TAYLOR FRY

Queensland CTP Market Briefing

Review of the risk premium for the 2021Q3 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 5 before the remainder of this briefing so as to understand Taylor Fry's role and the structure of our advice.

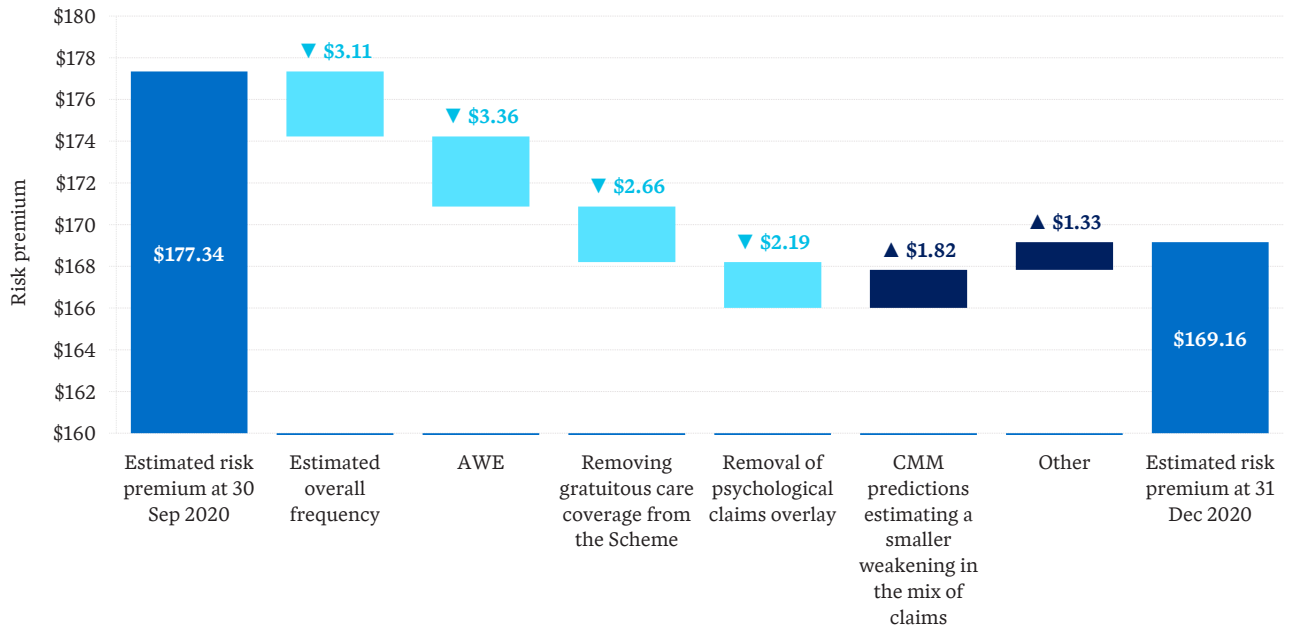
Risk premium and change since last review

Taylor Fry's **estimated** risk premium is **$169.16** which is **$8.18 lower** than our estimate made at the previous review. The estimate is in Dec-20 dollars before the application of inflation and discounting. We have assumed that the impacts of COVID on claim frequency over 2020 will not apply in subsequent years. The main contributors to the decrease are:

- A reduction in **claim frequency**. Since the introduction in December 2019 of legislation intended to limit claim farming in the Scheme, there has been a significant reduction in claim frequency. Over 2020 it has been difficult to separate the impact of this legislation from that of COVID-related changes and so we have been gradually recognising the impact of the legislation as our confidence in our estimates of underlying frequency has increased.
- A reduction in **Average Weekly Earnings** (AWE) for QLD. Since benefit levels have historically been closely tied to earnings, we base our estimated risk premium on current and projected Average Weekly Earnings. The latest ABS release of AWE showed a significant decrease in AWE over the last six months.
- Removing the allowance for **gratuitous care**. Since the introduction of the National Insurance Injury Scheme Queensland (NIISQ) there has been some doubt as to whether the CTP Scheme provides gratuitous care. Following the Walters v Roche decision, we have removed the allowance for gratuitous care costs from our estimated risk premium.
- A removal of the allowance for the increased level of claims with a **coded psychological injury**. After making an $8 allowance a year ago to take account of an increased level of psychological claims, we have progressively reduced the allowance at successive quarters as evidence has emerged that the finalised sizes of the extra psychological claims were lower than the sizes for similar claims in previous accident years.
- A lessening of the estimated impact of a **weakening in the mix of claims**, as indicated by our claims mix model (CMM).

Figure 1 shows the sizes of the most important changes.

Figure 1– Change in estimated risk premium since the Sep-20 review



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 several 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 31 December 2020

	Risk premium component		
	Frequency	Average claim size ($)	Risk premium ($)
Core claims			
Baseline	0.1510%	103,785	156.71
Overlay: Post claim-farming reform frequency		3,417	5.16
Overlay: claims mix trend		-2,223	-3.36
Overlay: Psychological claims		-	0.00
Estimated core claims	0.1510%	104,979	158.52
NSW accident postcode claims	0.0060%	128,288	7.75
Interstate sharing	0.0026%	65,183	1.69
Workers' compensation recovery	0.0123%	9,702	1.19
Estimated risk premium at 31 December 2020	0.1720%	98,349	169.16

Commentary

Our estimated risk premium for this review is especially uncertain. Claim frequency has reduced sharply from December 2019, with the introduction of new claim processes aimed at limiting claims farming and again once the impact of COVID was felt on economic activity, including traffic flow. Frequency for 2020 was approximately 20% less than for 2019. It has been difficult to determine how much of the frequency drop is due to the claims farming reforms, and so might be sustained, versus the impact of COVID.

Our estimates of claims frequency for accidents occurring after 1 December 2019 but before 30 September 2020, along with traffic volumes reported to us by the Department of Transport and Main Roads suggest that the contributions of both sources of the reduction are approximately equal. There are not yet sufficient claim notifications to be confident of the frequency for the December 2020 accident quarter but notifications so far are consistent with this view. The claim frequency underlying our estimated risk premium is based on our estimate of the underlying claim frequency for 2020, with the impact of COVID removed. We have investigated the use of other mobility datasets to estimate the impact of COVID and the results are very similar.

There are a number of reasons that the claim frequency for the 2021Q3 underwriting quarter may be different from our assumption but, in our view, other than removing the impact of COVID these risks are not sufficient to change our long-standing practice of basing our ERP on the most recently observable frequency, averaged over a suitable period. In particular, basing the ERP on a frequency based on a short averaging period – the September 2020 accident quarter say, increases the uncertainty by both reducing the volume of data and by increasing the likelihood that the well-established but volatile seasonality patterns in notifications distort the estimate.

Such a significant frequency change also brings uncertainty in the mix of claims because the frequency reduction may not be experienced proportionately across all claim segments. In particular, we expect the claim farming reforms to result in smaller claims not being made. In order to estimate the change in mix, we have analysed the change in mix experienced as the frequency increased from 2014 to 2016 and assumed that this mix change is reversed. As shown in Table 5, other reasonable scenarios give similar results.

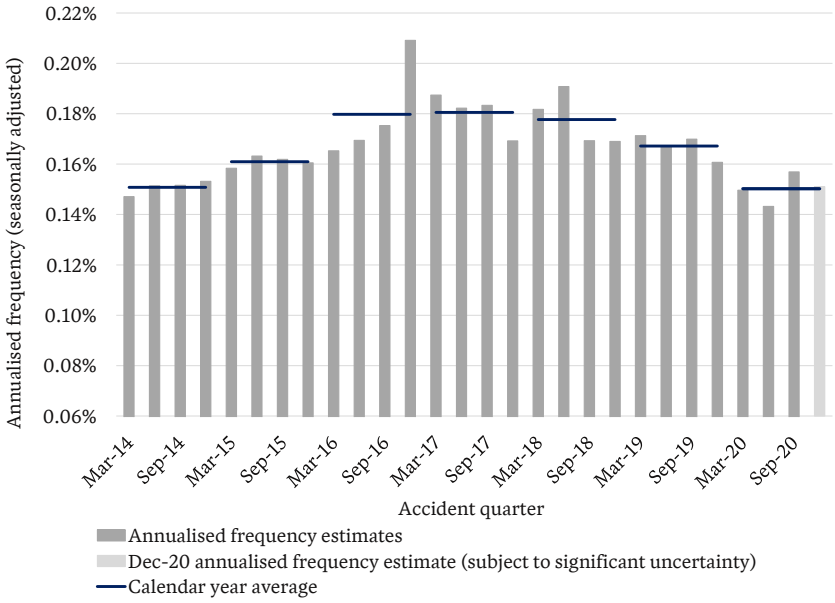
There are several other uncertainties in the claim size assumption underlying our estimated risk premium which are explored in Table 5. There is an increasing number of claims coded with a psychological injury. After introducing an allowance last year, based on the levels of insurer case estimates for these claims, the evidence that emerged over the year shows that the extra psychological claims are settling at lower levels than suggested by those case estimates, hence, we have removed the allowance at this review. The claims mix model suggests a weakening in the mix of claims between the accident periods for which we can reliably estimate claim size using our finalisation models to accident periods just before the claims farming reforms and we have incorporated an adjustment accordingly. Finally, finalised claim size experience for legally represented severity 1 (sev 1Y) claims has been low for a number of quarters. This has yet to be reflected in full in our finalisation models but if it is sustained our estimated risk premium will reduce.

2

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. 2020 has been an unusual year and notifications for the 2020 accident year have been significantly lower than recent accident years, due to COVID related shutdowns and the introduction of claim-farming legislation. We have been adapting to the experience as it has emerged and at this annual review we have recalibrated our projection models so that 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. This section outlines the assumptions for the estimated core claim frequency.

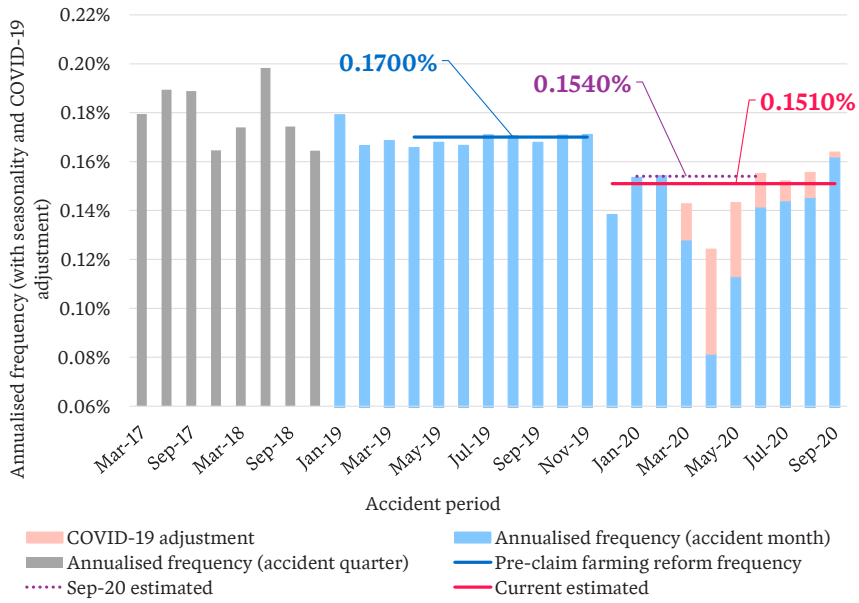
Figure 2 - Estimated annualised core claim frequency as at 31 December 2020



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 delay in notification and the reduced traffic volumes after Mar-20 due to COVID19 related shutdowns. We have allowed for both factors as best as we can.

Figure 3 – Estimated core claim frequency as at 31 December 2020



Our current estimate of frequency incorporates experience from Dec-19 to Sep-20 accident periods excluding the Apr-20 accident month while incorporating an adjustment to remove the impact of COVID related shutdowns. This leads to a 2% reduction from the previous estimated frequency which only gave 75% weight to the post-claim farming reform experience.

3

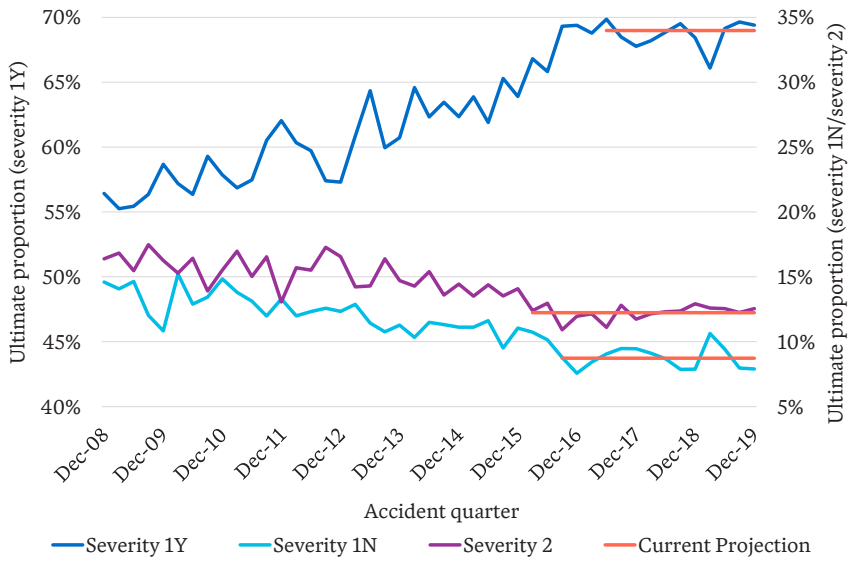
Severity Profile

3.1 Baseline 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 annual review, we have fully reviewed and updated the severity profile. The significant reduction in frequency and change in notification pattern in the 2020 accident year has led to additional difficulties in estimating the severity profile for the most recent accident year. Our current severity profile assumption follows a two-stage approach. First, we estimate the baseline (i.e. pre-claim farming reform) severity profile using experience up to the Dec-19 accident month. We then make an allowance for impact of the post-claim farming reform frequency reduction on the severity profile through our severity profile overlay which is discussed in the next section.

This section outlines the assumptions for the baseline severity profile.

Figure 4 – Historical frequency of less severe claims as a proportion of overall frequency



Prior to the claim farming reforms, the core claim severity profile was stable for a few years.

Severities 1N, 1Y and 2 – the less severe claims – have been a stable proportion of the total core claim frequency since 2017 while Severities 3 to 6 – the more severe claims – have had stable frequencies since 2013.

We have calibrated our baseline severity profile assumptions using the pre-claim farming reform frequency of 0.1700%.

Table 2 – Baseline severity profile

Severity	Previous review (Sep-20)	Current review (Dec-20)	Movement
1N	8.5%	8.7%	0.2%
1Y	68.5%	69.0%	0.5%
2	12.8%	12.2%	-0.6%
3	5.3%	5.5%	0.1%
4	0.8%	0.9%	0.0%
5	0.4%	0.4%	0.0%
6	0.9%	0.9%	0.0%
9NA	2.7%	2.4%	-0.3%
Total	100%	100%	

There has been a small strengthening in the baseline severity profile from the previous review. The main changes are:

- A reduction in severity 2 proportion
- A modelling change in the projection method for severity 3 claims from ultimate proportion to ultimate frequency
- A decrease in severity 9 proportion
- A small increase in severity 1Y proportion.

The risk premium impact of the change in severity profile is $0.31.

3.2 Post-claim farming reform severity profile overlay

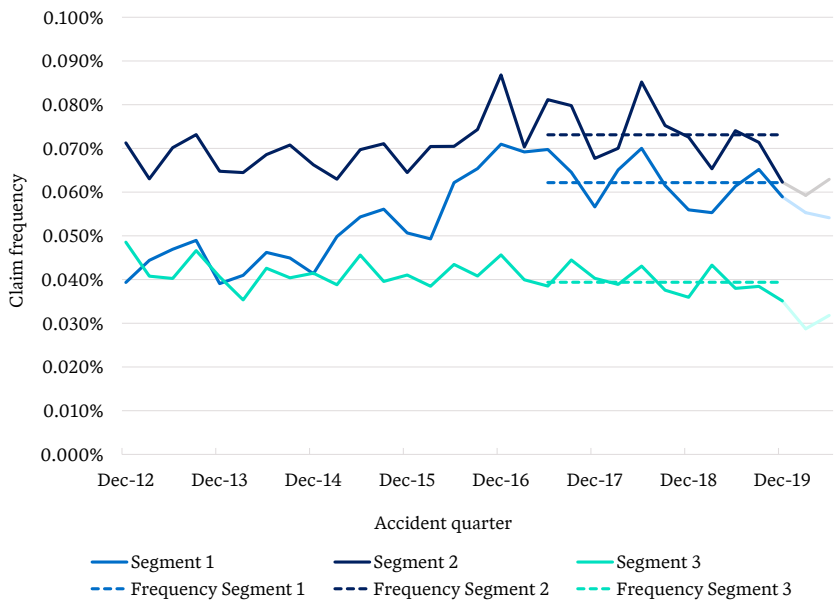
The significant reduction in frequency and change in notification pattern in the 2020 accident year has led to additional difficulties in estimating the severity profile for this period. The severity profile overlay is an allowance for the impact of this frequency reduction on the baseline severity profile.

This section outlines the assumptions for our post-claim farming reform severity profile overlay.

The severity profile overlay uses a broader segmentation of claims compared to the typical severity-based segmentation. This segmentation is the same one used when viewing the results of our claims mix model. It is based on claim characteristics that are known early in the life of a claim and are less likely to develop compared to claim severity. The three resulting segments are introduced below:

- Segment 1: Small non-serious claims are defined as claims which are legally represented, don't involve an overnight stay in hospital, don't involve an ambulance and where the accident involved vehicles travelling in the same direction.
- Segment 2: Other non-serious claims are defined as claims which are legally represented, don't involve an overnight stay in hospital and are not in Segment 1.
- Segment 3: Other claims are defined as claims which are not in Segments 1 or 2.

Figure 5 – Claim frequency by segment



The increasing trend in frequency between 2014 and 2017 was almost entirely driven by an increase in non-serious same direction claims (Segment 1).

We have assumed the post claim-farming reform frequency reduction is from the same segment. Since segment 1 has the smallest claim size across the three segments, a reduction in its frequency leads to a strengthening in the overall severity profile.

This strengthening leads to a 3% increase in average claim size, equivalent to a $5 increase in risk premium.

4

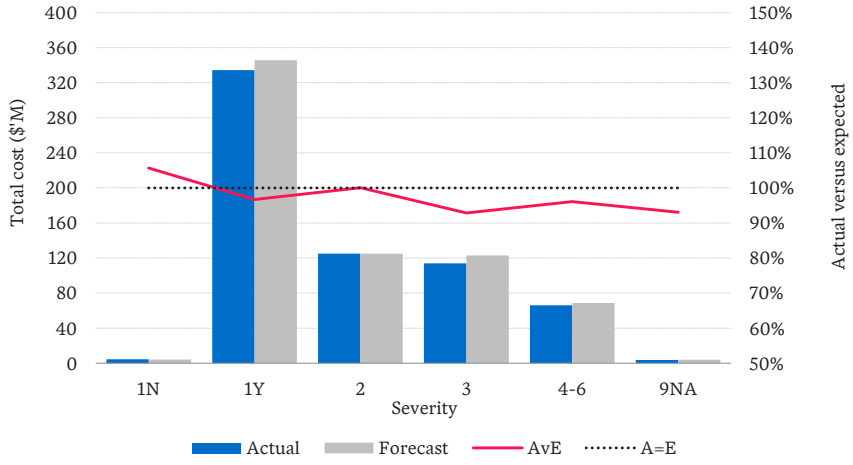
Average claim size

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.

Our estimated average claim size now assumes that gratuitous care costs for severe claims are no longer covered by the Scheme (Walters v Roche decision). After adjusting for this change, the baseline core average claim size has remained broadly in line with the previous review.

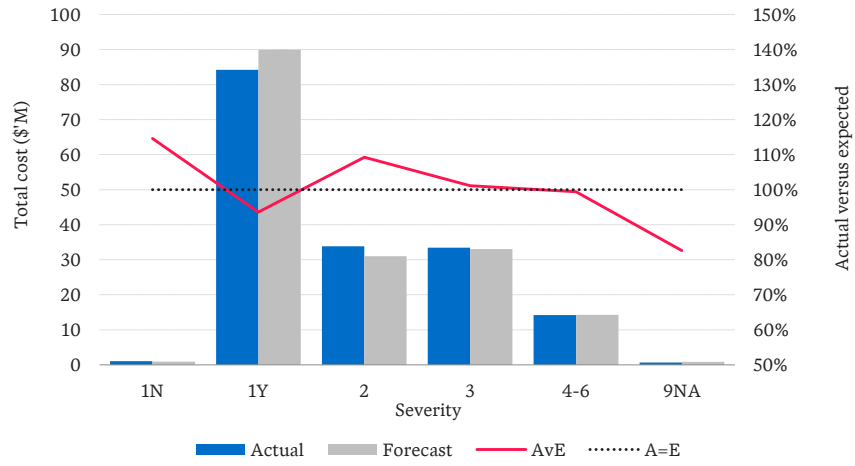
Figure 6 – Finalisation experience by severity in 2020 against Dec-19 model



Overall, the actual cost of claims finalised in 2020 was 3% lower than expected at Dec-19.

The average finalised claim size in severity 1Y was 3% lower than forecast. Actual cost was also lower than expected in severities 3, 4-6 and 9NA.

Figure 7 – Finalisation experience by severity in Dec-20 against Sep-20 model



Actual cost for the Dec-20 quarter across all severities was 2% lower than expected by our Sep-20 model.

Severity 1Y claims have finalised for 6% lower than forecast. The average finalised size in severities 4-6 was 1% lower than expected.

Table 3 – Change in baseline average claim size by severity ($'000, adjusted for inflation and gratuitous care costs)

	Severity								All
	1N	1Y	2	3	4	5	6	9NA	
Baseline at Sep-20	7	78	157	328	605	942	309	13	**104**
Baseline at Dec-20	7	77	157	328	602	946	313	13	**104**
Change	+1.6%	-0.5%	+0.1%	+0.1%	-0.5%	+0.4%	+1.4%	-0.3%	**-0.0%**

Figure 8 – Average claim size by finalisation quarter

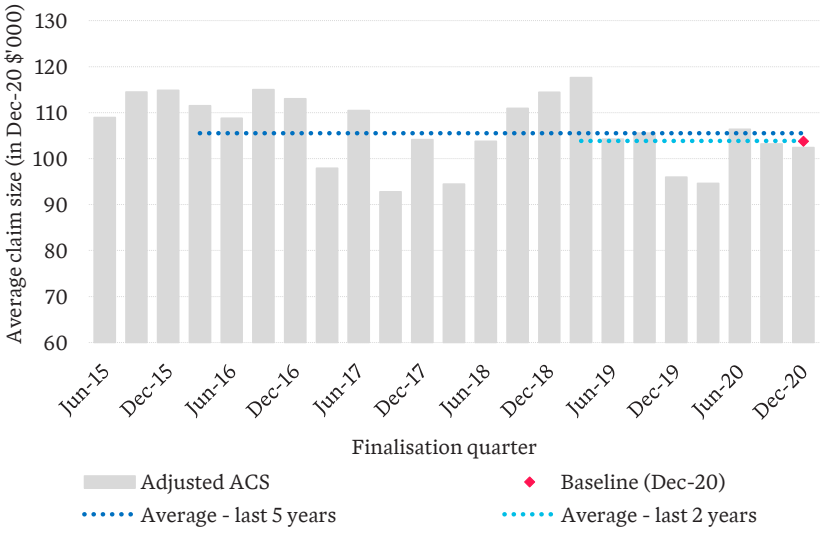
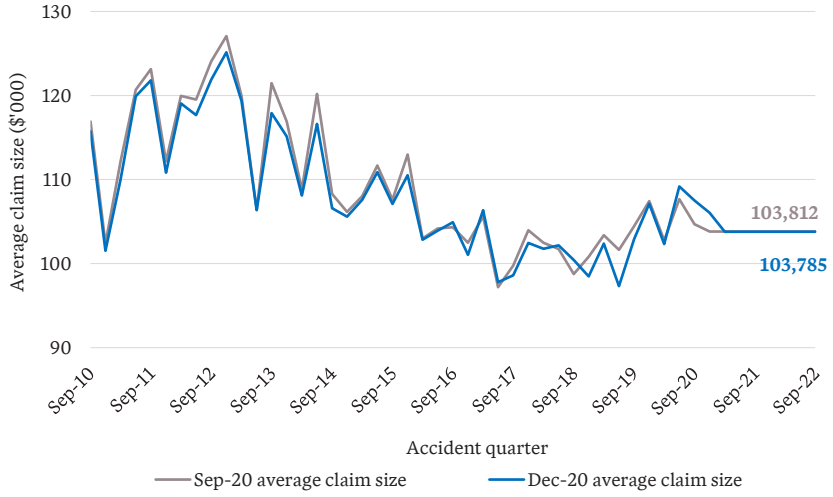


Figure 5 shows historical finalized claim sizes by finalisation quarter standardised for severity profile and stage of claim development.

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

Figure 9 –Projected average claim size by accident quarter (all severities) ($'000, adjusted for inflation and gratuitous care costs)



The projected baseline average claim size has remained broadly unchanged from last quarter. The current estimate is $103,785.

4.1.1 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. However, we have removed the psychological injury overlay from our estimated premium at this review since experience has continued to suggest that the increase in the proportion of claims with a psychological injury coding post 2018 is mainly driven by changes in insurer coding practices.

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 claims 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 allow for this trend to arrive at a 2% reduction in our average claim size for the claims mix trend overlay. Although case estimates also provide some support for this reduction, the large frequency decrease increases the uncertainty around the claims mix model overlay. We will continue to monitor the claims mix model overlay and respond if warranted.

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 the last quarter 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 AY2016/2017. 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.

The current incurred costs for accident years 2018 and 2017 psychological claims are very close. However, the finalised psychological and non-psychological average sizes for accident year 2018 have been developing significantly below that of 2017 over the past year. This suggests that a large proportion of the apparent increase in costs caused by the increasing proportion of psychological claims is driven by insurer case estimates which are not currently supported by the finalised claim costs. It further suggests that that some claims formerly coded as non-psychological are being coded as psychological claims with no impact on overall claims cost.

In 2020, MAIC commissioned an investigation into the increase in the frequency of claims with a psychiatric injury by Jensen McConaghy. The investigation concluded that the increasing trend in the prevalence of psych claims is "not the result of an intentional strategy or trend on the part of the legal profession in Queensland" and that claim farming reforms and progressive coding injuries were potential drivers of the trend. Views of the insurers were mixed, with no consensus that the issue was one of concern in terms of increasing claim costs.

At this annual review, we have removed the psychological injury overlay. We will continue to monitor experience as it emerges and update our advice if required.

Estimated claim size

The estimated average claim size is $104,979 which incorporates the claims mix model trend overlay and post claim-farming reform severity profile overlay as discussed in the previous section. This is also summarised in Table 4.

Table 4 Average claim size of core claims

	Average claim size ($)
Baseline at Dec-20	103,785
Overlay: Post claim-farming reform severity profile	3,417
Overlay: Claims mix model trend	-2,223
Overlay: Psychological claims	0
Estimated at Dec-20	**104,979**

5

Structure of Risk Premium Advice and Scenarios

5.1 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.

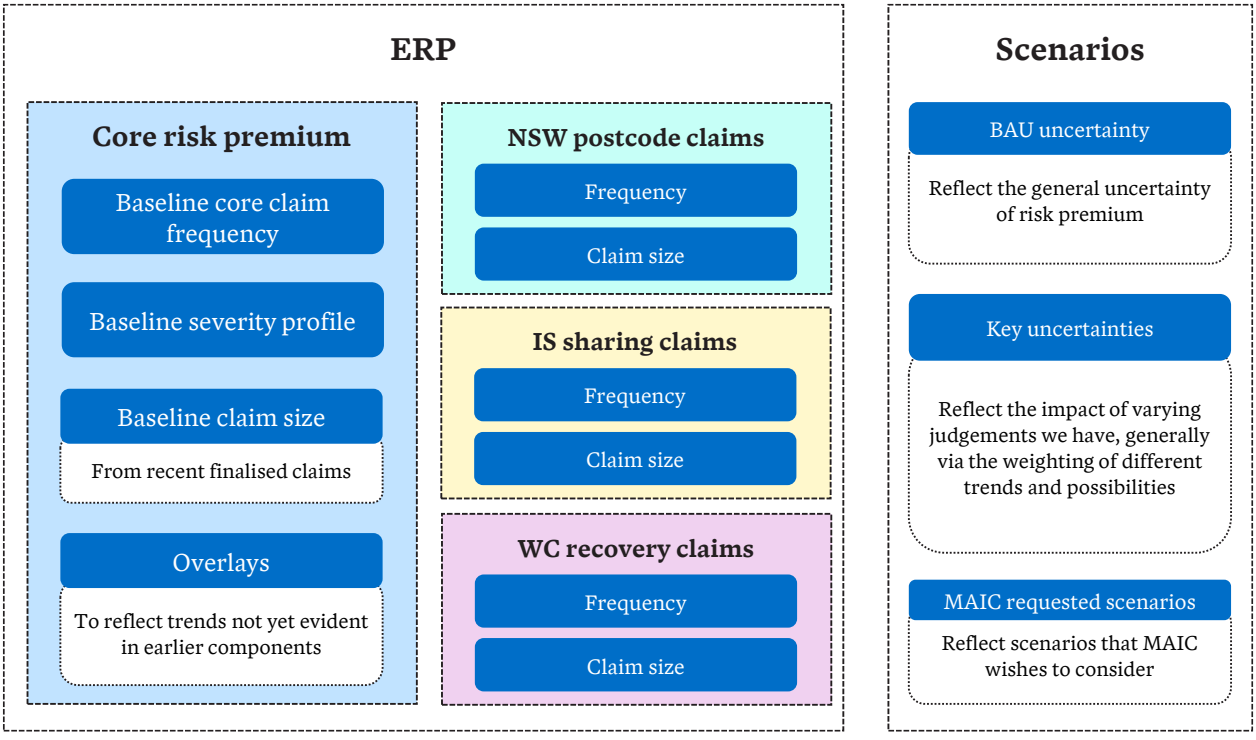
The **prescribed floor and ceiling premiums** for each underwriting quarter are calculated and set by **MAIC**, based on several inputs, including estimates of the average **risk premium** for the scheme**.** Taylor Fry estimates the components of the risk premium for the Queensland CTP scheme for each 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 we are reasonably confident will occur 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 likely scenarios which reflect possible changes to our ERP relating to likely 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.

5.2 Risk Premium scenarios

There is considerable uncertainty in the assumptions underlying our risk premium estimate. Our estimated claim frequency is based on post-claim farming reform experience which is limited and subject to development. The true impact of claim farming reforms on severity profile is still unknown but we have allowed for it as best as we can. The large frequency decrease post-claim farming reform also increases the uncertainty around our claims mix model overlay. Therefore, there is a risk that the claim frequency and size for the 2021Q3 underwriting quarter ultimately emerge differently to our current view of frequency and size. We provide risk premium impacts for a range of plausible alternative scenarios.

The definitions of these scenarios are provided in Table 5 below.

Table 5 Scenario definitions

Category	Scenario	Description
BAU variation based on time elapsed between measurement and payment	*+/- 6% change in core frequency*	The impact of recent differences in actual and expected frequency on risk premium. The percentage change is determined by comparing the current estimated frequency to the 12-month average frequency frequencies over the last 18 months, ignoring the impact of legislative change.
	+/- 8% change in core average claim size	The impact of recent differences in actual and expected average claim size on risk premium. The percentage change is determined by comparing the current baseline claim size to the ultimate claim size projected using the projected case estimate (PCE) model over the last 6 accident calendar years.
Key uncertainties, generally via the weighting of different trends and possibilities	*Post-claim farming reform frequency*	This scenario estimates the impact of a future increase to frequency, reversing some of the recent change related to the introduction of claim farming regulations.
	CMM scenario	These scenarios present potential different weightings that are appropriate for the CMM given the recent reductions in frequency.
	SP overlay scenarios	This scenario aims to estimate the impact on the RP, if the severity profile emerges differently to the severity profile used for our estimated RP. We have considered three potential scenarios.
	Severity 1Y claim size	Over the past 5 quarters, severity 1Y claim size has been lower than expected. This scenario estimates the impact of the severity 1Y claim size developing in line with this recent experience.
Scenarios requested by MAIC	*Post-claim farming reform frequency with no COVID adjustment*	This scenario aims to estimate the impact of COVID related shutdowns on recent notification experience.

Table 6 Change in estimated risk premium for plausible alternative scenarios

Risk premium scenarios	Impact on estimated risk premium
Business as usual variation	
Core claim frequency +/- 6% (excluding severities 4-6)	+$10 / -$10
Core average claim size +/- 8%	+$13 / -$13
Key uncertainties	
Apparent frequency reduction due to claim farming reforms is halved	+$7
CMM adjustment not realised/Apparent size reduction in segment 2 fully realised	+$3 / -$2
Post-claim farming reform frequency reduction allocated to **All Sevs/Sevs 0-2 & 9/Sev 1Y**	-$5 / -$1.3 / -$0.9
Severity 1Y claim size continues to develop at the same level as recent experience	-$3
Scenarios requested by MAIC	
Post-claim farming reform frequency estimated using no COVID adjustment	-$16

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 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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