Taylor Fry

Queensland CTP Market Briefing

Review of the risk premium for the 2017Q4 underwriting quarter

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Risk premium

Taylor Fry estimates the components of the risk premium for the Queensland CTP scheme for each underwriting quarter and advises the Queensland Motor Accident Insurance Commission (MAIC) on these components.

Baseline risk premium

The risk premium is the expected future cost of claims made to insurers. We consider "core" claims separately from workers' compensation recovery (WC) and interstate sharing (IS) claims. Each component is separated into the frequency of claim per registered vehicle and average claim size.

Table 1 Baseline estimate of risk premium at 31 March 2017

	Frequency	Average claim size ($)	Risk premium ($)
Core claims	0.172%	110,779	190.54
WC claims	0.011%	10,714	1.21
IS claims	0.004%	47,659	2.10
Headline risk premium	**0.188%**	**103,275**	**193.85**

The baseline estimate of the headline risk premium is **$193.85**. This is before the application of inflation and discounting, and before the reduction due to the costs transferred to the National Injury Insurance Scheme Queensland (NIISQ).

Other premium scenarios

We present other risk premium scenarios based on different emerging core claim frequencies and average claim sizes. These are intended to guide MAIC on other plausible outcomes in addition to our baseline estimate. As one moves away from the top left corner of Table 2, assumptions become more speculative.

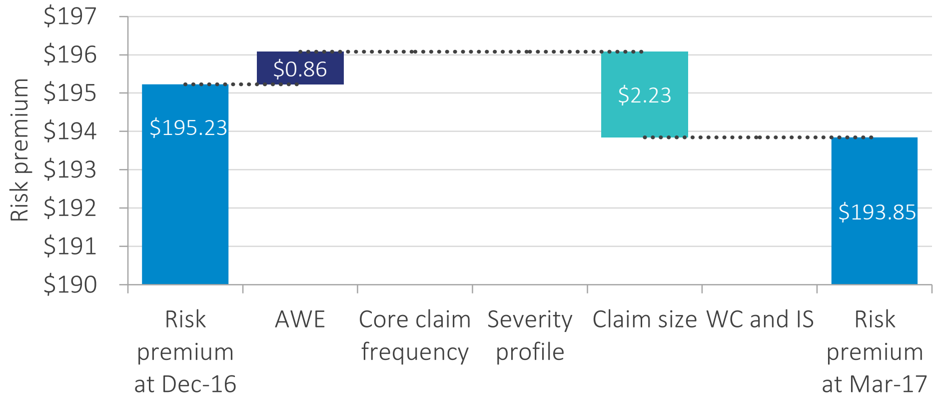
Table 2 Impact of alternative premium component assumptions on CTP premium

Core frequency	Core average claim size: Baseline ($111k)	Average of past year for severity 1Y ($109k)	Emerging costs estimate for 2015/16 ($105k)
Baseline (0.172%)	$0	-$4	-$10
MAIC 2017Q3 (0.176%)	+$4	+$1	-$6
2016 average (0.180%)	+$9	+$5	-$1
2016H2 frequency (0.186%)	+$15	+$11	+$4

Using more responsive frequency estimates increases the premium. Using more recent finalised claims experience or looking at the type of claims emerging decreases the premium. While the highlighted diagonal shows similarly-responsive frequency and size, the risk premium becomes more speculative as one moves to the bottom right.

Change in estimated baseline risk premium since the previous review

Figure 1 Change in risk premium since the Dec-16 review



The risk premium as at 31 March 2017 is **$1.38 lower** than the risk premium as at 31 December 2016.

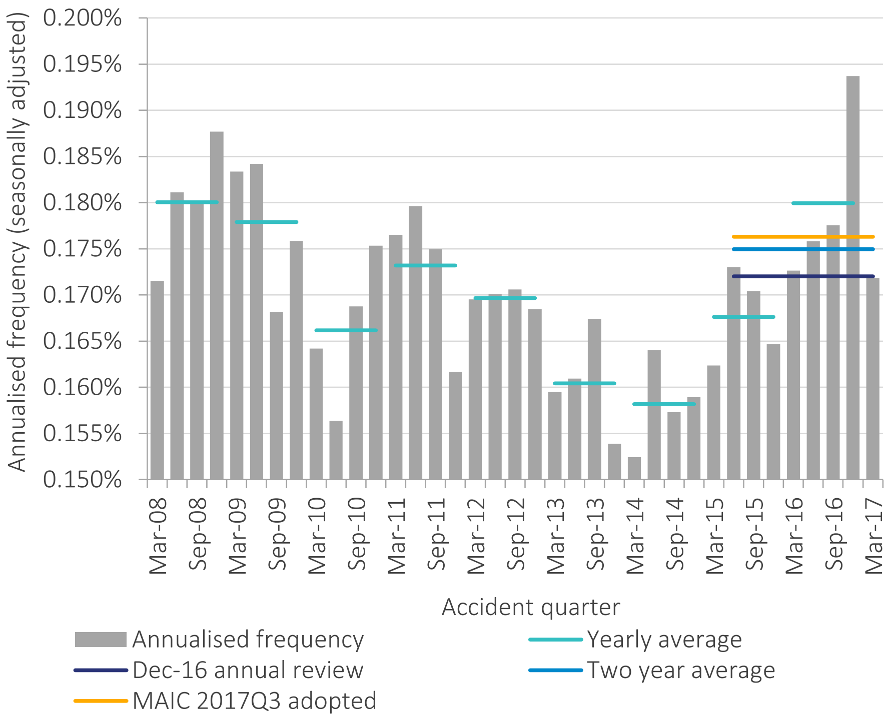
We have left the assumptions of frequency, severity profile, WC and IS claims unchanged from the previous review. The effect of the decrease in average claim size is partly offset by a higher estimate of average weekly earnings (AWE).

Core claim frequency and severity

Typically, Taylor Fry reviews the core claim frequency and severity profile each year, but the experience is monitored quarterly so MAIC can revise the claim frequency if they deem it appropriate. The frequency and severity profile were last reviewed in Dec-16.

Overall core claim frequency

Figure 2 Estimated annualised core claim frequency as at 31 March 2017



At this quarterly review, we have kept the baseline frequency assumption unchanged at 0.172% as set at the Dec-16 annual review. MAIC adopted a core claim frequency of 0.176% at the previous review.

The estimated average frequency over the previous two years increased to 0.175%. This is because:

» The Dec-16 accident quarter continued to deteriorate

» The favourable Mar-15 accident quarter fell out of the two-year averaging period.

We estimate 80% of the eventual claims from Dec-16 quarter to have been notified to date.

Severity profile

The majority of claims are legally represented severity 1 claims (severity 1Y). These contribute 63% of core claim notifications and 45% of the core risk premium. While there are relatively few higher severities claims, these have higher average claim sizes (p.3).

Figure 3 Severity-specific frequency

Severity	Proportion	Frequency
1N	10%	0.0177%
1Y	63%	0.1085%
2	15%	0.0251%
3	6%	0.0100%
4	1%	0.0017%
5	1%	0.0010%
6	1%	0.0015%
9NA	4%	0.0065%
Total	100%	0.1720%

At this quarterly review, we have kept the baseline severity profile unchanged from the Dec-16 annual review.

There is some evidence suggesting a possible weakening of the severity profile along with the increased core claim frequency in 2015 and 2016. This would mean a lower severity 4 and 5 claim frequencies and a higher severity 1Y claim frequency than advised in the current severity profile. We continue to monitor this closely.

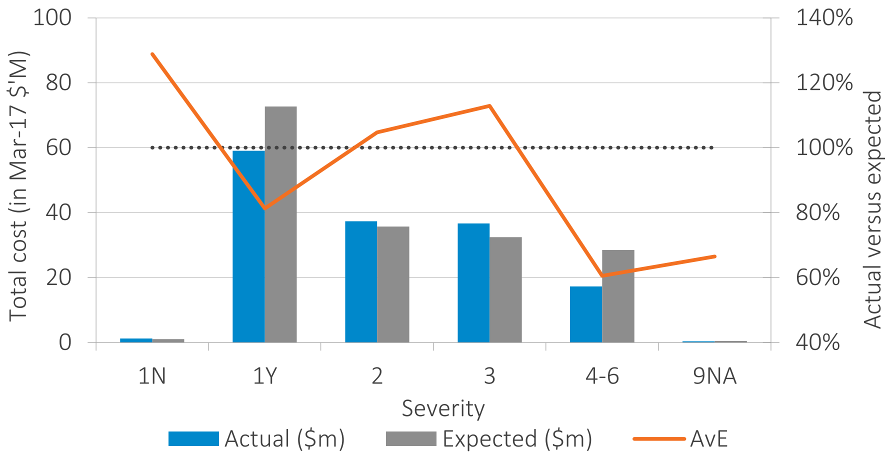
Average claim size

Taylor Fry reviews the average claim size by severity every quarter based on finalised claims.

Total cost of claims by severity

We compare the total cost of finalised claims in Mar-17 quarter to what was forecast at the previous review for the same number of claims. This reveals the difference in and materiality of movements in average claim size by severity.

Figure 4 Total cost of finalised core claims in Mar-17 quarter by severity



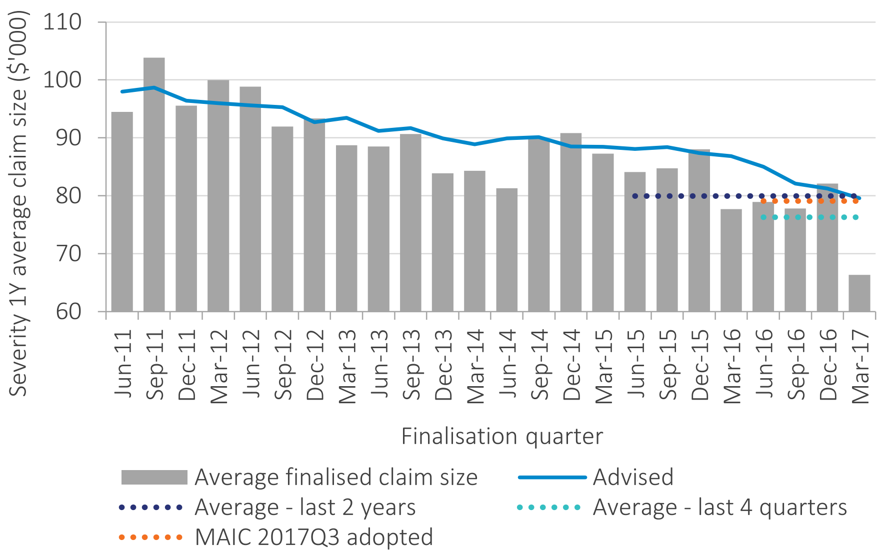
Average finalised claim size in severity 1Y was 19% lower than forecast at the previous review. This result is particularly important because severity 1Y claims comprise 45% of the total cost, and outcomes are less volatile than higher severities. This severity 1Y result is a continuation of a downward trend, which we discuss below.

The average finalised claim size for severity 4-6 claims was lower than expected. Historically, these severities have tended to be more volatile.

Severity 1Y average finalised claim size

We have adapted to the decreasing severity 1Y average finalised claim size over the past five years.

Figure 5 Decreasing severity 1Y average claim size, including advised at each quarterly review



We have **reduced the baseline average claim size for severity 1Y by 2% to $80k**. The Mar17 average finalised claim size is caused by favourable experience for mature claims. Mature claim outcomes are relatively volatile so we have responded to the low experience cautiously.

The advised average claim size is similar to the average over the past two finalisation years and MAIC's adopted claim size at Dec-16.

The one-year average finalised claim size is lower, at $76k, as a consequence of the low result for Mar-17.

Change in advised baseline average claim size since previous review

The modest reduction in severity 1Y average claim size has the largest impact.

Table 3 Change in advised baseline average claim size by severity ($'000, adjusted for inflation)

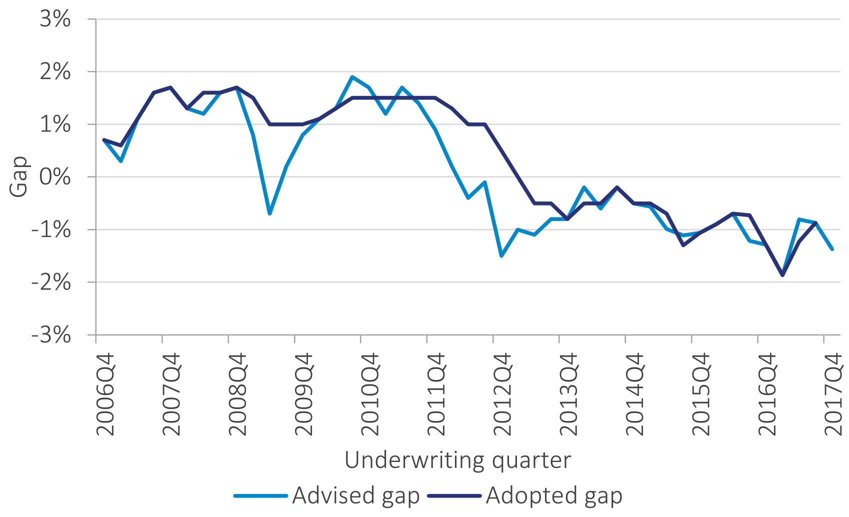
	Severity								All
	1N	1Y	2	3	4	5	6	9NA	
Advised at Dec-16	6	81	145	319	857	1,714	205	17	112
Advised at Mar-17	6	80	146	319	830	1,694	204	17	111
Change	5%	-2%	0%	0%	-3%	-1%	0%	-1%	-1%

Economic assumptions

Taylor Fry advises on the economic gap (difference between risk-free investment return and QLD AWE inflation rate) and monitors superimposed inflation each quarter.

Economic gap

The economic gap is the difference between the projected risk-free investment return and the projected QLD AWE inflation rate up to the time of claim payment. This is derived from prevailing Australian Government bond yield curves and Deloitte Access Economic inflation forecasts available at the time of premium setting. A higher economic gap translates to a lower CTP premium.



For the 2017Q4 underwriting quarter, **the advised economic gap is -1.37%.** This is made up of:

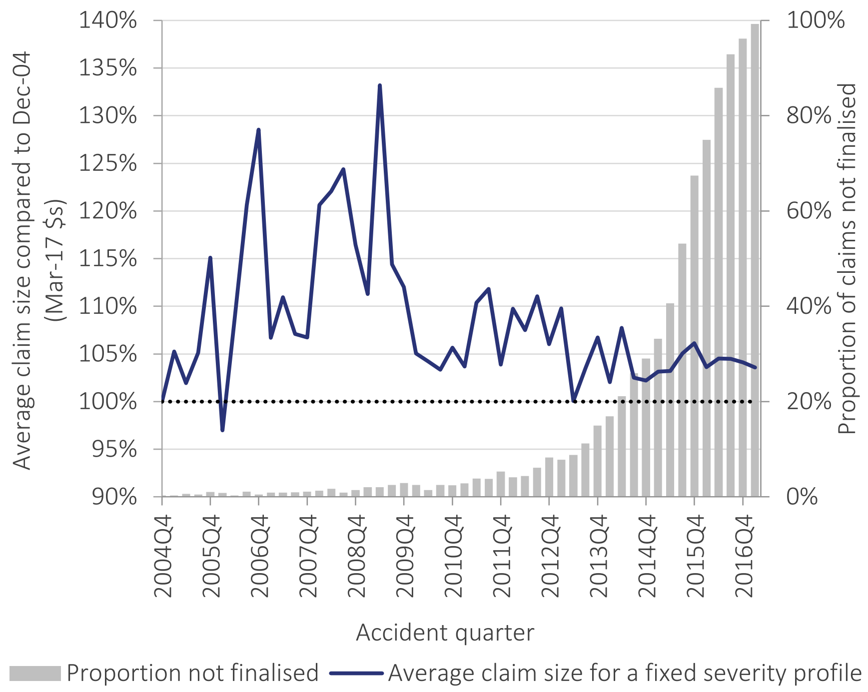
- Wage inflation of 3.38% p.a.
- Discount rate of 2.01% p.a.

The economic gap decreased from -0.87% set at the previous review due to a decrease in the discount rate.

Superimposed inflation

In the premium setting process, superimposed inflation is the growth in average claim size above the QLD AWE inflation rate that cannot be explained by changes in the severity mix. Currently, MAIC set the future superimposed inflation assumption at 1% p.a.

Figure 6 Superimposed inflation illustration (adjusted for AWE inflation) assuming 0% p.a. *future* superimposed inflation



Superimposed inflation has been benign over the past decade. That is, average claim size has not increased at a materially faster rate than QLD AWE inflation.

With a high proportion of claims not finalised, there is potential for the average claim size for accidents in 2016 and Mar-17 quarter to exhibit superimposed inflation before finalisation:

- At 0% p.a. future superimposed inflation, the 5-year change in average claim size to Mar-17 is -1.0% p.a.
- At 1% p.a. future superimposed inflation, the 5-year change to Mar-17 is -0.5% p.a.

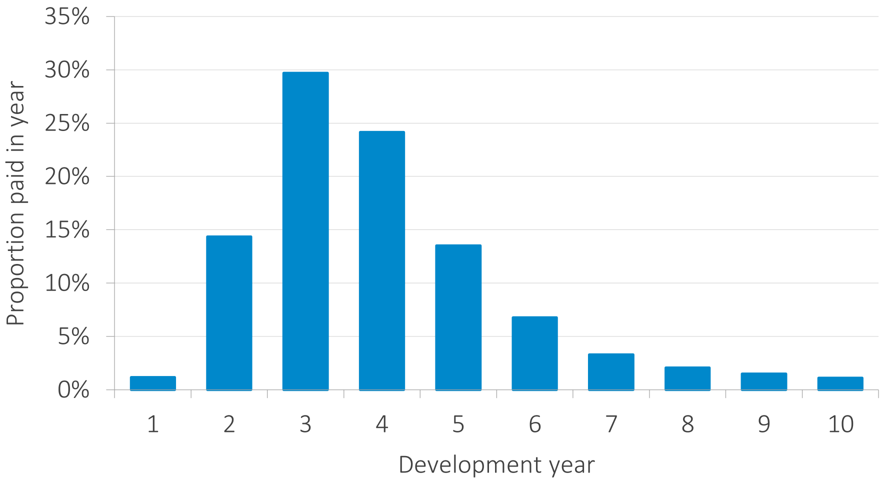
Other premium components

Taylor Fry advises on the costs transferred to the NIISQ, the pattern of future payments for applying the economic assumptions, and the vehicle class relativities.

Payment pattern

The payment pattern shows when claim payments are expected to be made following underwriting.

Figure 7 Payment pattern



The payment pattern assumption has not been changed since Dec-16 review. **The mean term from underwriting to payment is 3.67 years.**

NIISQ reduction

Some expected costs associated high severity claims have been transferred to the NIISQ from 2016Q3. Each quarter, we update the estimate of these costs to be consistent with the updated economic assumptions. Other than economic assumptions, the expected costs of transferred risks are not updated.

We advise a **NIISQ reduction of $16.30** from the *discounted* risk premium.

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