

New Frontiers: Optimizing Liability-Backing Portfolio Construction Under IFRS 17

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Issued by the International Accounting Standards Board in 2017, the International Financial Reporting Standards (IFRS) 17 framework became effective on January 1, 2023 and replaced IFRS 4 as the accounting practice for insurance contracts. The new standards aim to increase transparency and harmonize financial reporting for insurance companies in the countries that have chosen to adopt IFRS 17. The new standards also make financial statements more directly comparable against each other. This change shifts the way Canadian insurers value their insurance contract liabilities and recognize income on their financial statements. In this new complex regulatory landscape, insurers should review their investment strategy and make sure it is optimized under IFRS 17.

Key Changes and Impact on Investment Objectives

The impact of investment returns on the insurer’s financial statements is often a key consideration when designing investment strategies. To better understand how the insurer’s investment portfolio can be optimized, we need to examine how liability valuation and income recognition has evolved from IFRS 4 to IFRS 17. The following table provides a high-level summary on the key changes between the two standards:

Figure 1: IFRS 4 vs. IFRS 17 – Key Differences

Consideration	IFRS 4	IFRS 17
Liability Valuation	Liability cash flows are discounted based on the portfolio’s expected return less actuarial margins.	Liability cash flow discounting is delinked from the actual portfolio.
Income Recognition	Income is recognized as the change in reserve that the insurer holds. Since the reserve is determined using the expected return on assets, insurers have an incentive to achieve a high discount rate to value their liabilities.	Income is recognized as the net mark-to-market between investment assets and liabilities. Incremental carry return above liabilities is reflected in income over time.
Investment Objective	Higher focus on maximizing duration-weighted yield, which reduces the present value of liabilities.	Higher focus on achieving an effective hedge against liabilities and limiting volatility, as well as earning incremental return over time.

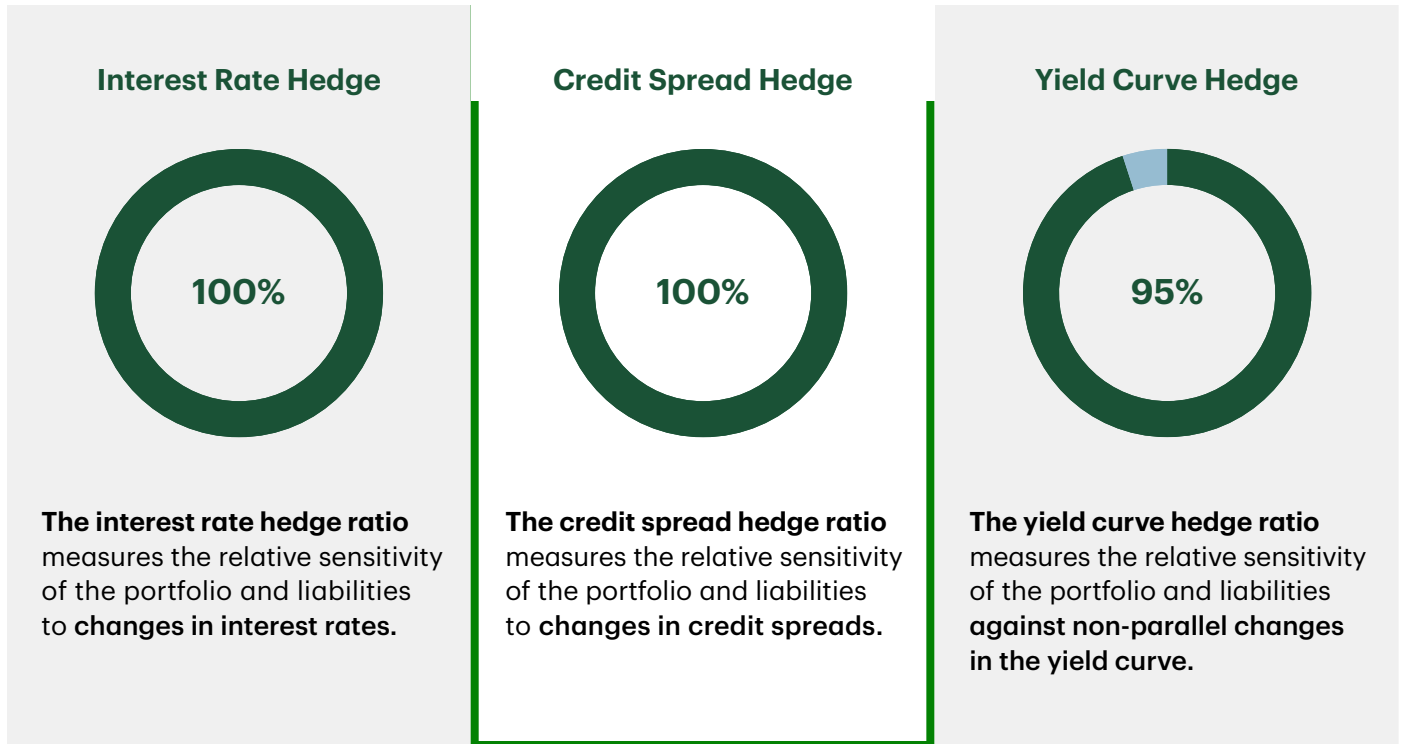
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Understanding Risk Drivers of IFRS 17 Investment Income Volatility

Insurers looking to improve the hedging effectiveness of their liability-backing portfolio first need to understand the risk drivers affecting portfolio return, liability valuation and income volatility. The concept of hedge effectiveness can be expressed in terms of hedge ratios.

Figure 2: Hedge Ratios



The concepts of interest rate and yield curve hedging are not new under IFRS 17. Insurers have historically managed interest rate risk through duration and key rate duration matching relative to their liabilities. The hedge ratios introduced here are an alternative way of expressing the same concept.

Portfolio

Credit Spread Sensitivity Deep Dive

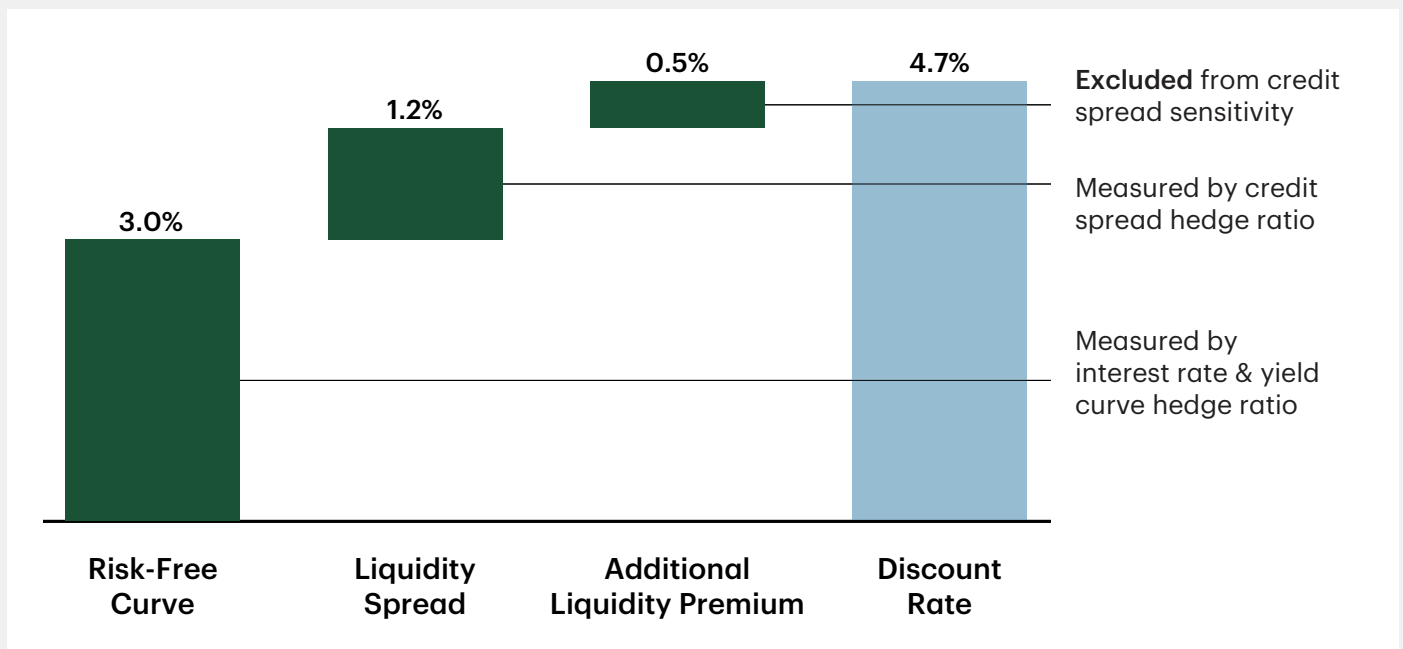
Credit spread hedge is a topic insurers haven't had to worry about until now. Under IFRS 4, credit spread movements within the investment portfolio were passed through to the valuation of liabilities, establishing a natural hedge to credit spread movements within the valuation methodology.

With the de-linking of assets and liabilities under IFRS 17, the passthrough of portfolio credit spread to liability discounting is no longer applicable, and the concept of credit spread sensitivity plays a larger role under the new framework. At TD Asset Management Inc. (TDAM), our preferred approach of measuring credit spread sensitivity is through duration times spread (DTS), a metric that captures the following nuances of quantifying spread risk:

- Credit spread sensitivity can differ between fixed income securities with comparable duration profile. For example, during a risk-off market event, credit securities that are lower on the rating spectrum tend to widen more than higher-rated bonds, contributing more to credit-spread-driven mark-to-market return.
- Private fixed income assets have an associated credit spread premium to compensate investors for their lower liquidity. The illiquidity premium is determined at the issuance and does not typically change over the security's lifetime. As such, this extra spread on top of the standard credit spread does not contribute to mark-to-market volatility. Therefore, it should be excluded from credit spread hedge metrics.

Duration times spread can be extended to measure credit spread sensitivity of the insurer's IFRS 17 liabilities as well. By applying this concept to a set of liabilities which are discounted by using the Canadian Institute of Actuaries' (CIA) IFRS 17 illiquid reference curve, we can decompose the discount curve into the following components: risk-free curve, liquidity spread and additional liquidity premium.

Figure 3 : IFRS 17 Illiquid Discount Curve Construction



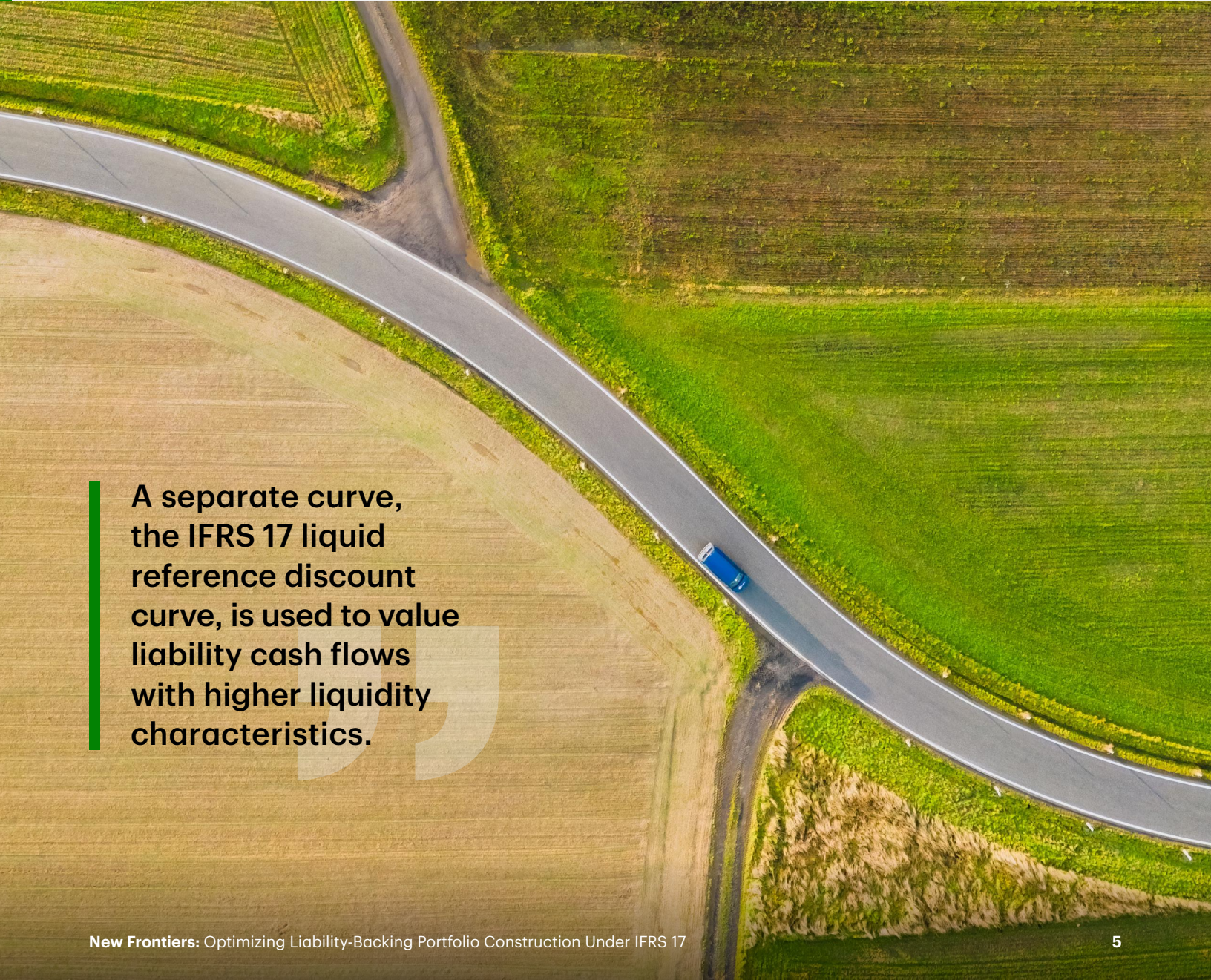
Source: Canadian Institute of Actuaries, TD Asset Management Inc. As of December 31, 2023.

Liquidity Characteristics of Insurance Contract Liabilities

The IFRS 17 illiquid reference discount curve — the methodology for which was developed by the CIA — is constructed using a hybrid approach (a blend of top-down and bottom-up) and is used to discount illiquid insurance contract liabilities. The liquidity characteristics of insurance contracts can be examined from the perspective of the

contract's features. Illiquid contracts typically include products with limited portability options, higher exit costs and/or inherent reserve value. A separate curve, the IFRS 17 liquid reference discount curve, is used to value liability cash flows with higher liquidity characteristics.

Tying back to the hedge ratios, the risk-free curve component of IFRS 17 liabilities can be hedged by ensuring an interest rate hedge and yield curve hedge of close to 100%. Decomposing the credit spread into the market sensitivity liquidity spread and the assumption-driven additional liquidity premium provides a framework to measure the credit sensitivity of IFRS 17 liabilities. This allows the insurer to design their investment strategy accordingly, target the appropriate credit spread hedge and measure credit spread sensitivity accurately.

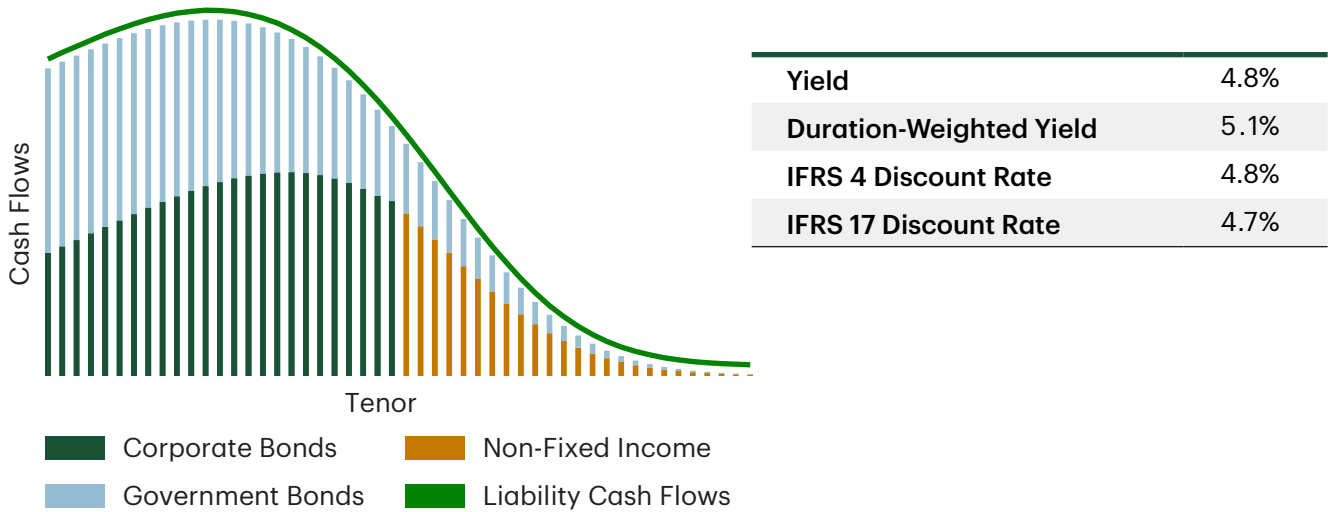


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Illustrative Liability-Backing Portfolio – IFRS 4 vs. IFRS 17

To bring the income recognition considerations to life, we can examine how a hypothetical optimized liability-backing portfolio looks under IFRS 4 and look at how the portfolio changes under the new IFRS 17 standards.

Figure 4: IFRS 4 Liability-Backing Portfolio



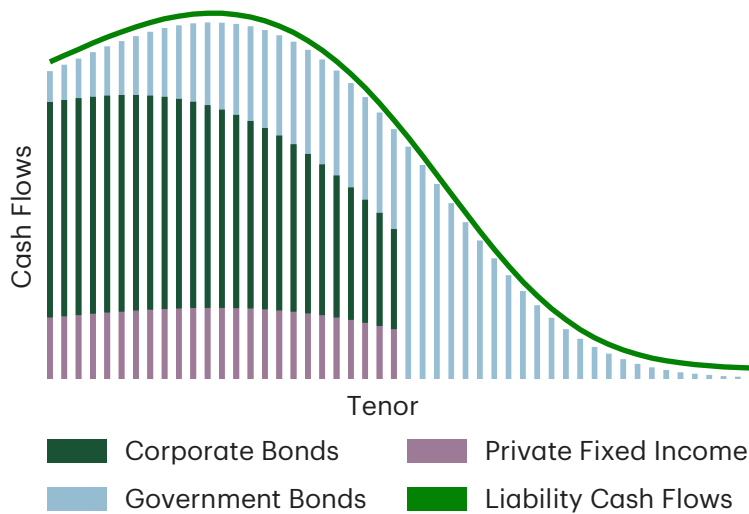
Source: Canadian Institute of Actuaries, TD Asset Management Inc. As of December 31, 2023.

For the hypothetical optimized IFRS 4 portfolio, we can make the following observations:

- Higher allocation of longer-term corporate bonds** — the portfolio has a higher concentration of corporate bonds on the longer end than the short end. This barbelled structure is designed to **increase the duration-weighted yield** of the portfolio, contributing to lower liability valuation.
- Implementation of a carve-out strategy** — some insurers implement a carve-out strategy, where they back the tail end of liability cash flows by using non-fixed-income assets (NFIs) such as common equity. This practice is more commonly adopted among life insurers, whose liability cash flows typically have a longer duration profile, further improving the IFRS 4 liability discount rate. (For more information on carve-out strategies, please refer to our [in-depth paper on the topic >](#).)

Income

Figure 5: IFRS 17 Liability-Backing Portfolio



Yield	5.1%
Duration-Weighted Yield	4.8%
IFRS 4 Discount Rate	4.6%
IFRS 17 Discount Rate	4.7%

Source: Canadian Institute of Actuaries, TD Asset Management Inc. As of December 31, 2023.

In contrast to the portfolio outlined under IFRS 4, the optimized IFRS 17 liability-backing portfolio has several notable distinctions:

- Increased emphasis on yield-to-maturity** — this is achieved through a **higher allocation to credit assets with shorter tenors**, which provide higher credit spread compensation per unit of credit spread risk in today's environment. This strategy both boosts portfolio yield and aligns credit spread sensitivity with IFRS 17 liabilities, generating positive net returns and net investment income over the liabilities.
- Incorporation of private fixed income assets** — while private fixed income assets such as commercial mortgages and private debt are already favoured by insurers under IFRS 4, they prove to be a natural match for hedging IFRS 17 liabilities. The additional yield offered by private assets allows insurers to better offset interest cost on liabilities, helping to effectively keep pace with the additional liquidity premium embedded in the IFRS 17 liability discount curve.

Assets

The Role of NFIs under IFRS 17

While carve-out strategies are less favourable under the lens of hedging IFRS 17 liabilities, NFIs continue to play a role in an insurer's strategic asset mix. NFIs – including common equity, preferred shares, real estate and infrastructure – can help the insurer diversify away from fixed income exposure and generate higher long-term returns in the surplus portfolio. A total portfolio analysis, including analysis of both liability-backing and surplus portfolios, can help to further optimize the strategic asset mix through the lens of economic risk vs. return, regulatory capital and financial statement impact.

Measuring Success of the IFRS 17 Investment Strategy

To ensure the hedging framework properly captures the relative sensitivity to interest rates and credit spreads against the insurer's IFRS 17 liabilities, we can stress-test the portfolio and examine the impact. This can be done in a variety of ways.

- **Deterministic shock analysis** — applying a set of instantaneous interest rate and credit spread shocks to the portfolio and liabilities to analyze their relative impact. This can help the insurer gauge near-term impact on their financial positioning (e.g., quarterly or annual investment income volatility).
- **Stochastic projections** — using an economic scenario generator, simulate many plausible economic scenarios over a longer time horizon. This can help the insurer better understand the range of potential outcomes and probability-based tail events in the long run, such as value-at-risk (VaR) or conditional tail expectation (CTE) measures.

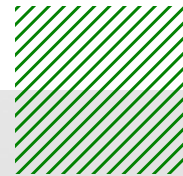
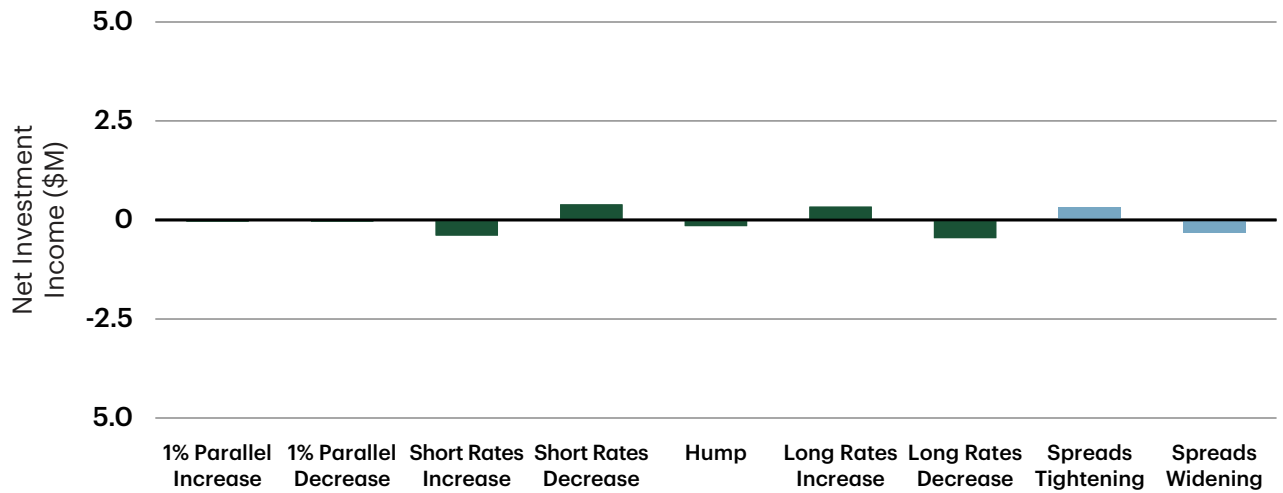


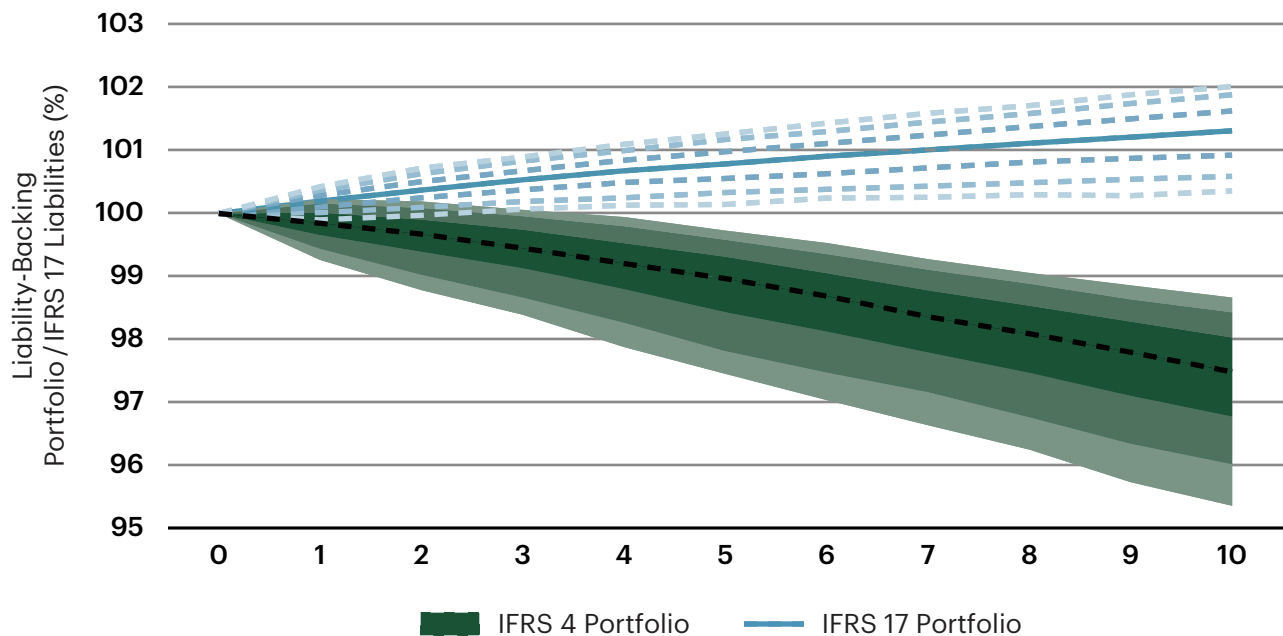
Figure 6: Deterministic Shock Analysis vs. Stochastic Projections

Deterministic Shock Analysis



- An optimized IFRS 17 liability-backing portfolio ensures that key risk drivers are hedged, reducing investment income volatility.

Stochastic Projections



- An optimized IFRS 17 liability-backing portfolio reduces the range of potential outcomes and helps to keep pace with the liabilities in the long run.

Source: TD Asset Management Inc. As of December 31, 2023.

How TDAM Can Help

Over the past three decades, TDAM has cultivated extensive expertise in managing assets for insurance companies, offering one of the broadest suites of investment products and portfolio management services across Canada. In recent years, TDAM has created a robust portfolio management platform for insurers. This platform has built-in IFRS 17 liability valuation capabilities, enabling portfolio managers to make well-informed decisions based on the most up-to-date client liability data.

In light of the complex regulatory landscape and investment environment, TDAM stands ready to support our insurance clients. Our team includes numerous professionals with actuarial and investment expertise across multiple teams. Leveraging this expertise, we are committed to delivering unique insights and addressing our clients' most important challenges. ■

Strategy



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