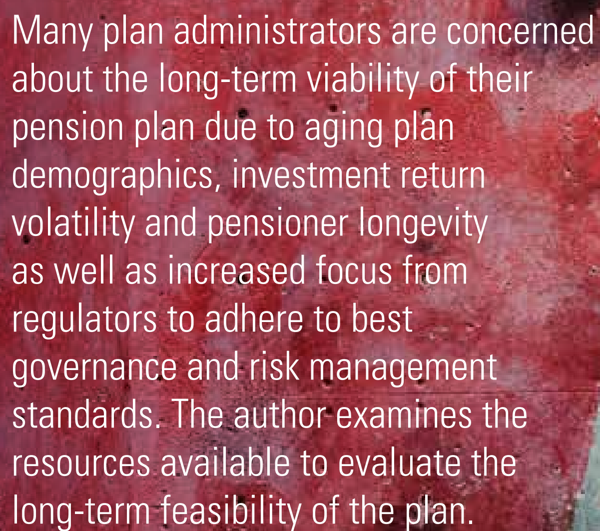

Many plan administrators are concerned about the long-term viability of their pension plan due to aging plan demographics, investment return volatility and pensioner longevity as well as increased focus from regulators to adhere to best governance and risk management standards. The author examines the resources available to evaluate the long-term feasibility of the plan.

Target Benefit Pension Plan Sustainability: Assessing and Managing the Challenges

by | **Jeff Bradley**

plans & trusts
education | research | information

Reproduced with permission from *Plans & Trusts,* Volume 41, No. 1, January/February 2023, pages 8-13, published by the International Foundation of Employee Benefit Plans (www.ifebp.org), Brookfield, Wis. All rights reserved. Statements or opinions expressed in this article are those of the author and do not necessarily represent the views or positions of the International Foundation, its officers, directors or staff. No further transmission or electronic distribution of this material is permitted.

Ensuring that pension plans are structured to maintain long-term sustainability requires an understanding of the challenges on the horizon and ongoing assessment and management of existing and emerging risks. There's an added element to maintaining long-term sustainability when the benefits provided by the plan, either some or all, are dependent on the plan's funded position. These plans are considered "target benefit" pension plans because the amount of monthly pension a member receives can change. For example, in the case of defined benefit multi-employer plans, the earned benefit and future benefit levels can be adjusted at any time depending on the plan's funded position. For some other defined benefit pension plans, including many public sector and broader public sector plans, ancillary benefits such as indexing and early retirement subsidies may be conditional on the funded status of the plan.

But what does sustainability mean? At a basic level, it means the plan can continue to provide appropriate benefits over the long term, under a variety of scenarios, while maintaining an acceptable cost. This requires balancing the level of benefits with the level of security while also avoiding intergenerational inequity. There are many factors to consider when designing and maintaining a sustainable plan. Prudent short- and long-term planning will help pension plans anticipate and navigate potential problems before they arise.

Challenges to Sustainability

There are several risks that could create challenges to pension plan sustainability in the years ahead. These include investment return volatility, retirees living longer than expected, aging plan demographics and regulatory changes. This article will discuss the challenges to sustainability that target benefit pension plans face and the ways that trustees can assess and manage their risks.

Investment Return Volatility

It is not uncommon to see investment returns of 15% one year followed by -2% the next year. With this level of volatility in asset levels, managing the financial position of a pension plan can be very difficult. How large a deficit can the plan handle before the contributions become insufficient? When should surplus be used to improve benefits? If the funded position of a plan swings from a surplus one year to a deficit the next, how can you be confident that decisions made now will support your long-term objectives? For plans with fixed contributions, long-term funding can be especially challenging because, in most cases, there is no ability to increase contributions in the short term if needed.

Retirees Living Longer

The longer a retiree lives, the more expensive it becomes for a pension plan because the monthly pensions are paid for a longer period. Life expectancy has steadily increased for several decades, which has significantly increased the cost of providing a pension. In the late 1990s, the average 65-year-old Canadian retiree was expected to live until approximately age 82 for males and age 85 for females. Today, a 65-year-old retiree is expected to live until approximately age 87 for males and age 90 for females. If retirees receive pension payments for five years longer than originally expected, that increases the cost of providing a pension by about 20%. That means a plan that was 100% funded in 1999 would be just over 80% funded today,

Takeaways

- Various challenges like legislative changes, the volatility of investment return, retirees living longer than anticipated and aging plan demographics could make it difficult for pension plans to be sustainable in the years to come. To achieve sustainability, it is necessary to strike a balance between security and benefits while simultaneously minimizing intergenerational inequality. Pension plans will be able to identify and overcome possible issues before they occur with the support of prudent short- and long-term planning.
- Sensitivity testing, scenario testing and stochastic asset/liability modelling are three different levels for assessing the risks of target benefit pension plans. The plan's actuary performs these assessments at the trustees' request. Many plans find it advantageous to perform stochastic asset/liability modelling every three to five years and sensitivity testing or scenario testing every year or two.
- A successful management strategy should be driven by clear objectives, a well-defined risk tolerance and sound governance once the risks to a plan have been recognized and evaluated. The management approach should be continuously assessed to ensure that it remains suitable for the plan—This will allow trustees to make any necessary adjustments. Investment strategy, funding strategy and benefit strategy are typically the three areas of risk management for target benefit pension plans.

due solely to changes in life expectancy (and ignoring all other factors such as investment returns, plan changes, etc.). How long will retirees live 40 years from now? When actuaries assess the current funded status of a plan, the life expectancy of a new plan member who will retire in 40 years needs to be factored into the current-day calculation. As you can imagine, given that we have yet to find a way to predict the future with certainty, this poses a challenge.

Aging Plan Demographics

If the average age of the active members increases, the cost of earning a pension also increases. This happens because contributions remitted to the plan by younger members have a longer time horizon to earn investment income. For example, if the average age of active members is 40 and we assume members retire at age 65, contributions to the plan have 25 years to earn investment income before pension payments start. If the average age of active members is 45, contributions only have 20 years to earn investment income, which means higher contributions are needed to make up for less investment income. To keep the average age steady, it is vital that younger members join the plan. However, this is often easier said than done, as active membership is generally driven by employer needs, not plan needs.

In addition to the average age of active members, another demographic risk for plans is an increase in the ratio of retirees to active members. An increase in this ratio will make it harder to fund deficits that emerge because retirees do not contribute to the plan. However, their liabilities could represent a significant portion of the deficit. For plans that have limited or no ability to increase contributions in the short term, this risk is even more pronounced because the only option to address a deficit may be to reduce benefits.

Regulatory Changes

Regulatory changes, especially unexpected ones, can have a major impact on plan funding and long-term sustainability. Over the last ten years, significant pension funding reform for target benefit plans has been introduced across Canada, which resulted in the permanent removal of solvency funding requirements and the introduction of more rigorous going concern funding rules. Going concern assumes the plan will continue to operate for the foreseeable future, while solvency assumes the plan ended on the valuation date and had to pay all members their pension benefits. Given that target benefit pension plans are very unlikely to shut down, removing solvency funding is a necessary change because it is simply an inappropriate minimum funding requirement for these plans. The enhanced going concern funding rules contain new requirements, including:

- Mandating that plans hold a contingency reserve, or buffer, called a provision for adverse deviation (PfAD)
- Restricting benefit improvements until the plan's assets exceed a certain threshold, such as the going-concern liability amount plus the PfAD.

The purpose of a PfAD is to build a new reserve in the funded status of a plan and enhance benefit security. However, if new funding rules are too rigorous, current benefits may no longer be affordable. Given that plans cannot control regulatory changes, this risk is sometimes perceived as having limited management options and, as a result, may not receive the necessary attention.

Even from a high-level view, the landscape of challenges facing pension plan sustainability is vast, with a variety of risks that need to be considered. The task at hand is to figure out how to assess these varying factors in a way that provides the most relevant and actionable results.

How to Assess the Risks

Assessing the risks of target benefit pension plans can be approached from three different levels, as follows.

Sensitivity testing is the simplest approach to quantifying and understanding the impact of certain risks to a plan by changing one variable at a time. This method is used to stress test the plan under specific events such as: What happens if assets drop by 10%? What if retirees live longer than expected? This type of testing provides valuable information to understand how much of a shock the plan can absorb.

Scenario testing is similar to sensitivity testing except that it looks at the impact of changing multiple variables under an individual scenario. An example would be looking at how the projected going concern funded ratio might be affected by different equity return and interest rate environments over the next ten years. How does the funded status of the plan evolve during an economic recession? This scenario might reflect things like lower equity returns, lower interest rates and higher unemployment.

Stochastic asset/liability modelling is the most complex, but it is also the

most robust. This approach uses a computer model to generate thousands of possible scenarios, each with its own likelihood of occurring. This type of modelling offers a more complete picture of a plan's future financial health and sustainability by simulating a wide range of economic and investment scenarios to analyze multiple risk exposures. There are several advantages of asset/liability modelling, including:

- Seeing what the future may hold, including scenarios ranging from the best to the worst case and the likelihood of the events occurring
- Gaining a better understanding of the interaction between changes in contribution levels, benefit levels, investment strategies, assumption changes, future membership growth and plan demographics
- Answering key questions such as: Are the current benefits sustainable? Is the investment strategy appropriate?
- Using the modelling to build a well-defined funding/benefits policy
- Developing and maintaining a disciplined approach to adjust benefit levels.

While stochastic asset/liability modelling empowers strategic thinking and informed decision making, it cannot answer the question of exactly how much risk to take. This is a fiduciary decision that rests with the trustees of the plan.

Sensitivity testing, scenario testing and stochastic asset/liability modelling are done by the plan's actuary at the request of the trustees. Many plans find it useful to do sensitivity testing or scenario testing every year or two and stochastic asset/liability modelling every three to five years.

How to Manage the Risks

Once the risks to a plan have been identified and assessed, a good management strategy should be guided by clear objectives, well-defined risk tolerance and sound governance. Ongoing monitoring of the management strategy will help ensure it continues to be appropriate for the plan and enables trustees to make any changes as needed.

For target benefit pension plans, there are generally three focus areas for risk management: investment strategy, funding strategy and benefit strategy.

Investment Strategy

A sound investment strategy involves reviewing the asset allocation and manager structure to ensure that the risk/reward profile is appropriate based on your objectives and risk tolerance. For example, what portion of the assets should be allocated to equities versus fixed income? Would alternative asset classes such as real estate, infrastructure or private debt help achieve your objectives? How mature is the plan, and what portion of the assets needs to be available for pension payments each month? The general objective of an investment strategy is to optimize the return by maintaining a well-diversified and balanced portfolio without taking on undue risk of loss. Exploring different investment portfolios and their impacts on plan funding will help guide educated decisions.

Funding Strategy

To reduce the volatility of the market value of assets, asset smoothing methods can be used to determine the going concern funded position. As the name suggests, asset smoothing reduces the volatility of the assets by smoothing out the short-term bumps caused by investment returns that are

BIO

Jeff Bradley is a principal and consulting actuary in the pension practice at Eckler Ltd. Specializing in multi-employer pension plans (MEPPs), he joined Eckler in 2007 and consults to a number of large MEPP clients. Bradley has extensive knowledge on funding and solvency valuations, plan design, sustainability analysis, governance, risk management, plan mergers, negotiations, administration and member communication. For several clients, he provides trustee education and presents at plan membership meetings. Active in the profession and in the pension industry, Bradley has published articles on pension issues, served on advisory boards, developed content for examinations for the Society of Actuaries and participated on actuarial education and examination committees. Bradley graduated from Western University with an honours bachelor of science degree in actuarial science and is a fellow of both the Society of Actuaries (FSA) and the Canadian Institute of Actuaries (FCIA).

higher or lower than expected. For example, instead of recognizing the investment gains and losses in the year they occur, an asset smoothing method may recognize investment gains and losses over a five-year period, which significantly reduces the asset volatility. This will bring more stability to the funded position, which in turn will bring more stability to the contribution requirements. Some plans choose not to use asset smoothing because they have conservatism in other areas that provide a cushion to absorb investment volatility. For example, plans with a larger amount of excess contributions may be able to handle swings in contribution requirements that come with using the market value of assets to determine the going concern funded position.

Another important element of the funding strategy is the timing of filing actuarial valuation reports with the regulator. These reports are generally required to be filed at least once every three years. However, a more strategic approach includes filing the reports more frequently. The advantage of filing more often is resetting the three-year clock until the next required report filing is due. This reduces the risk of being forced to file a report when the results are not favourable, which could force the plan to reduce benefits or increase contributions (for plans that do not have fixed contributions).

Benefit Strategy

Building a benefit strategy requires reviewing several factors with the dual goals of providing a framework for the prudent financial management of the plan and guiding decisions about benefit changes. Key considerations include defining when and how benefit reductions will be made if needed, identifying the funding targets for making benefit improvements, evaluating equity among different generations of plan members, and finding the desired balance between higher benefits that are less secure and lower benefits that are more secure.

In the years and decades ahead, investment return volatility, increasing retiree longevity, shifting plan demographics and the changing regulatory environment will impose unique challenges on the pension landscape. Sensitivity testing, scenario testing and asset/liability modelling are powerful tools to assess and manage the risks. Using these tools to develop targeted strategies can alleviate uncertainty and provide a stable foundation for both plan sustainability and member confidence.

pdf/123