
Demographics are not static

Another benefit of this approach is that alongside the gradual aging of its plan membership, there is a natural demographic rebalancing that occurs as active and deferred members move into retiree paydown status. In this way the DIY annuity portfolio can be topped up from time-to-time, in a similar manner as one might consider purchasing annuities in tranches.

Demographics

Interestingly, the savings an investor could expect by directly investing in the DIY annuity portfolio is not just a function of today's rate environment. As can be seen in **Figure 7**, history shows DIY annuity portfolios have consistently provided a superior credited rate compared to a traditional buy-in annuity.

Figure 7: Historical credited rate advantage of DIY annuity portfolio compared to buy-in annuity



Note: Weighted YTM is not directly comparable to an annuity credited rate.
All other rates are Internal Rates of Return (IRR). DIY Annuity Portfolio rate is net of fees.
Source: TD Asset Management and Canadian Institute of Actuaries (CIA). As of April 30, 2020. For illustrative purposes only.

The new pension plan option in 2020 and beyond?

When it comes to DIY annuity portfolios, the benefits are clear: There is a potential 15% to 30% opportunity cost savings when compared to purchasing annuities. You get paid while you wait as it is a more cost-effective interim strategy than a traditional buy-in annuity. Finally, there is greater flexibility. By retaining underlying assets, plans can use assets as collateral for overlay strategies and planned asset cashflows can help alleviate potentially serious liquidity issues. While this strategy is gaining traction in Canada with several large plans transitioning into DIY, it is still not mainstream. The choice is ultimately yours: continue with status quo or adapt the new thinking from TDAM.

Portfolios

[1] American Academy of Actuaries, Issue Brief, September 2019, "Pension Plan Maturity – Why Big Plans Mean Big Risk" [2] Canadian Institute of Actuaries, Preliminary Communication for Assumptions for Hypothetical Wind-Up and Solvency Valuations with Effective Dates on or after April 30, 2020 (but no later than December 30, 2020), May 14, 2020. [3] Canadian Institute of Actuaries, Education Note, Assumptions for Hypothetical Wind-Up and Solvency Valuations with Effective Dates Between December 31, 2019 and December 30, 2020, April 24, 2020. Education note states that there are capacity constraints within the Canadian group annuity market. The liability thresholds where a plan my have difficulty in effecting a single annuity purchase to settle its liabilities is significantly lowered for indexed annuities compared to non-indexed annuities. [4] Office of the Superintendent of Financial Institutions Canada (OSFI) Life Insurance Capital Adequacy Test (LICAT) guideline, October 2018. [5] Approximated as \$100mm x 140bps x 11.4 years duration. [6] Approximated as \$100mm x 240bps x 14.2 years duration. [7] A do-it-yourself annuity portfolio can be augmented with longevity risk protection for an even more comprehensive solution. [8] Canadian Institute of Actuaries, Revised Education Note, Alternative Settlement Methods for Hypothetical Wind-Up and Solvency Valuations, April 23, 2020. An alternative approach to settling benefits may be the establishment of a portfolio of assets that produces cash flows that match the expected benefit payments to plan members (a Replicating Portfolio). [9] Canadian Institute of Actuaries, Revised Education Note, Determination of Best Estimate Discount Rates for Going Concern Funding Valuations, December 7, 2015. For a plan where assets are invested in part in treasury bills or bonds, and are expected to be invested that way indefinitely, the best estimate of the long-term investment return on that class of assets may be reasonably viewed as the market yield on the particular investments or the yield on a market index representative of such investments at the calculation date, adjusted to reflect an allowance for reinvestment and the effect of possible changes in interest rates on future investments, if appropriate.

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