Queensland CTP Market Briefing

Review of the risk premium for the 2022Q2 underwriting quarter

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In this briefing

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Risk Premium

Each quarter, Taylor Fry gives advice to MAIC to assist in its role of setting a pricing band for the QLD CTP Scheme (the CTP Scheme). This market briefing is intended to summarise Taylor Fry's latest advice to MAIC. We suggest that the first-time reader reviews Section 6 before the remainder of this briefing to understand Taylor Fry's role and the structure of our advice.

1.1 Risk premium and change since last review

Taylor Fry's **estimated** risk premium is **$181.32** which is **$4.47 higher** than our estimate made at the previous review. The estimate is in Sep-21 dollars before the application of inflation and discounting. The main contributors to the increase in estimated risk premium are:

- An increase in our **core claim frequency** assumption driven by higher than expected experience for the Mar-21 accident quarter.
- An offsetting weakening of the **severity profile.**
- An increase in **Average Weekly Earnings** (AWE) for QLD. Since benefit levels have historically been tied to earnings, we base our estimated risk premium on current and projected Average Weekly Earnings.
- An increase in baseline **average claim size** driven by several large severity 1Y finalisations over the quarter.

Figure 1 shows the sizes of the most important changes.

Figure 1– Change in estimated risk premium since the Jun-21 review

1.1.1 Components of risk premium

Our estimate is a combination of the risk premium relating to core claims, workers compensation, interstate sharing and NSW postcode claims. The baseline core claims risk premium is based on our estimate of core claims frequency, which typically relies on the notifications experience from the most recent accident periods, and our estimate of core claim size which relies on a reasonably long history of finalised claim sizes. In addition to this, our estimated risk premium incorporates overlays that aim to reflect lead indicators of claim size, frequency and severity profile. Table 1 shows the components of our risk premium estimate.

Table 1 - Estimated risk premium at 30 September 2021

	Risk premium component		
	Frequency	**Average claim size ($)**	**Risk premium ($)**
Core claims			
Baseline	0.1570%	110,503	173.49
Overlay: Claims mix model trend		-1,986	-3.12
Estimated core claims		108,517	170.37
NSW accident postcode claims	0.0060%	131,980	7.97
Interstate sharing	0.0026%	67,059	1.74
Workers' compensation recovery	0.0123%	9,981	1.23
Estimated risk premium at 30 Sep 2021	**0.1780%**	**101,865**	**181.32**

1.1.2 Risk premium uncertainty

Our risk premium estimate for the 2022Q2 underwriting quarter is highly uncertain. As an illustration of this uncertainty:

- There is approximately one in four chance that the actual risk premium will be *more* than 7.5% higher than our risk premium estimate.
- There is approximately one in four chance that the actual risk premium will be *less* than 7.5% lower than our risk premium estimate.

More details on this uncertainty are found in Section 5.

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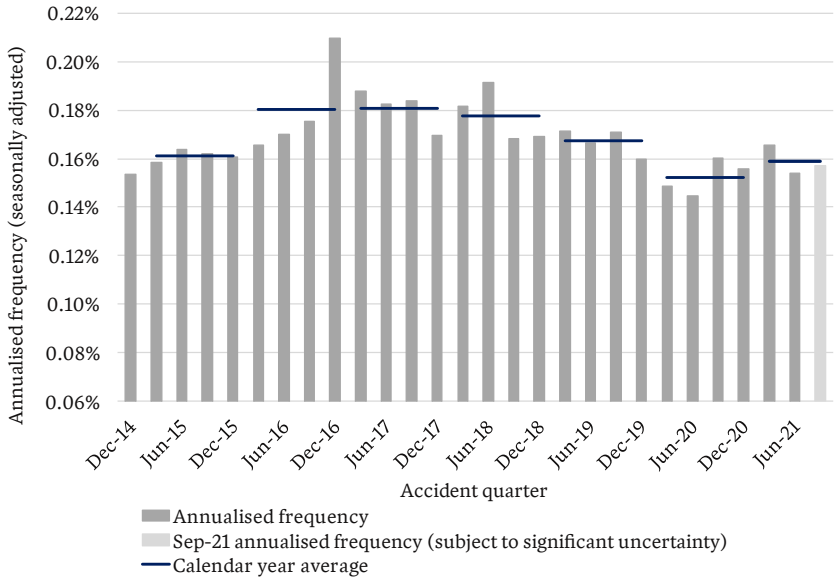
Frequency

Typically, we review the core claim frequency model at each annual review, but the experience is monitored quarterly, and changes are made if necessary. In this quarterly review, we have updated the core claim frequency assumption. The frequency assumption and severity profile were previously revised in Jun-21. This section outlines the assumptions for core claim frequency.

2.1 Core claim frequency

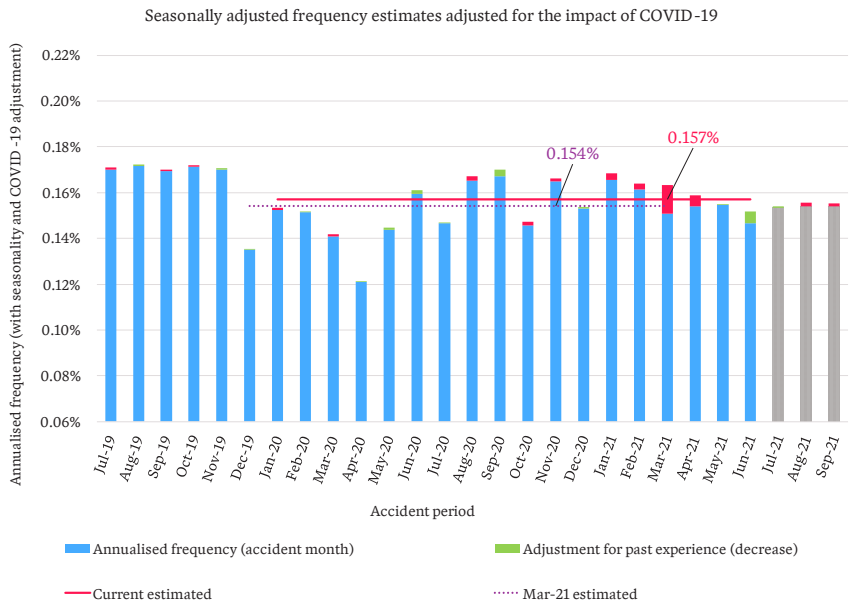
Figure 2 - Estimated annualised core claim frequency as at 30 September 2021



This figure shows the projected ultimate annualised baseline frequency for each historical accident quarter after allowing for seasonality and removing the estimated impact of COVID-19.

Core claim notifications have shown a marked decrease after the Nov-19 accident month. The true reduction in frequency post-claim farming reform is difficult to estimate due to a change in the notification pattern and the reduced traffic volumes after Mar-20 due to COVID19 related shutdowns. As per the annual review, we have allowed for both factors but these allowances are highly uncertain.

Figure 3 – Estimated core claim frequency as at 30 September 2021



Our current estimate of frequency incorporates experience from Jan-20 to Jun-21 accident periods excluding the Apr-20 accident month. This leads to a 2% increase from the previous estimated frequency driven by unfavourable experience in the Mar-21 accident quarter.

3

Severity Profile

3.1 Core claim severity profile

We typically review the severity profile formally every year but monitor experience quarterly, so MAIC can revise the severity profile if deemed appropriate. At this quarterly review, we have continued to estimate the core claim severity profile directly from the post-claim farming experience as we have a sufficient volume of developed experience for this period.

This section outlines the assumptions for the baseline severity profile.

The majority of claims are legally represented severity 1 claims (severity 1Y). These contribute 70% of core claim notifications and 52% of the core risk premium. While there are relatively few high severity claims, these have higher average claim sizes.

Table 2 – Baseline severity profile

Severity	Previous review (Jun-21)	Current review (Sep-21)	Movement
1N	7.6%	7.3%	-0.2%
1Y	69.5%	69.8%	0.4%
2	12.2%	12.2%	0.0%
3	5.9%	5.8%	-0.1%
4	1.0%	0.9%	-0.1%
5	0.5%	0.4%	-0.1%
6	1.0%	1.0%	0.1%
9NA	2.4%	2.5%	0.1%
Total	100%	100%	

For this review we have continued to estimate the core claim severity profile directly from the post-claim farming experience as it is now sufficiently developed.

The increase in estimated frequency over the quarter, coupled with the direct estimation of the frequency of severities 3-6 has resulted in an overall weakening of the severity profile. This weakening has been offset slightly by an increase in legal representation for severity 1 claims.

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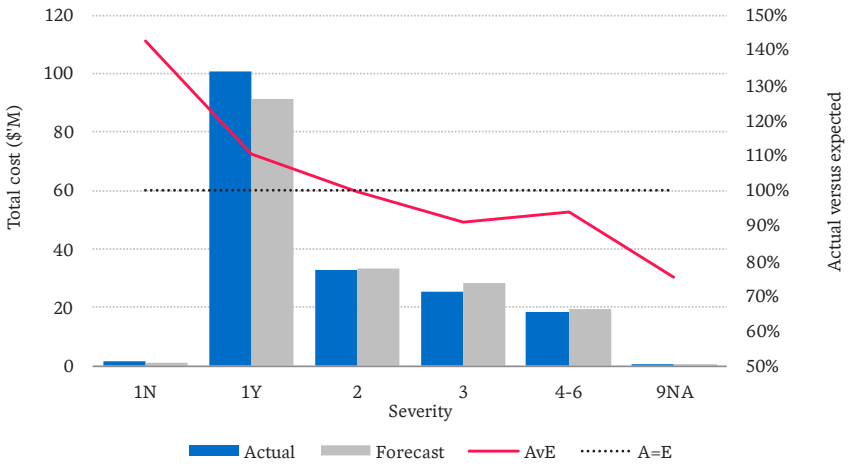
Average claim size

4.1 Baseline core average claim size

Taylor Fry reviews the average claim size by severity every quarter based on the payments to finalised claims. In this section, we compare the recent experience to our assumptions and show the resulting projected average claim size by accident quarter.

The baseline core average claim size has increased since the previous review driven by several large Severity 1Y finalisations over the quarter.

Figure 4 – Finalisation experience by severity in Sep-21 against Jun-21 model



Actual cost for the Sep-21 quarter across all severities was 3% higher than expected by our Jun-21 model.

Severity 1N claims have finalised for 43% higher than forecast.

Severity 1Y claims have finalised for 11% higher than forecast.

Severity 3 claims have finalised for 9% lower than forecast.

Table 3 – Change in baseline average claim size by severity excluding changes in SP ($'000, adjusted for inflation)

	Severity								All
	1N	1Y	2	3	4	5	6	9NA	
Baseline at Jun-21	7	81	164	344	623	958	297	13	**110**
Baseline at Sep-21	8	82	164	347	618	947	301	13	**111**
Change in baseline	+3.2%	+0.9%	-0.1%	+0.9%	-0.8%	-1.2%	+1.3%	-2.5%	**+0.6%**

Figure 5 – Average claim size by finalisation quarter

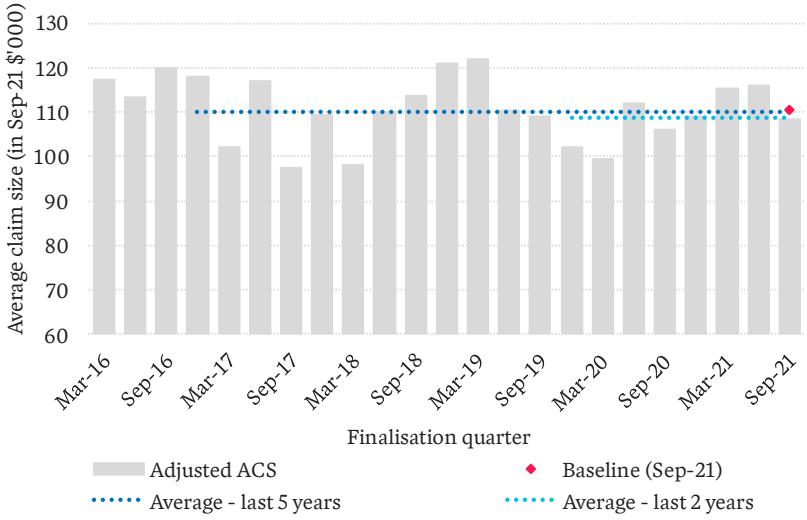
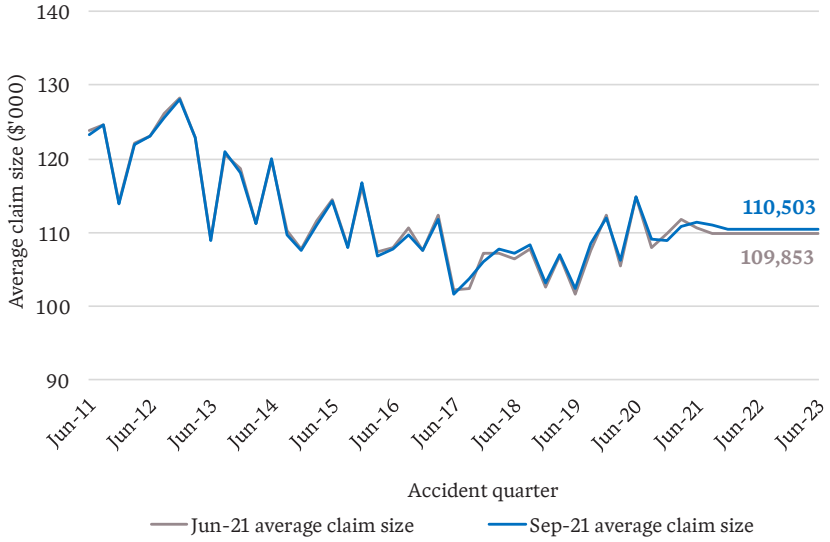


Figure 5 shows historical finalized claim sizes by finalisation quarter standardised for severity profile and stage of claim development.

Our current estimate of claim size is in line with recent experience.

Figure 6 –Projected average claim size by accident quarter (all severities) ($'000, adjusted for inflation)



The projected baseline average claim size has increased slightly from the previous review. The current estimate is $110,503.

4.2 Core average claim size: lead indicators and overlays

We use alternative average claim size models that use lead indicators to validate our average claim size assumption. The three lead indicators are: the claims mix model, the developed incurred costs model and the emerging trend in psychological claims proportion. As for the last few quarters, we have continued to incorporate the claims mix model trends into our advice.

Currently, our advice regarding emerging claim size is informed primarily by the **size of finalised claims**. This is a proven and robust methodology and is established actuarial practice. However, it can be slow to recognise changes to the mix of claims or changes to the management/settlement environment, especially when the claims affected have not yet finalised. Therefore, we monitor three lead indicators of claim size: a **separate claim mix model** which responds to the mix of claims yet to be finalised, such as legal representation, accident circumstance and hospitalisation; **insurers' case estimates of open claims**; and the **emerging proportion of psychological claims**.

Claims mix model and overlay

Our claims mix model indicates a growing frequency of legally represented, non-serious, same direction claims until the 2017 accident year and an established, decreasing and continuing trend in the size of all legally represented, non-serious claims. This suggests that further drops in claim size, beyond those reflected in our finalised claim models, are likely. We have continued to recognise these trends up to the introduction of the claim farming reforms for small non-serious claims as the large frequency decreases observed after accident year 2019 increase the uncertainty around the continuation of the trend. However, at this review, we have removed our adjustment for other non-serious claims as there is no longer enough evidence to support it for this segment. We arrive at a 2% reduction in our average claim size for the claims mix trend overlay.

Developed incurred cost model

Historically, case estimates had been relatively stable, however, since early 2018, we have seen significant quarter on quarter development in these estimates including a significant strengthening over recent quarters driven by case estimate development in AY2018 and 2019. This has reduced our confidence in the reliability of insurer case estimates as a lead indicator of claim size. We have developed the case estimates to ultimate for the incurred cost model although caution is required given the recent unpredictability. Our baseline average claim size is consistent with ultimate incurred costs for AY2017/2018. We do not consider the developed costs for more recent accident years to be sufficiently reliable to inform our estimates.

Psychological claims

There was a decreasing trend in the proportion of claims with a psychological injury code up to accident year 2015. Since then, it has been increasing, with the expected proportions for accident years 2018 and 2019 much higher than 2017. Psychological claims have historically finalised for higher costs compared to non-psychological claims. This alone would imply that if there is a genuine increase in the frequency of claims with psychological injuries, we would expect claims costs to increase.

We have continued to monitor the experience of psychological claims since the Dec-18 review. Currently, the proportion of psychological claims finalised in accident years 2018 and 2019 are 1.11 (11%) and 1.30 (30%) times higher respectively compared to AY2017 experience at the same stage of development. Over recent quarters, large claim finalisations have driven up the AY2018 finalised average claim size for psychological claims. However, assuming the relativity between 2018 and 2017 finalised average claim size remains the same in the future, the increase in the proportion of psychological claims in AY2018 is not associated with an increase in cost. This is further supported by the overall average finalised claims experience which shows average finalised costs for AY2018 and AY2019 are at AY2017 levels or less despite the proportion of psychological claims increasing for these accident years.

Estimated claim size

The estimated average claim size is $108,517 which incorporates the claims mix model trend overlay. This is also summarised in Table 4.

Table 4 Average claim size of core claims

	Average claim size ($)
Baseline at Sep-21	110,503
Overlay: Claims mix model trend	-1,986
Estimated at Sep-21	**108,517**

5

Risk Premium Uncertainty

There is considerable uncertainty in the assumptions underlying our risk premium estimate. We provide risk premium impacts for a range of plausible alternative scenarios.

5.1 Business as usual variation

Our risk premium estimate is highly uncertain. This uncertainty has two main sources:

- Risk premium evolution – the average claim for underwriting quarter 2022Q2 will finalise around four years after the date of the data available to estimate the risk premium. Historically there have been large movements in the risk premium over a four-year period. In general, these movements are not predictable in advance.
- Historical risk premium estimation uncertainty – even for past underwriting quarters where a good volume of finalised claims data is available, there is considerable uncertainty in relation to the cost of claims yet to finalise.

We have quantified this "business as usual variation" and have found that there is an approximately 50% chance that the actual risk premium will fall within the range:

- Estimated risk premium +/-7.5%, or equivalently
- Estimated risk premium +/-$14.

5.2 Key uncertainties

In addition, we have identified three key uncertainties that could impact the risk premium:

- The core claim frequency emerges differently than allowed for
- The severity profile we have allowed for following the claim farming reforms emerges differently to expected
- The uncertainty surrounding the impact of COVID-19 on traffic volumes and claims frequency.

We have illustrated the potential impact of these uncertainties with a range of scenarios that are summarized in Table 5 and described below.

Table 5 Change in estimated risk premium for plausible alternative scenarios

Risk premium scenarios	Impact on estimated risk premium
Business as usual variation	
Estimated risk premium +/- 7.5%	**+$14 / -$14**
Key uncertainties	
Core claim frequency emerges in line with the Jul-20-Jun-21 average experience	**+$1.2**
Impact of lockdown similar to Sep-21 accident qtr occurs during the underwritten period	**-$2.2**
Transitions from Sev1Y to Sev2 remain low	**-$0.9**
Sev 2 frequency is consistent with pre-claim farming periods	**+$1.3**
Change in relative proportion of sev1N and sev1Y claims is cost neutral	**-$1.8**

5.2.1 The core claim frequency emerges differently than allowed for

Our core claim frequency assumption is uncertain as the recent experience has been volatile and our adjustments for the impact of COVID-19 highly uncertain.

To illustrate the uncertainty surrounding the core claim frequency assumption we have set up a scenario which assumes core claim experience emerges in line with the Jul-20 to Jun-21 experience. This has an estimated risk premium impact of *plus* $1.30.

5.2.2 Severity profile emerging differently than allowed for following the claim farming reforms

For this review, we have continued to utilise post-claim farming reform experience to set our core claim severity profile assumptions. One uncertainty in the post-claim farming reform experience is that the proportion of severity 2 claims has been unusually low due to a significant drop in claim transitions from severity 1Y to severity 2. We have assumed that the reduction in transitions is a temporary effect likely due to operational changes and will not continue into the future. If transitions from severity 1Y to severity 2 continue to remain low in the future, the reduction in severity 2 claim proportion would result in a $0.90 *reduction* in risk premium. Alternatively, if severity 2 frequency was to emerge in line with pre-claim farming experience then this would result in a $1.30 *increase* in risk premium.

As a result of the claim farming reforms, changes in the lodgement requirements may have caused a reduction in the proportion of direct lodgements and an increase in the proportion of legally assisted lodgements. If this is true, then the impact of the change in relative proportion of 1N and 1Y claims could be close to cost neutral and this would result in a $1.80 *reduction* in our current estimated risk premium.

5.2.3 COVID-19 and the estimated impact on risk premium

There is considerable uncertainty around the continuing impact of COVID-19 on traffic volumes over 2021. We have continued to adjust notification experience only for periods of harsh lockdowns with significant impact on traffic volumes where there is a clear link between reductions in traffic volumes and claim frequency.

To illustrate the uncertainty around future core claim frequency caused by COVID-19 we have set up a scenario which assumes continued outbreaks of COVID-19 due to new variants. This scenario assumes a future lockdown over a single accident quarter within the 2022Q2 underwriting period similar in magnitude to the lockdowns experienced in the Sep-21 accident quarter. This has an estimated risk premium impact of a *reduction* of $1.80.

6

Structure of Risk Premium advice

6.1 Structure of Taylor Fry's advice to MAIC

This section describes the components of our advice to MAIC as well as the role of this advice in MAIC's premium setting process.

The **prescribed floor and ceiling premiums** for each underwriting quarter are calculated and set by **MAIC**, based on several inputs, including estimates of the average **risk premium** for the scheme**.** Taylor Fry estimates the components of the risk premium for the Queensland CTP scheme for each underwriting quarter and advises MAIC on these components.

In estimating the risk premium for each underwriting quarter, we consider **"core"** claims separately from workers' compensation recovery (WC), interstate sharing (IS) and NSW accident postcode (NSW) claims. Each component is separated into the **frequency** of claims per registered vehicle and **average claim size**. These components make up the baseline risk premium.

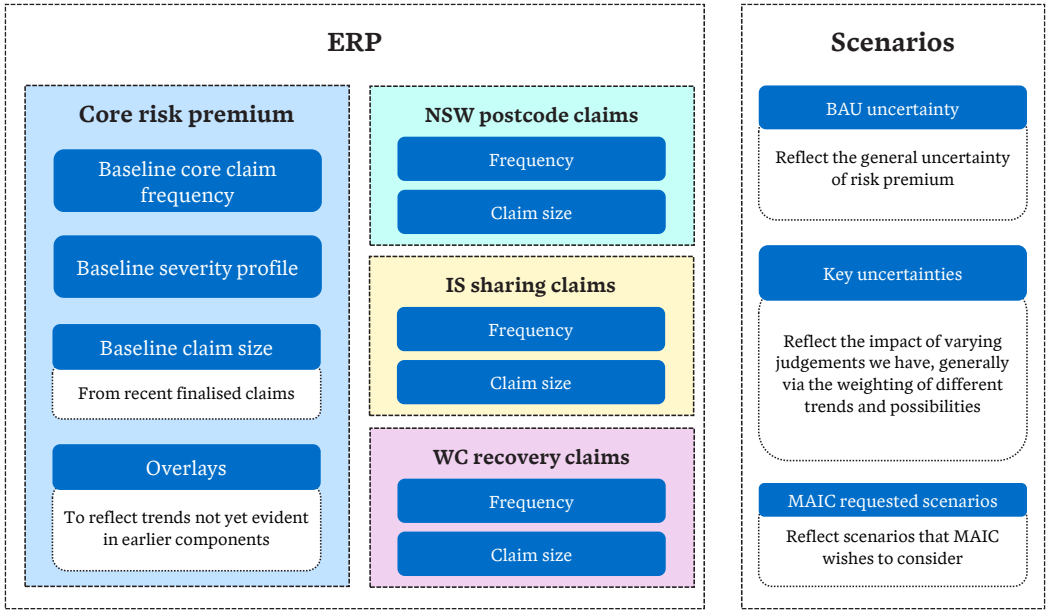
Our Estimated Risk Premium (ERP) for a given future underwriting quarter is comprised of our **baseline risk premium estimate** and **overlays**. The ERP reflects **risk premium** implied by **the most recent past accident periods**, adjusted for the impact of changes which meet the following criteria:

- Evidence of the change can be seen in the data
- The change is quantifiable with reasonable certainty
- We are reasonably confident that the change will continue into the future up until the time most of the cost of claims for the underwriting quarter has been paid.

The risk premium of recent accident years is captured in the baseline risk premium estimate and the other adjustments are made through the overlay component.

There is a large degree of **uncertainty** and **reliance on judgment** apparent in the overlays as they reflect our view of changes to the scheme experience occurring in either the very recent past or the future; the prescribed premiums are set for an accident period approximately one year in the future with claims settling on average 3 years after that.

In addition to the ERP, we provide MAIC with a series of scenarios focusing on key uncertainties in the ERP which reflect potential alternative scenarios relating to possible changes to underlying components of risk premium. Our ERP and scenarios are inputs for MAIC to utilise in their pricing process. We do not expect that MAIC will necessarily adopt our ERP or a risk premium that is within the range covered by our scenarios.



We consider it proper for MAIC to adopt a risk premium different to our ERP based on:

- Adopting a combination of provided scenarios which they consider to be the most likely to occur
- Their anticipation of future changes to the risk premium which we have not allowed for in our ERP or scenarios.

A

About the Market Briefing

A.1 About the Market Briefing

This report, alongside the accompanying market briefing and associated insurer annex spreadsheet, is provided by Taylor Fry to Queensland Motor Accident Insurance Commission (MAIC) for distribution to QLD CTP insurers each quarter.

Key definitions

Claim	All claims recorded as notified in the Scheme data, other than Nominal Defendant claims, but specifically including those for nil or trivial amounts.
Claim Severity	Claim severity refers to our severity band under which a claim falls under, which is a categorisation based on the maximum injury severity score of the claim and the status of the claim's legal representation.
Core claims	Claims excluding those categorised as workers' compensation recovery, interstate sharing claims or NSW accident postcode claims.
Interstate sharing claims (IS) claims	Interstate sharing (IS) claims involve one party from Queensland and another from a different state. In some of these cases the claim cost is shared between schemes. These claims are managed by an interstate insurer. They are identified in the database by means of a specific injury code. Claims with a NSW accident postcode are excluded.
Workers' compensation recovery (WC) claims	Workers' compensation recovery (WC) claims are those notified to insurers by a workers' compensation insurer/authority. They have been identified separately in the database since 2009Q1 by means of a specific injury code. Claims with a NSW postcode are excluded.
NSW accident postcode claims	Claims with a NSW accident postcode, including those categorised as core, workers' compensation recovery and interstate sharing claims. They are identified in the database by means of accident postcodes.
Claim frequency	Number of claims per registered vehicle.
Severity profile	The severity profile refers to the final proportion of claims related to each claim severity.
Average claim size	Average size of claims with non-zero cost.
Risk Premium (RP)	Risk premium refers to the average premium required to cover claim costs which is calculated as the total ultimate claim costs of a period divided by the number of registered vehicles. This is equivalent to claim frequency multiplied by average claim size for each severity, summed across all claim severities.
Estimated risk premium (ERP)	The ERP refers to our estimate of risk premium that reflects claims costs for the most recent past accident periods, to the extend we can reliably measure them, adjusted for the impact of changes we are reasonably confident will occur up until the time most of the cost of claims for the underwriting quarter has been paid.
Claim farming reforms	On 5 December 2019, new legislation commenced which aims to stop the practice of insurance car crash scamming (commonly known in the industry as 'claim farming'). Car crash scammers contact unsuspecting people and pressure them (or their family members) to make a CTP insurance claim or share their personal information to law firms for a profit. Car crash scammers have been known to use aggressive tactics and target vulnerable Queenslanders. The legislation makes it illegal in Queensland for lawyers to pay a fee to a car crash scammer.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