Queensland CTP Market Briefing

Review of the risk premium for the 2023Q1 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. 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.

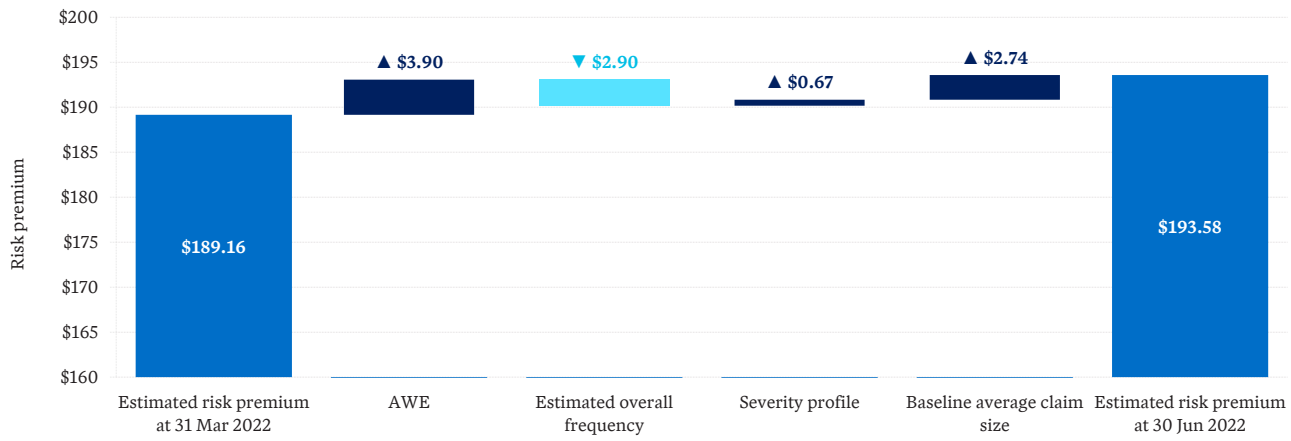
1.1 Risk premium and change since last review

Taylor Fry's **estimated** risk premium is **$193.58** which is **$4.41 higher** than our estimate made at the previous review. The estimate is in Jun-22 dollars before the application of inflation and discounting. The main contributors to the increase in estimated risk premium are:

- 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.
- A decrease in our **core claim frequency** assumption driven by lower-than-expected experience over the quarter.
- A strengthening of the **severity profile** as the reduction in frequency was assumed to occur in severities 1 and 2 only.
- An increase in baseline **average claim size** driven by higher-than-expected experience over the quarter.

Figure 1 shows the sizes of the most important changes.

Figure 1– Change in estimated risk premium since the Mar-22 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. Table 1 shows the components of our risk premium estimate.

Table 1 - Estimated risk premium at 30 June 2022

	Risk premium component		
	Frequency	Average claim size ($)	Risk premium ($)
Core claims	0.1550%	118,119	183.08
NSW accident postcode claims	0.0060%	138,360	8.36
Interstate sharing	0.0015%	68,585	1.03
Workers' compensation recovery	0.0144%	7,662	1.10
Estimated risk premium at 31 Jun 2022	**0.1770%**	**109,367**	**193.58**

1.1.2 Risk premium uncertainty

Our risk premium estimate for the 2023Q1 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

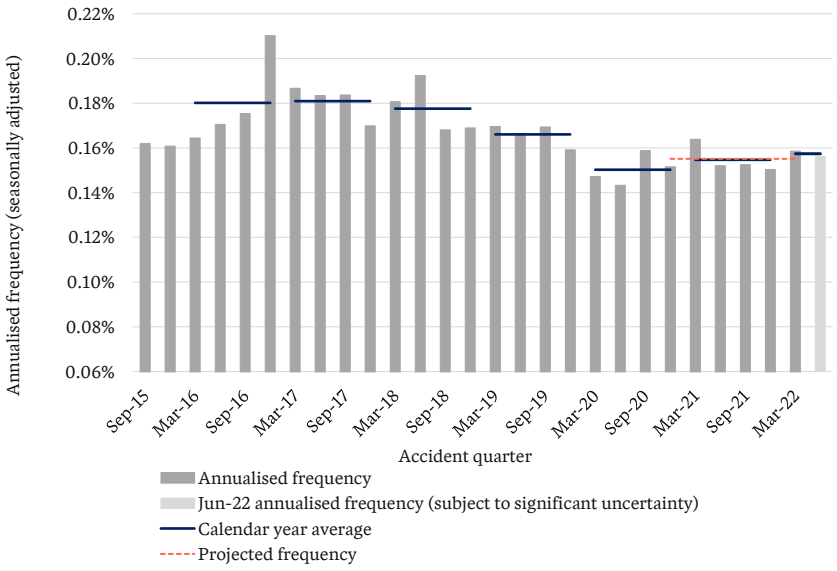
Typically, we review the core claim frequency model at each annual review, but the experience is monitored quarterly, and changes are made if necessary. Our estimated frequency is set using post-claim farming reform notification experience, allowing for the impact of COVID related shutdowns and the apparent change in notification patterns. The frequency assumption and severity profile were previously revised in Mar-22. This section outlines the assumptions for core claim frequency.

2.1 Core claim frequency

Notifications over the quarter were 10% lower than forecast at Mar-22, after adjusting the forecast for low Mar-22 traffic volumes. The lower than forecast notifications occurred mainly in the 2021 accident year.

This lower than forecast experience follows similar experience at the previous quarterly review. At that review, we only gave partial weight to the low frequency experience because the drop appeared to be partially explainable as a slowdown in notifications caused by COVID-related staff shortages and the Eastern Australian floods. However, the continued low notification experience over the 2021 accident year has led us to give full weight to the lower frequency when setting our frequency estimate at this review.

Figure 2 - Estimated annualised core claim frequency as at 30 June 2022



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 frequency decreased in the early part of 2020 following the introduction of the claim farming reforms. This coincided with a change in the notification pattern and COVID impacted traffic volumes.

Following this drop, claim frequency has settled to a slightly higher level, however the experience continues to be volatile.

For future accident quarters we now advise a frequency assumption of 0.1550% which is based on the 6-quarter average to Mar-22. This advised frequency represents a 1.6% reduction since the last review.

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Severity Profile

3.1 Core claim severity profile

We typically review the severity profile formally every year but monitor experience quarterly and make appropriate adjustments, so MAIC can revise the severity profile if deemed appropriate.

Given the increased level of uncertainty in the severity profile experience after the introduction of claim farming reforms, we continue to closely monitor and respond to emerging experience on a quarterly basis.

This section outlines the assumptions for the baseline severity profile.

Legally represented severity 1 claims (severity 1Y) represent 70% of core claim notifications and 53% 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 (Mar-22)	Current review (Jun-22)	Movement
1N	7.4%	7.5%	0.06%
1Y	69.7%	69.5%	-0.10%
2	12.0%	12.0%	-
3	5.7%	5.7%	0.03%
4	0.8%	0.9%	0.08%
5	0.4%	0.4%	0.01%
6	1.0%	1.0%	-0.05%
9NA	3.0%	3.0%	-0.02%
Total	100%	100%	

The strengthening of severity profile this quarter is mainly caused by the reduction in overall frequency being attributed to lower severities.

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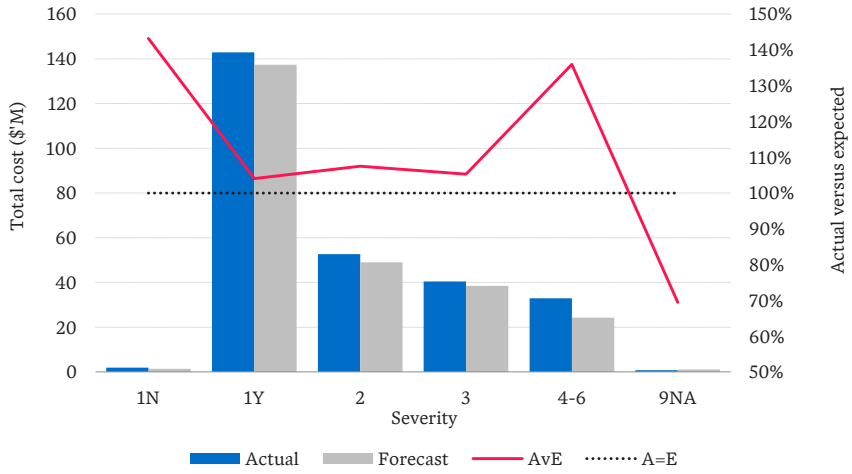
Average claim size

4.1 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 core average claim size has increased since the previous review driven by higher-than-expected experience in severity 1Y.

Figure 3 – Finalisation experience by severity in Jun-22 against Mar-22 model



Actual cost for claims finalised in Jun-22 across all severities was 8% higher-than-forecast at Mar-22.

Severity 1Y claims have finalised for 4% higher than forecast.

Severity 2 claims have finalised for 8% higher than forecast.

Severity 3 claims have finalised for 5% higher than forecast.

Severity 4-6 claims have finalised for 34% higher than forecast.

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

	Severity								
	1N	1Y	2	3	4	5	6	9NA	**All**
Baseline at Mar-22	9	88	176	357	652	985	298	14	**116**
Baseline at Jun-22	9	90	179	352	658	962	306	13	**118**
Change in baseline	+3.7%	+2.7%	+1.7%	-1.4%	+1.0%	-2.2%	+2.6%	-2.6%	**+1.5%**

Figure 4 – Average claim size by finalisation quarter

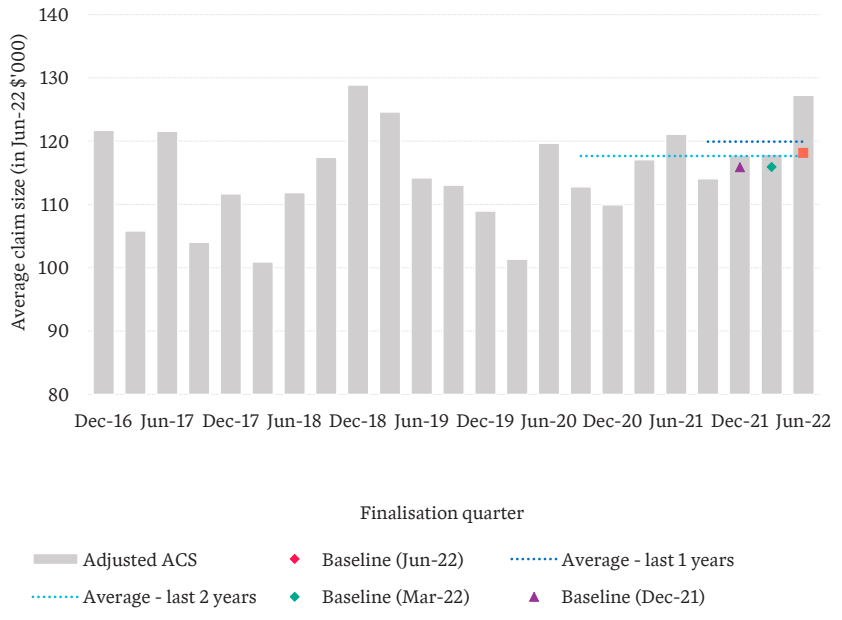
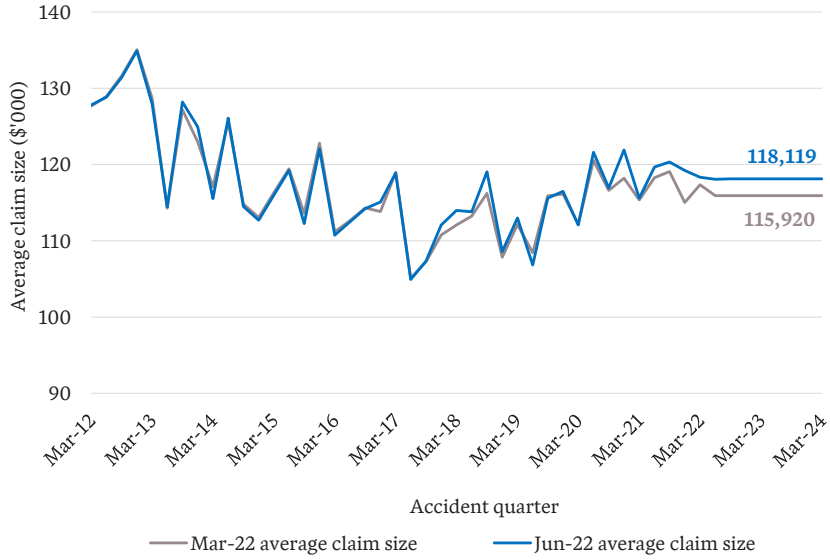


Figure 4 shows historical finalised claim sizes by finalisation quarter standardised for severity profile and changes in the rate of finalisations across accident periods.

The increase in the core average claim size is mainly driven by an increase in the projected claim size for severity 1Y in response to higher than forecast experience over the last several quarters.

Our current average claim size assumption is slightly higher than the average experience over the last 2 finalisation years.

Figure 5 –Projected average claim size by accident quarter (all severities) ($'000, adjusted for inflation)



Our projected baseline average claim size has increased from the previous review. The current estimate is $118,119.

This increase includes the combined effect of an increase in the selected average claim size assumptions and a strengthening of the selected severity profile basis.

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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 2023Q1 will finalise around four years later than the most recent finalised claim data available at this review. 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 +/-$15.

5.2 Key uncertainties

In addition, we have identified several key uncertainties that could impact the risk premium. These are summarized in Table 4 and described below.

Table 4 Change in estimated risk premium for plausible alternative scenarios

Risk premium scenarios	Impact on estimated risk premium
Business as usual variation	
Estimated risk premium – 50% confidence interval	**+$15 / -$15**
Frequency scenarios	
Traffic volumes continue to stay down at the current level (5% lower than 2019)	**-$9.2**
No traffic volume adjustment made for Mar-22 accident quarter	**-$1.9**
Lower-than-expected notification experience over the quarter given 50% weight and assumed to be partially driven by notification delays	**+$0.9**
Severity 3+ frequency develops in line with AY2017	**+$2.2**
Severity 3+ frequency develops in line with AY2019	**-$2.0**
Average claim size (ACS) scenarios	
ACS across all severities emerges in line with to the finalisation experience over the last 12 months	**+$2.8**
ACS across all severities emerges in line with the finalisation experience over the last 4 years	**-$1.8**
Severity 1Y ACS emerges in line with the finalisation experience over the last 6 quarters only	**+$1.7**
Severity 1Y ACS emerges in line with the finalisation experience over the last 2-3 years	**-$1.7**
Seasonality adjustments removed from AWE index	**-$0.6**

5.2.1 Impacts of traffic volumes on claim frequency

When selecting our baseline core claim frequency assumption, we have adjusted the claim frequency for the Mar-22 accident quarter in response to a significant decrease in traffic volumes caused by the Eastern

Australian floods, along with schools starting two weeks late. This is because the likelihood of a similar flood event in the pricing underwriting quarter is very low. Had we not made any adjustment to allow for this decrease in traffic volumes, the baseline frequency estimate would decrease by 1.3% leading to a reduction in RP of $1.9.

Traffic volumes over the Jun-22 quarter continue to remain ~5% lower than 2019 adjusted for changes in registration numbers. If traffic volumes continue to remain low in the future, potentially due to an increased rate of working from home and changes in road utilisation patterns, we would expect baseline core claim frequency to reduce by 5% which would lead to a decrease in RP of $9.2.

5.2.2 Impacts of floods and absenteeism on notification experience

At the previous review, only partial weight was given to the lower notification experience observed at that review due to the possible impact of the Eastern Australian floods and high absenteeism. However, the lower than forecast experience has continued, and at this review there does not appear to be a compelling reason to give less than full weight to the continuing lower than forecast experience. If instead we gave only 50% weight to the lower notification experience over the quarter, there would be a $0.9 increase in risk premium.

5.2.3 Severity profile for higher severities emerges differently than allowed for

There is significant uncertainty around the frequency of high severity (3+) claims which has historically been very volatile. Disruptions to the notification pattern over the 2020 notification period added additional uncertainty to the frequency of high severity claims. If the frequency for severity 3+ claims emerges similarly to accident year 2017, then the risk premium would *increase* by $2.2. If the frequency for severity 3+ claims emerges similarly to accident year 2019 then our risk premium estimate will *decrease* by $2.0.

5.2.4 The core average claim size emerges differently than allowed for

Core average claim size experience has historically been very volatile. To provide accurate claim size estimates in the face of this volatility, we typically base our core claim size assumptions on averaging periods of two years and greater. This means we have not fully responded to the higher-than-forecast experience that has emerged over the last year. If future average claim sizes emerge at levels similar to experience over the last 12 months, then our risk premium estimate will be *too low* by $2.8. However, if future average claim size emerges at levels similar to experience over the last 4 years, then our risk premium estimate will be *too high* by $1.8.

Severity 1Y has had particularly poor average claim size experience over the last 6 finalisation quarters. For this review we have taken a 6-quarter average of finalisation experience for low to mid operational times to give more weight to the recent experience. If we were to adopt a 6-quarter average across all operational times and give full weight to the recent experience, then the risk premium estimate would *increase* by $1.7. Alternatively, if we apply the same 2-3 year average as was used in the previous quarter's model, then the risk premium estimate would *decrease* by $1.7.

We estimate claims cost inflation using the seasonally adjusted QLD AWE index released by the ABS on a semi-annual basis. Over the last 5 releases, the seasonality adjustment process used by the ABS has been exacerbating seasonality rather than smoothing it. And as such, we now find that our estimates of AWE inflation would be less volatile if we use the non-seasonality adjusted index. Had we used the non-seasonally adjusted AWE series to inflate past payments to current values, the AWE inflation over the year would reduce from 2.06% to 1.7% leading to a risk premium *decrease* of $0.6. If the seasonality adjustments used by the ABS continue to add to volatility, then we may move to using the non-seasonality adjusted series at future reviews.

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.

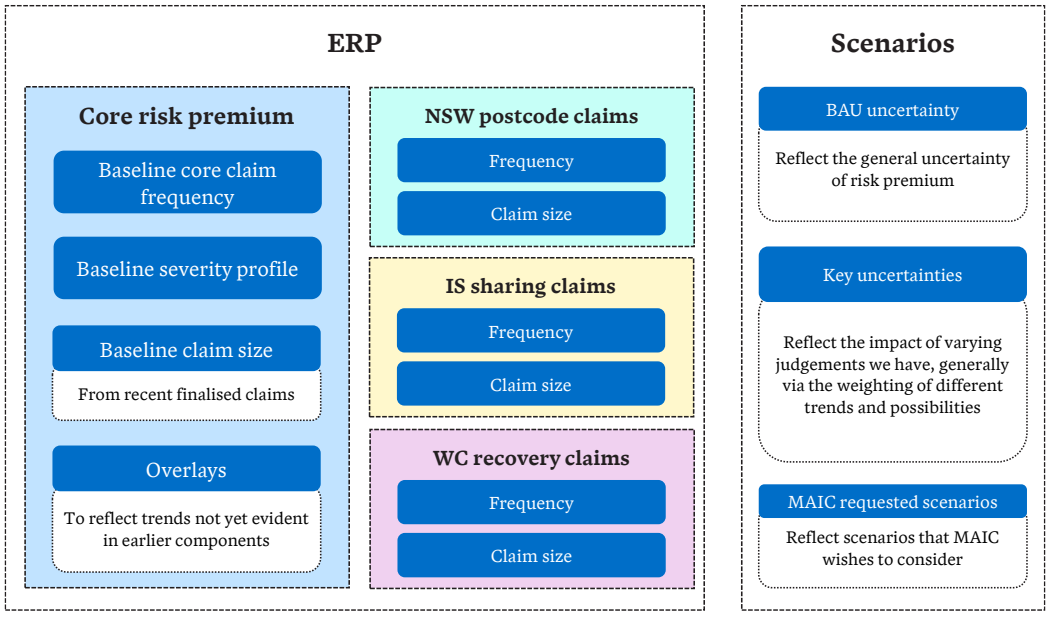
Our Estimated Risk Premium (ERP) for a given future underwriting quarter is comprised of our **baseline risk premium estimate** and **overlays**. The ERP reflects **risk premium** implied by **the most recent past accident periods**, adjusted for the impact of changes which meet the following criteria:

- 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.
Operational time	The rank order of claims finalised from an accident quarter. For example, the first claims finalised have operational times near 0% and the last claims finalised have operational times near 100%.
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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