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IFRS 17 Illiquidity Premiums for Public Sector Schemes

Prepared by Augustine Sidik, Francis Beens, Khar Mun Tang, Kieran Leong, and Roshane Samarasekera

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Actuaries Institute

ABN 69 000 423 656

Level 34, Australia Square, 264 George Street, Sydney NSW 2000

P +61 (0) 2 9239 6100 | actuaries.asn.au

Synopsis

This paper examines how public sector schemes can estimate the “illiquidity premium”, which is required for discounting under IFRS 17. These schemes typically involve long-duration liabilities, often linked to statutory benefits, and these liabilities will generally be “illiquid” to a degree. Under IFRS 17, the discount rate adopted must reflect the characteristics of the liability cash flows, including their illiquidity.

Our paper starts by exploring theoretical and practical reasons for including an illiquidity premium, and how it may support matching of assets and liabilities when credit markets are under stress. We then consider the nature of the liabilities taken on by public sector schemes, and the concept of an illiquidity premium from IFRS 17.

We then evaluate a range of methods proposed or used in practice to estimate the illiquidity premium and assess their appropriateness for public sector schemes. We focus primarily on the methods that were canvassed in the Actuaries Institute ‘Illiquidity Premium Paper’ from 2011. We set out how to apply the approaches in an Australian and New Zealand context, and estimate what the illiquidity premium would be for an example portfolio that is similar to an Australian public sector workers’ compensation or catastrophic injury scheme, or an equivalent to an accident compensation scheme in New Zealand. We also compare and contrast the results from these methods with Australian, New Zealand, and international benchmarks.

This paper does not try to develop a new method for estimating illiquidity. Rather, using what we already have available, we consider whether existing methods are appropriate to use for public sector schemes.

We conclude that including an illiquidity premium is appropriate for public sector schemes with long-duration liabilities. The illiquidity premium helps to align liability and asset values during periods of asset market stress, contributing to a somewhat more stable net balance sheet.

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1. Introduction

1.1. This paper

This paper examines how public sector schemes can estimate the “illiquidity premium”, which is required for discounting under IFRS 17. Our paper focuses on public sector schemes that take on workers’ compensation, compulsory third party, and catastrophic injury (lifetime care) liabilities. These typically involve long-duration liabilities, often linked to statutory benefits. Under IFRS 17, the discount rate adopted must reflect the characteristics of the liability cash flows, including their illiquidity.

Some public sector schemes will take on shorter duration liabilities, such as for property damage (sometimes a form of state government ‘self-insurance’). These shorter duration liabilities may not be as “illiquid” as the long-duration liabilities, and in any case, the impact of applying an illiquidity premium will often be immaterial for short duration liabilities. Our paper does not consider these short duration liabilities.

We would like to acknowledge Phillip Halverson who kindly peer reviewed a draft of this paper.

1.2. What is illiquidity?

An illiquid asset is an asset that you cannot quickly and easily convert to cash. Theoretically, investors demand a higher return for investing in illiquid assets compared to liquid assets (all other things, such as the level of riskiness, being equal). This additional return is referred to as an illiquidity premium.

Illiquidity in the context of insurance contract *liabilities* is more difficult to define. There is some limited literature on the concept. To date, the literature defines the liquidity of an insurance contract via its liquidity characteristics from the perspective of the policyholder or claimant.

An insurance contract is considered liquid if the policyholder or claimant can influence the timing of the insurance cashflows. For example, cancelling the policy before the expiry date and forcing the insurer to refund the premium. Or, seeking a settlement and forcing the insurer to pay a lump sum to finalise the claim.

In other words, insurance contracts with high transaction costs for cancellation or in a monopolised market would be considered more illiquid. Insurance contracts with long-term liabilities and claims that cannot be easily settled via lump sums (for example, benefits paid as periodic payments according to a statutory formula) would be considered more illiquid.

The illiquidity premium in the context of insurance contract liabilities is the quantification of the additional return that an insurer can earn (on its *assets*) because the illiquid insurance contract liabilities mean it can safely invest in illiquid assets.

1.3. Illiquidity and IFRS 17

The International Financial Reporting Standard, IFRS 17, introduces a requirement for insurance companies to report insurance contract liabilities on a discounted basis. This will attempt to standardise an aspect of financial reporting that has varied significantly across the (global) industry. The International Accounting Standards Board in their effects analysis paper on IFRS 17 observe:

“Currently many insurers discount the future cash flows from insurance contracts using discount rates that are based on the expected return on assets backing the insurance contract liability. Some insurers use a discount rate specified by law or a regulator. A few use a risk-free discount rate. Some do not discount at all.”¹

¹ <https://www.ifrs.org/content/dam/ifrs/project/insurance-contracts/ifrs-standard/ifrs-17-effects-analysis.pdf>

However, IFRS 17 states that it:

“...requires a company to discount the cash flows from insurance contracts using discount rates that reflect the characteristics of the cash flows arising from the insurance contract liability rather than rates based on the characteristics of the assets backing that liability.”²

As a result, IFRS 17 will provide more transparent and useful information because it:

“... will help to report economic mismatches between insurance contract liabilities and assets backing them which otherwise might remain obscured.”³

IFRS 17 requires entities to use discount rates to adjust their estimates of future cash flows to reflect the time value of money and the financial risks related to those cashflows. One of the factors that the discount rates are required to reflect is the liquidity characteristics of the insurance contracts.⁴ As introduced earlier, this allowance for the liquidity characteristics is referred to as the illiquidity premium.

Risk free yield curves reflect assets traded in active markets that the holder can typically sell readily at any time without incurring significant costs. In contrast, under some insurance contracts the entity cannot be forced to make payments earlier than the occurrence of insured events, or dates specified in the contracts.⁵

The inclusion of an illiquidity premium in the discount rate for financial reporting is a key requirement for insurers reporting under IFRS 17. As noted earlier, the inclusion will ensure financial reporting captures the liquidity characteristics of the insurance cash flows. This also enables more consistency between the insurance contract liabilities and the assets backing them, particularly under a stressed scenario.

1.4. IFRS 17, PBE IFRS 17, AASB 17 and public sector amendments

IFRS 17 is the International Financial Reporting Standard for insurance. It has been adopted by Australia and New Zealand.

The Australian and New Zealand accounting boards made a number of amendments to the standard for application to public sector entities. In Australia the ‘original’ implementation, which applies to the private sector, is accounting standard AASB 17, and the amendments are included within AASB 2022-9, *Amendments to Australian Accounting Standards – Insurance Contracts in the Public Sector*. In New Zealand the consolidated standard is PBE IFRS 17.

The amendments do not change the discounting requirements. The discounting requirements are identical across IFRS 17, AASB 17, and PBE IFRS 17. For simplicity we will refer to them as “IFRS 17”.

For public sector entities in Australia IFRS 17 will first apply to the 1 July 2026 to 30 June 2027 annual reporting period. In New Zealand IFRS 17 will apply for accounting periods beginning on or after 1 January 2026.

1.5. Illiquidity premium during distressed market conditions

As highlighted by the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) Task Force,⁶ while a substantial body of economic theory exists on liquidity premiums, prior to the 2008 Global Financial Crisis (GFC), this aspect received significantly less attention than other components of the spread between corporate and government bonds—most notably, credit risk. The GFC triggered a sharp widening of spreads, prompting research that largely attributed this phenomenon to the presence of a liquidity premium.

² <https://www.ifrs.org/content/dam/ifrs/project/insurance-contracts/ifrs-standard/ifrs-17-effects-analysis.pdf>

³ As above

⁴ IFRS 17 paragraph 36

⁵ IFRS 17 paragraph B79

⁶ https://www.eiopa.europa.eu/publications/task-force-report-liquidity-premium_en

This premium compensates investors in corporate bonds for the risk that, due to market illiquidity, they may be unable to sell the instrument at a price reflecting its expected future cash flows.

During the GFC, on the asset side, the sudden increase in spreads due to illiquidity led to a marked decline in the value of corporate bond portfolios held by insurance companies.

On the liability side, where insurers discounted their liabilities using risk free discount rates, the liabilities remained largely unaffected in valuation, despite being inherently illiquid—both during the crisis and under normal conditions. It is standard practice to match illiquid insurance liabilities, which have predictable cash flows, with similarly illiquid assets of corresponding maturities. However, the emergence of a significant liquidity premium embedded in asset valuations created a balance sheet shortfall. This shortfall may be considered artificial, as—assuming effective credit risk hedging—the asset revenues, both periodic and at maturity, remained sufficient to meet the cash outflows of the insurance contracts.

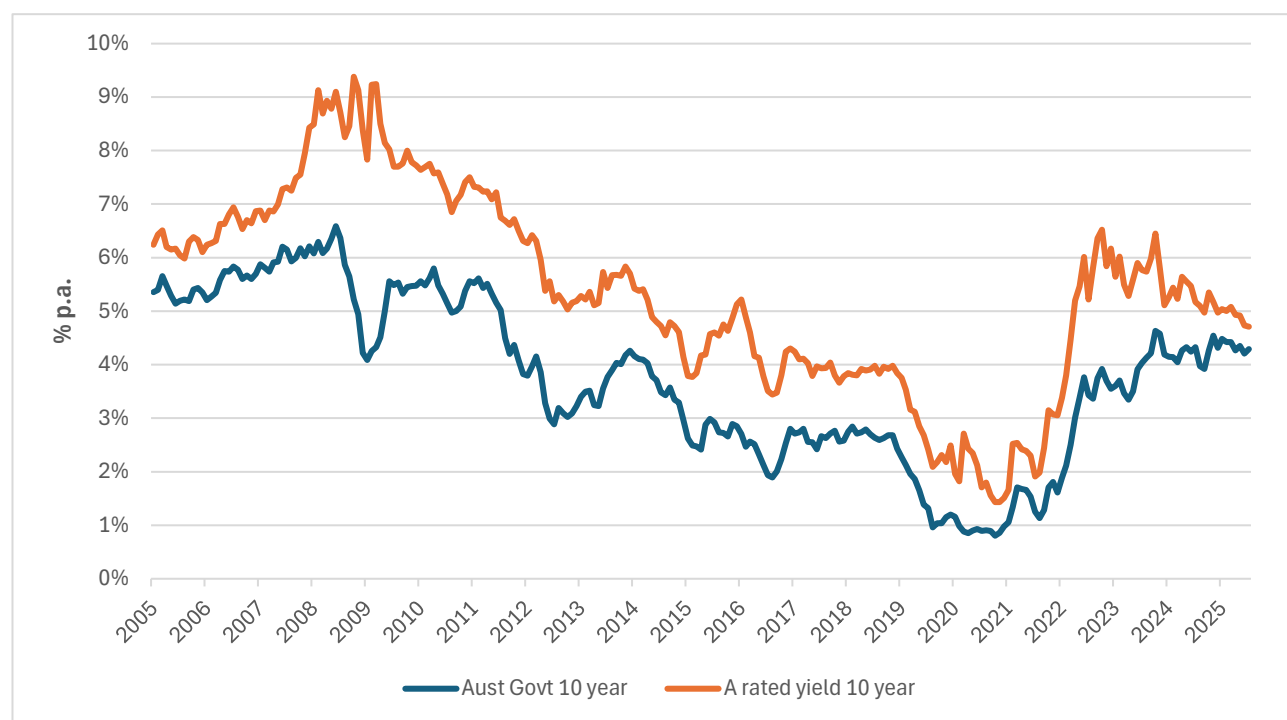
Introducing a liquidity premium in the valuation of insurance liabilities seeks to correct this mismatch. While mitigating pro-cyclicality is not the primary objective of a liquidity premium, its implementation offers clear benefits in this regard. By reducing the incentive for corporate bondholders to liquidate portfolios during periods of market stress, it helps to avoid exacerbating financial crises.

1.6. The Australian context

The next two sections set out a simplified example of the previous discussion and shows the impact that an illiquidity premium can have.

The figure below shows risk free rates (from Australian Government 10 year bonds) and the yield on A rated Australian corporate bonds, over the past 20 years. Corporate bonds have a higher yield, and this reflects both higher risk (a greater risk of default, referred to as credit risk), and a lesser ability to trade the bonds (leading to less demand, and a lower price, referred to as the illiquidity premium). There may be other elements beyond credit and illiquidity leading to a higher yield.

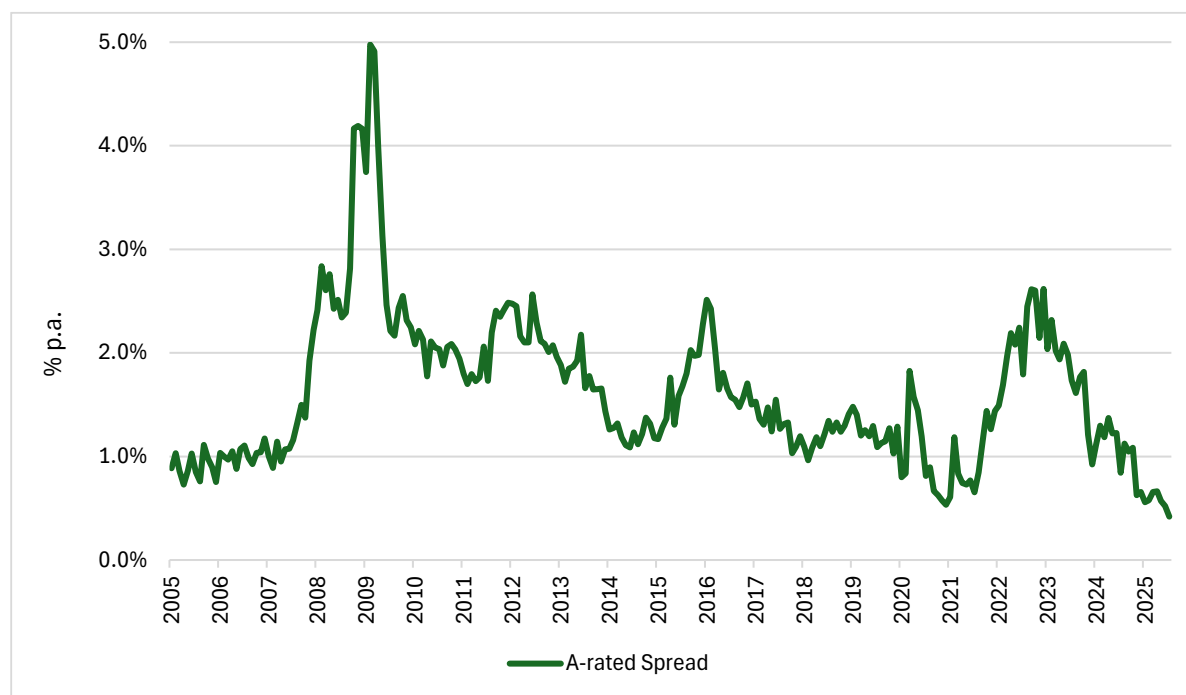
Figure 1.1: 10-year Australian government bonds and A-rated Australian corporate bonds



The impact of the GFC is apparent beginning towards the end of 2007 when the yield on A rated bonds increased to around 9%. In late 2008 and early 2009 the yield on Australian Government (risk free) bonds fell dramatically, touching 4%, before returning to just over 5%.

The following chart shows the spread in yield between A rated corporate bonds and risk free rates, at 10 year durations (i.e. the gap between the two series from the chart above).

Figure 1.2: Spread between 10-year A-rated Australian corporate and Australian government bonds



Again, the period around the GFC shows that the spread increased from around 1% in 2005 and 2006, to initially exceed 2.5%, before touching 4%-5% for a number of months. It fell back to around 2% by 2010. The spread then drifted lower over the following 10 years, dropping to less than 1% by 2021, before spiking again to 2.5% in late 2022 as global rates of inflation became elevated and global interest rates were increased in response.

The yield on a bond is inversely proportional to its market price. As yields increase, the value of the bond reduces. The spike in yields around the time of the GFC represents a significant fall in the value of corporate bonds.

1.7. A simple example

Consider an insurer with long term liabilities. The insurer receives a premium of 2,000 and has liabilities of 2,000 that will be paid out equally over the next 20 years (with a mean term, therefore, of 10 years). The insurer has no expenses.

The insurer invested all of the 2,000 of premium in A rated corporate bonds.

On its first day of operation (before making any payments), it prepares a balance sheet showing its assets and liabilities. The very next day, a market crisis occurs, and liquidity dries up. As a result, while risk free rates remain *steady*, the market price of A rated corporate bonds *falls*, and their yield increases.

Here is a simple balance sheet example, where the insurer discounts its liabilities at a risk free rate only.

Example 1: risk free discounting only

Risk free discount rate: 5.5%

Yield on A rated corporate bonds: Initially 6.5%, increasing to 9.0%

Normal environment		Liquidity shock	
Assets		Assets	
Bonds	2,000	Bonds	1,586
Liabilities		Liabilities	
Claims	1,195	Claims	1,195
Net Assets	805	Net Assets	391
A / L ratio	167%	A / L ratio	133%

In this simple example, the 2,000 of claim payments discounted at the 5.5% risk free rate are accounted for at a present value of 1,195. When the liquidity shock occurs, the risk free rate remains unchanged, but there is a significant reduction in the value of bonds. Because risk free rates do not change, the value of the liabilities does not change. As a result, net assets fall, and the ratio of assets to liabilities (A / L ratio) falls significantly.

Example 2: discounting with an illiquidity premium embedded

Now consider an alternative example, where the insurer discounts the liabilities but allows for an illiquidity premium.

If the insurer could quarantine credit risk, and the fall in asset values is purely because they are illiquid, then the insurer knows that the 'value' of the bonds is higher than the market price. The solution created by IFRS 17 is to adjust the value of the *liabilities* to better match changes in the value of the assets.

Risk free discount rate: 5.5%

Yield on A rated corporate bonds: initially 6.5% (a 1.0% spread to risk free), increasing to 9.0% (a 3.5% spread)

Illiquidity premium: initially 0.5% (i.e. 6.0% total discount rate), increasing to 2.0% (i.e. 7.5% total discount rate). That is, three fifths of the increase in the spread is assumed to be related to illiquidity. This is an example only.

Normal environment		Liquidity shock	
Assets		Assets	
Bonds	2,000	Bonds	1,586
Liabilities		Liabilities	
Claims	1,147	Claims	1,019
Net Assets	853	Net Assets	566
A / L ratio	174%	A / L ratio	156%

Under 'normal' conditions in this example, the insurer adopts a low, 0.5%, illiquidity premium. As the liquidity shock occurs and corporate A rated bond prices fall, the insurer's estimate of the illiquidity premium increases to 2.0%.

As a result, while the asset value falls in exactly the same way, the value of the liabilities *also reduces*. As a result the net assets reduce, but not by nearly as much.

The underlying assumption, of course, is that the insurer can afford to 'wait out' the fall in asset values until liquidity returns on markets and the price of corporate bonds increases again (reducing their yield).

1.8. What do we take from this example?

This example (and the impact of the GFC) highlights a number of things:

1. As measured by A rated spreads, the period of 'extreme' illiquidity lasted for around **two years** around the time of the GFC. More recently, with the inflation shock post COVID, spreads exceeded 2.5% for **14 months**.

These increases in spreads will be due to a *combination of higher credit risk and an illiquidity premium*. But the duration gives some idea about how "illiquid" insurance liabilities must be if an insurer is going to "wait out" the market, anticipating that asset prices will recover their falls once the liquidity crises resolves.

2. The purpose of an illiquidity premium is to better match asset and liability values.
3. The premium for illiquidity *changes over time*. While it may be low, or reasonably steady for lengthy periods of time, during a crisis it can increase significantly.
4. As a result, the illiquidity premium embedded in discount rates should respond (increase) when asset values drop materially due to liquidity drying up.

2. Liquidity characteristics of insurance contracts

IFRS 17 requires the discount rate to reflect the liquidity characteristics of the insurance contracts or the underlying cashflows. When using the bottom-up approach, this is via the illiquidity premium.

2.1. Literature review

There is limited literature on measuring the liquidity of insurance contracts. This section provides a summary of relevant papers on this topic. The following sections then consider the liquidity characteristics of general insurance contracts and public sector schemes.

2.1.1. Bulpitt

Thomas Bulpitt, as part of the Institute and Faculty of Actuaries working group, wrote an undated paper *IFRS 17: liquidity characteristics of insurance liabilities*.⁷ Bulpitt argues the liquidity characteristics of insurance contracts should be viewed from the perspective of the policyholder. Bulpitt concentrates on the ability for the policyholder to lapse and the incentives or disincentives influencing the lapse behaviour. The easier it is for a policyholder to lapse, the more liquid the insurance contract, and vice versa.

Bulpitt's suggestion of lapse rates is more relevant for life insurance since lapse is a significant feature of the product. For Australasian public sector schemes where products like workers compensation or motor accident insurance are compulsory, cover only ceases following a cancellation when it is no longer required.

2.1.2. International Actuarial Association

The International Actuarial Association published the *International Actuarial Note 100 – Application of IFRS 17 Insurance Contracts* (IAN 100)⁸ in August 2021. Under section 3.15, the IAN 100 addresses the question of liquidity characteristics of insurance contracts. It takes similar logic to Bulpitt and considers this concept from the perspective of the policyholder and the features of the insurance contract. It considers the following:

- Exit value (value of the contract at exit)
- Exit costs
- Inherent value (policyholder's expectation of contract value)

Exit value and inherent value are more features of life insurance than general insurance. There are typically minimal exit costs for cancelling a general insurance policy due to comparatively low upfront costs relative to life insurance. Overall, the discussion in IAN 100 is focused on life insurance and all these features can be thought of as influencing lapse behaviour as discussed by Bulpitt.

However, the IAN 100 states general insurance policies with no exit costs are considered liquid insurance contracts for the Liability for Remaining Coverage (LRC). For the Liability for Incurred Claims (LIC), the IAN 100 references the claimant's ability to settle the claim and withdraw payments as a lump sum. This is relevant for general insurance.

2.1.3. Canadian Institute of Actuaries

The Canadian Institute of Actuaries (CIA) published an educational note in September 2024 titled *IFRS 17 Discount Rates and Cash Flow Considerations for Property and Casualty Insurance Contracts*.⁹ Section 4.6 of the CIA's note addresses the liquidity of liabilities for general insurance contracts, repeating discussion from IAN 100. Section 4.6.1 of the CIA's note provides guidance on the liquidity of general insurance liabilities. The CIA's note specifies the LRC as being liquid and the LIC as being illiquid for most general insurance contracts.

⁷ <https://vle.actuaries.org.uk/course/view.php?id=2177>

⁸ https://actuaries.org/app/uploads/2025/04/IAA_IAN100_31August2021.pdf

⁹ <https://www.cia-ica.ca/publications/225109e/>

According to the note, the main criteria for assessing the liquidity of a general insurance contract's liabilities are:

- For the LRC, *the ability of the policyholder to cancel before expiry date without significant exit costs*
- For the LIC, *the ability of the policyholder to bring forward the exit value of the claim.*

There are useful comments in the CIA's note for assessing the liquidity of general insurance contracts.

2.1.4. MJW

The MJW paper titled *IFRS 17 Illiquidity Premium*¹⁰ dated 26 November 2024 references the work of Bulpitt and expands on it to develop an approach for determining the illiquidity premium. MJW suggests more criteria for considering liquidity characteristics of insurance contracts.

- *Uncertainty of the cashflows (including claim payments, expenses and recoveries) underlying the insurance contracts.* The more uncertain the insurance cashflows, the more liquid the insurance contract since the insurer theoretically needs to invest in liquid assets in the event a claim occurs.
- *Ability for the policyholder to influence timing and amount of the insurance cashflows.* The easier it is for a policyholder or claimant to settle the claim and exit from the contract, the more liquid the insurance contract. Again, this is because the insurer theoretically needs to invest in liquid assets in the event the claim is settled.

The suggestions from MJW could be applied to general insurance and Australasian public sector schemes. The second point is consistent with the IAN 100.

2.1.5. CEIOPS Task Force

CEIOPS established a Task Force shortly after the Global Financial Crisis (GFC) to explore the inclusion of a liquidity premium in the risk-free rate for discounting technical provisions. The Task Force released their report in March 2010.¹¹

The CEIOPS Task Force report addressed the concept of illiquidity premium in both assets and liabilities (predominantly life insurance liabilities). The concept is relatively more established and intuitive on the asset side, whereas it is more challenging to assess on the liability side. The Task Force outlined:

- Most life insurance liabilities can be considered to be at least partially illiquid. The assessment of illiquidity in an insurance liability is complex noting that unlike assets such as corporate bonds, insurance liabilities represent a full range of cash flow characteristics with varying levels of uncertainty due e.g. to policyholder options such as surrenders, withdrawals, etc. or to mortality and expenses evolution. These characteristics of an insurance liability have as a consequence that in some cases no replicating portfolio can accurately match the cash flows of the liability in all circumstances or the replicating portfolio has to contain a combination of both liquid and illiquid assets.
- Although not the main objective of introducing the illiquidity premium, it has an anti-cyclical effect and allows a harmonised treatment of assets and liabilities during distressed market conditions.

2.2. Liquidity for general insurance contracts

Initial literature (e.g. Bulpitt, IAN 100) and discussion on liquidity characteristics of insurance contracts was focused on life insurance. It examined features of the policy influencing lapse or timing of payments from the perspective of the policyholder. This approach is natural for life insurance particularly for lapse which is a significant feature of the product. However, it is less appropriate for general insurance.

¹⁰ <https://mjw.co.nz/wp-content/uploads/2025/05/Illiquidity-Premium.pdf>

¹¹ https://www.eiopa.europa.eu/publications/task-force-report-liquidity-premium_en

There has been more recent literature (e.g. CIA's note, MJW) focusing on general insurance. There appears to be agreement the LRC is liquid for most general insurance contracts on the basis contracts can be cancelled without significant penalties. There appears to be agreement liquidity of the LIC can be assessed by considering the ability for the policyholder or claimant to influence the timing or amount of insurance cashflows.

Some guidance on just how 'illiquid' liabilities should be to utilise an illiquidity premium can be taken from the example at the start of this paper. A period of heightened illiquidity of between 12-24 months has occurred twice in the past 20 years. That would suggest that insurers would want to be confident that their liabilities would **not** need to be settled within 24 months before allowing for an illiquidity premium.

2.3. Liquidity for Australasian public sector schemes

The CIA guidance noted that typically the LRC of general insurance contracts is liquid while the LIC is illiquid. As a result, different discount rates under IFRS 17 would be required.

For Australasian public sector insurers, we believe the LRC and LIC are *both* illiquid and the same discount rate, incorporating an illiquidity premium, can be used. Most Australasian public sector insurers are monopolies, providing compulsory products such as workers compensation or lifetime care with a long tail in terms of claims. This means the policyholder cannot cancel the policy unless coverage is no longer needed. For workers compensation, some policyholders may opt for self-insurance or specialised insurance in some jurisdictions (for example New South Wales), but this is not without significant transaction costs. For this reason, we consider the LRC of most long tailed Australasian public sector insurers to be as illiquid as the LIC.

We observe most public sector insurers are pricing at breakeven levels and issuing insurance contracts that would be onerous. This will require the calculation of a loss component for the LRC. A discount rate curve incorporating an illiquidity premium will be required in these circumstances.

For the LIC, the key consideration is the ability for the policyholder or claimant to bring forward the claim payments and exit the claim. Using workers compensation as an example, most of the LIC reflects statutory benefits with reasonable certainty over timing. Income replacement payments are made periodically (for example, fortnightly). The ability to bring forward payments via common law or commutation are tightly controlled in Australian public sector schemes. Medical and treatment payments are paid following the consumption of treatment so there is limited ability to bring forward payments.

Schemes tend to have a long history of claims experience over which they can assess how fast common law claims or commutation payments are requested, and identify if, historically, there have been any 'runs' in the sense of a large number of claimants suddenly all seeking (and then settling) a common law or commutation payment. In our experience this is very unlikely to occur, and the LIC for workers compensation benefits can be considered illiquid.

For the lifetime care component of motor accidents insurance, most of the LIC reflects attendant care paid to the carer of the catastrophically injured participant. These payments are made following the delivery of service and are expected to continue until the participant's death with reasonable certainty over timing. The payments typically cannot be brought forward.

As illustrated in examples above, workers compensation and lifetime care schemes display illiquidity characteristics. While we have not covered every Australasian public sector schemes in this paper, should they display similar characteristics then they would also be considered illiquid.

3. Models for calculating illiquidity premia under IFRS 17

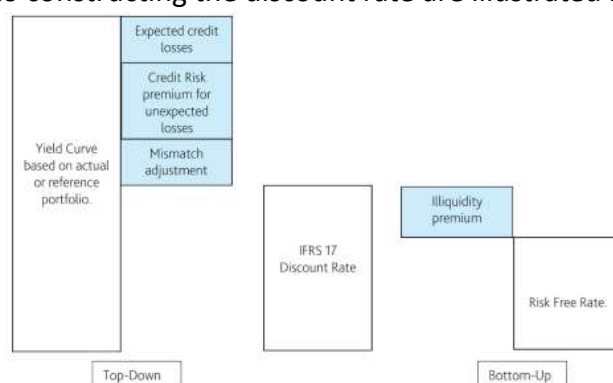
3.1. IFRS 17 requirements

IFRS 17 requires that future cashflows are discounted to reflect the time value of money and the financial risks related to the cashflows.¹² It requires that discount rates are “consistent with observable current market prices (if any) for financial instruments with cash flows whose characteristics are consistent with those of the insurance contracts, in terms of, for example, **timing, currency and liquidity**”.

IFRS 17 sets out two approaches to adjusting the discount rate for the illiquidity premium.^{13, 14}

- **Under a bottom-up approach** the discount rate is based on a liquid risk-free yield curve and then an addition is made to reflect the differences between the liquidity characteristics of the financial instruments that underlie the rates observed in the market and the liquidity characteristics of the insurance contracts.
- **Under a top-down approach** the discount rate is based on a yield curve that reflects the current market rates of return of a reference portfolio of assets adjusted to eliminate any factors that are not relevant to the insurance contracts.

The two approaches to constructing the discount rate are illustrated in the diagram below.¹⁵



This section covers various approaches for determining estimates of illiquidity premia when applying the bottom-up approach to calculate discount rates under IFRS 17.

IFRS 17 paragraph B84 notes that:

“In principle, for cash flows of insurance contracts that do not vary based on the returns of the assets in the reference portfolio, there should be a single illiquid risk-free yield curve that eliminates all uncertainty about the amount and timing of cash flows. However, in practice the top-down approach and the bottom-up approach may result in different yield curves, even in the same currency. This is because of the inherent limitations in estimating the adjustments made under each approach, and the possible lack of an adjustment for different liquidity characteristics in the top-down approach. An entity is not required to reconcile the discount rate

¹² IFRS 17 paragraph 36

¹³ IFoA IFRS 17 discount rate considerations ([IFRS 17 discount rate considerations_20190925.pdf](https://www.ifo.org.uk/ifs17-discount-rate-considerations-20190925.pdf))

¹⁴ IFRS 17 paragraphs B80, B81

¹⁵ <https://www.moodys.com/web/en/us/insights/resources/whitepaper-series-ifs17-discount-curves.pdf>

determined under its chosen approach with the discount rate that would have been determined under the other approach.”

3.1. Suggested approaches

The Australian Actuaries Institute Information Note on AASB 17 (which is similar to the International Actuarial Association’s IAN 100, mentioned in Section 2) notes that there are typically three different approaches to estimating an illiquidity premium using the bottom-up method:

- Using Credit Default Swaps (CDS). This approach starts by taking the difference between the yield on Australian Government bonds and on a portfolio of highly rated Australian corporate bonds. The resulting ‘spread’ comprises a premium for credit risk and a premium for illiquidity. The credit risk component can be removed by using the price of Credit Default Swaps for similar Australian corporates, with the remainder being the illiquidity premium.
- Using the structural model approach. This uses the Merton model to estimate the credit risk of market traded bonds. It then compares the yield on an illiquid corporate bond portfolio with the yield on a liquid portfolio with similar credit risk characteristics.
- Using covered or guaranteed bond spreads. If certain bonds are essentially free from credit risk (e.g. they are guaranteed by the Australian Government), the spread over the yield on Australian Government bonds can be considered as an estimate for the illiquidity premium.

Equivalent approaches can obviously be adopted in New Zealand.

In this section we set out calculation examples for the Credit Default Swap and covered or guaranteed bond approaches. In our experience these are relatively simple methods to apply. By using bonds in either Australia or New Zealand the IFRS 17 requirements that discount rates be “consistent with observable current market prices for financial instruments” with equivalent cash flow characteristics to the insurance liabilities around “timing, currency, and liquidity” can be met.

3.2. Credit Default Swap approach

In the 2011 paper entitled “Discussion of Approaches for Determining Illiquidity Premiums in Australia for Regulatory Purposes” (the “2011 paper”),¹⁶ the Actuaries Institute working group presented a proxy-based methodology for determining illiquidity premium, for use in regulatory prudential capital calculations under APRA’s *LPS112 Capital Adequacy: Measurement of Capital* framework for life insurers. The approach was simple, formula-driven and easy to apply.

The 2011 paper was produced as part of Actuaries Institute’s submission to APRA in response to the proposed introduction of an illiquidity premium for certain life insurance products at the time. It should be noted that APRA subsequently developed a similar formula, which life insurers are now required to use to calculate illiquidity premium for prudential capital purposes under LPS112. APRA’s calculation is currently under review for certain life insurance (annuity) products, with changes expected to be finalised in the first half of 2026.

Although originally developed for life insurance, the methodology proposed in the 2011 paper has also been referenced by general insurers in Australia as a basis for estimating illiquidity premium under IFRS 17.

3.2.1. Formulaic proxy method

The 2011 paper proposed the following proxy formula for use in life insurance regulatory capital calculation. The coefficients were derived using regression analysis on Australian market data up to 2011.

¹⁶ Actuaries Institute, “Discussion of Approaches for Determining Illiquidity Premiums in Australia for Regulatory Purposes”, 17 November 2011.

For duration terms up to 7 years, illiquidity premium can be calculated as follows.

$$\begin{aligned}
 & \text{(a) Illiquidity premium} \\
 & = \max (0\%, 90\% \times \text{RBA Single A Index Spread to Bond} \\
 & \quad - 60\% \times \text{RBA Single A Index Spread to Swap} + 2\text{bps})
 \end{aligned}$$

X
 Y

where

RBA Single A Index Spread to Bond is the spread over bonds issued by the Australian Government for corporate bonds with a credit rating of A (as determined by Standard and Poor's).

RBA Single A Index Spread to Swap is the spread over swaps for corporate bonds with a credit rating of A (as determined by Standard and Poor's).

The formula is based on the principle that the difference between the corporate bond spread to government bonds (denoted X) and the corporate bond spread to swaps (denoted Y) can serve as a proxy for illiquidity premium.

- X : corporate bond spread reflects the difference between the yield on a corporate bond and a comparable maturity Commonwealth Government Security (CGS). The Government bond is considered 'risk-free' and highly liquid, so this spread is assumed to incorporate credit risk, liquidity risk and any other market demand factors.
- Y : corporate bond spread to swaps measures the yield difference between a corporate bond and a comparable maturity interest rate swap. This spread is typically representative of a 'purer' measure of credit risk.

Subtracting Y from X effectively removes the credit risk component and leaves a measure that is reflective of the inherent illiquidity risk.

The illiquidity premium, in theory, is expected to increase with duration. That is, all else being equal, for two illiquid assets, the asset with a longer duration would be expected to provide a higher illiquidity premium to compensate for the higher risk of not being able to realise the asset for longer. In other words, the illiquidity premium curve is expected to be upward sloping by duration.

However, the 2011 paper noted there can be practical challenges and data limitations when quantifying the upward slope of illiquidity premiums for durations beyond 7 years. Therefore, a prudent approach is not to assume illiquidity premium will increase indefinitely with duration and that the illiquidity premium will revert to a long-term level.

Given this, the working group proposed the following formula to determine the 'long-term' illiquidity premium for durations over 12 years, with the illiquidity premium reverting linearly from year 7 to this level over five years.

$$\begin{aligned}
 & \text{(b) Illiquidity premium} \\
 & = \max (0\%, 7.5\% \times \text{RBA Single A Index Spread to Bond} \\
 & \quad + 9.3\% \times \text{RBA Single A Index Spread to Swap} + 24\text{bps})
 \end{aligned}$$

The formula was originally developed to rely on the spread data from the F3 Capital Market Spread Non-government instruments, published monthly by the RBA. However, this data is available only for bond durations up to 10 years. For public sector schemes, where the average duration of liabilities can extend beyond 20 years for lifetime care, an alternative source is required. In addition, while RBA continue to publish yields for corporate bonds, the spread data was discontinued from November 2023. In the following sections,

for the purpose of our analysis applying this formula, bond yields and swap rates have been sourced from Bloomberg instead.

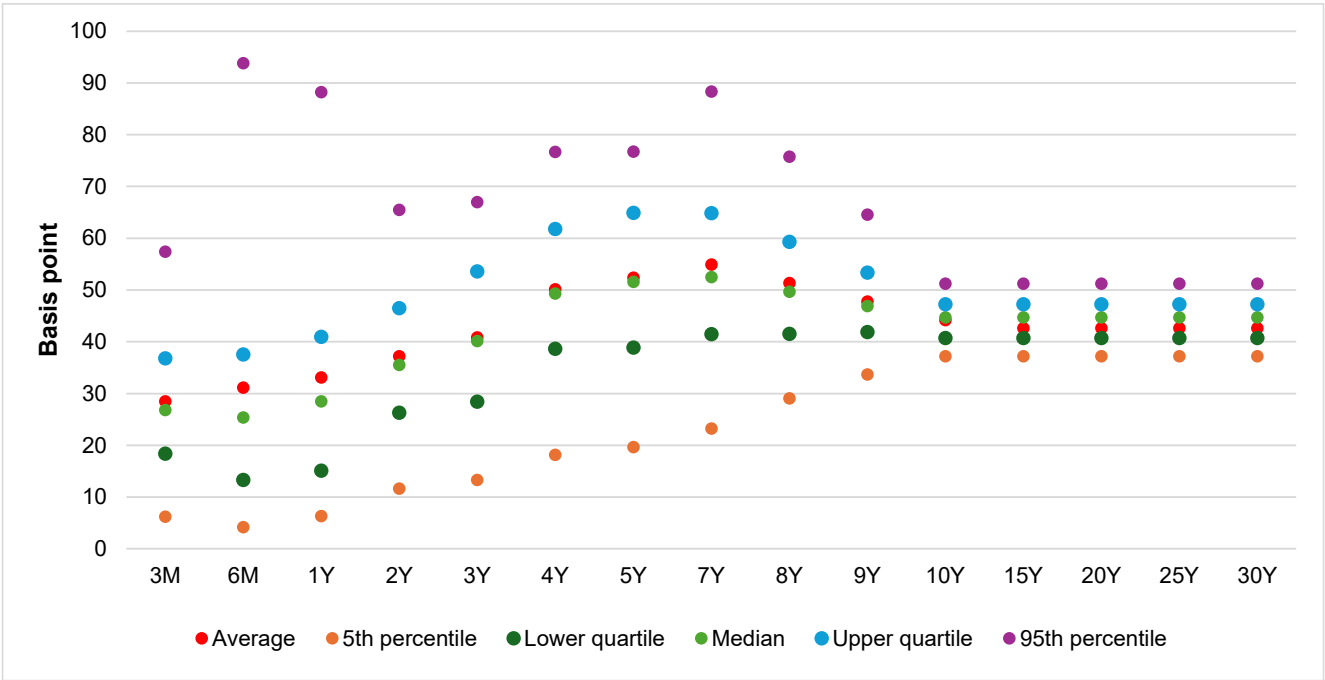
As noted above, the proxy formulas were calibrated using Australian data up to 2011. We believe the 2011 calibration remains appropriate. The original 2011 formula was designed to provide a stable and consistent approach to calculating illiquidity. There is no compelling evidence that, since 2011, the market relationship between corporate bond spreads to government bonds, and corporate bond spreads to swaps, have materially changed such that the original calibration is no longer appropriate.

3.2.2. Results

The graph below shows the results of the proxy formulas applied to empirical data from January 2015 to June 2025 for bond durations up to 30 years. Including longer-maturity bonds is relevant, as public sector schemes typically have longer liability durations than commercial general insurance products. The results are shown as spot rates.

Given this, the period of analysis was chosen to span what might be regarded as one full cycle of interest rate increases and reductions, which is based on judgement and not an exact science, and aimed at providing an appropriate basis for a long-term view. Data for corporate bonds with maturities beyond 15 years is available only from July 2018.

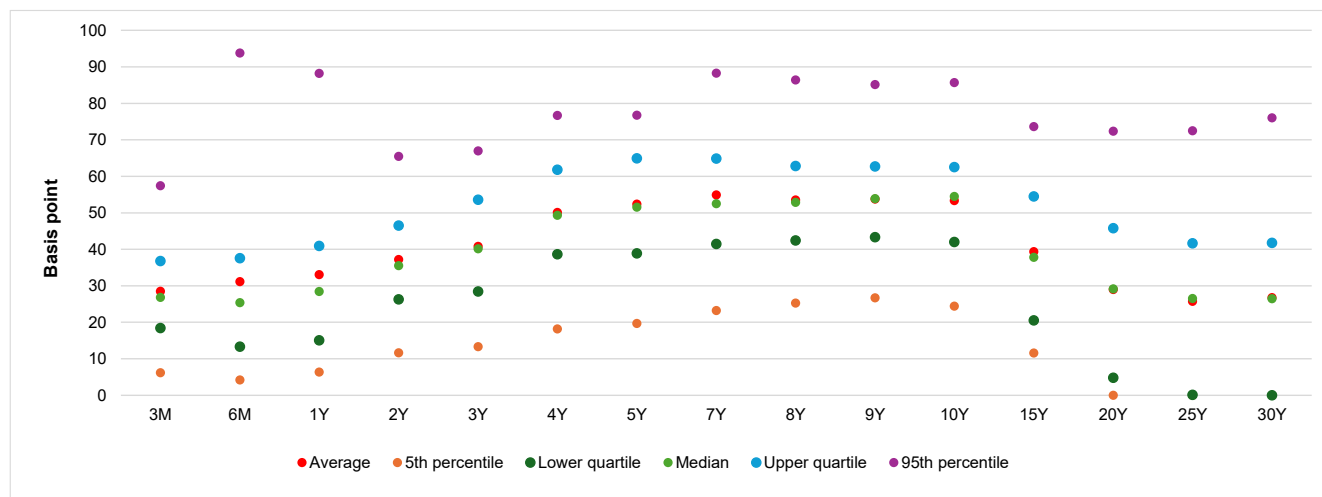
Figure 3.1: Empirical data for illiquidity premium using Actuaries Institute (2011 paper) approach



The graph above shows that illiquidity premium increases with duration until year 7, before it reverts linearly to a long-term level by year 10 and remains stable at that level thereafter. While the 2011 paper proposed a linear reversion to a long-term level at year 12, due to insufficient yield data for government and corporate bonds with 12-year maturities, a linear increase in illiquidity premium has been assumed up to year 10 rather than year 12 in this analysis.

Applying the same formula used for the first 7 years to longer-term maturities (i.e. year 8 and beyond) results in a flattening on the illiquidity premium after year 7 and a decline from year 15. Based on observable market data over the past decade, this suggests an average illiquidity premium of approximately 50bp at year 8 and then reducing to around 30bp by year 20. A strict application of the proxy formula suggests a long-term illiquidity premium level of around 42bp.

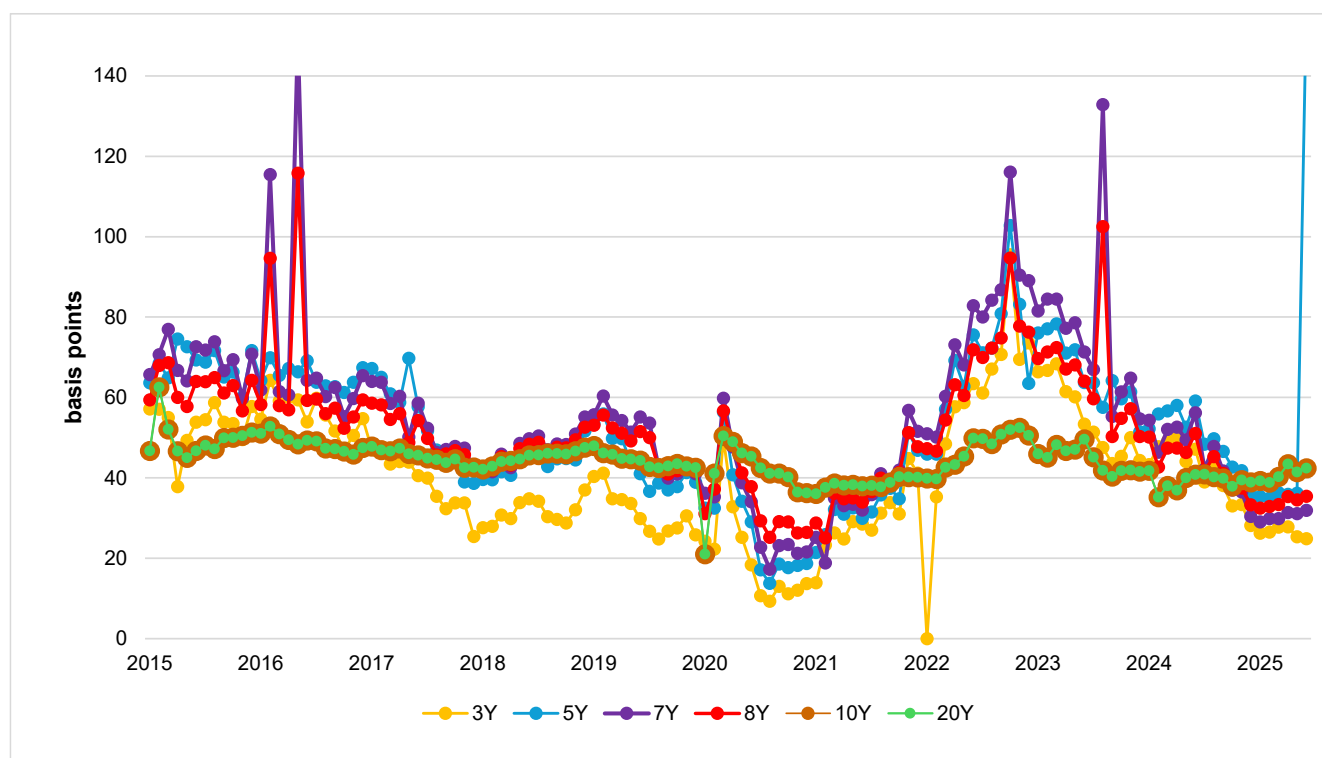
Figure 3.2: Empirical data for illiquidity premium assuming the same formula (formula a) is applied after year 7



As noted above, in theory, the illiquidity premium is expected to increase with duration. However, this is not always the case in practice as longer term Australian Government bonds tend to be less liquid, which can make corporate bond spreads to government bond appear artificially low, reducing observable market price for illiquidity. In addition, demand for long term corporate bonds is often attributed to institutional investors such as superannuation funds and insurers, whom by their nature may require relatively less compensation for illiquidity. Other factors such as distortions between the swap and government bond curves, and the natural flattening of the credit spread curve at longer maturities, may also contribute to the observed reduction in long-term illiquidity premium beyond 15 years.

The graph below shows the volatility of the implied illiquidity premium across the last 10 years for various bond durations assuming a strict application of the Actuaries Institute approach, with linear reversion after year 7 and a constant level of premium beyond year 12.

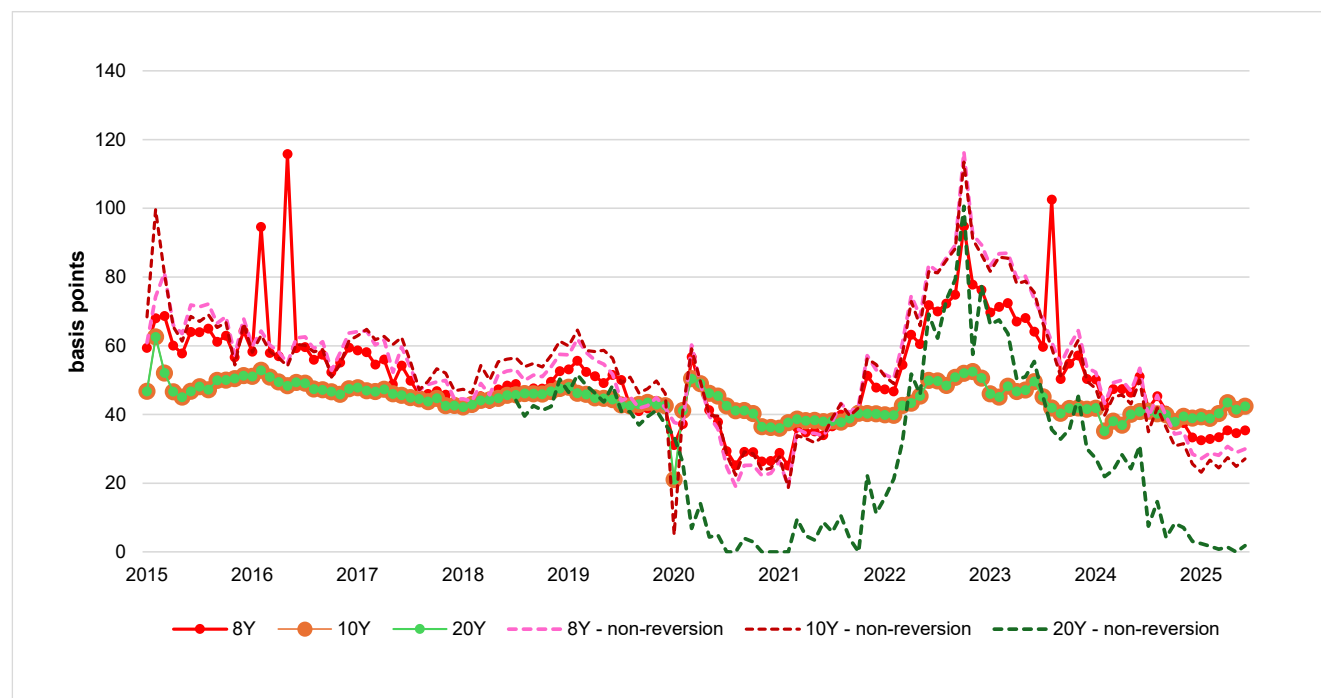
Figure 3.3: Illiquidity premium across the last 10 years for various bond durations



The graph shows that excluding a few outliers, the illiquidity premium generally ranges between 20 and 80 basis points across the bond durations presented, capturing key market movements over the period. The longer-term durations (10 years and longer) appear more stable, but only because they are based on the linear formula proposed by the working group (formula *b*). In practice, however, the illiquidity premium for longer-term maturities is likely to be more volatile due to market distortions noted above.

Extending the formula for the first 7 years to 8-, 10- and 20-year maturities results in greater variability as expected. This is illustrated by the corresponding dotted lines in Figure 4.

*Figure 3.4: Illiquidity premium across the last 10 years for various bond durations – assuming the same formula (formula *a*) is applied after year 7*



From 2015 to 2019, the illiquidity premium gradually fell across all durations, reflecting strong credit conditions and deep funding markets. This aligns with a period of low interest rates and stable economic conditions in Australia.

The dip in early 2020 was a direct result of the RBA injecting substantial liquidity into the financial system to counteract the financial panic caused by the COVID-19 pandemic. This included emergency interest rate cuts and large-scale bond purchases, which alleviated the immediate fears of illiquidity and eased the ‘dash for cash’. This swift policy response successfully counteracted the market’s illiquidity, causing the illiquidity premium to reduce temporarily.

From 2021 onwards, the illiquidity premium rose sharply driven by high inflation and rising interest rates. Heightened economic uncertainty led investors to demand greater compensation for holding less liquid assets. The illiquidity premium peaked in 2022-2023 before beginning to moderate as the economy began to adjust to the new interest rate environment.

The earlier graphs suggest that adopting a term structure seems appropriate, with illiquidity premium increasing for longer-duration liabilities up to around 8 years before stabilising thereafter. A strict application of the Actuaries Institute formula implies a maximum illiquidity premium of around 50bp for maturities beyond 8 years, although this may not reflect periods of market stress. If the formula does not revert linearly after 7 years, the illiquidity premium at 20 years’ duration can vary between single digit and up to 100bp depending on the period of analysis, reflecting changes in the market price for illiquidity.

3.3. Guaranteed Bond Method

For this paper, we have prepared illiquidity premium assumptions under the guaranteed bond approach described in the Actuaries Institute 2011 paper. This is also known as the covered bond spreads approach described in Actuaries Institute 2021 Information Note on AASB 17.

This paper presents preliminary results under this approach for Australia and New Zealand.

3.3.1. Summary of approach

The approach compares the yields of national government bonds to the yields from local or state government bonds at the same duration. The margin between national government bonds and local / state government bonds is a proxy to the illiquidity premium.

The analysis in this paper compared Australian Government bonds to state government bonds in NSW, Victoria and Queensland for Australia. For New Zealand, this paper compared New Zealand Government bonds to Local Government Funding Agency bonds.

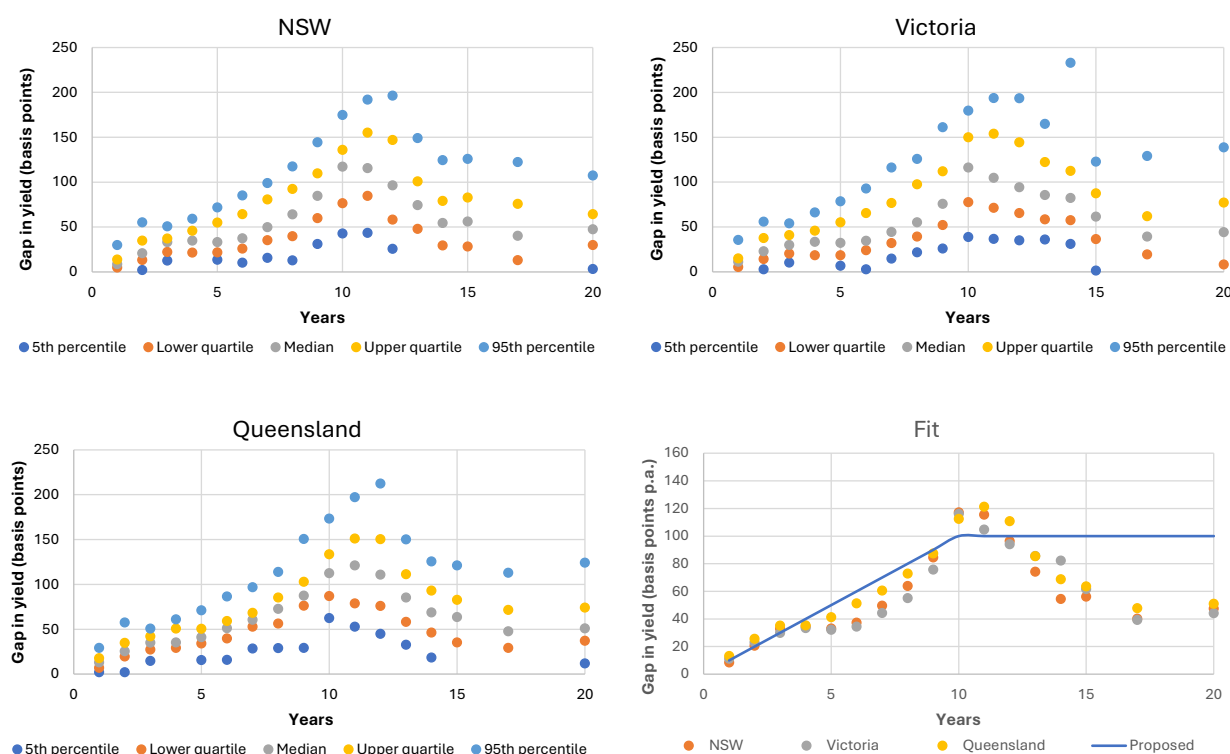
Illiquidity premium assumptions were fitted to empirical data across ten years. As with the CDS method above, this sets out how the illiquidity premium has varied over, roughly, one interest rate cycle.

The approach involves judgement and there will be scope for differences in the application of the approach across the industry. For example, approach to fitting to the empirical data, consideration of forward rates versus spot rates, and allowance for credit risk.

3.3.1. Analysis of empirical data

The figures below illustrate the empirical data when national government bonds are compared to local or state government bonds in Australia.

Figure 3.5: Empirical data for illiquidity premium on forward rates in Australia



For Australia, the entire spread between the state Government bonds and the Australian Government bonds is assumed to be due to illiquidity. This is because the Australian Government implicitly (if not explicitly)¹⁷ guarantees state borrowing.

The fitted line in the charts above shows the ‘median’ illiquidity premium over the past 10 years. For Australia, the highest median illiquidity premium assumption is 100 basis points to the forward rate and is consistent with the empirical data at duration 10 years.

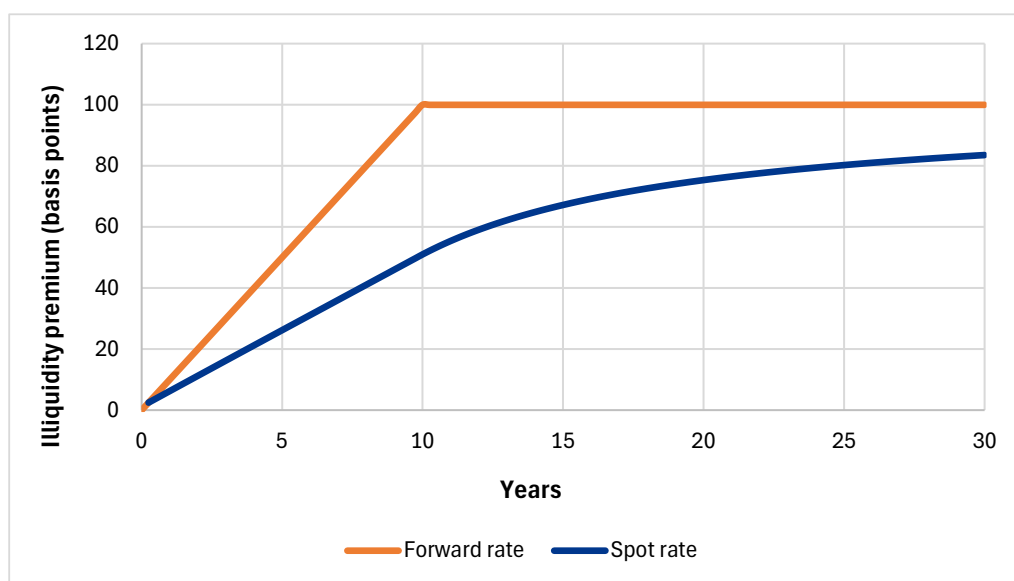
The empirical data shows a reduction in the illiquidity premium forward rate assumption after duration year 10. This may reflect a distortion in the market as demand for long-term investments is limited to institutional investors. In theory, the illiquidity premium assumption should be upward sloping, and the proposed fit reflects this structure by maintaining the highest illiquidity premium assumption after duration year 10.

The 95th percentile reaches around 200 basis points (at 10 years), which would provide an estimate of the illiquidity premium during a stressed market.

3.3.2. Result

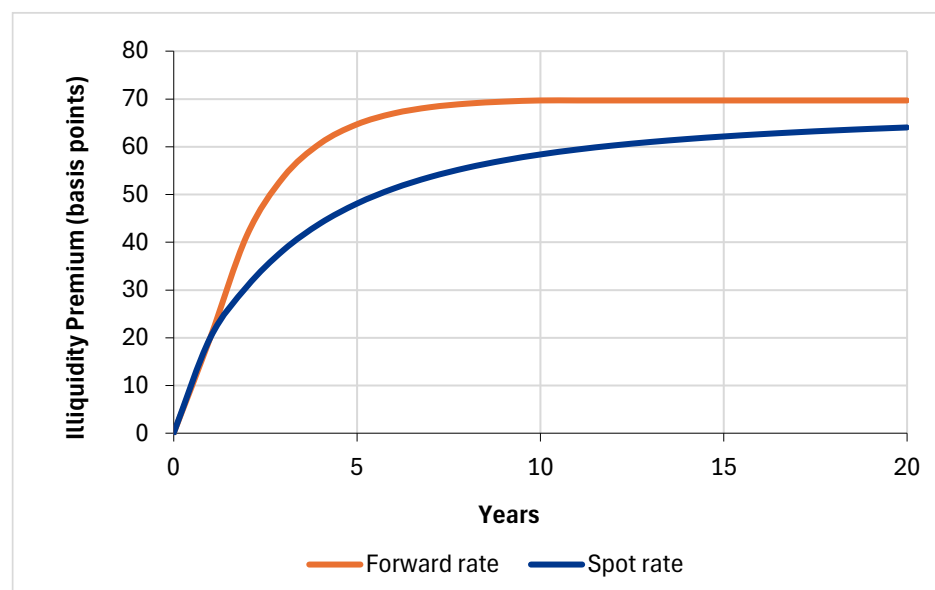
The figures below illustrate the preliminary results for illiquidity premium implied by empirical data from government bonds. This is based on the fitted medium rates observed above. The results are shown as forward rates (orange line) and spot rates (blue line).

Figure 3.6: Potential illiquidity premium assumptions under guaranteed bond approach for Australia



¹⁷ See, for example, the Guarantee of State and Territory Borrowing which operated around the time of the GFC: <https://www.stateguarantee.gov.au/>

Figure 3.7: Potential illiquidity premium assumptions under guaranteed bond approach for New Zealand



The preliminary results for Australia and New Zealand vary by duration and have a similar upward sloping shape. There is a common minimum of 0 basis points at duration year 0. Both sets of forward rate assumptions reach a maximum at duration year 10. The maximum illiquidity premium forward rate is 100 basis points for Australia, while the maximum for New Zealand is 70 basis points.

3.3.3. Credit risk

In theory, the margin between a national government bond and local or state government bond also reflects credit risk as well as an illiquidity premium. Judgement can be applied in deciding on how to adjust for this in the results of the guaranteed bond method.

In New Zealand, the empirical data has been adjusted for credit risk differences.¹⁸ This adjustment in New Zealand was approximately 10 basis points.

In Australia, state government bonds in NSW and Victoria have had similar credit ratings as the Commonwealth Government in the past ten years, and during periods of market stress (such as around the time of the GFC) have even had the benefit of an explicit Australian Government guarantee. We take this to mean that there is likely an implicit Australian Government guarantee, and therefore negligible credit risk.

3.3.4. Appropriateness for Australasian public sector schemes

As discussed in section 2.3, we believe most long-tailed Australasian public sector schemes display illiquidity characteristics. Using workers compensation and lifetime care as examples of products offered by Australasian public sector schemes, the underlying insurance liabilities are typically periodic cash flows akin to an annuity. For example, the cash flows are mainly income replacement, medical treatment and long-term care. The claimants have limited or no ability to bring forward future payments and exit the claim.

We believe most long-tailed Australasian public sector schemes would have illiquid insurance liabilities that are at least as illiquid as state government bonds. For this reason, we believe the illiquidity premium results from a guaranteed bond approach are appropriate for long-tailed Australasian public sector schemes.

¹⁸ The credit risk adjustment was estimated by taking the spread between the Local Government Funding Agency bonds and Kāinga Ora bonds. Kāinga Ora is a Crown Entity that provides social housing and support to individuals and families across New Zealand. Since November 2022 there has been an implied government guarantee for Kāinga Ora bonds, therefore the spread between Local Government Funding Agency bonds and Kāinga Ora bonds is expected to reflect the credit risk differences.

3.4. Summary of results

This section applies the illiquidity premium result derived above to an illustrative workers' compensation and lifetime care portfolio. The workers' compensation portfolio has a uniform payment pattern for ten years (that is, undiscounted mean term of five years) and undiscounted claims liability of \$1 billion. The lifetime care portfolio has a uniform payment pattern for 20 years (that is, undiscounted mean term of ten years) and undiscounted claims liability of \$1 billion.

For the purposes of this illustration, we have assumed a 5% flat risk-free discount rate, giving discounted claims liabilities of \$791 million for workers compensation and \$638 million for lifetime care.

The following table shows the single equivalent illiquidity premium under the CDS and guaranteed bond approaches for periods of high liquidity. This corresponds to the long-term averages of the distributions shown in this paper (for example, Figure 3.2 for CDS and Figure 3.5 for guaranteed bonds). The table also shows the impact on the discounted claims liability from including the illiquidity premium to the risk-free discount rate.

Table 3.8: Results for periods of high liquidity

Approach	Workers compensation (5 year mean term)		Lifetime care (10 year mean term)	
	Single equivalent illiquidity premium (basis points)	% change to discounted claims liability	Single equivalent illiquidity premium (basis points)	% change to discounted claims liability
CDS – formulaic proxy (2011 paper) for Australia	52	-2.4%	53	-4.3%
Guaranteed Bond – Australia	32	-1.4%	54	-4.2%
Guaranteed Bond – NZ	43	-1.9%	54	-4.2%

For the CDS approach, the results are broadly similar for both portfolios. However, the guaranteed bond approach produces higher single equivalent illiquidity premium for the longer duration portfolio due to the steeper upward slope in the illiquidity premium using that method. When comparing approaches, more variation is observed for the workers compensation portfolio, which has a shorter mean term.

The proposed assumptions are set with a long-term view and not intended to change frequently. It is expected the assumptions will only be reviewed every three years or when there is a major change in economic conditions. Public sector insurers can consider a threshold for triggering a review of the illiquidity premium. The threshold could be based on a standard deviation of the empirical data for the illiquidity premium proxy.

Under a stress scenario where liquidity is low, historical data shows the spread between corporate bonds and government bonds increase reflecting investors preference for more defensive assets in times of low liquidity (expressed as a greater loss of value on corporate bonds). In these circumstances, the illiquidity premium adopted would need to increase. The above results have also been produced under a stress scenario where the illiquidity premiums are closer to the 95th percentile of the empirical data (rather than the long-term average).

Table 3.9: Results for periods of low liquidity (stress scenario)

Approach	Workers compensation (5 year mean term)		Lifetime care (10 year mean term)	
	Single equivalent illiquidity premium (basis points)	% change to discounted claims liability	Single equivalent illiquidity premium (basis points)	% change to discounted claims liability
CDS – formulaic proxy (2011 paper) for Australia	78	-3.5%	85	-6.9%
Guaranteed Bond – Australia	54	-2.3%	91	-6.9%
Guaranteed Bond – NZ	n/a	n/a	n/a	n/a

Under a stress scenario, the impact would be larger on the longer duration portfolio for both approaches. This scenario was not produced for New Zealand as data on the spread on Local Government Funding Agency bonds to New Zealand Government bonds is not available going all the way back to the GFC. As a result we did not have an equivalent liquidity stress for New Zealand that demonstrated a significant change in the price of liquidity.

3.5. Canadian public sector schemes

The Canadian workers' compensation boards appear to have adopted a similar approach to each other to calculate discount rates, including allowing for an illiquidity premium.

The four largest boards (Alberta, British Columbia, Ontario, and Quebec) all adopted a very similar discount rate at December 2024 and all have a mean term of their liabilities of around 10-15 years. The Fiera Capital Corporation produce the illiquid reference curves on behalf of the Canadian Institute of Actuaries,¹⁹ and we understand these reference curves have been adopted by the workers compensation boards.

The approach they use is similar to the Credit Default Swap approach that we have set out above. The Canadian approach:

- Takes the spread for A rated bonds, and the spread for BBB rated bonds, and averages the two spreads (using Canadian bonds)
- Assumes that 70% of the spread is related to illiquidity (and 30% is related to credit risk)
- Judgementally adds a further 50 basis points to reflect the fact that insurance liabilities for statutory benefits are inherently less liquid than bonds

On average this produced an illiquidity premium for the boards of around 1.6% at December 2024.

The Canadian boards are similar to Australian Workers Compensation schemes, so it is worth considering their approach. However, there is a degree of judgement involved in applying their approach, and it is not clear how the judgemental elements would be updated during a liquidity stress.

One important consideration relevant to the Canadian boards, is that, prior to IFRS 17 they discounted their liabilities using the expected investment returns on assets backing the insurance liabilities. In Canada the move to discounting using a risk-free rate with the inclusion of a (quite high) illiquidity premium led to a very similar discount rate used pre- and post- the implementation of IFRS 17.

¹⁹ <https://www.fieracapital.com/en/institutional-markets/cia-ifrs-17-curves>

3.6. Comparison to benchmarks

The following tables set out estimates of illiquidity premiums, current at the time of this paper (October 2025) from a range of different insurers across jurisdictions.

New Zealand

Insurer	Sector	Product	Illiquidity premium
Asteron ²⁰	Life		50 bps
Fidelity Life ²¹	Life	Stepped premium	0 bps
		Traditional non-par, level premium	25 bps
		Annuities and LIC – where applicable	50 bps
General Insurers ²²	General		0-60 bps

Australia

Insurer	Sector	Product	Illiquidity premium
ResLife ²³	Life	CICP	20 bps
		Annuities	50 bps
AIAA ²⁴	Life		83-124 bps
Swiss Re ²⁵	Life		0 bps
IAG ²⁶	General		25 bps
Suncorp ²⁷	General		30 bps
QBE ²⁸	General		30 bps

The large locally-listed Australian general insurers (IAG, Suncorp and QBE) adopted an illiquidity premium of between 25 bps and 30 bps. These insurers write a mix of short and long-tail business, with quite variable liquidity characteristics.

We have only shown life insurers that disclosed a separate illiquidity premium (rather than just an overall discount rate), as collated by PwC in their summary of Australian IFRS 17 reporting. For these insurers, the illiquidity premium was quite variable ranging from 0 bps (Swiss Re believes that Commonwealth Government Bonds incorporate sufficient illiquidity) to 124 bps.

Canada

The Fiera Capital Corporation produce the illiquid reference curves on behalf of the Canadian Institute of Actuaries.²⁹

²⁰ <https://mjw.co.nz/wp-content/uploads/2024/11/ast-20240630.pdf>

²¹ <https://www.fidelitylife.co.nz/media/rhjazzco/fidelity-life-annual-report-2024.pdf>

²² <https://mjw.co.nz/wp-content/uploads/2024/12/Illiquidity-Premium.pdf>

²³ https://www.pwc.com.au/insurance/IFRS_17_Disclosures_Thought_Leadership_AU_June_2024.pdf

²⁴ As above

²⁵ As above

²⁶ https://aasb.gov.au/media/s44brdlg/aasb17_psfg_feb-25_ap3_illiquiditypremium.pdf; annual reports

²⁷ As above

²⁸ As above

²⁹ <https://www.fieracapital.com/en/institutional-markets/cia-ifs-17-curves>

The following table sets out the single equivalent discount rates, and estimated illiquidity premium, for the following Workers Compensation' boards, at December 2024.

Province	Sector	Discount rate	Illiquidity premium
Alberta ³⁰	Workers' compensation	4.92%	~ 160 bps
British Columbia ³¹	Workers' compensation	4.79%	~ 160 bps
Ontario ³²	Workers' compensation	4.83%	~ 160 bps
Quebec ³³	Workers' compensation	4.75%	~ 160 bps

Canada adopted a much higher illiquidity premium than our proposed methods would suggest. Partly this is due to a judgemental overlay of adding 50 bps. And it may also reflect, in part, differences between Australian and Canadian asset prices and spreads.

United Kingdom³⁴

Insurer	Sector	Product	Illiquidity premium
Aviva	Life	Annuities	~170-180 bps
		With-profits	~30-40 bps
		Protection	~20-30 bps
L&G	Life	Annuities	~160 bps
		Protection	~80 bps
Phoenix	Life	Annuities	169 bps
		With-profits (liquid)	20 bps
		With-profits (illiquid)	104-169 bps

UK life insurers appear to have a relatively consistent view on illiquidity premiums (160-180 bps) for annuity business, although there is quite substantial differences for other types of business. As with Canada, the higher rates may reflect differences between Australian and UK asset prices and spreads.

4. Discussion and conclusions

In summary, the inclusion of the illiquidity premium will play a critical role in the valuation of liabilities for public sector insurance schemes. The following key considerations highlight its relevance, practical application, and recommended approach for ongoing review.

- The inclusion of an illiquidity premium is appropriate for public sector schemes because their insurance liabilities typically exhibit illiquidity characteristics. Consequently, IFRS 17 requires that discount rates used for valuing the liabilities include an illiquidity premium.
- For many long-tailed public sector schemes, incorporating an illiquidity premium supports long-term financial sustainability. These schemes often adopt a long-term investment perspective distinct from

³⁰ https://wcb.ab.ca/annual-report-2024/assets/PDFs/AR_2024_web.pdf

³¹ <https://www.worksafebc.com/en/resources/about-us/annual-report-statistics/2024-annual-report/2024-annual-report-2025-2027-service-plan?lang=en>

³² https://www.wsib.ca/sites/default/files/2025-09/2024_audited_financial_statements_web_posting.pdf

³³ <https://www.cnesst.gouv.qc.ca/sites/default/files/documents/rag2024.pdf>

³⁴ <https://www.pwc.co.uk/insurance/assets/pdf/ifrs-17-fy24-analysis-for-uk-life-insurers.pdf>

private sector insurers, given their role as sole insurance providers in specific segments, their ability to operate with negative net assets given explicit or implicit government support, and their ability to enact, or engage with government and parliament to enact, legislative changes to address systemic sustainability challenges. Including an illiquidity premium, which better matches liability values to asset values during times of asset market distress, assists long-tailed public sector schemes in reducing some of the economic volatility that their balance sheets are subject to.

- The Credit Default Swap and Guaranteed Bond methods offer a simple estimation approach, and are currently being considered by some schemes in Australia and New Zealand. Both methods produce broadly similar results.
- Historically, the illiquidity premium has remained relatively stable outside of periods of market distress, but it tends to rise significantly during such conditions. Outside periods of market distress, annual re-estimation is generally unnecessary. A pragmatic approach would be to review the illiquidity premium every three years or when there are substantial market changes.