CAS RESEARCH PAPER

ACTUARIAL CONSIDERATIONS ASSOCIATED WITH IFRS 17 IMPLEMENTATION FOR GENERAL INSURERS IN ASIA

PART 1 — PREMIUM ALLOCATION APPROACH

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Actuarial Considerations Associated with IFRS 17 Implementation for General Insurers in Asia: Part 1 – Premium Allocation Approach

By Delvin Cai, FCAS; Stephen Dong, FIAA; and Leo Lee, FCAS

1. Executive Summary

For the global insurance market, the transition to International Financial Reporting Standard 17 (IFRS 17) from IFRS 4 is one of the most impactful events in the industry's history. IFRS 17 strives to improve the transparency of insurers' financial statements and make insurance reporting more consistent across jurisdictions. However, IFRS 17 is still a principle-based standard and therefore has many areas that require management judgement. As such, actuaries will play a pivotal role in this transition since there may be significant changes to the measurement of the insurance contract liabilities.

Fortunately for property and casualty (P&C) insurers (the majority of which largely underwrite annual policies), they are likely to be eligible for the simplified Premium Allocation Approach (PAA) model under IFRS 17. In Part 1 of this paper, we will explore emerging practices in Asia around the implementation of the PAA and challenges P&C practitioners face. To supplement the research, we have conducted an industry survey on over 60 P&C insurers in territories that have already gone live with IFRS 17, including Hong Kong, Singapore, and Malaysia. The survey and our analysis cover several key actuarial topics underpinning the implementation of the PAA, as outlined in the subsequent sections.

1.1. PAA Eligibility

A group of contracts is eligible to apply the PAA if the coverage period of each contract in the group is one year or less. For those groups of contracts with coverage period greater than one year, it can still be eligible for the PAA if the entity reasonably expects that the measurement under PAA would not differ materially from the general measurement model (GMM) at inception.

Our survey highlighted several emerging practices around PAA eligibility:

- 86% of respondents indicated that they would only apply the PAA measurement model.
- 80% of respondents indicated that they would use some form of qualitative metric to pass the PAA eligibility test for groups of contracts over one year.

- 83% of respondents indicated that they would apply both a percentage and an absolute threshold to define "not materially different" for PAA eligibility testing.

1.2. Current Estimate Liabilities

Under IFRS 17, the current estimate liability, also widely known as best estimate liability (BEL), is an explicit and unbiased measurement of expected future cash flows required to fulfil the obligations arising from insurance contracts.

Our survey highlighted several emerging practices around BELs:

- 51% of respondents indicated that they have included new cash flow types to meet the IFRS 17 requirements of BEL.
- 95% of respondents indicated that they would not change the revenue recognition pattern (i.e., premium earning pattern) under IFRS 17.
- 85% of respondents indicated that their actuarial reserving methodology and/or assumptions would change due to IFRS 17.

1.3. Discounting

An entity should adjust the estimates of future cash flows to reflect the time value of money and the financial risks related to those cash flows (i.e., discounting). IFRS 17 allows two approaches to determine the discount rates (top-down and bottom-up), and certain simplifications around discounting may be applied under the PAA model.

Our survey highlighted several emerging practices around discounting:

- 98% of respondents indicated that they would apply the bottom-up approach to derive discount rates under IFRS 17.
- 86% of respondents indicated that they would apply discounting on the liability for incurred claims (LIC) only under PAA (i.e., no allowance for time value of money on the liability for remaining coverage (LRC).
- 71% of respondents indicated that they would use government bond rates to derive the risk-free rates under IFRS 17.
- 79% of respondents indicated that would not apply an illiquidity premium to the discount rates due to reasons such as materiality.
- 76% of respondents indicated that they would not adopt the other comprehensive income option (OIC) under IFRS 17.

1.4. Risk Adjustment

IFRS 17 requires insurers to reflect the compensation required for bearing uncertainty for future cash flows arising from nonfinancial risk (i.e., risk adjustment). The risk adjustment informs users of financial statements on the value that the entity places on the uncertainty and variability of insurance cash flows.

Our survey highlighted several emerging practices around risk adjustment:

- 95% of respondents indicated that they would adopt a confidence level (VaR) approach to determine the risk adjustment.
- 95% of respondents indicated that they would target a 75th confidence level for the risk adjustment.
- 75% of respondents indicated that they will explicitly calculate a diversification benefit within the risk adjustment.
- 91% of respondents indicated that their risk adjustment percentage on LRC[1] would be higher than their risk adjustment percentage on LIC.

1.5. Loss Component and Loss Recovery

Under the PAA, if a group of contracts is assessed to be onerous at the reporting date, the entity should book the difference between the carrying amount of the LRC and the fulfillment cash flows(FCF) related to the remaining coverage as a loss component.

Our survey highlighted several emerging practices around the loss component:

- 91% of respondents indicated that they expect a significant difference between the loss component under IFRS 17 and the premium deficiency or unexpired risk reserve under IFRS 4.
- 63% of respondents indicated that they would still use Excel to perform onerous testing and/or loss component calculation.
- 78% of respondents indicated that they would apply a ratio of ceded claims to determine the loss recovery component.

Overall, the survey results are aligned with our industry observations that there appears to be a level of convergence in market practice. Most P&C insurers in Asia will take a more pragmatic approach to implementing PAA. This has resulted in some simplifications applied to reduce operational burden under IFRS 17. However, whether these simplifications can be sustained in the long term remains to be seen.

2. Introduction

For the global insurance market, the transition to International Financial Reporting Standard 17 (IFRS 17) is shaping up to be one of the most impactful events in the industry's history. IFRS 17 is an accounting standard for insurance contracts that replaces IFRS 4, which was an interim standard that permitted a wide variety of practices. IFRS 17 represents

[1] For the LRC under PAA, a risk adjustment would be applied to determine the fulfillment cash flows under GMM when performing onerous testing or evaluating the loss component for onerous groups of contracts.

the most significant change to insurance accounting requirements in 20 years. It will require insurers to overhaul their financial statements (for those territories subject to IFRS reporting), including the measurement of key balance sheet items such as the insurance contract liabilities. As such, IFRS 17 strives to improve the transparency of insurers' financial statements and make insurance reporting more consistent across different jurisdictions.

IFRS 17 is still a principle-based standard and therefore has many areas that require management interpretation and judgement. Given the significant changes to the valuation of the insurance liabilities, actuaries will play a pivotal role in this transition. For property and casualty (P&C) insurers, there are typically two measurement models that are adopted under IFRS 17. The GMM is the default model, while the Premium Allocation Approach (PAA) is a simplified model designed for short-term insurance contacts. P&C insurers (the majority of which largely underwrite annual policies) are likely to be eligible for the PAA model for most if not all their contracts, which can reduce the implementation complexity while simplifying the modelling and disclosure requirements.

In this paper, we will focus on the wider Asia region and explore the local IFRS 17 implementation considerations and challenges P&C practitioners face. Asia is a diverse market with local regulators taking different approaches to IFRS 17 adoption. For many international markets such as Hong Kong and Singapore, their adoption dates have followed the global effective date of January 1, 2023. However, other major insurance hubs such as China and India have delayed their adoption dates to 2025/26. This has resulted in varying degrees of IFRS 17 readiness across different territories in Asia.

This research paper will be issued as a two-part series. The first part provides a deep dive on the PAA model implications, and the second part covers the GMM and changes in key performance indicators under IFRS 17. As part of our research, we have conducted an industry survey[2] of over 60 P&C insurers across Hong Kong, Singapore, and Malaysia. These territories have been selected because they went live with IFRS 17 on January 1, 2023, so the survey participants provided invaluable insights into emerging market practices. We have supplemented the survey with in-depth analysis and commentary around the key actuarial topics under PAA. These topics include PAA eligibility, current estimate liabilities, discounting, risk adjustment, and onerous testing and loss component.

[2] The survey was conducted by the authors and supporting team members from January 2024 to May 2024. The input from the survey was related to participants that represented P&C (re)insurers from various segments (e.g., local, multinational, and small and medium-sized enterprises (SMEs)) in Hong Kong, Singapore, and Malaysia. The responses, information, analysis, and commentary provided in association with the survey may come from a variety of sources. This includes the responses by the participants, observations from IFRS 17 disclosures published in annual financial statements, and the author's specific knowledge and research into the company. The survey results and the associated commentary should not be used as a substitute for consultation with professional advisors. Information received from respondents has not been verified by the authors or the Casualty Actuarial Society.

3. IFRS 17 Landscape in Asia

3.1. IFRS 17 Requirements in Asia

Table 3.1. Asia's IFRS requirements

Territory	Local Standard	Effective Date	Local Requirements
Hong Kong	Hong Kong Financial Reporting Standards 17 (HKFRS 17)	January 1, 2023	• Exemptions from HKFRS 17 reporting may be granted for insurers incorporated outside Hong Kong (e.g., branches or marine mutual insurers). • For the first year of HKFRS 17 reporting, Hong Kong insurers are required to submit financial statements together with a set of financial information that covers both the local Hong Kong Insurance Ordinance (HKIO) statutory basis (i.e., the preceding reporting basis akin to HKFRS 4) and HKFRS 17. • On a case-by-case basis, the local regulator may ask insurers to include an analysis to bridge from HKIO to HKFRS 17 results.
Singapore	Singapore Financial Reporting Standards 17 (FRS 117)	January 1, 2023	• No special local requirements, with the submission process for FRS 117 being the same as the previous basis under FRS 4.
Malaysia	Malaysia Financial Reporting Standards 17 (MFRS 17)	January 1, 2023	• No special local requirements, with the submission process for MFRS 17 being the same as the previous basis under MFRS 4.
Japan	Japanese generally accepted accounting principles (JGAAP)	January 1, 2023	• IFRS Accounting Standards are permitted but not required for domestic public companies. IFRS Standards are one of four permitted financial reporting frameworks. The others are Japanese GAAP, Japan's Modified International Standards, and US GAAP.

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Table 3.1. Asia's IFRS requirements *(Continued)*

Territory	Local Standard	Effective Date	Local Requirements
			• IFRS Accounting Standards are permitted for listings by foreign companies. • Therefore, IFRS 17 is not compulsory in Japan, as official disclosure requirements are still reported based on JGAAP.
South Korea	South Korea International Financial Reporting Standards 17 (K-IFRS 1117)	January 1, 2023	• K-IFRS is required for all listed companies, unlisted financial institutions, and state-owned companies in Korea. • Prior year comparatives must also be reported in the FY 2023 financial statements.
Mainland China	中国企业会计准则第 25 号——保险合同 Chinese Accounting Standards No. 25 – Insurance Contracts	January 1, 2023, for overseas listed companies January 1, 2026, for all other companies	• For overseas listed companies, the transition date is January 1, 2022. (Transition date refers to the beginning of the annual reporting period immediately preceding the date of initial application of the standard.) In the FY 2023 financial statements, a comparison analysis since transition date should be disclosed. • For other companies, the transition date is January 1, 2025. In the FY 2026 financial statements, a comparison analysis since transition date should be disclosed. • Companies are allowed to adopt IFRS 17 in advance of the required effective dates. • If the effective date of the group company is January 1, 2023, and the effective date of the subsidiary is January 1, 2026, the subsidiary can choose either January 1, 2022, or January 1, 2025, as the transition date.

Table 3.1. Asia's IFRS requirements *(Continued)*

Territory	Local Standard	Effective Date	Local Requirements
Thailand	Thailand Financial Reporting Standards 17 (TFRS 17)	January 1, 2025	• Effective date for TFRS 17 applies to all companies starting from January 1, 2025 (transition date of January 1, 2024), with the first submission report to be 45 days after Q1 2025. • The regulator has requested all companies to submit TFRS 17 parallel run results, including the restated opening balance sheet and profit and loss statement as of Q1 2024 by August 2024.
Taiwan	N/A	January 1, 2026	• The regulator has requested all insurance companies to complete their IFRS 17 system vendor selection by 2022 and complete the system implementation by 2023. The regulator has also requested companies complete their production of dry run monthly IFRS 17 results by 2024, including parallel testing, transition scenario testing, and financial closing process monitoring. • IFRS 17 transition date as of January 1, 2025, with dual reporting (IFRS 4 and IFRS 17) for 2025 until IFRS 17 goes live on January 1, 2026. • For specific classes of business, the measurement model is appointed by the regulator (e.g., Compulsory Motor will be measured under PAA)

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Table 3.1. Asia's IFRS requirements *(Continued)*

Territory	Local Standard	Effective Date	Local Requirements
Vietnam	N/A	N/A	• For local reporting, there is no requirement for IFRS 17 adoption yet. Vietnam is currently using local GAAP (Vietnam Accounting Standard). However, the regulator is planning to converge to IFRS in the future. • Multinational insurance companies with parent companies adopting IFRS 17 are usually required to complete internal IFRS 17 reconciliations under local reporting.
Indonesia	Indonesian Financial Accounting Standards (PSAK 74)	January 1, 2025	• Adopt to all companies starting from January 1, 2025, and early adoption is permitted. • Request insurance and reinsurance companies to carry out a parallel run of IFRS 17 (local equivalent PSAK 74 insurance contracts) in the first quarter of 2024.
Philippines	Philippine Financial Reporting Standard 17 (PFRS 17)	January 1, 2025	• All insurance and reinsurance companies are required to submit reports of prepared work for PFRS 17 implementation by April every year until 2025. • Companies that will not adopt PFRS 17 on January 1, 2023, are required to provide additional disclosures notes in their Financial Statements. Otherwise, companies can opt to adopt PFRS 17 starting January 1, 2023.

Table 3.1. Asia's IFRS requirements *(Continued)*

Territory	Local Standard	Effective Date	Local Requirements
India	Indian Accounting Standards 117 (Ind AS 117)	Staggered: April 1, 2025 April 1, 2026 April 1, 2027	• Insurers are bucketed into three adoption phases by the insurance regulator based on listing status and size of assets under management. • Insurers under the first phase will go live on April 1 2025, second phase on April 1, 2026, and third phase on April 1, 2027. • Second and third-phase insurers can opt for early adoption as per first phase timeline.
Sri Lanka	Sri Lanka Financial Reporting Standards 17 (SLFRS 17)	January 1, 2025	• SLFRS 17 is effective on January 1, 2025, with early application permitted. • The first compliant annual reports to be published on 31 March 2026.
Cambodia	Cambodia International Financial Reporting Standards 17 (CIFRS 17)	January 1, 2025	• Adopt to all insurance companies at the same time. • The first time of report is end of December of the CIFRS's effective year.
Macau	N/A	N/A	• The regulator is expected to begin adaptation of IFRS 17 in 2026 (still in discussion) after local risk-based capital implementation.

Note: Each territory information is the latest as of the time of writing this paper and is subject to change by the local regulators.

4. Implementation Considerations with Premium Allocation Approach

4.1. Overview of the Premium Allocation Approach

Under IFRS 17, the default measurement model to value insurance contract assets and liabilities is the GMM, where estimates of all rights and obligations are remeasured using unbiased assumptions in each reporting period. The GMM, also known as the building block approach, is based on the building blocks of discounted, probability-weighted cash flows;[3] a risk adjustment; and a contractual service margin (CSM). The measurement of the liabilities is broken down into the liability for remaining coverage (LRC; the unexpired risk portion) and the liability for incurred claims (LIC; the expired risk portion). Note that the CSM represents the unearned profit of the contract and is therefore only applicable to the LRC and not the LIC.

A simplification, called the Premium Allocation Approach (PAA), is permitted to measure the LRC if certain eligibility criteria are met. The PAA is designed for short-duration contracts and applied predominantly across the P&C industry. The requirements for PAA eligibility and the related practical considerations are discussed further in section 4.2. Note that under the PAA, the LIC will still need to be measured based on the building blocks of discounted, probability-weighted cash flows and a risk adjustment (i.e., the GMM approach).

The components of the PAA and GMM calculation are shown in Figure 4.1 along with a comparison to a typical measurement under IFRS 4. Under IFRS 17, the LIC has the same underlying components for both the GMM and PAA. However, the PAA LRC is much more simplified as it is not required to be broken down by current estimate liabilities, risk adjustment, and CSM. Note that if a group of contracts is determined as onerous for the current reporting period, a loss component will need to be booked under the PAA by taking the difference between the carrying amount of the PAA LRC and the fulfillment cash flows under the GMM.

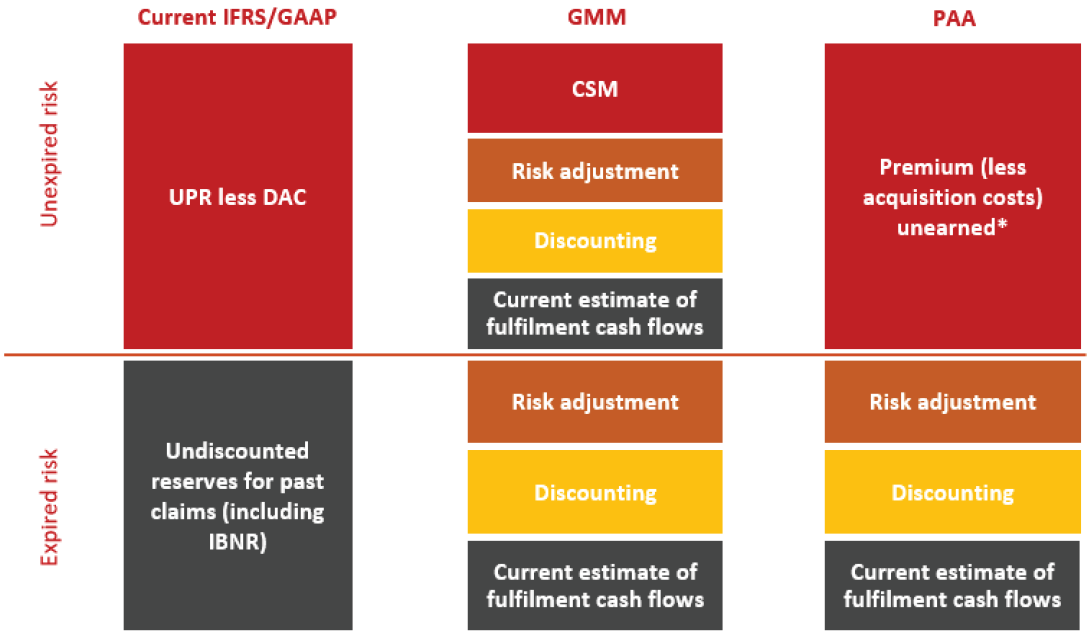
The following sections of the paper provide a deep dive into the individual building blocks that make up the insurance liabilities under PAA. This includes the current estimate liabilities (section 4.3), discounting (section 4.4), risk adjustment (section 4.5) and the loss component (section 4.6).

When an entity chooses to apply the PAA, the insurance revenue is the amount of total expected premium receipts (i.e., expected ultimate premiums over the coverage period) allocated to the reporting period. This allocation is generally done on the basis of the passage of time; however, if the expected risk release pattern differs significantly from the passage of time, then the insurance revenue should be recognized based on the expected timing of incurred insurance service expenses.[4]

[3] Refer to section 4.3 for more details on the measurement of cash flows under IFRS 17.

[4] IFRS 17.B126.

Figure 4.1. Comparison of GMM and PAA measurement models



UPR = unearned premium reserve; IBNR = incurred but not reported.

Note: The size of the blocks is for illustrative purposes only. In practice, the quantum of each measurement block may differ from current IFRS/GAAP to GMM or PAA due to a change in valuation basis under IFRS 17 (e.g., allowance for discounting).

** The measurement of the LRC (unexpired risk) under PAA assumes several simplifications, for example all premiums are fully received up-front (i.e., no premium receivables) and no onerous contracts. In practice, the LRC measurement may involve more considerations depending on the facts and circumstances.*

Overall, the PAA aims to streamline the accounting process for insurance contracts with shorter durations, by focusing on recognizing revenue based on premiums over time and simplifying the measurement of insurance liabilities where possible. It is often the practical choice amongst P&C insurers when PAA eligibility criteria can be met.

4.2. PAA Eligibility

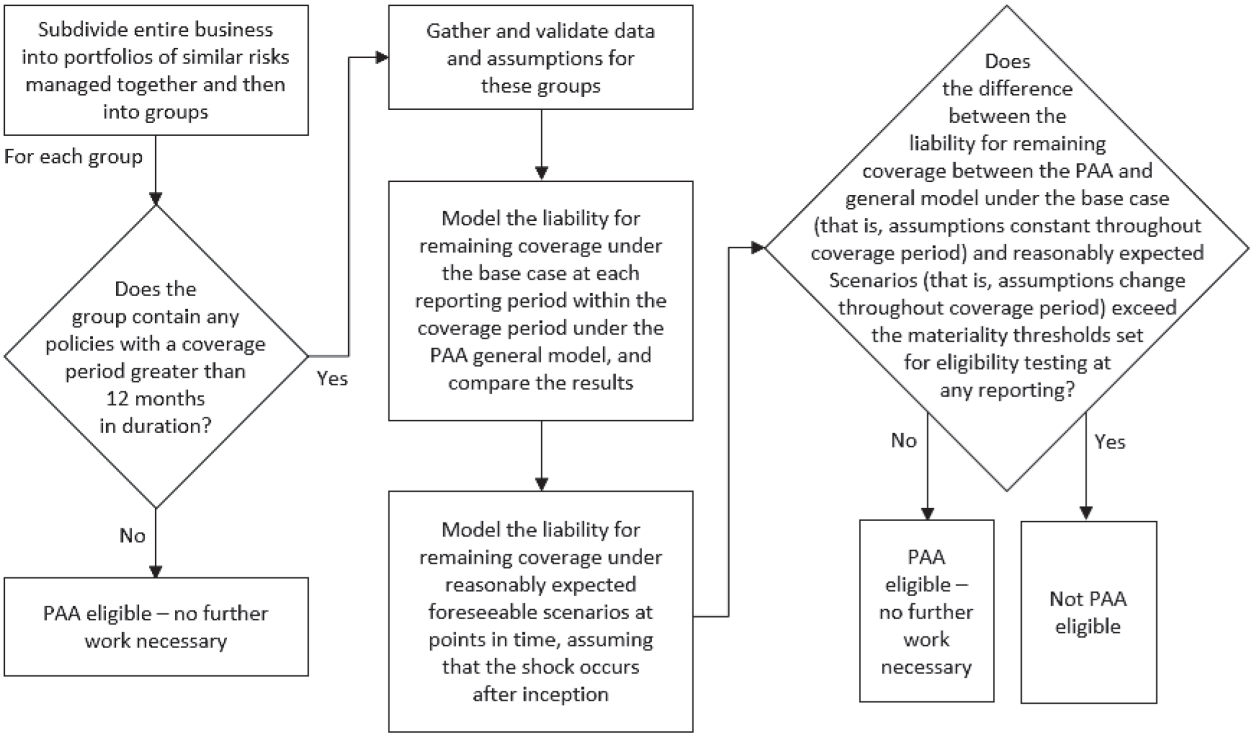
4.2.1. Background

A group of contracts is eligible to apply the PAA if at the inception of the group, the coverage period of each contract in the group is one year or less.[5] For those groups of contracts that include contracts with coverage period greater than one year, the insurer may still apply the PAA if the entity reasonably expects at inception that the simplification would not differ materially from the one that would be produced under the GMM.[6]

The decision tree below is an illustrative process that P&C insurers may utilize to determine whether a group of contracts can be measured under the PAA, see Figure 4.2. Note that

[5] IFRS 17.53(b).
[6] IFRS 17.53(a).

Figure 4.2. Decision tree to determine PAA eligibility



some aspects of the decision tree involve practical interpretations from the IFRS 17 Standard requirements, and other interpretations may also be possible.

The eligibility criteria for applying the PAA involve several key considerations in practice:

1. **Short-term coverage period:** The PAA is automatically applicable to groups of contracts where all contracts have a coverage period of one year or less. Therefore, it is crucial to analyze and determine the coverage period of each policy, including consideration of features such as cancellation clauses,[7] which are common in parts of Asia. Contracts with longer durations may still qualify if the entity reasonably expects that the LRC measured under the PAA does not differ materially from the LRC measured under the GMM.
2. **Predictable cash flows:** Groups of contracts that undergo PAA eligibility testing will need to be modelled under both the GMM and PAA. This involves projecting the expected premium, claims, expenses, risk adjustment, and CSM run-off over the expected coverage period. Contracts with relatively predictable cash flows enable entities to estimate future cash flows with reasonable accuracy, resulting in more robust PAA eligibility results.

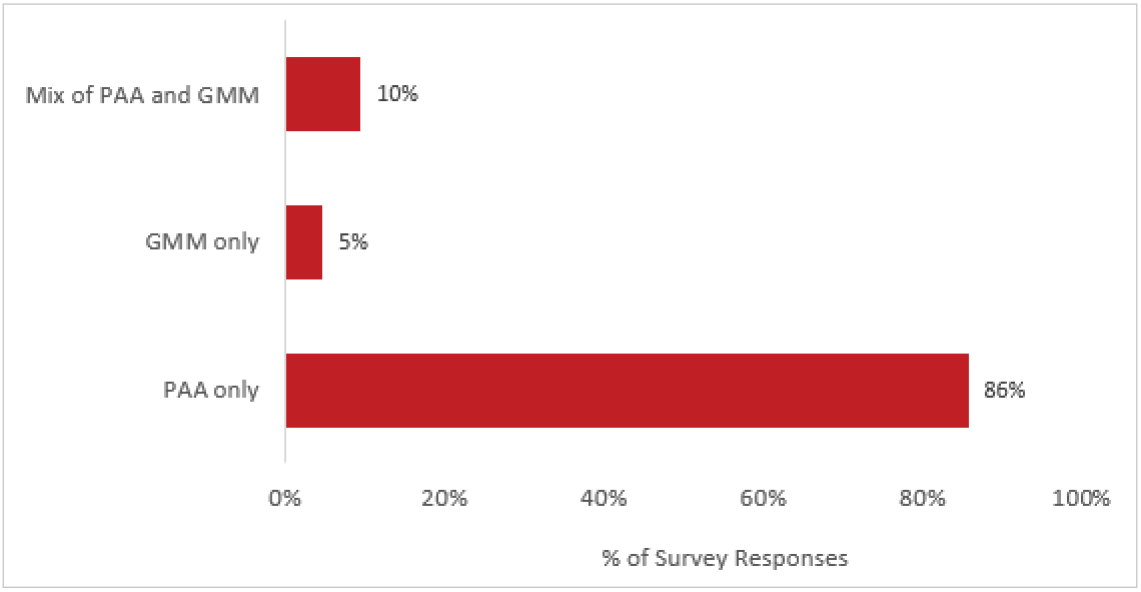
[7] Note that that presence of cancellations clauses in (re)insurance contracts may lead to a conclusion that the contract boundary under IFRS 17 is shortened compared to the legal contract term. Insurers would need to assess the rights and obligations of the contract (as per IFRS 17.34) under the existing policy conditions.

3. **Variability in insurance risk:** Groups of contracts with low levels of variability in insurance risk throughout their coverage period are more likely to pass the PAA eligibility test. This is because of the requirement to "reasonably expect" that the difference between the GMM and PAA are not material, which means groups of contracts with high variability in the estimated future incurred losses could have more possible and/or extreme outcomes. Also, the PAA eligibility testing criterion is not met if at the inception of the group an entity expects significant variability in the fulfillment cash flows that would affect the measurement of the LRC during the period before a claim is incurred.[8]

4.2.2. Market Survey

Our survey found that 86% of respondents will only use the PAA, while 5% will only use the GMM, as reflected in Figure 4.3. Given that the PAA is a simplified method designed for short-term business, it is not surprising to see most P&C insurers opting for the PAA. The PAA also offers more similarities to existing IFRS 4 practices and has fewer complex calculations and disclosures compared to the GMM. Given the requirement for contracts over one year to undergo PAA eligibility testing, the market survey indicates that most longer-term standard P&C products were able to successfully pass. Based on industry observations, some examples of P&C products that would have difficulty passing PAA eligibility include lenders mortgage insurance and extended warranty due to their nonlinear expected claims incurred pattern.

Figure 4.3. Responses to survey question: Which measurement model do you expect to apply under IFRS 17?



[8] IFRS 17.54.

Our survey found that 65% of respondents will pass PAA eligibility for groups with contracts over one year based on materiality considerations, see Figure 4.4. This means that the insurer will automatically apply the PAA for those groups without quantitative modelling. Based on industry observations, commonly used materiality metrics include the audit materiality threshold or a percentage of total entity net premiums (e.g., 1%–2%). Another 15% of respondents will also apply non-materiality metrics. These metrics may include looking at the coverage period (e.g., if the coverage period is less than three years) or assessing the expected seasonality in claim incurred.

Our survey found that 83% of respondents will apply both a percentage and absolute difference threshold when determining if the difference between the PAA and GMM is "not materially different," as indicated in Figure 4.5. Applying two layers of thresholds is common because a single threshold may result in nonintuitive results. In some situations, larger percentage differences might be observed toward the tail of the coverage period, but the absolute amount of the difference is still small. We note that there are varying practices in the market when it comes to setting the actual percentage and absolute threshold level. For the percentage threshold, it is typical to adopt a difference threshold of 5%–10% of the GMM LRC for the group of contracts. For the absolute difference, some insurers may reference the audit materiality level while others may take an amount that is equal to a percentage (e.g., 2%–5%) of the total gross written premium for the group of contracts.

Our survey found that 50% of respondents will refresh their PAA eligibility testing analysis when there are new products, while the other 50% will refresh it when facts and circumstances change, as seen in Figure 4.6. The big takeaway is that most companies will typically perform the PAA eligibility assessment at IFRS 17 transition and only update it when there are material changes in the business. Generally, insurers would not treat the PAA eligibility as a periodic exercise that would cause additional operational strain. Some common examples of facts

Figure 4.4. Responses to survey question: For contracts over one year, do you use any qualitative metrics to pass PAA eligibility?

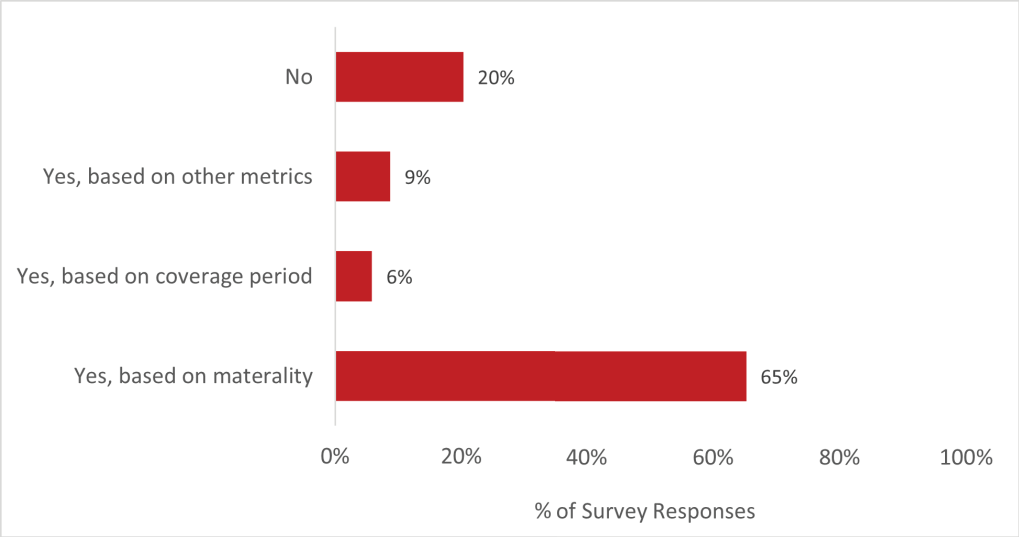


Figure 4.5. Responses to survey question: For the quantitative PAA eligibility testing (i.e., applying IFRS 17.53(a)), what thresholds do you use to define "not materially different"?

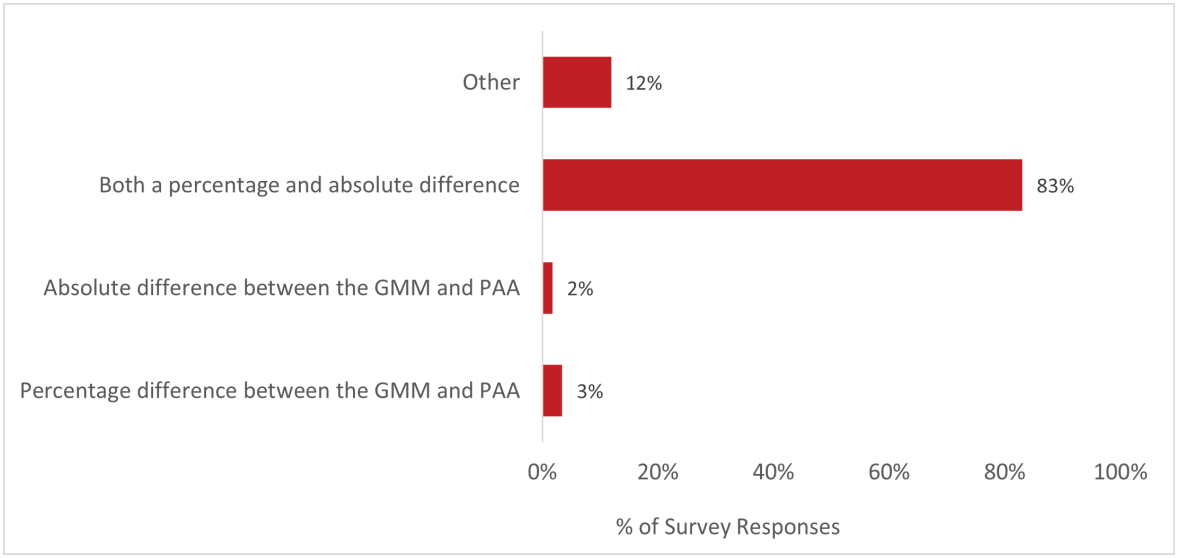
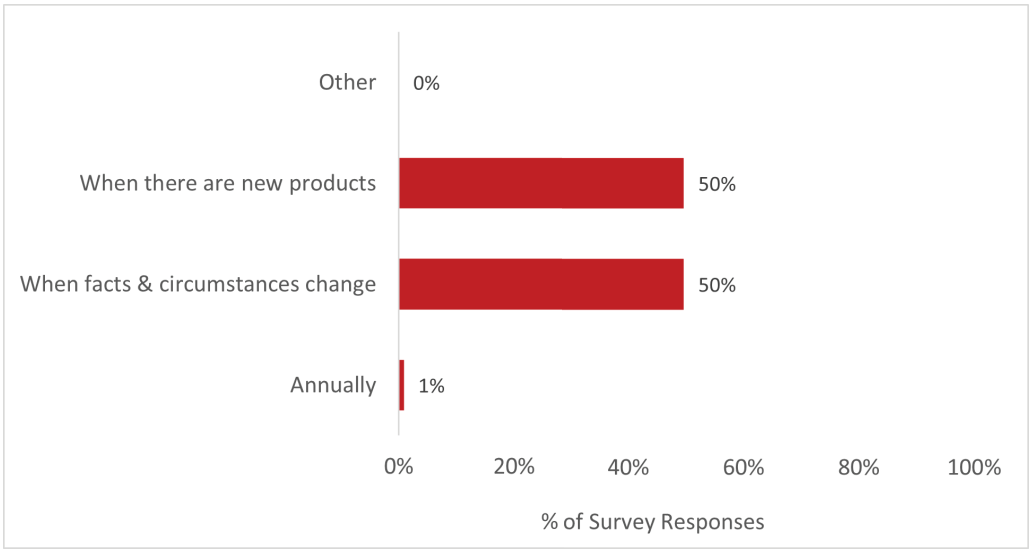


Figure 4.6. Responses to survey question: How often do you expect to refresh the PAA eligibility testing analysis?

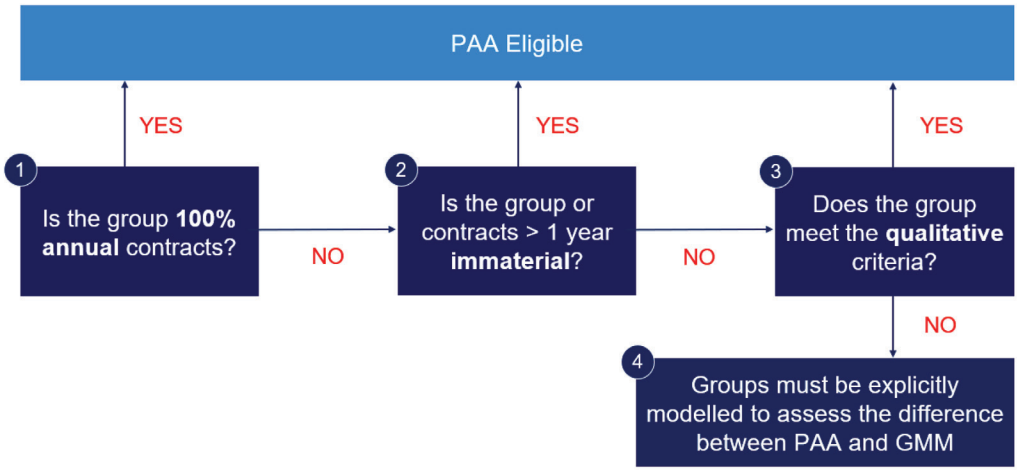


and circumstances that would trigger a review of the PAA eligibility include any significant changes in the underlying product assumptions (e.g., coverage period, payment pattern, and loss ratios) or market factors (e.g., interest rates).

4.2.3. Practical Considerations and Emerging Market Practice

For groups of contracts that have a coverage period exceeding one year and of material volume, PAA eligibility testing should be performed. For these groups, P&C insurers will need to first assess the coverage period and then set up processes to perform the PAA

Figure 4.7. PAA eligibility framework



eligibility testing. Several key emerging market practices around PAA eligibility testing are discussed below.

We have observed P&C insurers in Asia setting up frameworks to assess each group of contracts and determine whether they need to undergo quantitative testing for PAA eligibility. An illustrative example of a common framework is shown below, but different insurers may opt to include or exclude different steps in the framework.

Step 1: Is the group 100% annual contracts?

The insurer would first determine the coverage period of each group of contracts. If the contracts with the group are all one year or less, then they are automatically eligible for PAA. While this may seem straightforward, terms such as renewal and cancellation clauses may require judgement and distort the coverage period.

For example, in India, there are government-mandated renewal terms for annual health insurance policies. Due to the lack of practical ability to reprice in the first three years, the coverage period may be concluded to be greater than a year and therefore will not be automatically eligible for PAA. In Hong Kong and Singapore, it is standard practice to have 30-day cancellation clauses that can be unilaterally exercised by both the policyholder and insurer. These clauses can occur for both direct insurance contracts and reinsurance treaties. In these cases, the contract's coverage period may be assessed to be 30 days instead of the legal contract length. For some muti-year policies such as construction, this may allow the insurer to conclude that the coverage period is less than one year, which means it will be automatically PAA eligible.

Step 2: Is the group or contracts greater than one year immaterial?

Some insurers would also look at the materiality of the contracts over one year before deciding to proceed with further quantitative PAA eligibility testing. However, as with any

decisions around materiality, getting auditor agreement is critical to ensure it would not misread readers of the financial statements.

For example, there could be cases where most of the contracts in the group are annual, but only a few contracts are over one year. Therefore, the insurer would conclude that if the multiyear contracts in a group are under a certain threshold (e.g., less than 5% of the total premiums of the group of contracts), then it could be deemed immaterial. Another example is when a group consists of mostly multiyear contracts, but the total LRC of the group is immaterial when compared to the entity LRC. For example, we have observed some P&C insurers conclude that it is immaterial to test a group for PAA eligibility if the LRC of the group is less than 2% of the total entity LRC. This criterion can also be subject to a cumulative cap, which ensures that the total amount of groups defined as immaterial does not exceed a defined threshold at the company level.

Step 3: Does the group pass any qualitative criteria?

Some insurers will also assess a set of qualitative criteria based on contract characteristics that are known to drive differences between the LRC under GMM and PAA. The rationale is that if the multiyear contracts fit these criteria, then they are unlikely to fail the quantitative PAA eligibility testing. Common qualitative metrics include:

- Short coverage period (e.g., less than two years)
- Short tail claim run-off duration (e.g., less than three years)
- Linear claim incurred pattern (e.g., no seasonality)
- Onerous contracts

However, we note that applying these qualitative criteria would normally require strong empirical evidence. This is because auditors are likely to challenge it, and the onus would be on the insurer to prove that meeting such criteria will lead to immaterial differences between the GMM and PAA. Typically, these qualitative criteria are backed up by quantitative modelling, which has allowed the actuaries to understand the key drivers of the differences between the GMM and PAA. Based on these modelling insights, the actuary can argue that the qualitative criteria are a practical expedient to determine PAA eligibility, rather than going through the full quantitative modelling.

Step 4: Explicitly model the difference between the PAA and GMM

If the answers are "no" to steps 1, 2, and 3, then the groups of contracts should be tested explicitly under the PAA and GMM to determine if the differences are material. Further discussion on defining the passing criteria and modelling challenges is outlined in the sub sections below.

(a) Interpreting "not differ materially" and "reasonably expects"

If a group of contracts is assessed to require a quantitative PAA eligibility test, then IFRS 17.53(a) requires that the entity "reasonably expects" that the LRC under

PAA would "not differ materially" from the GMM. Defining this criterion has posed a major challenge for P&C insurers given the lack of guidance and the amount of judgement involved.

For "not materially different," P&C insurers in Asia typically will compare the LRC difference between the PAA and GMM at each future reporting period from inception until maturity of the group of contracts. The materiality threshold may reference both a percentage difference threshold and absolute difference threshold. An absolute difference threshold is recommended since the LRC amount can become very small toward the end of the coverage period, which may exaggerate any differences expressed as a percentage. Therefore, it is common to adopt a two-level materiality threshold such as the example below:

> *For a group of contracts, the company will assess the difference between the PAA and GMM to be immaterial, if, at each future reporting period, it passes either one of the materiality tests set out as follows:*
>
> *1) The percentage LRC difference between the PAA and GMM is less than [10%] (as a proportion of the GMM LRC).*
>
> *2) The absolute LRC difference between the PAA and GMM is less than [2% of the total GWP for the group of contracts]. Note that this means the same absolute difference threshold will be applied across every reporting period.*

The term "reasonably expects" implies that future expected changes in circumstances should be considered. It is common practice to interpret this as requiring that the PAA eligibility test should still pass under a range of scenarios that have a reasonable possibility of occurring. Common scenarios or assumption changes that are tested for the remaining unexpired risk include the following:

- Change in discount rates.
- Change in loss ratios.
- Change in expense assumptions.
- Change in payment patterns or incurred patterns.

Note these assumption changes are normally applied during the coverage period instead of the beginning. This is because assumption changes such as discount rates will have a smaller impact if applied at the beginning (compared with being applied during the coverage period) due to the locked-in mechanism of the CSM under GMM.

(b) Drivers of difference between GMM and PAA

P&C insurers in Asia have gone through a large amount of quantitative PAA eligibility tests to prepare for IFRS 17 transition. As a result of extensive modelling, valuable insights and trends have emerged to show what really drives the difference between the LRC measurement between GMM and PAA. Understanding these key drivers

allows the actuary to predict which kind of policies could pass the PAA eligibility test (despite having coverage periods longer than one year). This is especially helpful when facts and circumstances arise to revisit the PAA eligibility (e.g., new long-term products).

In the points below, we outline some of the commonly observed causes for GMM LRC and PAA LRC to have material difference under a range of reasonable scenarios (i.e., failing the PAA eligibility test). We note that the impact of these causes on whether it passes or fails the PAA eligibility test will ultimately depend on the characteristics of the group of contracts and the PAA eligibility criteria as defined by the entity.

- **Difference in run-off pattern between the GMM CSM and PAA LRC**

  The CSM under the GMM is expected to be run off based on the release of coverage units, which is defined as the expected quantity of benefits provided for each period. In contrast, the PAA LRC is expected to be run off based on the passage of time or the expected pattern of release of risk (i.e., expected timing of incurred insurance service expenses).[9] Therefore, any differences in the two run-off patterns will lead to potentially material LRC differences between the GMM and PAA.

  This is commonly seen in contracts with linear coverage (i.e., constant sum assured) over the coverage period, but they are exposed to seasonality in incurred claims. In this case, the risk release pattern used for the PAA may not be linear, which differs to the linear CSM release pattern. Some common examples of products that may face this problem include the following:

  – Construction coverage products where there may be more risk concentrated at the start or end of the construction projects.
  – Warranty products where the likelihood of claims may be significantly higher at the end of the warranty period when it is about to expire.
  – Catastrophe reinsurance products where the underlying exposure or location has seasonality (e.g., earthquakes or typhoons).

  From our industry observations, differences in the coverage unit and risk release patterns are one of the common reasons for long-term contracts to fail the PAA eligibility test. Since it is typical for P&C products to have linear coverage unit release patterns, actuaries would perform analysis to determine if the historical claims incurred pattern is also linear throughout the coverage period (or is not significantly different from linear).

- **Sensitivity and movements in discount rates**

  Movement in discount rates during the coverage period will result in differences in the GMM and PAA because the application of discount rates differs between each building block component. This is summarized in Table 4.1.

[9] IFRS 17.B126.

Table 4.1. Discount rates for GMM and PAA models

Measurement Model	LRC Component	Applicable Discount Rate
GMM	Future cash flow	Current discount rates
GMM	Risk adjustment	Current discount rates
GMM	CSM	Discount dates at initial recognition (locked-in rates)
PAA	LRC	If a significant financing component exists, then discount rates at initial recognition (i.e., locked-in rates). If no significant financing component exists, then no discount rate should be applied.

We have observed P&C insurers in Asia's test scenarios where discount rates change during the coverage period. The application of current versus locked-in rates across different components could result in material differences between the GMM and PAA. Other factors that have been considered and could also affect the final impact of any discount rate assumption changes include the following:

- Contracts with longer coverage periods: This characteristic would amplify any discount rate changes as it builds up over the coverage period.
- Contracts with longer claim settlement periods (i.e., long-tailed classes): This characteristic would already have a higher discounting impact, which then is amplified once the discount rate changes.
- Quantum of discount rate shocks: The higher the shock, the higher the impact and difference between GMM and PAA. We have observed P&C insurers applying up and down shocks of 100 bps to 300 bps.
- Existing macroeconomic environment: During periods of low discount rates (e.g., during COVID-19), risk-free interest rates around Asia hovered close to 0%–1%. Therefore, any discount rate shocks applied should factor in a return to normal interest rate environment in the future.

- **Changes in forward-looking expectations**

Besides discount rates, other forward-looking assumption changes may have different implications on the GMM and PAA and therefore result in differences. P&C insurers in Asia would normally test assumption changes as part of the "reasonably expected" scenario tests. We note that these assumption changes would occur during the coverage period (and not at initial recognition) to maximize the impact. Commonly shocked assumptions include the expected loss ratio, directly attributable expense ratio, and risk adjustment.

Under the GMM, any changes in profitability expectations for future services would adjust the CSM balance and thus affect the CSM amount being allocated into the current period and future period. In contrast, for profitable groups under PAA,[10] there is no impact on the LRC from changes in profitability assumptions. However, it is important to note that only changes in profitability assumptions related to remaining coverage (i.e., future services) will affect the measurement, whereas actual claims events (i.e., past services) do not. Of course, actual claims experience may influence the selection of future profitability assumptions (e.g., loss ratios).

4.3. Current Estimate Liabilities

4.3.1. Background

Under IFRS 17, the current estimate liability, also widely known as best estimate liability (BEL), is an explicit and unbiased measurement of expected future cash flows required to fulfil the obligations arising from insurance contracts. It serves as a key component in the measurement of insurance contracts and reflects the current assessment of the entity regarding the amount it expects to pay out to policyholders and other beneficiaries.

The calculation of the BEL involves several steps:

1. Estimation of cash flows: Insurers estimate the future cash flows associated with fulfilling the obligations under the insurance contracts and within their contract boundaries. IFRS 17 defines the following cash flows[11] to be included in the BEL for insurance contracts issued (relevant for P&C business):
   - Premiums
   - Payments to, or on behalf of, a policyholder
   - Insurance acquisition cash flows attributable to the portfolio to which the contract belongs
   - Claims handling costs
   - Costs the entity will incur in providing contractual benefits
   - Policy administration and maintenance costs
   - Transaction-based taxes and levies
   - Potential cash inflows from recoveries on claims
   - Payments by the insurer in a fiduciary capacity to meet tax obligations incurred by the policyholder

[10] Note that for onerous groups, the PAA LRC will equal the GMM LRC by default and therefore pass the PAA eligibility test.

[11] IFRS 17.B65.

  - Allocation of fixed and variable overheads directly attributable to fulfilling insurance contracts
  - Any other costs specifically chargeable to the policyholder under the terms of the contract

  Insurers may estimate the future cash flows at a higher level of aggregation and then allocate down to individual unit of accounts.[12]

2. Consideration of uncertainty: The estimation of future cash flows takes into account a range of possible scenarios and uncertainties, such as changes in policyholder behavior and economic conditions. Techniques such as probability-weighted cash flow projections may be used to incorporate this uncertainty into the calculation. In practice, developing explicit scenarios is not always necessary if the estimate is consistent with the measurement objective of considering all reasonable and supportable information available without undue cost or effort when determining the mean.[13]
3. Consideration of reinsurance ceded contracts' terms and conditions: The estimation of reinsurance ceded cash flows is calculated similarly to the cash flows for issued contracts, but IFRS 17 requires these to be measured explicitly. It should consider the terms and conditions of reinsurance contracts, including its coverage and contract boundary and the risk of nonperformance by the reinsurer. For any loss component booked on the gross business, the expected recovery from reinsurance ceded should be considered as part of the loss recovery component calculation.

4.3.2. Market Survey

Our survey found that 51% of respondents have included new cash flows due to the IFRS 17 requirements, while 48% of respondents maintained the same type of cash flows, as shown in Figure 4.8. IFRS 17 has a broader concept of the insurance contract liabilities than what was typically included in the outstanding claim liabilities and premium liabilities under IFRS 4. Cash flows such as premium receivables, claim payables, and reinsurance recoverables may need to be included or reclassified to fit the IFRS 17 definition of BEL.

Our survey found that 95% of respondents will maintain the same premium earning pattern under IFRS 17, see Figure 4.9. Most P&C insurers in Asia adopts a straight-line approach (e.g., 1/24 or 1/365 method) to amortize the unearned premium reserve (UPR). This is not expected to change under IFRS 17 for most products. However, some P&C insurers have updated their earning pattern for products with risks that differ significantly from the passage of time, such as long-term mortgage insurance products or project-based construction risks.

Our survey found that only 15% of respondents will not change the existing reserving methodology or assumptions under IFRS 17, as shown in Figure 4.10. As one or more of the answers may be selected, it is likely respondents changed their actuarial reserving

[12] IFRS 17.33.
[13] IFRS 17.B39.

Figure 4.8. Response to survey question: Will you include or exclude any new cash flows due to IFRS 17 BEL requirements?

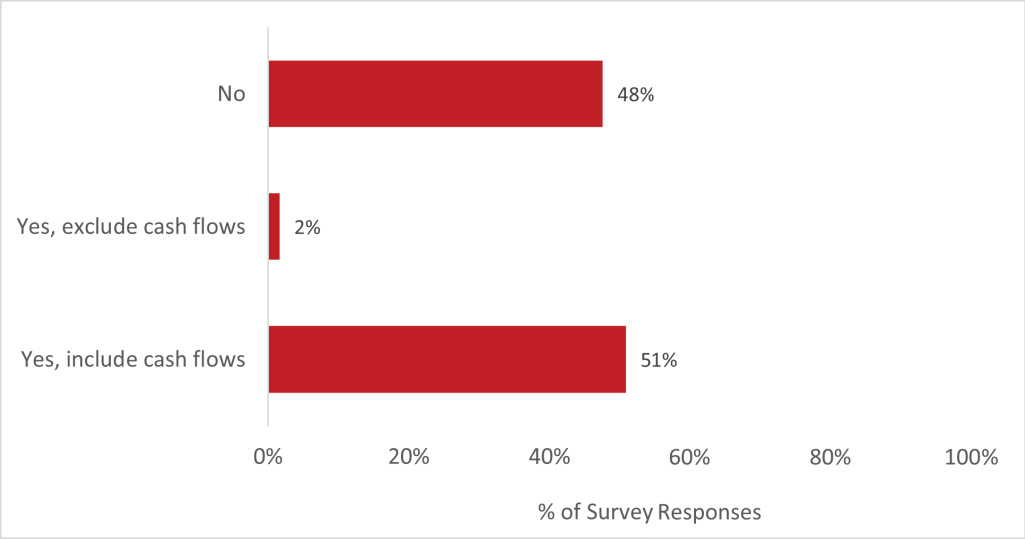


Figure 4.9. Response to survey question: Will your revenue recognition pattern (i.e., premium earning pattern) change under IFRS 17?

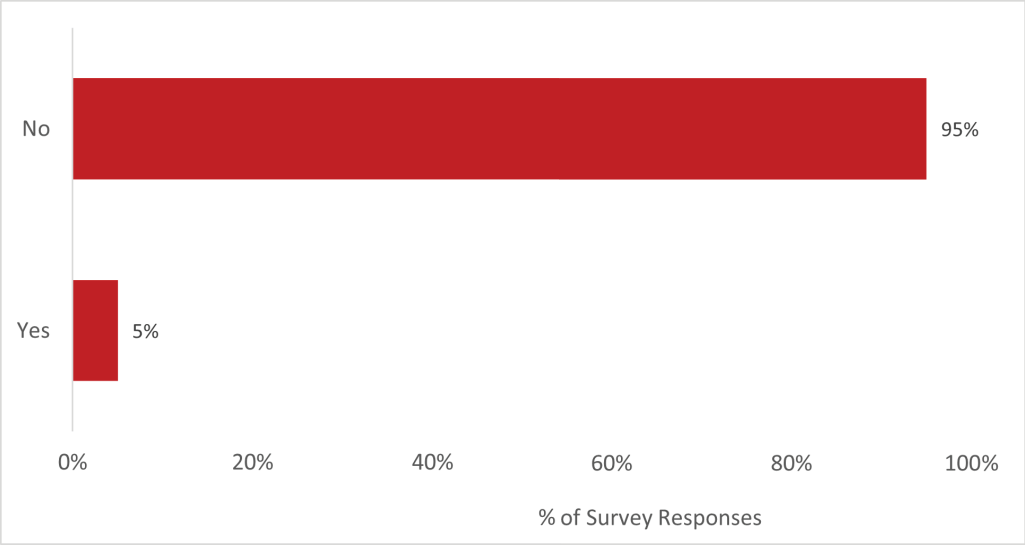
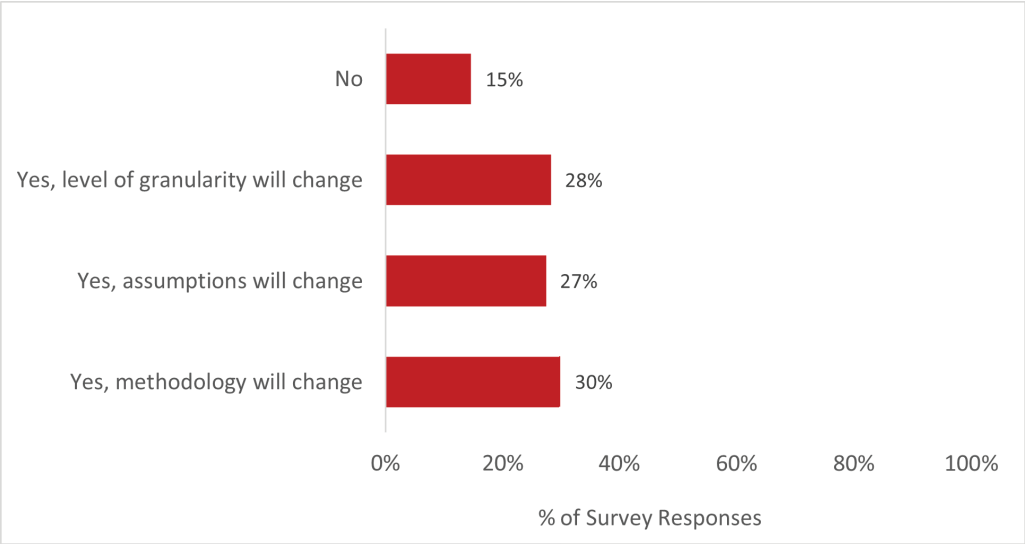


Figure 4.10. Response to survey question: Will your actuarial reserving methodology or assumptions change under IFRS 17?



due to a combination of the presented reasons. For most P&C insurers in Asia, the actuarial reserving may be updated to align with the IFRS 17 level of granularity (i.e., portfolios and/or groups) or assumptions (e.g., new expense reserve assumptions due to IFRS 17 expense allocation). In addition, for some territories where the existing incurred but not reported (IBNR) was set on a more prudent basis, IFRS 17 has triggered actuaries to move their assumptions toward a more true "unbiased mean estimate" basis.

4.3.3. Practical Considerations and Emerging Market Practice

The actuarial reserving practices for the valuation of claims liabilities and premium liabilities are expected to remain largely unchanged if actuarial assumptions were already set on a current estimate basis. However, below are some additional considerations around the BEL that may deviate from previous IFRS 4 practices.

(a) Additional cash flow(s) under BEL

IFRS 17 explicitly lists out the cash flows that should be included as part of the BEL. For P&C insurers, this may mean new types of cash flows need to be considered to meet the IFRS 17 criteria.

Cash flows such as premium receivables and claims payable, which were previously not part of the claim liability or premium liability, should now be included under the IFRS 17 insurance liability (i.e., LRC and LIC). Although this is mostly just a reclassification on the balance sheet, it does mean that these receivables and/or payables need to be allocated to each unit of account, which has proven to be a significant data challenge. Another example is non-reinsurance-related recoveries (e.g., salvage and subrogation or third party), which may not have been included under the IFRS 4 insurance liability for some insurers and therefore will need to be included within the IFRS 17 cash flows.

(b) Insurance acquisition cash flows

Insurance acquisition cash flows have a broader definition under IFRS 17 than just commissions. Under IFRS 4, it was common to only consider commissions as acquisition costs and amortize it to recognize a deferred acquisition cost (DAC) on the balance sheet. We note there has also been a mix of existing practice on either deferring or expensing commissions as they are incurred.

Under IFRS 17, P&C insurers in Asia are allocating more types of expenses (e.g., marketing costs and system purchases) that fit the broader definition of acquisition costs. Therefore, if the accounting policy is chosen to defer acquisition costs,[14] the DAC under IFRS 17 will have to allow for the amortization of these additional expenses. Based on our market observations, a key challenge has been trying to automate this process, as typically administrative systems are set up to only amortize the commission data. Therefore, some P&C insurers are relying on manual Excel adjustments to convert the DAC under IFRS 4 to the IFRS 17 basis to allow for any non-commission-related acquisition costs. For P&C insurers implementing IFRS 17 calculation engines, users may need to input additional assumptions around the amortization pattern for the total acquisition costs.

(c) Reinsurance nonperformance risk

The treatment for reinsurance contracts held has some differences compared to insurance contracts issued. One key difference is that IFRS 17 requires the insurer to consider the possible default of reinsurers (i.e., credit risk) when measuring the reinsurance recoveries. This is known as the reinsurance nonperformance risk, which is a downward adjustment to the reinsurance asset. From our observations, P&C insurers will analyze historical defaults from their panel of reinsurers and their current credit ratings. While some may conclude that the nonperformance risk is immaterial, others will perform a more robust expected credit loss (ECL) analysis to come up with the nonperformance risk factor as follows:

$$ECL\ Factor = PD * LGD,$$

where PD is probability of default and LGD is loss given default.

The PD and LGD parameters are typically calculated as a weighted average based on each individual reinsurer's credit rating and their proportion of expected recoveries.

The PD figures are typically sourced from rating agencies such as Standard and Poor's or Moody's. The LGD figures may be leveraged from industry studies of reinsurance default recovery rates. An illustrative ECL analysis is shown below.

[14] As per IFRS 17.59(a), an insurer has an accounting policy option under PAA to expense acquisition costs when it incurs (i.e., not defer), provided that the coverage period of each contract in the group at initial recognition is no more than one year.

Assume the following situation for the simplified reinsurance ECL analysis:

- There are two reinsurers: Reinsurer A and Reinsurer B.
- Reinsurer A's credit rating: A (with PD and LGD parameters of 0.06% and 50%, respectively).
- Reinsurer B's credit rating: AA (with PD and LGD parameters of 0.02% and 35%, respectively).
- Reinsurance claims recoverable weighting for Reinsurer A: 70%.
- Reinsurance claims recoverable weighting for Reinsurer B: 30%.

The reinsurance nonperformance risk factor would be calculated as

$$\text{ECL Factor} = 0.06\% * 50\% * 70\% + 0.02\% * 35\% * 30\% = 0.0231\%.$$

4.4. Discounting

4.4.1. Background

An entity should adjust the estimates of future cash flows to reflect the time value of money, and the financial risks related to those cash flows, to the extent that the financial risks are not included in the estimates of cash flows. The discount rates applied to the estimates of the future cash flows shall:[15]

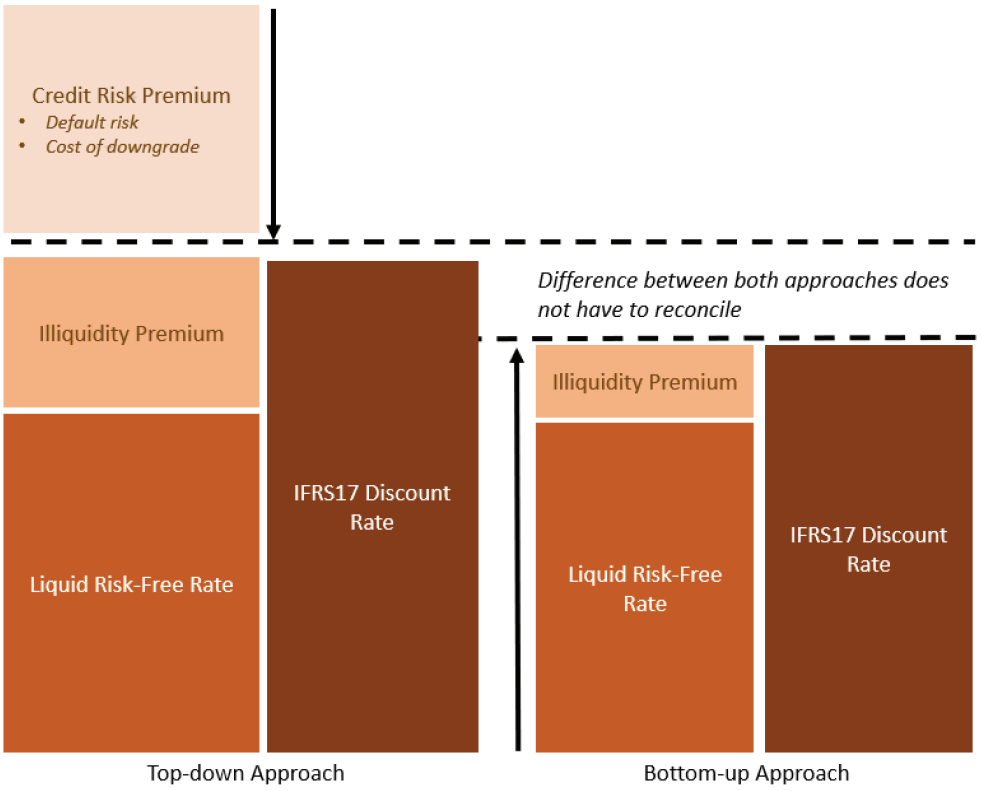
1. Reflect the time value of money, the characteristics of the cash flows, and the liquidity characteristics of the insurance contracts;.
2. Be consistent with observable current market prices (if any) for financial instruments with cash flows whose characteristics are consistent with those of the insurance contracts, in terms of, for example, timing, currency, and liquidity; and
3. Exclude the effect of factors that influence such observable market prices but do not affect the future cash flows of the insurance contracts.

To determine the discount rates, IFRS 17 allows the choice between two approaches. Note that the two approaches may not necessarily result in the same outcome.

- **Top-down approach:** To apply the top-down approach,[16] insurers may first consider a yield curve that reflects the market return from a reference portfolio of assets. This yield curve is then adjusted downward to eliminate the components of the yield curve that are not relevant to insurance risk, namely credit risk premium (e.g., expected defaults, expected cost of downgrade, and default risk).

[15] IFRS 17.36.
[16] IFRS 17.B81.

Figure 4.11. Illustration of top-down and bottom-up discount approaches



Note: The size of the blocks is for illustrative purposes only. In practice, the resulting IFRS 17 discount rates under the top-down and bottom-up approaches could be the same or differ (i.e., bottom-up could produce a higher or lower value than the top-down approach).

- **Bottom-up approach:** To apply the bottom-up approach,[17] insurers should use a liquid risk-free yield curve as a starting point. An upward adjustment for the illiquidity premium is then applied on top of the risk-free yield curve to allow for the difference between the liquidity characteristics of the underlying insurance contracts and the risk-free rates.

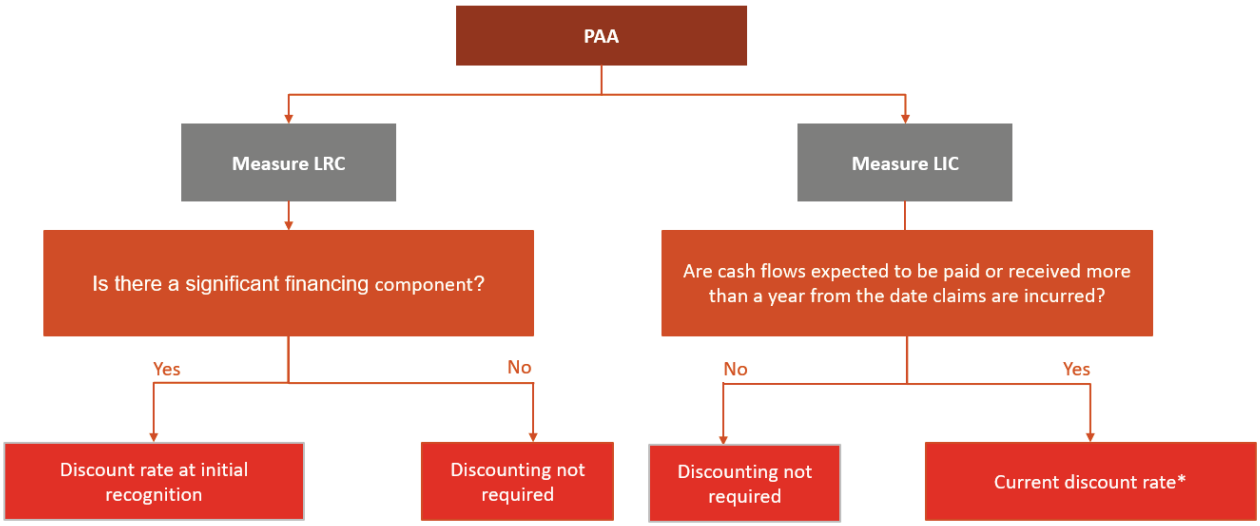
An illustration of the two discount rate approaches under IFRS 17 is shown in Figure 4.11.

For insurers applying the PAA measurement model, there are two simplifications for discounting that can be taken if certain criteria are met:

1. Insurers can choose not to adjust the carrying amount of the LRC for the time value of money if the contracts are considered to not have a significant financing component. A significant financing component may be – but is not necessarily – present, if the insurer expects the period between the provision of coverage and the related premiums being due to be more than a year.[18]

[17] IFRS 17.B80.
[18] IFRS 17.56.

Figure 4.12. Simplifications for discounting under PAA, assuming cash flows do not vary with returns on underlying items



*Assumes that the **other comprehensive income (OCI) option is not used**. If the OCI option is chosen, then use the discount rates at date of incurred claim to calculate the amount reflected in Profit and Loss (P&L) of each financial period.

2. Insurers can choose not to discount the LIC if the claims cash flows are expected to be paid or received within one year or less from the date the claims are incurred.[19]

An illustration of the discounting simplifications allowed under PAA is shown in Figure 4.12.

4.4.2. Market Survey

Our survey found that 86% of respondents will apply discounting to the LIC only (i.e., no discounting on the LRC), while only 10% of respondents will apply discounting to both the LIC and LRC, see Figure 4.13. This is consistent with our expectation for P&C insurers since the claim settlement period for common classes of business (e.g., employee's compensation and liability) would exceed one year. However, given that the contracts underwritten are mostly annual contracts or longer contracts with installment premiums, a significant financing component is less likely to exist, which means discounting on the LRC may not be required.

Our survey found that 98% of respondents will apply the bottom-up approach to determine discount rates, as shown in Figure 4.14. This result is expected for P&C insurers since the bottom-up approach is more practical to apply and more aligned with existing local requirements. For example, under risk-based capital (RBC) regimes in Hong Kong and Singapore, the regulator will provide risk-free interest rates to the industry. In addition, the reference portfolio and credit risk premium required by the top-down approach are not easily constructed given the available market data. However, for P&C business from composite insurers, the top-down approach may be adopted to maintain consistency (as the top-down approach is more common for life insurance business).

[19] IFRS 17.59(b).

Figure 4.13. Responses to survey question: Under the PAA, will you apply discounting to the LRC[20] and/or LIC?

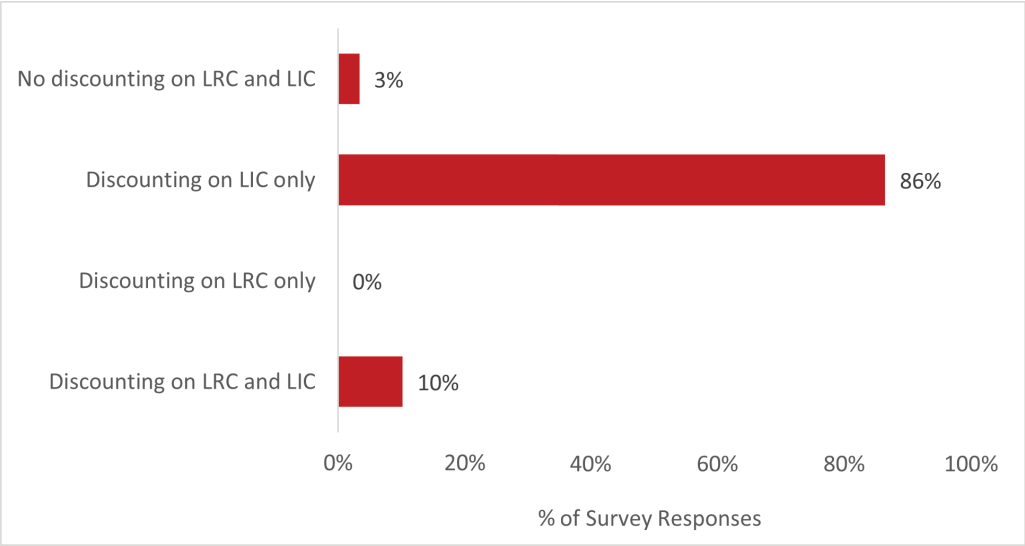
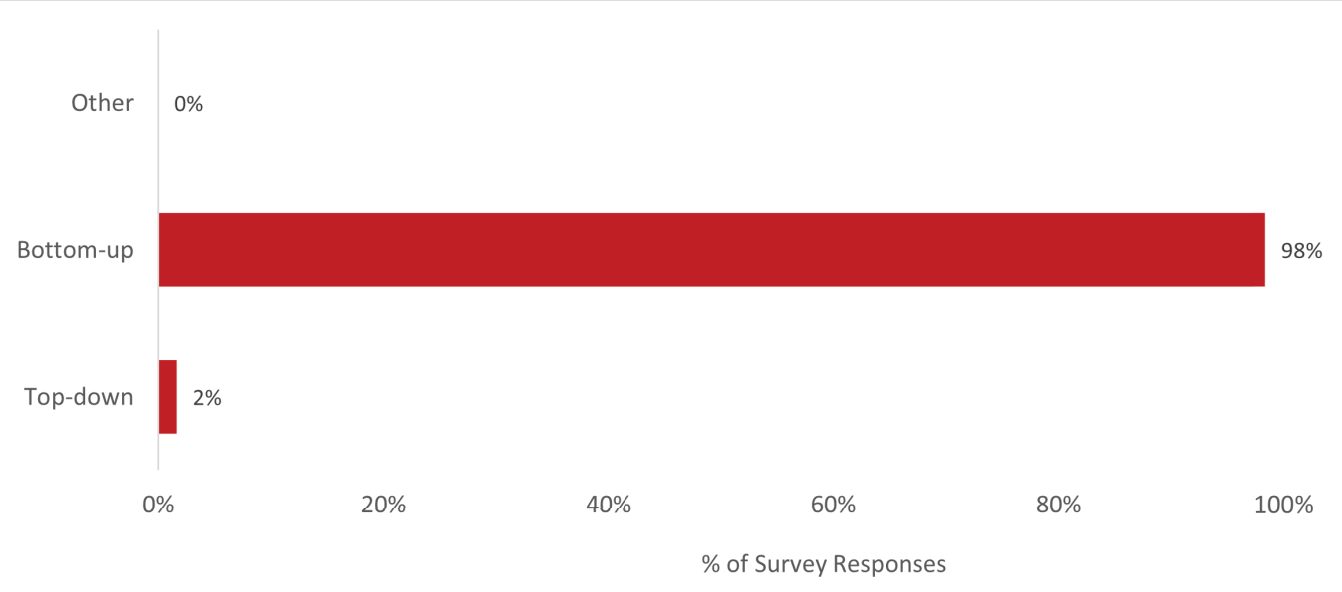


Figure 4.14. Responses to survey question: Will you use the bottom-up or top-down approach for discount rates?



[20] Discounting to the LRC refers to the consideration of time value of money, which is also known as interest accrual on the LRC balance, when a significant financing component is deemed to exist.

Our survey found that 71% of respondents referenced government bond rates to derive the IFRS 17 risk-free rate, followed by 27% of respondents who referenced swap rates, as seen in Figure 4.15. The difference in sources of risk-free rates may be influenced by local regulatory requirements, where some regulators prescribe a yield curve for insurers to follow. For example, in Hong Kong, the regulator provides risk-free rates based on swap rates under the local RBC regime. To maintain consistency between RBC and IFRS 17, insurers in Hong Kong would leverage the prescribed RBC risk-free rates for IFRS 17.

Our survey found that 79% of respondents did not apply an explicit illiquidity premium, with 69% citing materiality as the reason, as shown in Figure 4.16. Due to the short-term nature of P&C contracts and claim settlement periods, the illiquidity premium may be assessed as immaterial to the overall discounting impact. However, this impact will depend on the type of business (short-tail vs long-tail) and the interest rate environment. The derivation of the illiquidity premium is discussed further in section 4.4.3.

Our survey found that 76% did not adopt the OCI option in presenting the effect of changes in discount rates, see Figure 4.17. The OCI option is an accounting policy choice that can reduce the accounting mismatch in the income statement, which mitigates the impact of interest rates on financial statements. For an insurer applying the OCI option, the change in the insurance contract liabilities due to changes in discount rates is recognized in OCI instead of profit or loss.

These survey results are not surprising given that the OCI option is more complex to implement, requires more data (i.e., historical yield curves), and the impact may be less significant for short-tail business. Therefore, many P&C insurers in Asia have chosen not to adopt the OCI option, citing operational simplicity reasons. For those respondents that applied the OCI option, we have observed it is typically because they have a larger proportion

Figure 4.15. Responses to survey question: What source do you use to derive the risk-free discount rates?

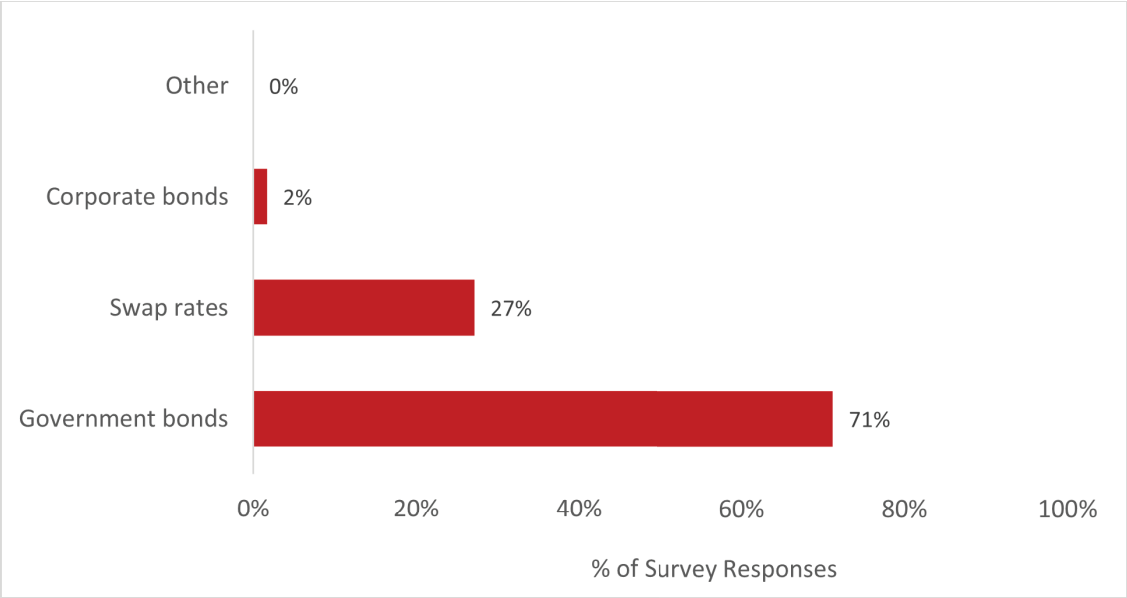
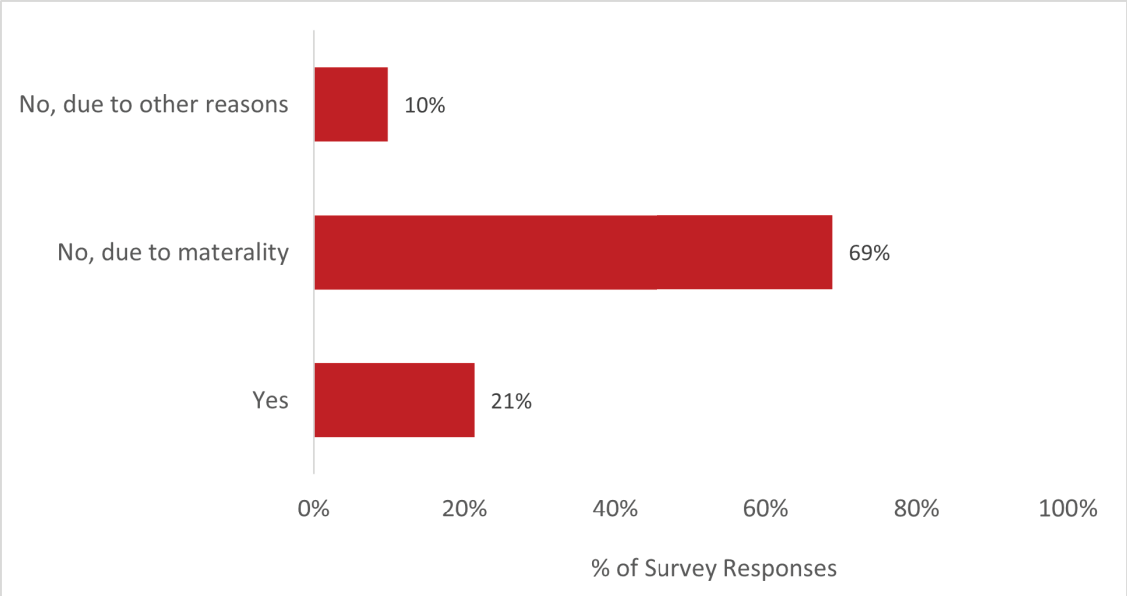


Figure 4.16. Responses to survey question: Do you allow for an illiquidity premium in the discount rate?



of assets exposed to interest rates changes (e.g., debt securities) or have mandates from head office to select the OCI option for all subsidiaries. For those responding, "not applicable," it is likely because they did not apply any discounting on the LRC and LIC (as per IFRS 17.56 and IFRS 17.59a).

Our survey found that 49% of respondents will use IFRS 17 software to calculate the IFIE under IFRS 17, while 49% of respondents will use Excel, as shown in Figure 4.18. The IFIE calculation is a new concept for P&C insurers in Asia, so it is not surprising to

Figure 4.17. Responses to survey question: Will you adopt the other comprehensive income (OCI) option to present the effect of changes in discount rates?

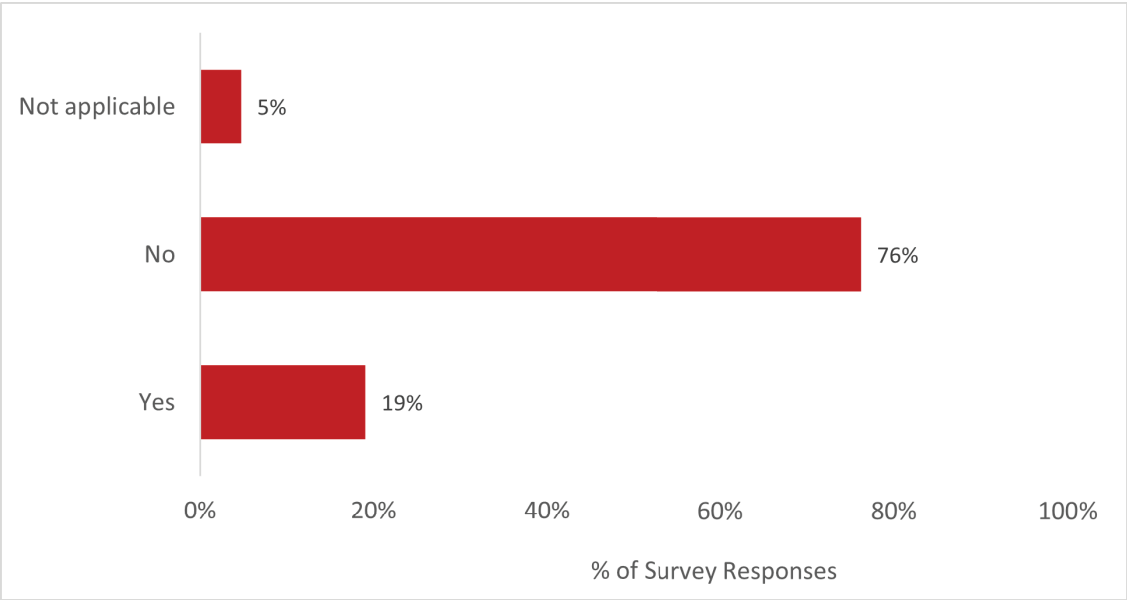
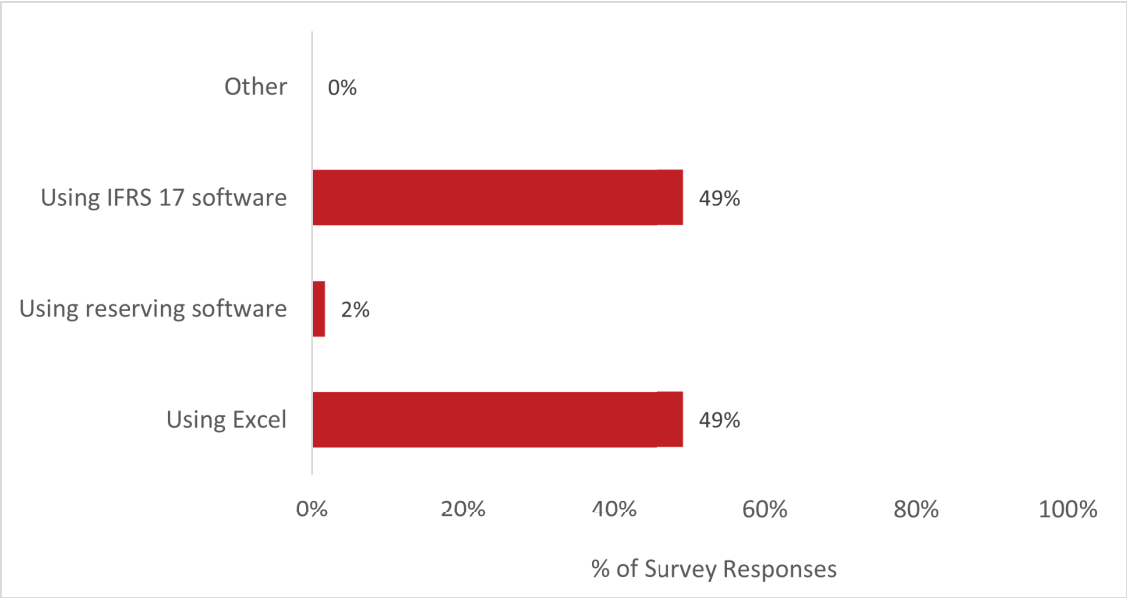


Figure 4.18. Responses to survey question: Where do you plan on performing the insurance finance and income expense (IFIE) calculation?



see insurers take the opportunity to automate this step via software. As most P&C insurers are procuring new software for IFRS 17 reporting, the ability to discount cash flows and separate out the discounting impact has been a major factor in the software selection process.

4.4.3. Practical Considerations and Emerging Market Practice

Discounting of claim and premium liabilities is a relatively new concept for most P&C insurers in Asia. In some territories, such as Hong Kong, discounting was not permitted by the regulator. Therefore, the introduction of discounting under IFRS 17 will bring significant operational and process changes for actuaries.

Allowance for discounting can also result in material financial impacts. We observed that P&C insurers will typically realize a one-off positive impact on the net asset value (i.e., decrease in insurance liabilities) at the IFRS 17 transition date. Post transition, the impact on earnings is expected to be more volatile and susceptible to changes in interest rates and liability profile over time. Going forward, actuaries will have an increasing responsibility to monitor and explain these financial impacts due to discounting and change in interest rates.

In the subsections below, we discuss several areas that require interpretation or have posed technical challenges for P&C insurers in Asia around the discounting topic.

(a) Discounting simplifications under PAA

The PAA model allows for discounting simplifications for LRC and/or LIC under certain criteria. However, proving eligibility for these simplifications may require judgement and quantitative analysis.

For the LIC, the interpretation is more straightforward as the historical claims run-off pattern can be analyzed to determine if claims are settled over a year from the accident date. One common approach is for actuaries to inspect the selected paid development factors in their reserving analysis. If paid claims are expected to fully develop by the end of year one, then discounting can be optional. This would be more common in short-tail classes such as medical or motor vehicle damages.

For the LRC, the interpretation is more challenging and requires judgement given that the one-year criterion is not determinative in identifying whether a significant financing component is present. The one-year criterion is a practical expedient from the general principle, under which there is deemed to be no significant financing component if there is no more than one year between the premium due date and the related coverage provided.

Since IFRS 17 is silent on how to determine whether there is a significant financing component, one way to look at it is to consider the principles in IFRS 15 by analogy. In the March 2015 Transition Group Resource (TRG) paper, a response[21] noted that entities should determine if a significant financing component exists based on the intent of the payment terms. For example, upfront payment of premiums could be used for customer convenience, normal business practice, and credit risk related reasons – all of which are intents other than financing. In addition, the combined impact of prevailing interest rates and the gap between payment and the provision of services should be considered. Therefore, all other things being equal, the lower the prevailing interest rates are, the longer that gap might be between premium payment and provision of coverage before an insurance contract is considered to contain a significant financing component. As P&C insurers generally issue short-term policies with limited time value of money consideration when pricing such policies, the general trend seen across the industry is that no significant financing component exists.

In cases where an insurer has elected to accrete interest on its LRC (i.e., there is a significant financing component), IFRS 17 dictates that the rate used should be locked in at initial recognition and not updated subsequently. This presents an operational challenge since insurers will need to store past discount rates and assign them to the respective unit of account. This accretion of interest on the LRC balance would be recorded as insurance finance income or expense, and the amount recognized as revenue in each financial period would be higher due to the financing component. It is worth noting that this will affect the insurer's timing and recognition pattern of its insurance service revenue.

(b) Determination of illiquidity premium

For P&C insurers using the bottom-up approach for discount rates, the most challenging part is calculating the illiquidity premium. The concept of the illiquidity premium does not exist in most local regulatory regimes in Asia, so insurers do not have readily available data and benchmarks. Considering the calculation complexity, additional effort, and materiality,

[21] Referencing the response to IFRS 15ASC 606-10-32-17(c) (paragraph 62(c) of IFRS 15) in the March 2015 TRG.

many P&C insurers have decided not to apply any illiquidity premium. This is especially the case for short-tail lines of business, where the discounting impact may prove to be immaterial. However, for insurers who do adopt an explicit illiquidity premium, below are some common approaches used in the market.

Bucketing Approach

There are three general steps to calculating the illiquidity premium under the bucketing approach:

1. Determine the reference illiquidity spread.

   The determination of reference illiquidity spread follows the principles of the top-down approach. Insurers will first identify a reference portfolio of assets (for example, high-grade corporate bonds). The reference portfolio should in theory match the weighted average durations and currency mix of insurance liabilities. Then, the average illiquidity spread of the reference portfolio will be calculated by first removing the expected defaults and risk charge for default risk, then subtracting the government yield from the reference yield curve.[22] A long-term rolling weighted average may be applied to avoid short-term volatility.

2. Determine the level of illiquidity for each portfolio and separately for LRC versus LIC.

   Qualitative and/or quantitative assessment can be used to derive the illiquidity portion, denoted as [X]%. Product features such as coverage period, cancellation clauses, and the expected claims duration may be assessed to determine the illiquidity bucket. For example, an illustrative framework is outlined below:

   a. X = 100% (fully illiquid)

      Contracts that are least liquid.

   b. X = 75% (relatively illiquid)

      Illiquid products other than those that qualify for the 100% fully illiquid above.

   c. X = 50% (relatively liquid)

      Remaining liabilities that do not fall under the previous two categories would fall under this category.

   d. X = 0% (most liquid)

      Consists of contracts that are the most liquid. This is common in short-term contracts with cancellation clauses and general insurance contracts with short-tail liabilities.

[22] Alasdair Thompson and Nick Jessop, "A Cost of Capital Approach to Estimating Credit Risk Premia," Moody's Analytics, December 2018, p. 19, https://www.moodys.com/web/en/us/insights/resources/a-cost-of-capital-approach-to-estimating-credit-risk-premium.pdf.

3. Determine the illiquidity premium.

   The formula below would be used to derive the final illiquidity premium for each portfolio:

$$Illiquidity\ Premium = Max\left(0, X\% * reference\ illiquidity\ spread\right),$$

   where X% corresponds to the illiquidity portion derived from step 2.

Covered Bonds Approach

The covered bonds approach derives the illiquidity premium by taking the difference between a covered bond index yield and the risk-free rate. A covered bond is defined as a corporate bond collateralized against a pool of assets such that in case of default, the underlying pool of assets can cover the bond. This approach assumes covered bonds have relatively low or negligible default risk. It is a straightforward approach as it does not rely on any model but requires enough covered bonds data to plot the yield graph.

(c) Multicurrency considerations

An insurer may issue insurance contracts that have cash flows in multiple currencies. For example, one insurance contract could have premium inflows in one currency unit, while the claim and expense outflows are in one or several different currency units. In these situations, the selection of discount rates under IFRS 17 should reflect the multicurrency characteristics of the cash flows.

From our market observations, P&C insurers in Asia will consider several approaches to tackle this situation:

1. Construct a "blended" discount rate that takes into account the different mix of currencies and their weighting.
2. Pick a "dominant" currency and apply the corresponding discount rate curve to all cash flows.
3. Separately apply the respective discount rates corresponding to each cash flow's currency.

Approach 1 and 3 would be considered more compliant with the IFRS 17 requirements, while approach 2 is more of a practical expedient. Insurers adopting approach 2 may first assess whether there is a dominant currency (e.g., if one currency is greater than 50% of the cash flows). If so, they may opt for the simplicity of using the dominant currency's discount rate. To supplement this analysis, actuaries may also assess the materiality of the difference between using a blended rate versus a dominant currency rate.

(d) Separation of insurance finance income or expense

In addition to discounting the insurance liability results, IFRS 17 also introduces additional complexity for insurers to calculate the insurance finance income or expense (IFIE) amount

separately in the income statement. The IFIE comprises the change in the carrying amount of the group of insurance contracts arising from:[23]

1. The effect of the time value and changes in the time value of money (i.e., interest accretion); and
2. The effect of financial risk and changes in financial risk (i.e., impact of changes in discount rates).

For the LRC, there is no impact of changes in discount rates at subsequent measurement because each cohort's discount rates are locked in at initial recognition. Therefore, the IFIE will only consist of the interest accretion component (if the choice is made to apply discounting on LRC).

For the LIC, the IFIE will consist of both interest accretion and the impact of changes in discount rates. It is important to note that insurers should not simply calculate the IFIE as the difference in the discounting impact (i.e., difference between the undiscounted LIC and discounted LIC) between the opening and closing balance. An illustration of one possible approach to the calculation of the IFIE is shown below.[24]

Illustrative example—assumptions

- LIC cash flows are for prior accident years only
- Claims expected to be paid at the end of each period
- No risk adjustment
- No OCI option is selected
- Spot rates at each valuation date are outlined below:

Valuation Date	Year 1	Year 2	Year 3
31/12/X	1%	1.5%	2%
31/12/X-1	2%	3%	4%

- The yield curve rate for one-year maturity is used for the amortization for all projected future cash flows

[23] IFRS 17.87.

[24] The illustrative example shown is one possible approach to calculate the IFIE. We note that there are other accepted possible approaches that involve other methodology and/or assumptions, which may result in a different IFIE result.

Illustrative example—cash flow calculations

Table 4.2. Undiscounted LIC

Valuation Date	LIC (Undiscounted)	Undiscounted Projected Cash Flows for Each Period		
		X	X + 1	X + 2
31/12/X	5,000	–	3,500	1,500
31/12/X-1	8,000	4,000	3,000	1,000

Table 4.3. Discounted LIC, applying discount rates as at 31/12/X-1

Valuation Date	LIC (Discounted)	Discounted Projected Cash Flows for Each Period		
		X	X + 1	X + 2
31/12/X	4,725	–	3,365	1,360
31/12/X-1	7,638	3,922	2,828	889

(1) **Discounted LIC** as at current valuation year, applying previous discount rates:

$$= \text{Discounted Cash Flow}\left(@X+1\right) + \text{Discounted Cash Flow}\left(@X+2\right)$$

$$= \frac{3{,}500}{\left(1+3\%\right)^2 \big/ 1+2\%} + \frac{1{,}500}{\left(1+4\%\right)^3 \big/ 1+2\%}$$

$$= 3{,}365 + 1{,}360 = 4{,}725$$

(2) **Discounted LIC** as at current valuation year, applying previous discount rates:

$$= \text{Discounted Cash Flow}\left(@X\right) + \text{Discounted Cash Flow}\left(@X+1\right)$$

$$+ \text{Discounted Cash Flow}\left(@X+2\right)$$

$$= \frac{4{,}000}{1+2\%} + \frac{3{,}000}{\left(1+3\%\right)^2} + \frac{1{,}000}{\left(1+4\%\right)^3}$$

$$= 3{,}922 + 2{,}828 + 889 = 7{,}638$$

Table 4.4. Discounted LIC, applying discount rates as at 31/12/X

Valuation Date	LIC (Discounted)	Discounted Projected Cash Flows for Each Period		
		X	X + 1	X + 2
31/12/X	4,921	N/A	3,465	1,456
31/12/X-1	3,941	N/A	2,970	971

(3) **Discounted LIC** as at previous valuation year, applying current discount rates

$$= \text{Discounted Cash Flow}\left(@X+1\right) + \text{Discounted Cash Flow}\left(@X+2\right)$$

$$= \frac{3{,}500}{1+1\%} + \frac{1{,}500}{\left(1+1.5\%\right)^2}$$

$$= 3{,}465 + 1{,}456 = 4{,}921.$$

Illustrative example—IFIE calculation

(4) **Interest accretion**

$$= \left(2\right)\text{Discounted LIC at previous valuation year}\left(\text{applying previous discount rate}\right)$$

$$* \text{ Actual discount rate for the period}$$

$$= 7{,}638 * 2\% = 153.$$

(5) **Impact of changes in discount rates**

$$= \left(3\right)\text{Discounted LIC at current valuation year}\left(\text{applying current discount rate}\right)$$

$$- \left(1\right)\text{Discounted LIC at current valuation year}\left(\text{applying previous discount rate}\right)$$

$$= 4{,}921 - 4{,}725 = 196.$$

(6) **IFIE** = (4) Interest Accretion + (5) Impact of change in discount rates

$$= 153 + 196 = 349.$$

4.5. Risk Adjustment

4.5.1. Background

IFRS 17 requires insurers to reflect the compensation required for bearing uncertainty for future cash flows arising from nonfinancial risk (i.e., calculating a risk adjustment). The risk adjustment is meant to inform users of financial statements on the value that the entity places on the uncertainty and variability of insurance cash flows. To the extent that an entity allows for diversification benefits, the risk adjustment should capture this and the entity's risk aversion from both favorable and unfavorable outcomes.[25]

IFRS 17 does not specify the estimation technique used to determine the risk adjustment or the confidence level required. Common techniques available for P&C insurers to calculate the risk adjustment include the cost of capital (CoC), value at risk (VaR), and tail value at risk (TVaR). Regardless of the technique used, it is expected that the risk adjustment should exhibit some common characteristics. For example, each of the following should result in a higher risk adjustment:[26]

- Risks with low frequency and higher severity.
- Contracts with a longer duration under similar risks.
- Risks with a wider probability distribution.
- Risks with more uncertainty around the current estimate and its trend.

IFRS 17 provides two options for the recognition and presentation of the risk adjustment in the financial statement. Insurers can choose to disaggregate the change in risk adjustment between the insurance service result and the insurance finance income or expense.[27] If the entity chooses not to disaggregate, then the entire change in risk adjustment should be included as part of the insurance service result.

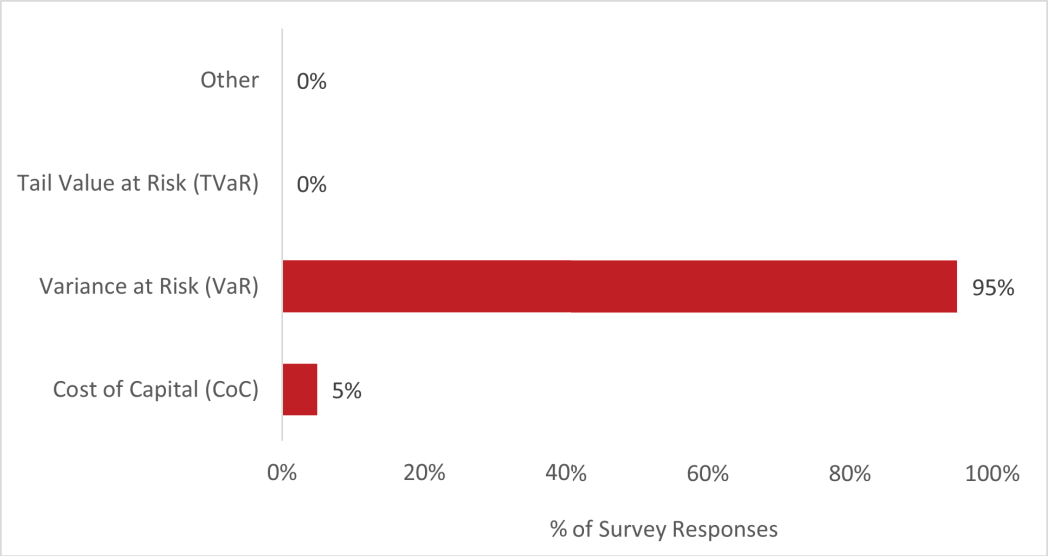
4.5.2. Market Survey

Our survey found that 95% of the respondents will apply the VaR method, which is largely consistent with the IFRS 4 basis (for those who applied a risk margin), see Figure 4.19. Applying the VaR, insurers may utilize stochastic modelling techniques such as bootstrapping or Mack method to simulate a distribution of expected cash flows. From this distribution, the risk adjustment can be selected based on the target confidence level. The 5% of respondents who adopt a CoC approach are usually insurers with head office in Europe subject to Solvency II requirements.

Our survey found that 95% of insurers will calibrate to the 75th percentile for the risk adjustment, as shown in Figure 4.20. For those that adopted a risk margin under IFRS 4, this target confidence level under IFRS 17 would be largely consistent. The 75th percentile

[25] IFRS 17.B88.
[26] IFRS 17.B91.
[27] IFRS 17.81.

Figure 4.19. Response to survey question: Which approach will you apply to calculate the risk adjustment?



may also be mandated under certain local regulatory requirements for some territories (e.g., RBC in Hong Kong and Thailand). We have also observed cases of P&C insurers in Hong Kong and Singapore targeting a range of percentile (e.g., 70th to 80th), which means the exact percentile disclosed for the risk adjustment may change from year to year.

Our survey found that 75% of the respondents applied an explicit diversification factor to calculate the final risk adjustment, while 16% did not apply any diversification factor, as reflected in Figure 4.21. Diversification benefits in the risk adjustment can arise due to several factors. For example, the relationship between different lines of business, between LRC and LIC, or between different entities within a group. As IFRS 17 is not explicit in the requirement for diversification, we have observed mixed approaches from the market. A common

Figure 4.20. Responses to survey question: What is your target confidence level for the risk adjustment?

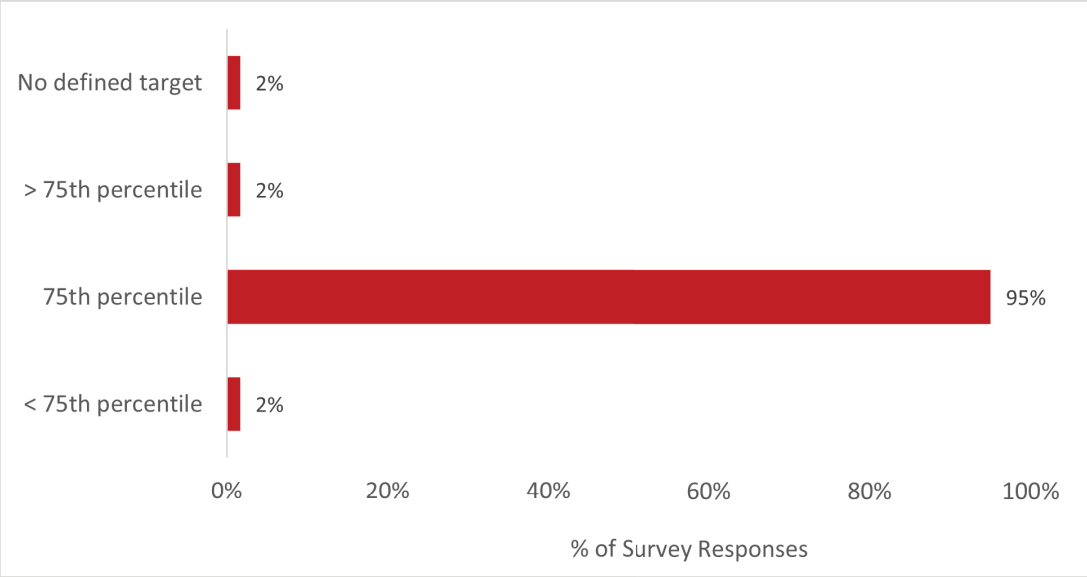
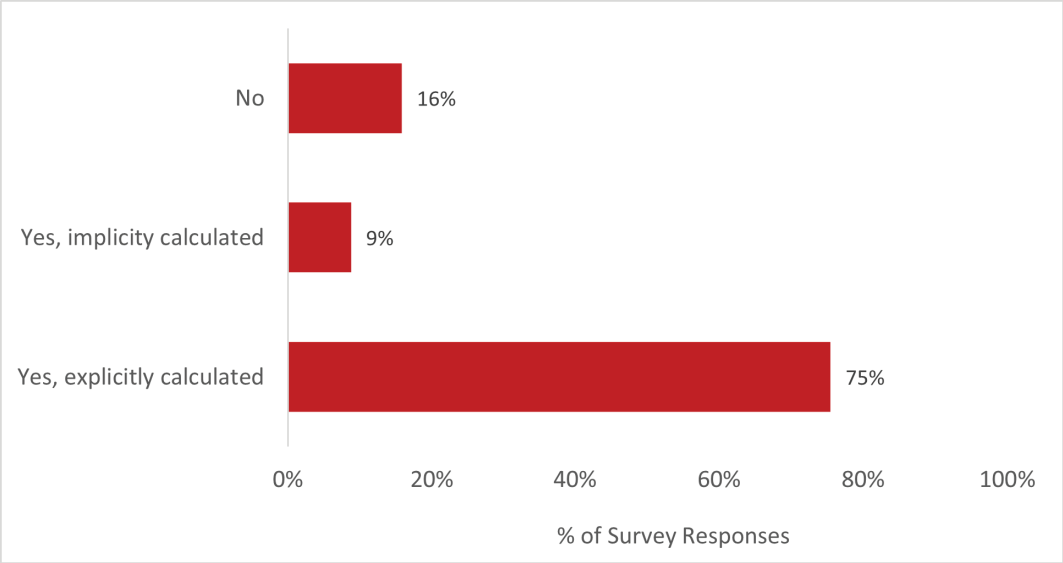


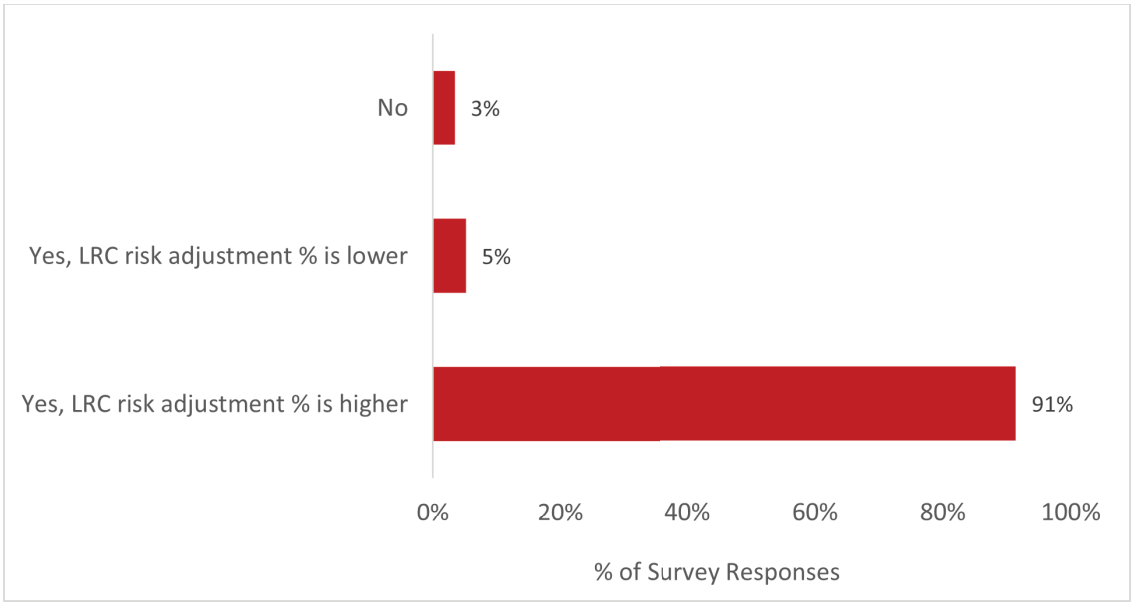
Figure 4.21. Responses to survey question: Do you apply any diversification benefit to the risk adjustment?



approach would be to reference external benchmarks set by industry bodies or regulators (e.g., correlation matrix under RBC regimes and, industry studies). Fewer P&C insurers performed their own statistical analysis to determine the diversification factor due to the calculation complexity and lack of credible data.

Our survey found that 91% of the respondents would apply a higher risk adjustment percentage on the LRC as compared to the LIC, see Figure 4.22. This result is consistent

Figure 4.22. Responses to survey question: Will you apply a different risk adjustment percentage to the LRC* compared to the LIC?



** For the LRC under PAA, a risk adjustment would be applied to determine the fulfillment cash flows under GMM when performing onerous testing or evaluating the loss component for onerous groups of contracts.*

with our expectation that there is greater uncertainty and volatility for unexpired business compared to incurred business. From our observations, most P&C insurers in Asia would first calculate the LIC risk adjustment through VaR methods (e.g., bootstrapping), and then apply a gross-up factor to get the LRC risk adjustment percentage. The gross-up factor may be determined through quantitative analysis or, more commonly, through industry benchmarks.

4.5.3. Practical Considerations and Emerging Market Practice

The requirements for risk margin under IFRS 4 are less prescriptive than the IFRS 17 risk adjustment, resulting in various existing actuarial practices. Therefore, the changes and effort required to comply with the IFRS 17 risk adjustment differ widely across P&C insurers and regions. For example, some insurers did not hold any risk margin for certain lines of business under IFRS 4, while others already held risk margins that could directly translate to the IFRS 17 risk adjustment. Outlined below are some areas where judgement may be required, or practical simplifications applied, in deriving the IFRS 17 risk adjustment.

(a) Risk adjustment methodology and confidence level

IFRS 17 requires the risk adjustment to be disclosed in an explicit way; however, it does not specify the estimation technique required. To determine the risk adjustment method, P&C insurers would typically consider existing actuarial practices, consistency with internal risk appetite, practicality of implementation, and ability to translate the result into a confidence level. As a result, the VaR is the most widely used approach since it is less operationally complex to calculate, easier to interpret, and can readily derive the confidence level. For insurers who already apply a CoC approach under their solvency regime (e.g., Solvency II), it is common to remain consistent and use the CoC to determine the risk adjustment.

Insurers are required to disclose the confidence level to which the risk adjustment is calibrated to. While 75th percentile is the most common, there is still a range of market practices for P&C insurers in Asia. One example is multinational insurers where the risk adjustment is estimated at the group level and then allocated to each stand-alone entity. In such cases, the implied confidence interval may be different at the group versus entity level due to the allowance for diversification benefits. Some insurers will also target a percentile range (e.g., 70th–80th) rather than a fixed percentile.

(b) LIC vs LRC risk adjustment

For onerous groups of contracts under the PAA, insurers are required to calculate the fulfillment cash flows (FCF) to determine the loss component. The risk adjustment is part of this FCF under the LRC and may differ from the risk adjustment under the LIC. For the LIC risk adjustment, actuaries typically have enough historical claims development experience to apply simulation techniques. However, it is more complex for the LRC risk

adjustment as there is more uncertainty for unearned business and potentially lack of credible data.

Therefore, many P&C insurers in Asia will apply an industry benchmark to gross up the corresponding LIC risk adjustment. This gross-up factor is typically around 25%,[28] and may change depending on the characteristics of the line of business (e.g., short-tail vs long-tail). Generally, the LRC risk adjustment should be higher than the LIC risk adjustment. However, we have observed cases where this does not hold, such as short-tail medical businesses with minimal IBNR resulting in higher volatility in the LIC.

(c) Risk adjustment for reinsurance held

IFRS 17 explicitly requires an entity to determine the risk adjustment separately for insurance contracts issued (i.e., gross basis) and reinsurance contracts held[29] (i.e., ceded basis). To compute the risk adjustment for reinsurance held, we observed two different approaches:

- Approach 1: Directly estimate the risk adjustment based on the proportion of the risks ceded to reinsurer.
- Approach 2: Compute the difference between the risk adjustment on the gross underlying contracts and the risk adjustment for the net risk retained after considering the reinsurance.

For P&C insurers adopting approach 2, the typical considerations include the lower operational complexity, insufficient data to model ceded risks, and consistency with local regulatory reporting where gross/net results are still required (e.g., RBC in Hong Kong). We also observed that it is common to adopt the same risk adjustment ratio for both gross and net basis under approach 2. For P&C insurers with more extensive reinsurance programs, approach 1 may be more practical, given that the reinsurance ceded data may be statistically significant enough to explicitly model the risk adjustment.

(d) Diversification benefits

IFRS 17 has encouraged more P&C insurers to apply an explicit diversification benefit in the risk adjustment. Insurers tend to consider the correlation between lines of businesses or other homogenous sets of risks and reflect the compensation required to bear risk at the whole entity level. One common approach is to calculate the diversification benefit at the

[28] One commonly used reference is Robyn Bateup and Ian Reed's "Research and Data Analysis Relevant to the Development of Standards and Guidelines on Liability Valuation for General Insurance," published by The Institute of Actuaries of Australia in 2001. This paper references a 75% gross-up ratio for short-tail classes of business and 25% gross-up ratio for long-tail classes of business.

[29] IFRS 17.64.

entity level and then allocate the total diversification benefit down to each IFRS 17 portfolio level by multiplying the diversification factor to each portfolio's stand-alone undiversified risk adjustment. An illustrative calculation of one such approach to calculating diversification is shown below.

Assume Company A underwrites three reserving classes in Line X, Line Y, and Line Z. The Company has performed bootstrapping on each reserving class and then the total business to derive the diversified risk adjustment (RA) as follows in Table 4.5.

Table 4.5. Sample of diversified risk adjustment

Reserving Class	Current Estimate (1)	Undiversified RA (%) (2)	Undiversified RA ($) (3) = (1) ∗ (2)	Diversified RA (%) (4) = (2) ∗ [1 – (7)]	Diversified RA ($) (5) = (1) ∗ (4)
Line X	$1,000	5%	$50	3.75%	$37.50
Line Y	$1,500	10%	$150	7.5%	$112.50
Line Z	$2,500	8%	$200	6%	$150
Total	**$5,000**	**8%**	**$400**	**6%**	**$300**
Total Diversified Risk Adjustment (6) = 6%					
Total Diversification Benefits Factor (7) = 1 – (6)/(2) = 25%, derived from risk adjustment result from distinct bootstrapping performed at individual reserving class and total business level.					

(e) Risk adjustment disaggregation option

Most P&C insurers in Asia will adopt the accounting policy decision to not disaggregate the change in risk adjustment between insurance service result and insurance finance income or expenses. This decision is typically made to reduce operational complexity and considering that the changes in risk adjustment due to changes in financial risk (i.e., discount rates) is not significant.

4.6. Loss Component/Loss Recovery

4.6.1. Background

IFRS 17 requires an entity to categorize a portfolio of insurance contracts issued into a minimum of three profitability groups at initial recognition:[30]

[30] IFRS 17.16.

1. Onerous contracts
2. Contracts that have no significant possibility of becoming onerous subsequently
3. Remaining contracts

A contract is categorized as onerous if, at the date of initial recognition, the fulfillment cash flows (FCFs) allocated to the contract results in a net outflow. This includes any previously recognized acquisition cash flows and any inflow or outflow of cash flows arising from the contract at the date of initial recognition. The standard does not require profitability to be assessed at the level of each contract. Thus, information can be assessed on an aggregated basis, to the extent contracts are homogenous and data exists on an aggregate basis, and then subsequently allocated to a lower level.

For contracts to which the PAA measurement model is applied, an entity may assume no contracts in the portfolio are onerous at initial recognition, unless facts and circumstances indicate otherwise. The interpretation of facts and circumstances that could indicate a material change in profitability may require management judgement on a case-by-case basis. Examples of possible events that could trigger a review of the facts and circumstances may include but are not limited to the following:

- Intentional pricing strategies leading to losses
- Material changes to premium basis (e.g., premium discounts)
- Major changes in expense allocation
- Significant changes in expected loss assumptions

If a group of contracts that applies the PAA is assessed to be onerous at the reporting date, the entity should calculate the difference between the carrying amount of the LRC and the FCF related to the remaining coverage. This amount is then recognized as a loss component under LRC. The calculation of the loss component under PAA is show below.

Loss Component under PAA = max (FCF less LRC under PAA, 0),

where FCF is defined under IFRS 17.57(b) and LRC under PAA is defined under IFRS 17.57(a).

Note that unlike the GMM, the roll forward of the loss component under the PAA does not require the loss (de)recognition or the loss component amortization mechanism. This is because for onerous groups of contracts under PAA, the loss component at each reporting period is recalculated to be simply the difference between LRC (before allowance for loss component) and the FCF.

For any loss component recognized for onerous groups, an entity may also recognize a gain (i.e., loss recovery component) on the corresponding reinsurance contracts held group, to the extent that the reinsurance contracts held are entered into before or at the same time as the onerous insurance contracts are issued.

4.6.2. Market Survey

Our survey found that 42% of respondents will perform onerous testing at the statutory class level, while 41% of respondents will perform it at the reserving class level as shown in Figure 4.23. We note that in some cases the statutory and reserving classes may be the same. This follows the concept of homogeneity for P&C products, where risk characteristics are similar between individual contracts so the losses can be pooled. Other potential grouping approaches we have observed include product level, risk classes or management reporting segments.

Unsurprisingly given the amount of data and complexity required, only 2% of respondents will perform onerous testing at the individual contract level. This may be the case for P&C reinsurers who only underwrite treaties, as it is more common for them to model cash flows at the individual treaty level.

Our survey found that 43% and 37% of respondents expect significant differences arising due to the allowance for discounting and different level of granularity, respectively, see Figure 4.24. This is expected, as most P&C insurers are now conducting onerous testing and/or loss component calculations at the IFRS 17 group level, which is more granular than IFRS 4. (In some cases, insurers were performing the PDR calculation at the fund level.) This removes cross-subsidization between some lines of businesses previously pooled together, which in turn should increase the total loss component. The inclusion of discounting would have the opposite effect, whereby the present value of the outflows is reduced, therefore lowering the loss component (or less onerous groups).

Our survey found that 63% of the respondents will continue to use Excel to calculate the loss component and/or perform onerous testing, as seen in Figure 4.25. This result is surprising since most P&C insurers have procured new software for IFRS 17 reporting. This may be driven by the varying scope and capabilities of IFRS 17 software in the market.

Figure 4.23. Responses to survey question: At what level of granularity will you perform onerous testing?

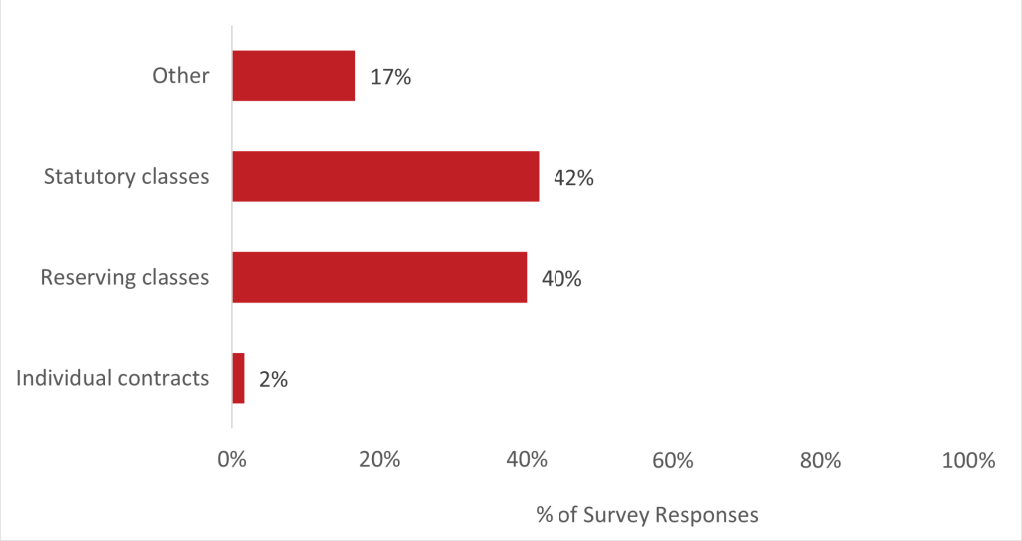


Figure 4.24. Responses to survey question: Do you expect a significant difference between the PAA loss component and the existing unexpired risk reserves (URR) and/or premium deficiency reserves (PDR) calculation?

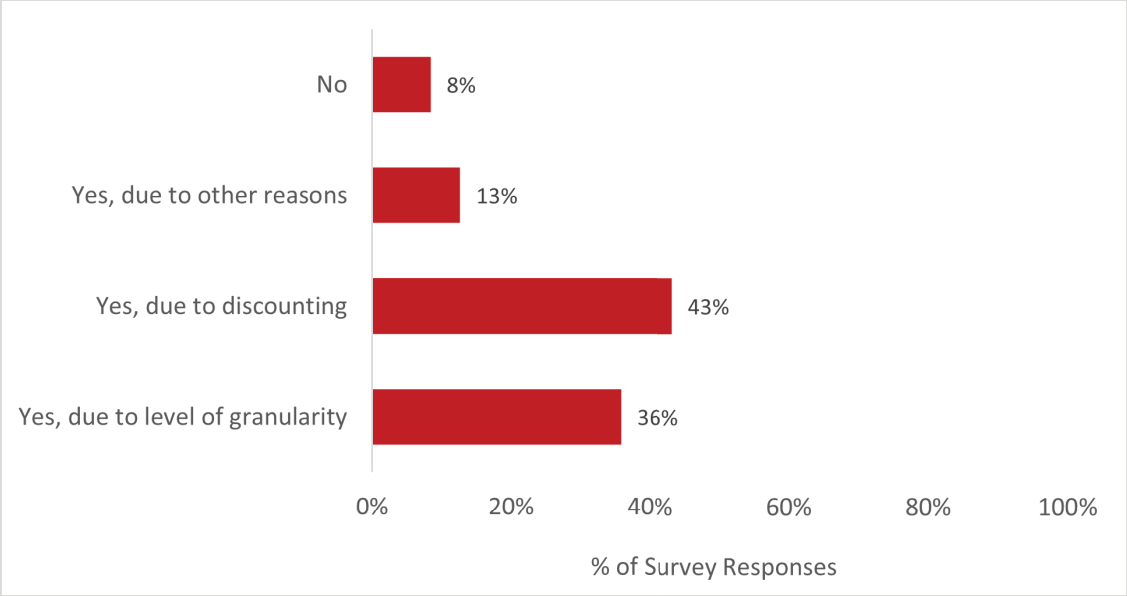


Figure 4.25. Responses to survey question: Where do you plan on performing the onerous testing and/or loss component calculation?

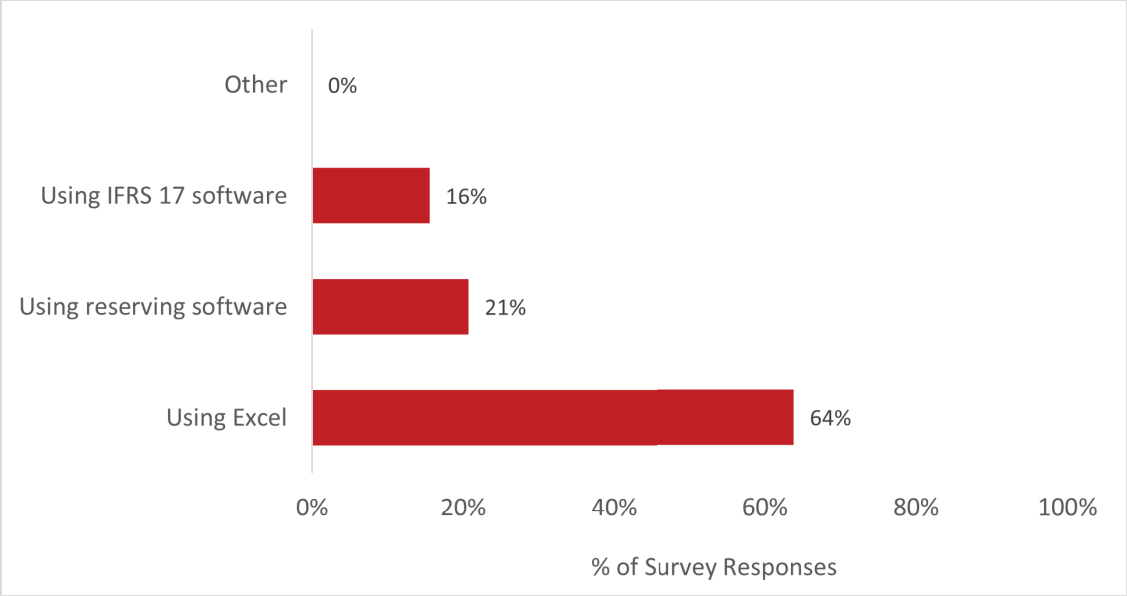
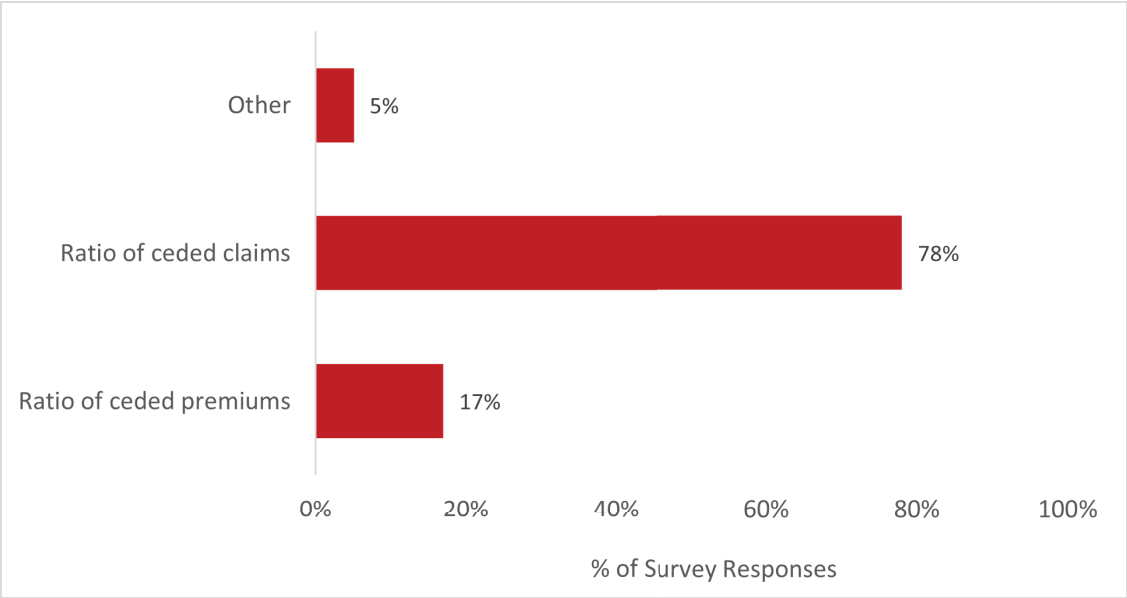


Figure 4.26. Responses to survey question: What driver will you apply to allocate the loss recovery component?



IFRS 17 software that is more accounting- or data-led may lack functionality around cash flows modelling, which then requires users to still perform actuarial calculations (such as onerous testing and FCF generation) outside of the software. Given that most P&C insurers in Asia are still using Excel for their reserving valuations, the loss component calculation can be seen as an extension of the actuary's existing work, which is then input back into the IFRS 17 software.

Our survey found that 78% of respondents would use a ratio of ceded claims to allocate the loss recovery component, see Figure 4.26. Using the claim recovery percentage is intuitive as a proxy for the loss recovery ratio, but there are some differing practices on how to apply this. Some P&C insurers would include the claim expense reserve and risk adjustment, while others would only use the expected claims portion. There are also differing views over whether to use the expected ceded claims ratio or the actual ceded claims ratio during the period. Meanwhile, 17% of respondents will use the ceded premium ratio as the allocation driver. This may be due to premiums data being simpler to gather or not having explicit expected claims for each reinsurance group.

4.6.3. Practical Considerations and Emerging Market Practice

IFRS 17 requires the identification of onerous groups of contracts at initial recognition, which is defined as when the expected FCFs are a net outflow. The expectation is to use readily available information (e.g., actuarial valuation and internal monitoring) to capture information about these estimates. For any groups of contracts that are identified as onerous at subsequent measurement, a loss component (and corresponding loss recovery component) should be booked under the PAA.

For P&C insurers in Asia, the concept of "onerous testing" is relatively new, which has required actuaries to be more involved. The key challenges for actuaries include defining

which level of granularity to test the profitability of contracts and how to meet the IFRS 17 requirements practically. For the loss component calculation, the transition impact is less since it is conceptually similar to the existing premium deficiency reserve (also known as unexpired risk reserve).

Outlined below are some developing market practices on how P&C insurers in Asia have tackled the onerous testing and loss component requirements under PAA.

(a) Determining onerous groups of contracts

The IFRS 17 Standard does not prescribe what "facts and circumstance" entails when determining onerous contracts under PAA. As a result, we have observed varying interpretations amongst P&C insurers in Asia on this topic. Some P&C insurers will apply a more qualitative assessment, where onerous contracts are determined based on pricing strategies (e.g., loss leader products). However, most P&C insurers have adopted more robust quantitative analyses to conduct the onerous testing. One common approach is to calculate a combined loss ratio (CLR) based on the IFRS 17 requirements, which can then be used to categorize homogenous sets of contracts into onerous or profitable groups. An illustration of this approach and the steps involved are outlined below.

➢ *Step 1: Define "set of contracts" for profitability assessment.*

Most P&C insurers will not perform onerous testing at the individual contract level. Instead, analysis is performed on an aggregated basis, or "sets of contracts" granularity, to the extent that contracts are homogenous and information exists on an aggregate basis. A set of contracts is expected to have similar characteristics, such as risk type and profitability. This is usually at a level where an insurer determines pricing and/or monitors performance.

The practical difficulty is in selecting an appropriate level of granularity such that no subset of contracts would have profitability characteristics that are significantly different from the rest of the contracts (when certain facts and circumstances occur). Some examples of facts and circumstances may include changes in pricing strategy, premium basis, expense allocation, or expected loss assumptions.

Common definitions of sets of contracts observed in the Asia market include actuarial reserving classes, management reporting splits, or statutory lines of businesses. These sets of contracts are chosen because key profitability assumptions (e.g., loss ratios and expense ratios) are monitored or forecast at these levels and therefore apply to all contracts within it. Once the set of contracts is defined, it would mean that one profitability bucket would be assigned to all the contracts within it at initial recognition.

➢ *Step 2: Calculate the combined loss ratio for each set of contracts.*

For each set of contracts, there would be an estimation of expected profitability based on the most up-to-date view of the technical information (e.g., latest actuarial valuation). This information is collated into a CLR (also known as combined operating ratio) on an

IFRS 17 basis. The calculation is performed at both initial recognition to determine the profitability group and then at each subsequent measurement to determine if any loss component needs to be recognized.

An illustrative formula for the CLR is shown below.

$$IFRS\ 17\ CLR = \frac{\left(Claims + Directly\ Attributable\ Maintenance\ Expenses + Risk\ Adjustment\right)}{Premium - Directly\ Attributable\ Acquisition\ Expense * Discounting\ Factor}$$

where:

(i) "Claims" = Premium ∗ Loss Ratio.[31]
(ii) "Directly Attributable Maintenance Expenses" = (Premium ∗ PAE%[32]*) + (CHE%*[33] *∗ Expected Claims).*
(iii) "Risk Adjustment" = Risk Adjustment% ∗ Expected Claims ∗ (1 + CHE%).
(iv) "Discounting Factor"[34] *is determined by applying the selected discount rates to the mean term*[35] *of each cash flow item.*

Note that, as a practical expedient, some P&C insurers do not apply any discounting for premiums and acquisition expenses in the formula. This is because the premiums and commissions for most P&C products are due upfront, so the discounting impact would be immaterial. Also, note that the items in the formula are on a gross basis before the risk-mitigating effect of reinsurance.

➢ *Step 3: Assign profitability groups to each set of contracts.*

Once the CLR is calculated for all sets of contracts, the insurer would then group them into different profitability buckets based on their accounting policies.

A common grouping approach is shown in Table 4.6.

Table 4.6. Example of IFRS 17 profitability grouping based on CLR

Profitability per IFRS 17.16	IFRS 17 CLR %
Onerous	CLR > 100%
No significant possibility of becoming onerous subsequently	CLR < [X] %
Remaining contracts	[X]% ≤ CLR ≤ 100%

[31] Loss ratio is the initial expected loss ratio.
[32] PAE refers to policy administration expenses.
[33] CHE refers to claims handling expenses
[34] Discounting factor at time 0 for cash flow due at time T = 1/(1 + risk free yield curve + illiquidity premium)^T.
[35] Average time to settle a claim (i.e., average time from accident date to claim settlement).

For CLR over 100%, it is quite standard to define these sets of contracts as onerous groups. However, more judgement is required to allocate sets of contracts to the two (or more) profitable groups, as there are no prescriptive rules in the IFRS Standard. Some P&C insurers may refer to the historical volatility of the CLR or internal pricing guidelines to split between the profitable groups. Another common observation is that in practice, P&C insurers tend to allocate contracts into only two profitability buckets: onerous and remaining contracts (i.e., profitable contracts). This is because the financial impact would not be considered material to allocate profitable contracts further into two separate buckets, when weighed against the additional operational effort of doing so.

(b) Calculation of the loss component

Under the PAA, the loss component calculation is less complex than that under GMM. For onerous groups of contracts, the loss component at each reporting period is simply the difference between the carrying amount of LRC under PAA and the FCFs under GMM. The roll forward of the loss component under PAA does not require the loss recognition or the loss component amortization mechanism.

$$\textit{Loss Component under PAA} = \textit{Maximum of}\left(\textit{FCF} - \textit{LRC under PAA}, 0\right).$$

Note the FCFs should include all cash flows attributable to insurance. An illustrative approach to calculate the FCFs (relating to the LRC) using the present value (PV) of expected cash flows is below.

$$\begin{aligned}\textit{FCF} = {} & \textit{PV of Claim Loss Reserves} + \textit{PV of Policy Administration Expenses} \\ & + \textit{PV of Claims Handling Expenses} + \textit{PV of Risk Adjustment} \\ & - \textit{PV of Premiums Receivables} + \textit{PV of Acquisition Cost Payables}\end{aligned}$$

For P&C insurers in Asia, the loss component calculation is conceptually similar to the premium deficiency reserve (PDR) under IFRS 4. However, we have observed some key differences as outlined below.

- **Different assumptions (e.g., loss ratios and expense ratios).**

  For example, the expense allocation may be more comprehensive under IFRS 17. As such, some P&C insurers have updated their claims handling or maintenance expense assumptions to align with the new expense allocation results. Also, the loss component requires all assumptions and cash flows on gross basis only. For the PDR, some P&C insurers previously only considered the net basis cash flows.

- **Allowance for discounting.**

  Most P&C insurers in Asia have allowed for discounting under the PAA. Therefore, the loss component is also based on the discounted cash flows, which is a change to the IFRS 4 basis, under which most territories did not discount. As discounting will

reduce the present value of the fulfillment cash flows, it should theoretically result in a lower loss component compared to the PDR (all other things considered equal).

- **Different level of granularity**

  The loss component is typically calculated at a more granular level compared to the PDR. Under the previous basis, many P&C insurers were calculating the PDR at an entity level, whereas the loss component will need to be calculated at the group or cohort level. This means there is less cross-subsidization between groups of contracts, resulting in a higher loss component compared to the PDR (all other things considered equal). An illustrative example of the removal of cross-subsidization benefits is shown in Table 4.7.

Table 4.7. Example of the removal of cross-subsidization benefits

Cohort	FCF	UPR	DAC	LRC (PAA)
A	65	100	50	50
B	130	200	80	120
C	195	300	90	210
Total	**390**	**600**	**220**	**380**

IFRS 4 PDR = max {URR – (UPR – DAC), 0}, aggregate level

= max {390 – (600 – 220), 0}

= 10

IFRS 17 Loss Component = max {URR – LRC (PAA), 0}, group of contracts

= max {65 – 50, 0} + max {130 – 120, 0} + max {195 – 210, 0}

= 25

(c) Calculation of the loss recovery component

To reduce the accounting mismatches between insurance contracts issued and reinsurance contracts held, the insurer should recognize a gain on reinsurance contracts held at the same time when a loss is recognized on onerous insurance contracts issued.[36] The loss recovery component is booked under the asset for remaining coverage.

[36] Loss recovery component can only be recognized to the extent that the reinsurance contracts held are entered into before or at the same time as the onerous insurance contracts are issued.

To derive the loss recovery component, we have observed some P&C insurers in Asia applying the following method (though other methods may also be compliant):

(a) Identify the percentage of all underlying claims it expects to recover through the reinsurance contract held based on the *historical recovery ratio* of a similar group of contracts considering any significant change in reinsurance arrangement; and

(b) recognize an income (i.e., loss recovery component) on the reinsurance contract held by multiplying the loss on the underlying insurance contracts by the percentage identified in (a) above.

To calculate the recovery ratio, there are different approaches used. The most common approach is to use a ceded to gross expected claims incurred ratio. Other insurers may also consider using ratios based on the ceded to gross premiums, UPR, or actual claims paid. An illustrative example is shown in Table 4.8 below on recognition of the loss recovery component.

Table 4.8. The aggregated profit and loss impact

Profit and Loss Account	Immediate Recognition	Recognized Over Coverage Period
Insurance revenue	–	100
Insurance service expenses – refers to steps (1) and (3) above	(50)	(100)
Insurance contracts issued	**(50)**	–
Allocation of reinsurance premium*	–	(50)
Amount recovered from reinsurance* – refers to step (2) and (4) above	20	40
Reinsurance contracts held	**20**	**(10)**
Profit/(Loss)	**(30)**	**(10)**

*The profit and loss presentation is based on a gross presentation of reinsurance contracts held.

Illustrative example—fact pattern

- Expected premium of underlying insurance contract: $100
- Expected claims of underlying insurance contract: $150
- Expected reinsurance premium of reinsurance contract held: $50[37]

[37] The reinsurers' share of premiums and claims may not be in the same ratio as the consideration of reinsurance ceding commission.

- Historical reinsurance's share of claims incurred to gross claims incurred ratio: 40%
- Assume no risk adjustment and directly attributable expenses
- Assume no discounting impact due to immateriality
- Assume no investment component

Illustrative example—profit and loss calculation with loss recovery component

(1) Loss recognized at initial recognition for insurance contract issued

= 100 – 150 = (50).

(2) Loss recovery immediately recognized at initial recognition for reinsurance contract held

= 50 * 40% = 20.

(3) Insurance service expenses recognized over the coverage period

= release of loss recognized at initial recognition + expected claims

= 50 – 150 = (100).

(4) Amount recovered from reinsurance recognized over the coverage period

= release of loss recovery immediately recognized at initial recognition + expected claims recovery

= (20) + 150 * 40% = 40