TAYLOR FRY

Queensland CTP Market Briefing

Review of the risk premium for the 2018Q4 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. MAIC integrates our advice with its own views to set a floor and ceiling for insurer CTP premiums.

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.

Taylor Fry's estimate of the headline risk premium is **$182.48**. This risk premium estimate is before the application of inflation and discounting. It includes the reduction due to the costs transferred to the National Injury Insurance Scheme Queensland (NIISQ). This estimate is **$5.76 lower** than our estimate of risk premium made at the previous review (see Figure 1).

The reduction is the result of two main changes. Claim notifications in the March 2018 quarter were much lower than expected – a reversal of the trend observed over 2017. In response, we have decreased our advised core claims frequency. In addition, we continued to observe downward pressure on average claim size which has also resulted in a lowering of our risk premium estimate.

This quarter, we did not update our estimate of the cost transferred to the NIISQ, except to allow for one quarter of inflation.

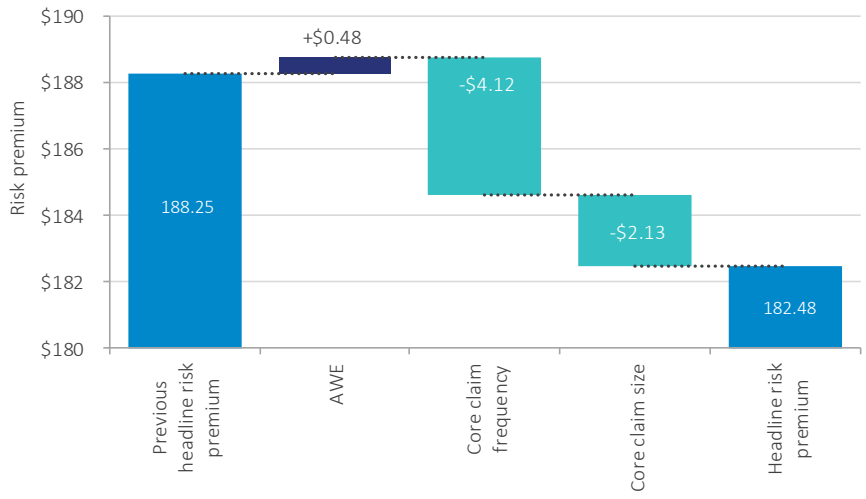
Risk premium

Table 1 Estimate of risk premium at 31 March 2018

	Risk premium component		
	Frequency	Average claim size ($)	Risk premium ($)
Core claims	0.187%	101,846	190.45
WC claims	0.010%	10,366	1.08
IS claims	0.005%	53,315	2.51
Gross headline risk premium	**0.202%**	**96,059**	**194.04**
NIISQ offset			11.55
Net headline risk premium			**182.48**

Change in estimated risk premium since the previous review

Figure 1 Change in net headline risk premium since the Dec-17 review



The main cause of the reduction in risk premium relative to the estimate made at the Dec-17 review is a decrease in the advised core claim frequency. This decrease was in response to claim notifications emerging 13% less than forecast at the Dec-17 review for the 2017 accident year.

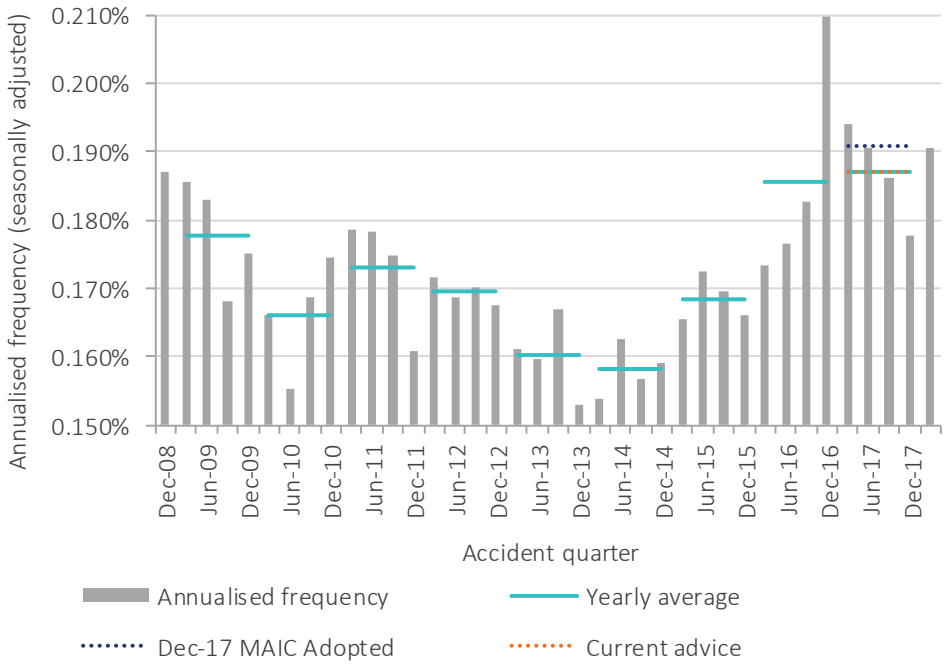
In addition, we also reduced the claim size assumption for core claims. This reduction was in response to low severity legally represented claims finalising for lower than forecast costs over the March 2018 quarter. This less than forecast experience continues the trend observed over the last several years.

Core claim frequency and severity

Typically, Taylor Fry reviews the core claim frequency and severity profile at each annual review, but the experience is monitored quarterly and changes made if necessary. Given the lower than forecast number of core claim notification over the March 2018 quarter, we have updated the core claim frequency assumption at this review. The severity profile experience has remained consistent with our Dec-17 assumptions and these were left unchanged at this review.

Overall core claim frequency

Figure 2 Estimated annualised core claim frequency as at 31 March 2018



This figure shows the projected ultimate annualised frequency for each historical accident quarter after allowing for seasonality.

We observe an upward trend from late 2013 until Dec-16. Over 2017, there are early signs of a decreasing trend.

For future accident quarters we now advise a frequency assumption of 0.187% equal to our current estimate of the core claim frequency for 2017. This is a 2% decrease over the 0.191% we advised at Dec-17.

Severity profile

The majority of claims are legally represented severity 1 claims (severity 1Y). These contribute 66% of core claim notifications and 46% of the core risk premium. While there are relatively few high severity claims, these have higher average claim sizes.

Figure 3 Severity-specific frequency

Severity	Proportion	Advised frequency
1N	9%	0.0176%
1Y	66%	0.1227%
2	13%	0.0247%
3	6%	0.0105%
4	1%	0.0015%
5	0%	0.0007%
6	1%	0.0020%
9NA	4%	0.0072%
Total	**100%**	**0.1870%**

At the Dec-17 annual review, we recommended a substantial weakening in the severity profile. The emerging experience in the March 2018 quarter remains consistent with the change.

In response we have kept the severity profile assumptions unchanged at this review.

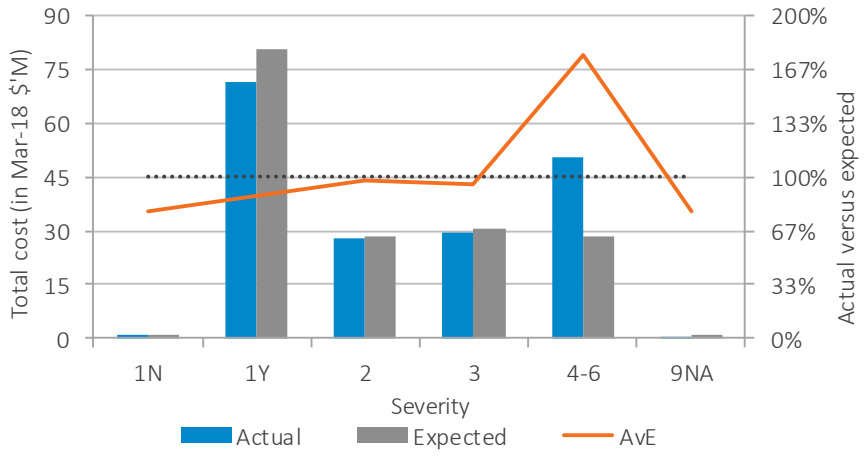
Finalised average claim size

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 the Mar-18 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-18 quarter by severity



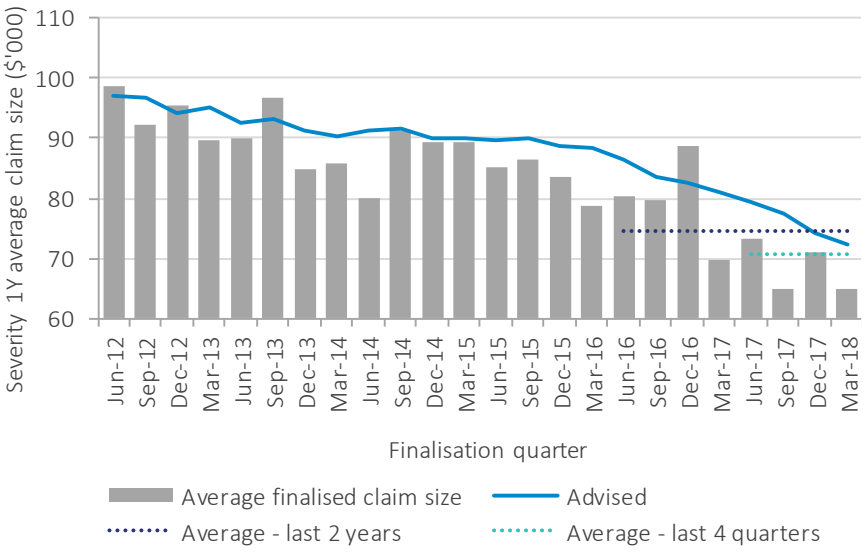
The average finalised claim size in severity 1Y was 11% lower than forecast at the Dec-17 quarterly review. This result is particularly important because severity 1Y claims comprise 46% of the total cost, and outcomes are less volatile than higher severities. This result is a continuation of a downward trend that will be discussed below.

The high severity 4-6 experience relative to forecasts is caused by a couple of particularly large finalisations this quarter.

Severity 1Y average finalised claim size

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

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



We have **reduced the baseline average claim size for severity 1Y by 2.7% to $72k**. The Mar-18 average finalised claim size was influenced 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 lower than the average over the past two finalisation years. The one-year average finalised claim size is lower than the advised average claim size.

Change in advised average claim size since the previous review

Table 2 Change in advised average claim size by severity ($'000, adjusted for inflation)

	Severity								All
	1N	1Y	2	3	4	5	6	9NA	
Advised at Dec-17	7	74	145	325	786	1,803	224	17	103
Advised at Mar-18	7	72	146	323	808	1,810	225	16	102
Change	-2%	-3%	+1%	-1%	+3%	+0%	+1%	-6%	-1%

Risk premium scenarios

There is considerable uncertainty in the assumptions underlying our risk premium estimate. There is a risk that the claim frequency and size that ultimately emerge for the 2018Q4 underwriting quarter turn out to be different to our assumed values. The table below shows the impact on the risk premium for some plausible scenarios with alternative sets of risk premium assumptions.

Risk premium scenarios

We have constructed scenarios with different assumptions for core claim frequency and average claim size. The average claim size scenarios incorporate both the variability in severity profile and the variability in the size of claims within severities. Although the table below shows the impact of each scenario in isolation, it is possible that more than one scenario may occur at the same time. If more than one scenario was to occur, we estimate the impact to be approximately additive.

Table 3 Change in risk premium in plausible alternative scenarios

Risk premium scenarios	Impact on risk premium
Frequency scenarios	
Increase by 5%[1]	*+$8*
Decrease by 5%[1]	*-$8*
Average claim size scenarios	
Incurred cost emerges at the levels of accident year 2015	*+$14*
Severity 4 and 5 claims revert to previous frequency	*+$5*
Trends in severity profile continue	*-$2*
Incurred cost emerges at the levels of accident year 2016	*-$5*
The increase in frequency in accident year 2017 is mostly due to small claims	*-$7*

Notes :

1. A 5% deviation in frequency of all severities except for 4 and 5

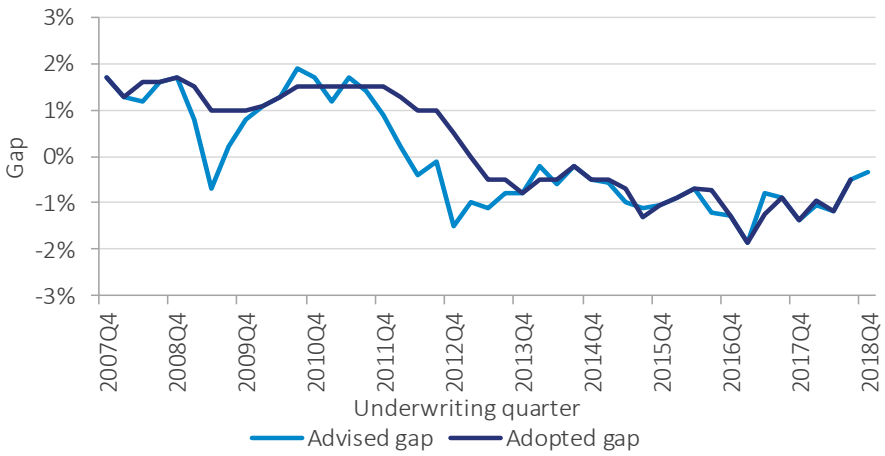
Economic assumptions

Taylor Fry advises on the economic gap (the 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.

Figure 6 Economic gap



For the 2018Q4 underwriting quarter, **the advised economic gap is -0.34%.** This is made up of:

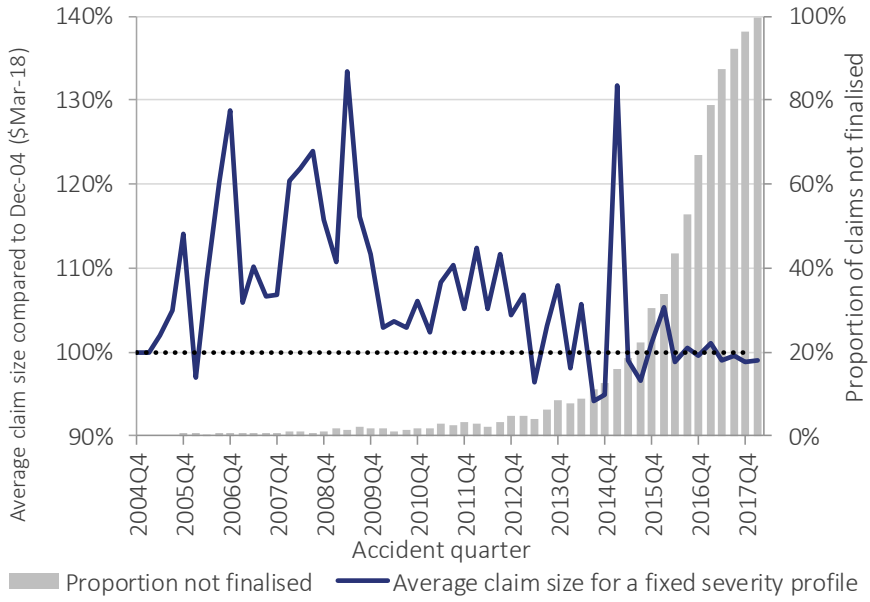
- Wage inflation of 2.81% p.a.
- Discount rate of 2.48% p.a.

The economic gap increased from -0.50% advised at the previous review primarily due to a decrease in the forecast inflation 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 7 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, 2017 and 2018 to exhibit superimposed inflation before finalisation:

- At 0% p.a. future superimposed inflation, the 5-year change in average claim size to Mar-18 is -1.5% p.a.
- At 1% p.a. future superimposed inflation, the 5-year change to Mar-18 is -1.0% p.a.

If the current 1% allowance were reduced to recent scheme experience of 0%, the Class 1 CTP premium would reduce by $8.

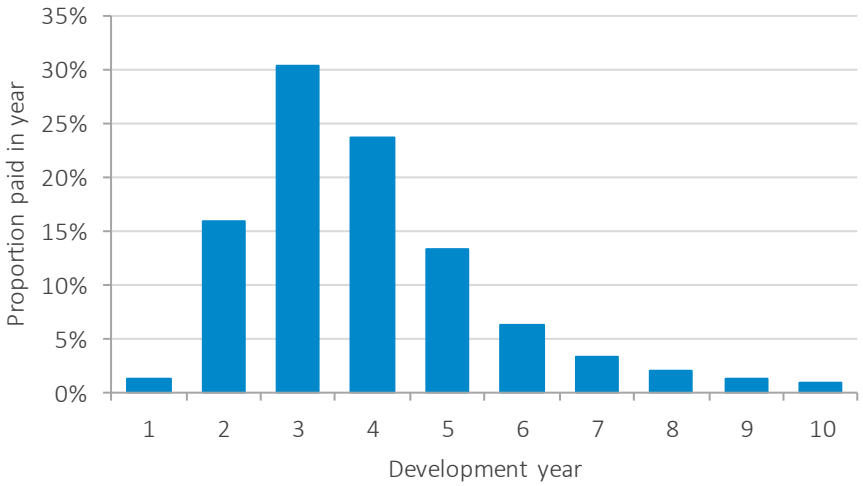
Other premium components

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 8 Payment pattern



The payment pattern assumption has not been changed since the Dec-17 review. **The mean term from underwriting to payment is 3.54 years.**

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