# Fair value under IFRS 17 and market risk benefits under LDTI: A comparative evaluation

Josh Dobiac, LLM, JD, MS, CAIA Yang Jing, FSA, MAAA Shirley Song, FSA, MAAA



The introduction of International Financial Reporting Standard (IFRS) 17 on January 1, 2023, will result in significant changes to the valuation of liabilities for most international insurance companies.

The Accounting Standards Update (ASU) 2018-12, also called "Targeted Improvements to the Accounting for Long-Duration Contracts" (LDTI), amends the existing accounting requirements under generally accepted accounting principles (GAAP) for long-duration contracts, with a target implementation date of January 1, 2023. With both IFRS and U.S. GAAP frameworks evolving toward a new framework, there will be significant accounting changes and related implications for U.S. reporting companies.

While some of the requirements of LDTI are similar to IFRS 17, some are quite different. This paper compares some of the key components to LTDI and IFRS 17 and better prepares insurers for the upcoming changes.

## General methodology

IFRS 17 combines the current balance sheet measurements of liabilities at every reporting period with profit recognition over the life of the contract. The standard includes three possible measurement models: the General Model (also known as the Building Block Approach or BBA), the Premium Allocation Approach (PAA), and the Variable Fee Approach (VFA) for contracts in scope of IFRS 17. One of the key components introduced in IFRS 17, the contractual services margin (CSM), represents unearned profit of the insurance contract at inception. CSM is set up so that profits are recognized as services are provided rather than at contract issue. It is equal to and the opposite of any present value of future cash flow gain less the initial risk margin at inception. A positive CSM would amortize over the life of the contract. Losses (a negative CSM) are recognized immediately for loss-making contracts. The CSM is unlocked to absorb future changes resulting from fluctuation in fulfillment cash flows.

Under IFRS 17, the International Accounting Standard Board (IASB) has allowed insurers to make choices on their approaches in various areas, such as the level of aggregations, derivation of risk adjustments, discount rates, and how various assumption changes are recognized in subsequent measurement periods.

Similar to IFRS 17, U.S. GAAP is moving closer to a current value framework for long-duration contracts. One of the key areas of LDTI is the introduction of market risk benefit (MRB), which aims to improve the current accounting framework for certain market-based options and guarantee products. MRB is defined as "a contract or contract feature that both provides protection to the contract holder from capital market risk and exposes the insurance entity to other-than-nominal capital market risk." The valuation model under LDTI measures features that qualify under the MRBs using a set of stochastically generated risk-neutral scenarios.

There are two approaches to carry out MRB implementations: an option-based approach and a non-option-based approach. The option-based approach determines fair value at contract inception using all applicable fees. The non-option-based approach is also known as the attributable or ascribed fee approach. An attributable fee ratio is set so that the fair value of MRB is zero at issue; it is determined as the average of the present value (PV) benefit over the average of PV or all contract fees as of inception and it is locked in at contract issue. MRB in subsequent measurement periods is the average of the PV future benefit - locked-in attributable fee ratio\* average of the PV of all contract fees.

1

While both frameworks are targeting a migration to reflect the fair value of insurance liabilities, there are still various fundamental differences between the two. The table in Figure 1 illustrates a general overview of IFRS 17 and LDTI considerations through various lenses, followed by sections detailing comparisons in assumptions, transition, and risk mitigation under both frameworks.

FIGURE 1.	OVEDVIEW	OF IEDS 17 AND	LDTI CONSIDER	PATIONS

	IFRS 17	LDTI
Implementation Date	January 1, 2023	January 1, 2023, for SEC filers
		January 1, 2025, for non-SEC filers
Cohorting	Three groups (profitable, becoming onerous, onerous) and by issue year.	Liability for policyholder benefits (LFPB): Cohorting by issue year.
	<ul> <li>Grouping of onerous contract testing is performed based on seriatim basis unless an entity has reasonable and supportable information to conclude that a set of contracts should be in the same group.</li> </ul>	For MRB: Seriatim calculation.  For MRB: Seriatim calculation.
Expected Cash Flow	Fulfillment cash flow to reflect full range of possible	Stochastic scenarios are not necessary for LFPB.
	outcomes, which includes the estimate of unbiased and probability-weighted future cash flows, a discount adjustment to reflect the time value of money, and financial risks.	<ul> <li>Stochastic scenarios are most likely necessary for any MRB with market-sensitive and/or asymmetric product features.<sup>1</sup></li> </ul>
Expenses	Measurement of liability calculation includes direct and directly attributable expenses.	Measurement of liability calculation excludes all expenses other than the claim settlement expenses.
Risk Provision	Captures an explicit risk provision with the Risk Adjustment (RA) component, which relates to uncertainties arising from insurance risk other than financial risk.	Uses best estimate assumption with no provision for adverse deviation.
Discount Rate and Extrapolation of Data	<ul> <li>Risk-free rate plus illiquidity premium.</li> <li>Extrapolation from market data is flexible, though the most common approach is extrapolating from the final market</li> </ul>	<ul> <li>LFPB – discounted at upper-medium credit rated curve, taken to mean an average credit rating of 'A' for the included bonds.</li> </ul>
	point (or last liquid point) to an ultimate forward rate over a period (10-20 years being common). Setting of the ultimate	<ul> <li>MRB- Risk-free rate plus nonperformance risk spread and potentially illiquidity premium (depending on product).</li> </ul>
	forward rate is often challenging but should be consistent with market information to the extent possible.	Extrapolation from market data is flexible, though the most common approach is extrapolating from the final market point (or last liquid point) to an ultimate forward rate over a period (10-20 years being common). Setting of the ultimate forward rate is often challenging but should be consistent with market information to the extent possible.
		<ul> <li>Accounting Standards Codification (ASC) 820/825 and Financial Accounting Standards Board (FASB) Concept Statement 7 still should inform principles of fair valuation.<sup>2,3</sup></li> </ul>
Illiquidity premium (ILP) & OCS	<ul> <li>Explicitly allowed in guidance, though no official methodology provided. Range of approaches available.</li> <li>Own-credit spread is disallowed.</li> </ul>	Significant uncertainty as to whether this is allowed. Credible argument for inclusion in MRB calculation for fixed-indexed annuities (FIA) and variable annuities (VAs) with Guaranteed Minimum Death Benefit (GMDB). Acceptance by auditors for other riders and insurance contracts is challenging, though not definitive yes or no at this point. The American Academy of Actuaries (AAA) recently published an exposure draft of a white paper on market risk benefit calculations that did endorse an ILP for at least some products. <sup>4</sup>
Reserving	Gross Premium Valuation (GPV)	<ul><li>Net Premium Valuation (NPV) for LFPB, capped at 100%</li><li>Not applicable for MRB.</li></ul>

<sup>&</sup>lt;sup>1</sup> AAA (October 2021). Considerations in Market Risk Benefits, A B7. Exposure Draft: A Public Policy White Paper. Retrieved April 26, 2022, from https://www.actuary.org/sites/default/files/2021-10/AAA\_MRB\_White\_Paper\_Exposure\_Draft\_10062021.pdf.

\_

June 2022

<sup>&</sup>lt;sup>2</sup> FASB. Summary of Statement No. 157. Retrieved April 26, 2022, from https://fasb.org/page/PageContent?pageId=/reference-library/superseded-standards/summary-of-statement-no-157.html&bcpath=tff.

<sup>&</sup>lt;sup>3</sup> FASB (February 2000). Statement of Financial Accounting Concepts No. 7. Retrieved April 26, 2022, from https://www.fasb.org/Page/ShowPdf?path=con7.pdf&title=CON+7+%28AS+ISSUED%29&acceptedDisclaimer=true&Submit=.

 $<sup>^{\</sup>rm 4}$  AAA (October 2021). Considerations in Market Risk Benefits, op cit.

#### FIGURE 1: OVERVIEW OF IFRS 17 AND LDTI CONSIDERATIONS (CONTINUED)

	IFRS 17	LDTI
Amortization	<ul> <li>IASB introduced a new concept, CSM. It is set up as the unearned profit of the insurance contract at inception. A positive CSM amortizes over the life of the contract.</li></ul>	<ul> <li>Deferred acquisition costs (DAC) is not a new concept; however, the amortization is simplified to a linear fashion under LDTI for LFPB.</li> <li>DAC does not accrue interest</li> <li>Not applicable for MRB calculation.</li> </ul>
Unlocking	<ul> <li>For future noneconomic assumption changes, CSM is adjusted to absorb the impact and stabilize profit pattern.</li> <li>Entities are permitted to make an accounting choice to report the impact of discount rate changes through either P&amp;L or OCI.</li> </ul>	<ul> <li>LFPB - For future noneconomic changes, net premium ratio (NPR) is revised and applied at issue to determine the revised liability. Change in NPR related to historical reporting is recognized in current period reporting income.</li> <li>Entities are required to report the impact of discount rate changes in OCI.</li> <li>For MRB calculations, the attributed fees are locked-in at contract inception or at transition, therefore assumption updates and utilization variances flow through the current period financials without the smoothing provided by the benefit ratio mechanism.</li> </ul>
Profit Emergence	Release of risk adjustment (RA) + release of CSM + investment gain.	LFPB - Income from gross premium (GP) over net premium (NP) – DAC amortization – maintenance expense + investment gain.
Transition	Full retrospective approach (FRA), modified retrospective approach (MRA), fair value (FV).	FRA, MRA
Risk Mitigation	Entities using VFA have the option to reflect certain market sensitivities through P&L instead of CSM if entities have risk mitigation strategy in place.	Market sensitivities can flow through P&L or other comprehensive income (OCI).

# **Assumptions**

Under GAAP LDTI, the market risk benefit calculation requires estimating the fair value of the insurance guarantee. This fair value is supposed to be market-based, reflecting the exit price (as opposed to a fulfillment cash flows-based approach). The calculation should also not be entity specific. Valuation should always maximize the available market information. However, in the absence of observable market transactions, reporting entities should be consistent with the standard assumptions market participants would use. 5 One aspect of the MRB calculation that is entity specific is nonperformance risk. This requires the reporting insurer to add an additional spread to the discount rate that reflects the credit-riskiness of the insurer. Aside from NPR, 6 discount rates "should reflect assumptions that market participants would use when pricing the liability and take into account only the factors attributable to the liability being measured."7

IFRS 17, on the other hand, does base liability valuation on the concept of "fulfilment cash flows." Under IFRS 17, fulfilment cash flows consist of:

- 1. A current estimate of unbiased and probability-weighted future cash flows expected to arise during the life of the contract.
- A discount adjustment to reflect the time value of money and financial risks, such as liquidity and currency risks.

<sup>&</sup>lt;sup>5</sup> ASC 820-10-05.

<sup>6</sup> NPR, or nonperformance risk, "includes, but may not be limited to, a reporting entity's own credit risk. Nonperformance risk is assumed to be the same before and after the transfer of the liability." See ASC 820-10-35-18.

<sup>&</sup>lt;sup>7</sup> ASC 820-10-55-6 and 820-10-55-7.

The reporting insurer should include all cash flows that are within the contract boundary and incorporate, in an unbiased way:

- 1. All reasonable and supportable information available without undue cost or effort about the amount, timing, and uncertainty of those future cash flows.
- 2. Reflect the perspective of the entity, if estimates of any relevant market variables are consistent with observable market prices for those variables.
- 3. Be current (based on actual data on the measurement date) and explicit (no historical model but based on current insights of the future) data.<sup>8</sup>

Furthermore, discount rates must reflect the time value of money, characteristics of the cash flows, and liquidity characteristics of the insurance contracts, and should be consistent with observable current market prices (if any) for financial instruments with cash flows whose characteristics are consistent with those of the insurance contracts (e.g., timing, currency, and liquidity), and exclude the effect of factors that influence such observable market prices but do not affect the future cash flows of the insurance contracts. An example would be in terms of currency and timing of cash flows and uncertainty due to financial risk. The effects of uncertainty in cash flows due to nonfinancial risks are included in the risk adjustment.<sup>9</sup>

IFRS 17, paragraph B74, provides further guidance on estimating discount rates:

- 1. Estimates of discount rates shall be consistent with other estimates used to measure insurance contracts to avoid double-counting or omissions.
- 2. Cash flows that do not vary based on the returns on any underlying items shall be discounted at rates that do not reflect any such variability.
- 3. Cash flows that vary based on the returns on any financial underlying items shall be: (i) discounted using rates that reflect that variability; or (ii) adjusted for the effect of that variability and discounted at a rate that reflects the adjustment made.

#### IFRS 17 VS. LDTI MRB DISCOUNT RATES

IFRS 17 fulfillment cash flows are different from those used for fair value under GAAP LDTI. However, the first two components of the definition (unbiased probability-weighted future cash flows, discounted to reflect the time value of money and financial risks) *are* consistent with GAAP fair value. From this, IFRS 17, paragraph 36.B26.a, explains why reporters should include liquidity considerations in the discount rate and why the cash flows should be on a consistent basis with the discount rates. IFRS 17, paragraph B74, also points out that if the cash flows depend on the returns of financial items, then discount rates should be set consistently. Some insurers and regulators in other countries seem to have read this to mean that components of the discount rate, such as an illiquidity premium, should be a part of both discounting and accumulation for products that have market-driven variable cash flows. However, until companies start officially reporting under IFRS 17, it is important to be cautious making strong pronouncements on this.

Regardless of the liquidity characteristics of a given insurance liability, the discount rate applied to liability cash flows should be less than the amount an insurer expects to earn on their asset portfolio. The best way to think about this is to decompose asset earned rates into their constituent parts:

- Risk-free rate: The rate that reflects the time value of money, without regard to any investment or default risk.
- Liquidity spread: The amount investors require above the risk-free rate as compensation for bearing the risk of not being able to sell an asset, or for having to sell at a discount to its fair value. This may be the result of contractual limitations, or a lack of market depth, such that any trade may materially impact the price in the market. Since the ability to sell an asset on short notice is valuable, investors need to be compensated for accepting constraints on it.
- Credit spread: For most fixed-income investments, there is a risk that the issuer will default, or that it may become less financially stable, increasing the risk of a future default. To accept this risk, investors need compensation, which comes in the form of a spread over the risk-free rate.

<sup>8</sup> IFRS 17-33.

<sup>9</sup> IFRS 17-36.

• Other risk spreads: This is a catch-all category to reflect other sources of risk that may exist for a given investment. For example, prepayment risk falls in this category. Since mortgages and other types of loan obligations allow the borrower to pay back the debt early, issuers of such debt implicitly demand compensation for granting that right. Because prepayments are most likely to occur in a declining rate environment, debt issuers receive their principal back sooner than expected, and at a time when prevailing yields are less favorable. This increases reinvestment risk, which requires compensation.

Given that asset yields comprise the above spreads, constructing an appropriate discount rate requires including spreads that reflect characteristics of the insurance contract, and excluding those that do not. To do this, you could start with a portfolio yield and work your way down to the appropriate discount rate, or you could start at the bottom (risk-free rates) and work your way up. These alternative methods are aptly called the "top-down" and "bottom-up" approaches, respectively.

Under LDTI, discount rates may be simpler. If the product falls under the MRB calculation, then the reporting entity starts with the risk-free rate. This is adjusted for nonperformance risk, which reflects the creditworthiness of the legal entity holding the liability. In some instances, the discount rate may also include an illiquidity premium, but this remains to be seen. For nonparticipating products that do not fall under the MRB calculation, the discount curve must reflect an upper-medium credit risk, which amounts to using an "A-rated" credit-risky discount curve.<sup>10</sup>

Under both LDTI and IFRS 17, interpolation and extrapolation of the discount curve remain key issues. Interpolation is necessary because there are not market quotes for all future time points, so it is necessary to assume some method for calculating the discount rate between market quotes (for example, between the 9-year swap rate and 10-year swap rate). Many different techniques are used, a comprehensive discussion of which is beyond the scope of this note.<sup>11</sup>

Extrapolation is also important because insurance liabilities tend to have cash flows that extend beyond the longest-dated interest rate instruments. As our colleagues Pierre-Edouard Arrouy et al. have noted, extrapolation requires answering at least two questions:

- 1. How to determine the longest duration at which market data is sufficiently reliable, often referred to as the "last liquid point" (LLP). This point can vary significantly among markets and for different instruments within those markets.
- 2. How to extrapolate the risk-free yield curve from the LLP to an ultimate horizon by which the insurance liabilities are expected to have been extinguished.

"There is no single accepted approach to extending the risk-free yield curve," they write, "and the choices made can have a significant impact on the valuation of some long-term insurance liabilities. We can look across to how other regimes handle this but the ongoing debate over the position of the last liquid points and the level of the ultimate forward rate (horizon value) under Solvency II (SII) illustrate the challenge."12

While this quote was directed at discount rates under IFRS 17, the observations are applicable to GAAP LDTI as well.

### **Transition**

IFRS 17 is expected to be implemented with an effective date of January 1, 2023. However, because IFRS 17 requires at least one year of comparative financial statements, the first IFRS17 balance sheet needed for transition purposes will start as of December 31, 2021, in order to prepare for a parallel set of results for year 2022.

At transition, IFRS 17 is applied retrospectively. Companies must consider the full retrospective approach (FRA) first. FRA assumes that IFRS 17 has always been applied since contract inception and has been rolled forward to the date of transition. This requires the companies to have access to all historical data since inception of the contracts, including market data, inforce data, and experience studies as well as system and modeling capabilities. This could be a challenge for some

<sup>&</sup>lt;sup>10</sup> Dobiac, J., Matczak, B., & Greco, J. (April 2020). Constructing Discount Curves Under LDTI. Milliman White Paper. Retrieved April 26, 2022, from <a href="https://frm.milliman.com/-/media/milliman/pdfs/articles/ldti-discount-curve.ashx">https://frm.milliman.com/-/media/milliman/pdfs/articles/ldti-discount-curve.ashx</a>.

<sup>&</sup>lt;sup>11</sup> The interested reader can consult "Equivalence Between Forward Rate Interpolations and Discount Factor Interpolations for the Yield Curve Construction" by Jherek Healy (December 2019), which provides a solid overview of the issues.

<sup>12</sup> Pierre-Edouard Arrouy et al. (October 2020). Setting discount rates under IFRS 17: Getting the job done, Paper 1: An overview of the process.

companies, so the standard permits companies to apply the modified retrospective approach (MRA) or the fair value approach (FVA), if they find the FRA approach to be impracticable. MRA follows FRA in principle, but it is simpler in execution. Some companies prefer MRA over FVA because they can use market assumptions as of or close to at issue to calculate initial CSM and then use historical actual cash flow data and attribution analyses to roll it forward. The goal of MRA is to achieve results as close to the FRA as possible, using reasonable and available information. However, if reasonable and supportable information cannot be obtained to apply the MRA, then the FVA is applied.

Entities can also choose to apply FVA if they 1) choose to apply risk mitigation, and 2) have risk mitigation strategies in place before the transition date. However, FVA is quite different in concept compared to FRA or MRA. Under the fair value method, the CSM or loss component is determined as the difference between the fair value and the fulfillment cash flows at the transition date. The definition of fair value comes from IFRS 13, where the fair value of the insurance contracts would be viewed as a transactional market "exit price" in a sale. The valuation is on a prospective basis and historical cash flows are not required for existing business, which diverges from the retrospective approaches under FRA or MRA. The different principles for a fair value approach under IFRS 13 and the fulfillment approach under IFRS 17 will most likely lead to different calculations in best estimates of liabilities, discounting, and risk adjustment components. For more details on fair value approach at transition, see our recent publication, "IFRS 17: Fair Value Approach to Transition: Options and Market Review." 13

A roll-forward methodology is needed to roll forward CSM from the initial recognition date to the transition date and to future subsequent valuation dates. CSM roll-forward can include but is not limited to the following components:

- 1. Interest accretion
- 2. Change in experience, actual versus expected experience adjustment
- 3. Release of CSM for providing insurance service that is measured by the number of coverage units

The IFRS 17 guideline definition of coverage units is "the quantity of insurance contract services provided by the contracts in the group, determined by considering for each contract the quantity of the benefits provided under a contract and its expected coverage period." The definition is principle-based in nature. Depending on the product features, common definitions of coverage units include but are not limited to PV of claims, PV of account value (AV), decrement rate-based, and PV of reserve. As shown in the hypothetical CSM runoff graphs in Figure 2, different coverage unit definitions exhibit different CSM amortization patterns. Account value based definitions front-load profit release while the claim-based definitions are less aggressive, with longer durations of profit release. Mortality-based CSM runoff shows similar characteristics as claim-based definitions.



Fair value under IFRS 17 and market risk benefits under LDTI: A comparative evaluation

<sup>&</sup>lt;sup>13</sup> Jenkins, J. & Patel, D. (November 30, 2021). IFRS17: Fair Value Approach to Transition: Options and Market Review. Milliman Insight. Retrieved April 26, 2022, from https://www.milliman.com/en/insight/firs17-fair-value-approach-to-transition-options-and-market-review.

LDTI is expected to be implemented with an effective date of January 1, 2023, for U.S. Securities and Exchange Commission (SEC) filers, and 2025 for non-SEC filers. Two approaches are allowed for calculating the opening balance at transition: the full retrospective approach or the modified retrospective approach. The full retrospective approach allows for a more precise picture of the opening transition balance and MRBs must use it. Similar to the full retrospective approach under IFRS 17, LDTI's full retrospective approach also requires entities to recalculate the reserve as if LDTI has been in place since contract inception.

MRB contracts must be remeasured at fair value but non-MRB contracts can decide to opt for the modified retrospective approach, which involves pivoting off current GAAP reserves. The decision on the transition methodology is most likely going to be dictated by data availability, system capability, and operational considerations. At transition, entities are required to calculate MRB. The difference between MRB and balances based on current accounting is going to be split between retained earnings (RE) and accumulated other comprehensive income (AOCI). The cumulative effect of changes in a company's own credit risk is classified under AOCI and the remainder is reflected in RE.

# Risk mitigation

A common issue that entities face when transitioning to IFRS 17 or LDTI is the impact of being market-consistent. Products that were traditionally valued at book value or under SOP will now have to be measured at fair value, which undoubtedly brings volatility to financial reporting. Additional asset and liability management (ALM) strategy specifically designed to mitigate economic and accounting volatility could be developed. For companies that already have volatility mitigation strategy in place, there are still areas for consideration given the change. For example, if an entity hedges on a statutory basis, which has muted market sensitivity, this transition could still bring a significant amount of volatility to profit and loss (P&L).

For LDTI adopters, the change in MRB will be directly reflected on the balance sheet, so it is beneficial to minimize market sensitivity by using a risk management mechanism if there is not one already in place.

For IFRS 17 adopters, there is the risk mitigation option that essentially provides a "switch off" option for an entity that uses the variable fee approach. Under the variable fee approach, the impact of financial risk is typically reflected in the contractual services margin (CSM), but this treatment would create an accounting mismatch for companies that have ALM strategies in place with the intention to fully or partially offset financial risks embedded in insurance contracts. For variable or structured annuities, it is common for companies to utilize derivatives such as futures, interest rate swaps, and/or options to hedge liability market sensitivity on a fair value basis. Based on the IFRS 17 guideline, paragraph B116, these risk mitigation instruments are not limited to derivatives. They can be non-derivatives such as fixed income securities and/or reinsurance contracts but all are valued at fair value. By applying the risk mitigation option, companies can recognize financial risk changes of their insurance contracts immediately in P&L, which will likely be offset by hedge assets and reduce accounting volatility. However, any accounting measurement differences between liability and assets will also flow through P&L.

To be eligible for applying the risk mitigation option, companies need to have "a previously documented risk-management objective and strategy." Another caveat to note about the risk mitigation option under IFRS 17 is that it can only be applied prospectively. The International Accounting Standards Board (IASB) took a strong position that retrospectively applying risk mitigation is prohibited due to the risk of the use of hindsight.

The ALM world is vast and complex. There is not a solution that fits all profiles and risk appetites. The following discussion selects a few examples to illustrate the potential impact of this transition for a variety of hypothetical risk management practices.

Company A currently has a dynamic, economic-based hedge program. It hedges the full contract with a 100% hedge target of market risks. Its discount curve is market-observable risk-free rates with spreads. For Company A, the transition to IFRS 17 or LDTI could be fairly straightforward. It likely won't need to change its hedge program for this transition. If it is an IFRS 17 adopter, it would probably be in its best interest to select the risk mitigation option so that 100% of liability market impact can flow through P&L, which will be offset by hedge assets, assuming hedge effectiveness is high.

Company B currently has a dynamic hedge program, but it only partially hedges its liability. Partial hedging could mean less than a 100% target market movement, or partial contract, or the fair valued liability only, etc. It also uses market-observable risk-free rates plus spreads to construct the discount curve. For Company B, there are a few considerations it needs to deliberate:

- Is it beneficial to expand its hedge program to be a full hedge instead of a partial hedge? If not, market sensitivity from the unhedged portion could cause significant volatility in its P&L.
- Is it beneficial to use different discount curves for different types of the contract? If so, tracking various discount curves can complicate the already complex operational system and, in addition, when the discount curve deviates materially from hedgeable rates, basis risk could lower hedge effectiveness and cause volatility in its P&L.
- How does the last liquidity point play a role affecting various contracts and hedge effectiveness? Usually the last liquidity point is not very market-sensitive and is utilized for projection year 30 and beyond. If a company's existing hedging instruments have durations longer than 30 years, then the use of the last liquidity point could generate mismatch between hedge asset sensitivity and liability sensitivity and, therefore, reduce hedge effectiveness.

If Company B is an IFRS 17 adopter, the risk mitigation option is likely still beneficial to elect.

Company C has a static hedge program with hedge targets based on statutory accounting. A statutory-based measure usually has a muted market impact and its hedging usually has a wider rebalancing threshold. Company C could consider keeping statutory-based hedging as core but incorporate fair value measure for rebalancing by using the relationship between statutory-based sensitivity and fair value-based sensitivity. Analyses need to be performed on both IFRS 17/LDTI fronts and the statutory front to understand the impact of this change, as it will impact many aspects of financial reporting. For Company C, it is less clear whether the risk mitigation option is beneficial or not.

Company D currently does not hedge. If Company D is a LDTI adopter, then balance sheet volatility is going to increase if it continues with the current strategy. If Company D is an IFRS 17 adopter, it could simply continue as is and allow all market sensitivity to flow through the CSM. Alternatively, Company D could set up a hedging program and elect the risk mitigation option to allow some market sensitivity to flow through P&L.

## Conclusion

There are many similarities between IFRS 17 and the GAAP LDTI MRB calculation. However, they are by no means identical. LDTI distinguishes between participating and nonparticipating products with material valuation differences between the two (non-par products are not fair-valued). IFRS 17 is more encompassing, wherein the standard assumption is that liabilities are fair-valued, though with adjustments to traditional fair value concepts. Of note, the risk adjustment and illiquidity premium may materially alter the fair value. The CSM, furthermore, has a heritage akin to accrual accounting, such that profit is determined at contract inception but earned over time. While CSM may adjust for changing assumptions, unless the insurer is using the VFA, changing market conditions will not impact CSM (except when the insurer uses the VFA without risk mitigation).

From a hedging perspective, both standards enlarge the number of insurance products whose valuation is sensitive to market conditions. Absent hedging or more dynamic ALM, this means greater income statement and balance sheet volatility. Reducing this requires insurers to determine the appropriate trade-offs between greater financial statement stability and the cost required to reduce volatility. There are no simple answers here, as it depends on the balancing of a multitude of factors that are insurer dependent. It is important that management seriously consider these trade-offs before the implementation date of each standard, because there may be a financial impact at transition that will depend on the amount of hedge assets which exist at that time.

IFRS 17 and GAAP LDTI represent substantive changes to the valuing of insurance liabilities. These changes, however, are not supported with detailed or prescriptive guidance on how to implement them, putting a significant burden on insurers to determine the most appropriate assumptions that reflect the intent of the standards. Thus, while these standards were first published some time ago, much uncertainty remains on implementation, transition, and disclosure. We hope this paper adds to the ongoing discussion and helps summarize some of the key challenges that need to be addressed ahead of the transition date next year.

## Disclaimer

The views expressed in this article are those of the authors, and not those of Milliman. Nothing in this paper is intended to represent a professional opinion or to be an interpretation of actuarial standards of practice. This article is intended solely for educational purposes and presents information of a general nature. Accordingly, it is not intended to be comprehensive or completely accurate. Original source documents should be referred to for complete information. It is not intended to guide or determine any specific individual situation and persons should consult qualified professionals before taking specific actions. Neither the authors nor Milliman shall have any responsibility or liability to any person or entity with respect to damages alleged to have been caused directly or indirectly by the content of this paper.



Milliman is an independent consulting, benefits and technology firm. Our expert guidance and advanced analytical solutions empower leading insurers, healthcare companies and employers to protect the health and financial well-being of people everywhere. Every day, in countries across the globe, we collaborate with clients to improve healthcare systems, manage risk, and advance financial security, so millions of people can live for today and plan for tomorrow with greater confidence.

milliman.com

CONTACT
Josh Dobiac
josh.dobiac@milliman.com

Yang Jing yang.jing@milliman.com

Shirley Song shirley.song@milliman.com

© 2022 Milliman, Inc. All Rights Reserved. The materials in this document represent the opinion of the authors and are not representative of the views of Milliman, Inc. Milliman does not certify the information, nor does it guarantee the accuracy and completeness of such information. Use of such information is voluntary and should not be relied upon unless an independent review of its accuracy and completeness has been performed. Materials may not be reproduced without the express consent of Milliman.