Queensland CTP Market Briefing

Review of the risk premium for the 2023Q3 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.

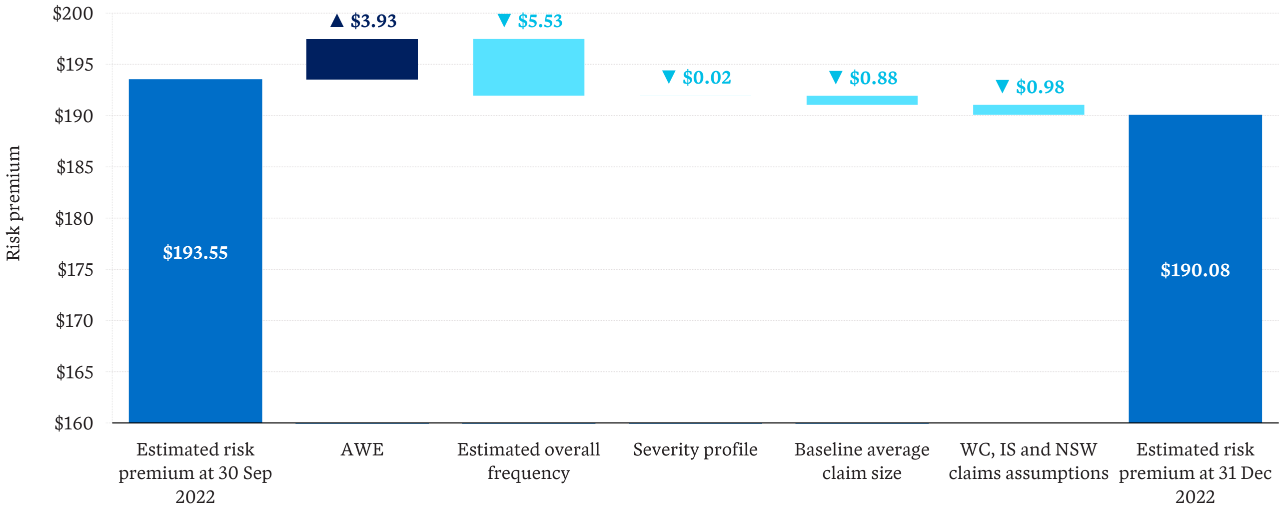
1.1 Risk premium and change since last review

Taylor Fry's **estimated** risk premium is **$190.08** which is **$3.47 lower** than our estimate made at the previous review. The estimate is in Dec-22 dollars before the application of inflation and discounting. The main contributors to the reduction in estimated risk premium are:

- A decrease in our **core claim frequency** assumption driven by lower-than-expected experience over the quarter
- A decrease in baseline **average claim size** driven by lower-than-expected experience over the quarter in severity 1Y and severity 3 claims
- A decrease in **non-core** risk premium driven by lower frequency assumptions for workers compensation and NSW postcode claims in response to favourable experience
- Partially offset by 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.

Figure 1 shows the sizes of the main changes.

Figure 1– Change in estimated risk premium since the Sep-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 recent accident periods, and our estimate of core claim size. Table 1 shows the components of our risk premium estimate.

Table 1 - Estimated risk premium at 31 December 2022

	Risk premium component		
	Frequency	**Average claim size ($)**	**Risk premium ($)**
Core claims	0.1475%	122,197	180.24
NSW accident postcode claims	0.0054%	143,374	7.71
Interstate sharing	0.0015%	71,920	1.08
Workers' compensation recovery	0.0129%	8,118	1.05
Estimated risk premium at 31 December 2022	**0.1670%**	**113,820**	**190.08**

1.1.2 Risk premium uncertainty

Our risk premium estimate for the 2023Q3 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. The frequency assumption and severity profile were previously revised in Sep-22. This section outlines the assumptions for core claim frequency.

2.1 Core claim frequency

Notifications over the quarter were 6% lower than forecast at Sep-22. The lower than forecast experience was driven by accident quarters between Sep-21 and Sep-22. The early experience for the Dec-22 accident quarter is mostly in-line with expectation, noting this accident period is underdeveloped.

The adjustments for low traffic volumes over COVID-related lockdown periods and the flood-affected Mar-22 quarter remain unchanged at this review.

We have continued to give full weight to the lower frequency experience to date when setting our frequency estimate at this review.

Figure 2 - Estimated annualised core claim frequency as at 31 December 2022

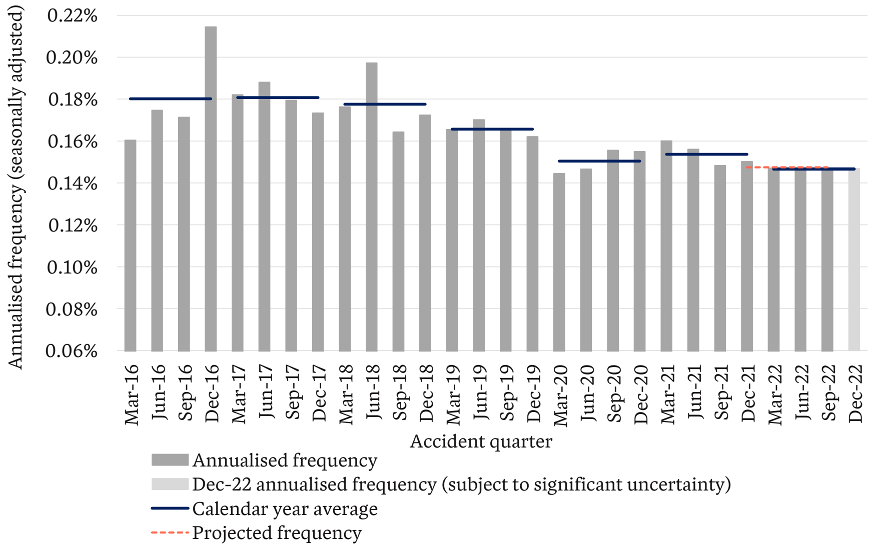

Figure 2 shows the projected ultimate annualised baseline frequency for each historical accident quarter after allowing for seasonality and removing the estimated impact of COVID-19 and the Mar-22 Eastern Australian floods.

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 increased in 2021 and decreased in 2022 – this is concurrent with a reduction in traffic volumes over 2022.

At this annual review, for future accident quarters we advise a frequency assumption of **0.1475%** which is based on the average over accident quarters Dec21 to Sep-22. We lengthened the averaging period from 4 to 6 quarters in 2021 to smooth through the volatility due to COVID-related disruptions. At this annual review, we have reverted to a 4-quarter averaging period when estimating the core claim frequency, placing more weight on recent experience. This advised frequency represents a **3% reduction** from 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 around 70% of core claim notifications and 50% of the core risk premium. While there are relatively few high severity claims, they typically have higher average claim sizes.

Table 2 – Baseline severity profile

Severity	Previous review (Sep-22)	Current review (Dec-22)	Movement
1N	7.5%	7.5%	-0.04%
1Y	69.1%	68.9%	-0.20%
2	12.3%	12.5%	0.17%
3	5.8%	5.8%	-0.03%
4	0.9%	0.9%	-0.04%
5	0.4%	0.4%	0.01%
6	1.0%	1.0%	0.03%
9NA	3.0%	3.1%	0.09%
Total	100%	100%	

At this annual review, experience was overall neutral across the severity groups, resulting in a small net **$0.02 reduction** to risk premium.

A reduction in severity 1Y proportion is largely offset by an increase in severity 2 proportion, with minor movements across other severity groups.

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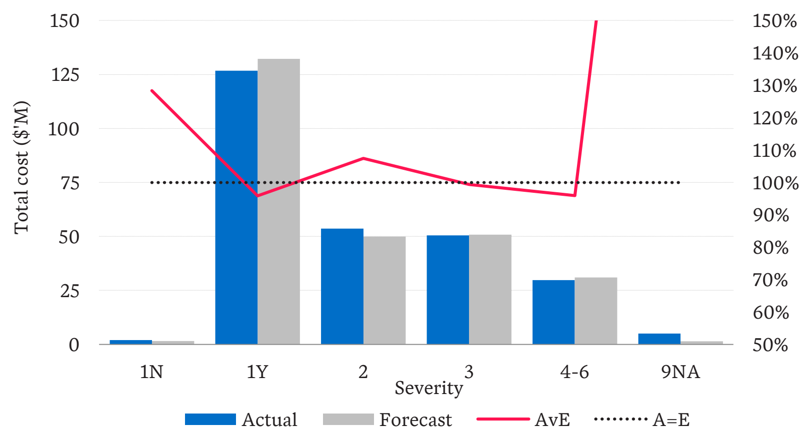
Average claim size

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 decreased slightly since the previous review driven by lower-than-expected experience in severity 1Y and severity 3 claims.

Figure 3 – Finalisation experience by severity in Dec-22 against the Sep-22 model



Actual cost for the Dec-22 quarter across all severities was in line with projections at Sep-22.

Severity 1Y claims finalised for 4% lower than forecast.

Severity 2 claims finalised for 7% higher than forecast.

Severity 3 claims finalised for 1% lower than forecast.

Severity 4-6 claims finalised for 4% lower than forecast.

Severity 9 experience is distorted by 3 large claims, 2 of which have transitioned to other severities since Dec-22.

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 Sep-22	9	93	187	367	689	969	319	13	**123**
Baseline at Dec-22	11	92	188	360	694	950	323	14	**122**
Change in baseline	+18.4%	-0.8%	+0.6%	-1.8%	+0.7%	-2.0%	+1.2%	+5.3%	**-0.5%**

Figure 4 – Average claim size by finalisation quarter

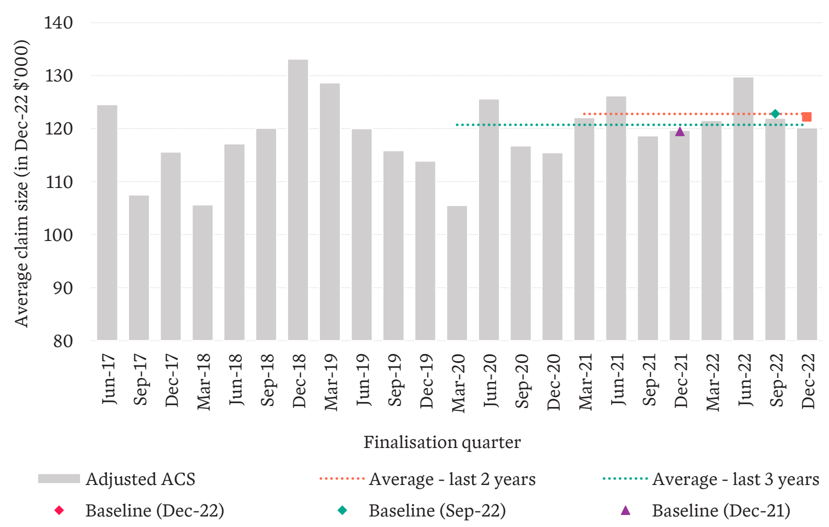
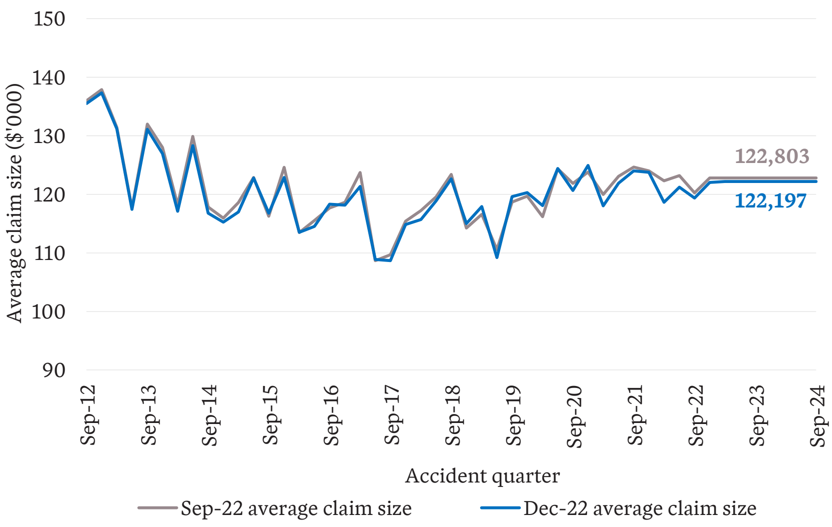


Figure 4 shows historical finalised claim sizes by finalisation quarter, standardised for severity profile and changes in the rate of finalisations across accident periods.

The slight decrease in the core average claim size is mainly driven by lower-than-expected average claim size experience in severities 1Y and 3.

Our current average claim size assumption is between the average experience of the last 2 and 3 finalisation years.

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



Our projected baseline average claim size has decreased from the previous review. The current estimate is $122,197.

This slight decrease is driven by lower-than-expected average claim size experience in severities 1Y and 3, with changes to the overall severity profile having only a very small impact (<0.1% ACS impact due to severity profile).

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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 2023Q3 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 +/-$14.

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	**+$14 / -$14**
Frequency scenarios	
Traffic volumes continue to stay down at 5% lower than 2019	**-$2.4**
6 quarter averaging period is adopted for core claim frequency	**+$1.4**
Severity 3+ frequency develops in line with AY2018	**+$1.8**
Severity 3+ frequency develops in line with AY2022	**-$2.4**
Average claim size (ACS) scenarios	
ACS across all severities emerges in line with the finalisation experience over the last 1 year	**+$2.0**
ACS across all severities emerges in line with the finalisation experience over the last 3 years	**-$2.2**
Severity 1Y ACS emerges in line with the finalisation experience over the last 2 years	**+$0.7**
Severity 1Y ACS emerges in line with the finalisation experience over the last 3 years	**-$1.9**

5.2.1 Impacts of future traffic volumes on claim frequency

Traffic volumes over 2022 were ~5.8% lower than 2019, adjusted for the increase in vehicle registrations. Our baseline frequency assumption is based on the average frequency experience over Dec-21 to Sep-22. Based on STREAMS data, the average traffic volumes over this period are ~4.3% lower than 2019 after removing the impact of the Eastern Australian floods from the Mar-22 experience.

Traffic volumes could continue to remain low in the future, potentially due to an increased rate of working from home and changes in road utilisation patterns. Assuming future traffic volume levels continue to stay 5% lower than 2019, a combination of lower overall frequency and a weakening of the overall severity profile would lead to a decrease in risk premium of $2.4.

Assuming our frequency assumption is based on a longer 6-quarter averaging period between the Jun-21 and Sep-22 quarters would lead to an increase in risk premium of $1.4.

The traffic volume related scenarios are illustrative of the uncertainty in frequency experience only.

5.2.2 Uncertainty in the frequency of high severity claims

The frequency for high severity claims (3, 4, 5 and 6) has shown a downward trend from accident years 2016 to 2022. Our selected frequency is based on the projected ultimate frequency for the three to four most recent accident years. This results in a frequency between that of AY2018 and AY2022.

If the frequency for 2023Q3 is assumed to emerge similarly to that projected for AY2018 then the risk premium estimate would increase by $1.8.

If the frequency for 2023Q3 is assumed to emerge similarly to that projected for AY2022 then the risk premium estimate would decrease by $2.4.

5.2.3 Uncertainty in the core average claim size

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. If future average claim sizes emerge at levels similar to experience over the last year, then our risk premium estimate will increase by $2.0. However, if future average claim size emerges at levels similar to experience over the last 3 years, then our risk premium estimate would decrease by $2.2.

Over the Mar-21 to Jun-22 finalisation quarters, there has been strong development in sev 1Y finalised average claim size. Our baseline projection at this review is based on a 2-year average for lower operational times and a 3-year average for higher operational time claims. If we were to give less weight to the recent experience – by selecting a 3-year average throughout – then the risk premium would decrease by $1.9. If we were to give more weight to the recent experience – by selecting a 2-year average throughout – then the risk premium would increase by $0.7.

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.

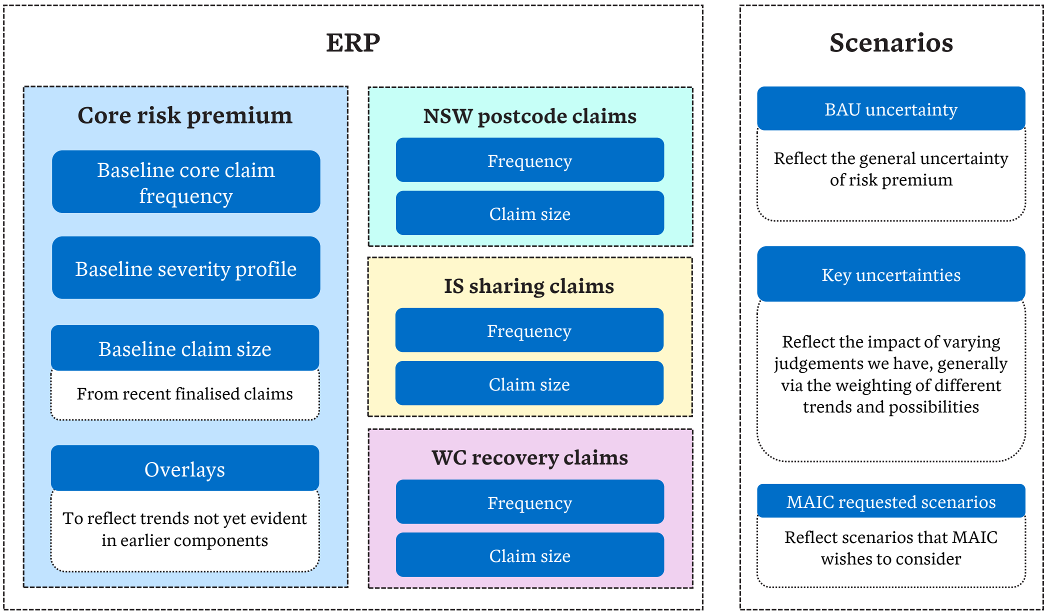
Our Estimated Risk Premium (ERP) for a given future underwriting quarter is comprised of our **baseline risk premium estimate** and **overlays**. The ERP reflects **risk premium** implied by **the most recent past accident periods**, adjusted for the impact of changes which meet the following criteria:

- 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.