Queensland CTP Market Briefing

Review of the risk premium for the 2019Q4 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 **$196.33**. This risk premium estimate is before the application of inflation and discounting and is based on modelling net costs to the CTP scheme after removing costs expected to be transferred to the National Injury Insurance Scheme Queensland (NIISQ). This estimate is **$7.06 higher** than our estimate of risk premium made at the previous review (see Figure 1).

Major contributors of the change in risk premium are:

» The inclusion of an allowance for missing NSW claims, recognising the delay in claim notifications for accidents occurring in NSW since the Dec-17 NSW CTP reforms.

» Less favourable frequency and average claim size experience. We have increased our estimates of frequency and average claim size in response.

» The alignment of the mix of historical paid care versus gratuitous care payments across insurers. One insurer had a significantly different mix to the rest of the industry. This has led to a decrease in risk premium over the quarter.

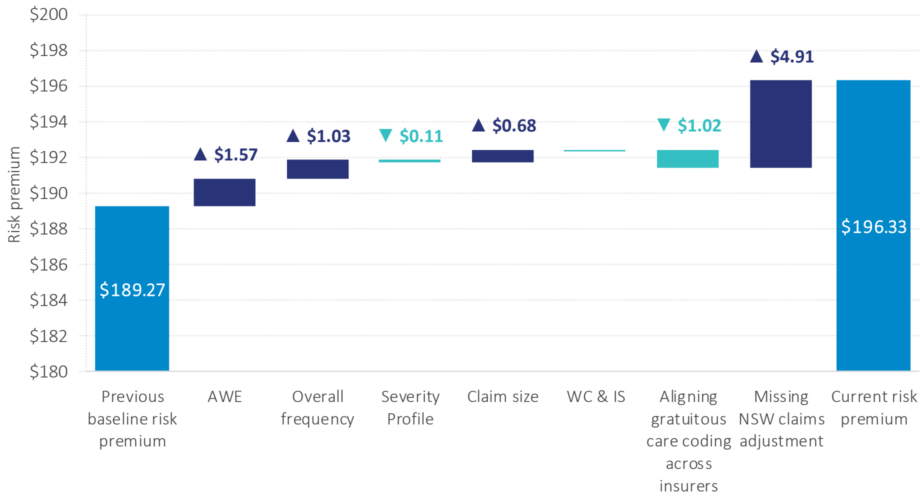
Risk premium

Table 1 Estimate of risk premium at 31 March 2019

	Risk premium component		
	Frequency	Average claim size ($)	Risk premium ($)
Core claims	0.1820%	103,124	187.68
IS claims	0.0042%	59,438	2.50
WC claims	0.0116%	10,669	1.24
Missing NSW claims allowance	0.0040%	123,530	4.91
Net headline risk premium	**0.2020%**	**97,193**	**196.33**

Change in estimated risk premium since the previous review

Figure 1 Change in risk premium since the Dec-18 review



The allowance for missing NSW claims is the main driver of the increase in the risk premium from the Dec-18 quarter ($4.91 or 2.6%). The increase in risk premium is also attributable to higher than expected frequency and average claim size.

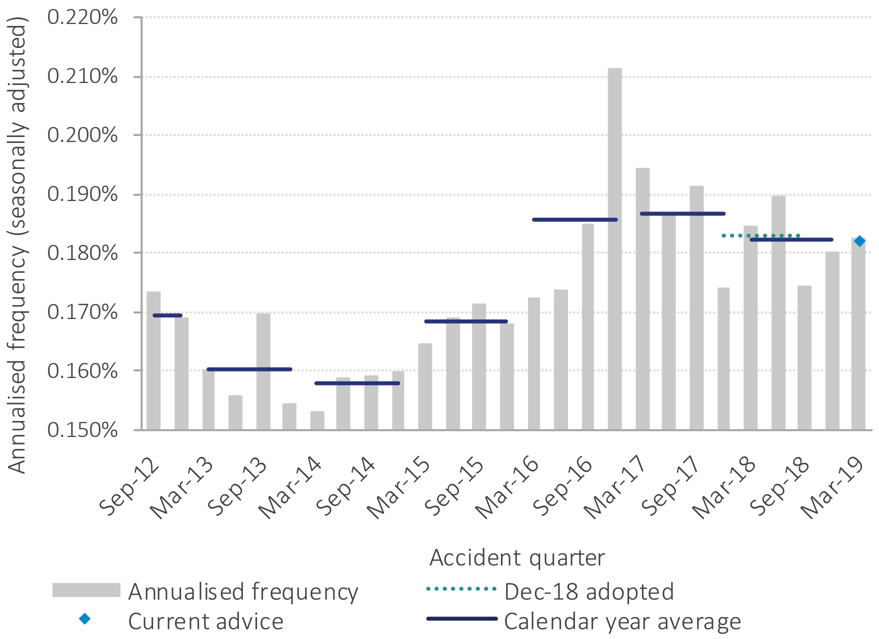
Partially offsetting these increases are the alignment of the mix of paid care and gratuitous care payments across insurers and a minor change in the severity profile.

Core claim frequency and severity

Typically, Taylor Fry reviews the core claim frequency and severity profile each at each annual review, but the experience is monitored quarterly and changes are made if necessary. In this quarterly review, we have updated the core claim frequency and made a minor revision to the severity profile. The frequency assumption and severity profile were previously revised in Dec-18. This section outlines the assumptions for core claim frequency and severity profile excluding the allowance for missing NSW claims, which is covered in a separate section further below.

Overall core claim frequency

Figure 2 Estimated annualised core claim frequency as at 31 March 2019



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

We have observed an overall decreasing trend from the peak in late 2016. However, the total number of notifications was 3% higher than expected in the Mar-19 quarter. The 2019 accident year notifications were 4% above the baseline forecast.

For future accident quarters we now advise a frequency assumption (excluding an allowance for missing NSW claims) of 0.1820%, which is equal to our current estimate of the core claim frequency for the four quarters to Dec-18. This is a 1% increase from the advised frequency at Dec-18.

Severity profile

The majority of claims are legally represented severity 1 claims (severity 1Y). These contribute 69% of core claim notifications and 52% 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	8.4%	0.0152%
1Y	68.6%	0.1249%
2	12.2%	0.0223%
3	5.3%	0.0096%
4	0.8%	0.0015%
5	0.4%	0.0007%
6	1.1%	0.0020%
9NA	3.2%	0.0059%
Total	**100%**	**0.1820%**

There has been a minor revision to the severity profile at this review.

The claim frequencies for severities 4-6 have remained unchanged despite the increase in overall frequency, as the frequencies for severities 4-6 historically tend to be independent of movements in the overall claim frequency. The frequencies of other severities, on the other hand, tend to move together with the overall claim frequency.

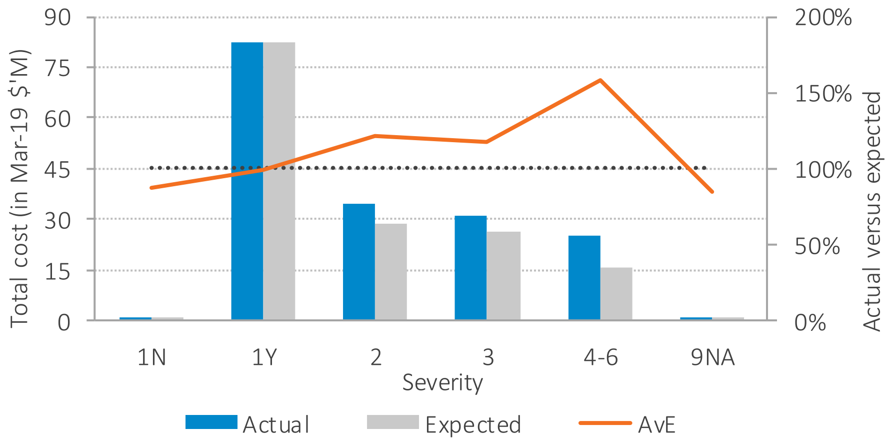
Finalised average claim size

Taylor Fry reviews the average claim size by severity every quarter based on finalised claims. The average finalised claim sizes used for modelling are on a net of NIISQ basis and have been adjusted to align gratuitous care coding across insurers. This section outlines the assumptions for finalised average claim size excluding the allowance for missing NSW claims, which is covered in a separate section further below.

Total cost of claims by severity

We compare the total cost of finalised claims in the Mar-19 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-19 quarter by severity

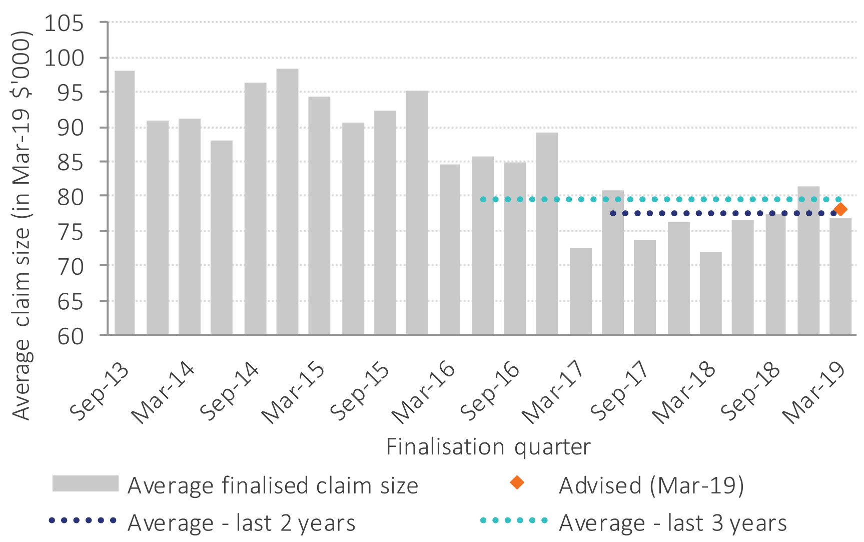


The average finalised claim size in severity 1Y was in line with the forecast at the Dec-18 annual review. This result is particularly important as severity 1Y claims comprise 52% of the total cost, and outcomes are less volatile than higher severities.

Severity 2-6 claims have finalised for higher amounts than expected. This is mainly attributed to the finalisation of several large claims.

Severity 1Y average finalised claim size

Figure 5 Severity 1Y average claim size



We have **slightly decreased the baseline average claim size for severity 1Y by 0.1% to $78,025**.

The advised baseline average claim size is lower than the average over the past three finalisation years and higher than the average over the past two finalisation years.

We have increased baseline average claim sizes for severities 2-4, leading to an **increase in the overall baseline average claim size of 0.3%**

Change in advised baseline average claim size (excluding missing NSW claims allowance) since the previous review

Table 2 Change in advised baseline average claim size by severity ($'000, adjusted for inflation and gratuitous care coding)

	Severity								All
	1N	1Y	2	3	4	5	6	9NA	
Advised at Dec-18	7	78	154	327	645	1,098	236	15	103
Advised at Mar-19	7	78	155	329	662	1,093	239	15	103
Change	-0.9%	-0.1%	+0.6%	+0.8%	+2.6%	-0.4%	+1.3%	-0.8%	+0.3%

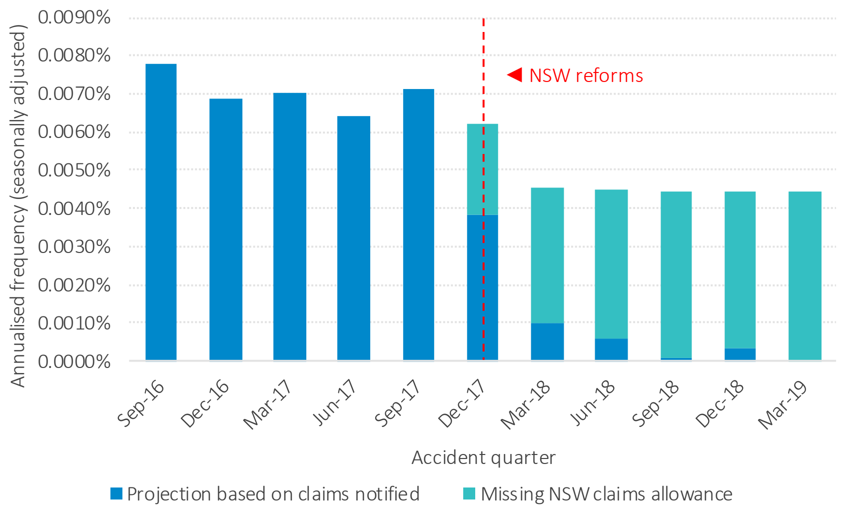
Missing NSW claims allowance

The number of claims notified with a NSW accident postcode has fallen significantly since the NSW CTP reforms in Dec-17. Insurers are confident that these claims have not disappeared, but rather their reporting has just been delayed. Taylor Fry has made a separate allowance for these missing claims in the calculation of risk premium. This is an overall allowance across core, WC and IS claims combined.

Claim frequency adjustment

We compare the projected ultimate claim count based on notified claims to date for accident quarters before and after the NSW CTP reforms in Dec-17.

Figure 6 NSW claim frequency



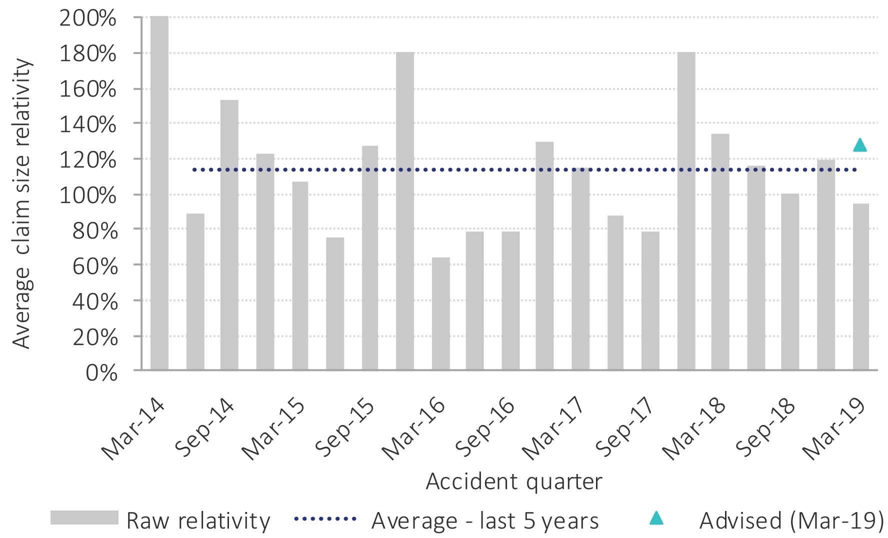
The estimated annualised frequency of missing NSW claims due to the reforms is 0.0040%.

Based on notified claims to date alone, the projected NSW claims frequency for the four accident quarters to Dec-18 would fall from the historical (pre-reform) annualised average of 0.0070% down to 0.0005%.

We have added an allowance for these missing (or late reported) NSW claims since the Dec-17 accident quarter. This allowance incorporates the expected 35% reduction in not at fault claim frequency as a result of the reforms.

Average claim size relativity of NSW claims

Figure 7 Average claim size relativity of NSW claims



We have selected a NSW to non-NSW accident average claim size relativity of 128%.

Historically, the average claim size related to accidents occurring in NSW has been higher than those occurring outside NSW. The average claim size relativity of NSW to non-NSW accident claims over the last 5 years is 115%.

The selected relativity of 128% incorporates the expected 11% increase in not at fault average claim size as a result of the reforms.

Using the selected relativity results in an **estimated average claim size for missing NSW claims of $123,530**.

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 2019Q4 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.

Lead indicators of claim size

At the current time, 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 two 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; and insurers' case estimates of open claims.

Our claims' mix model indicates a growing frequency of legally represented, non-serious, same direction claims and an established decreasing trend in the size of all legally represented, non-serious claims[2]. Insurer case estimates for the 2017 accident year, although as yet undeveloped, indicate a further substantial drop in the claim size for open claims. Although the 2017 accident year is immature, much of this drop is concentrated in the legally represented, non-serious claims where we have not historically observed much case estimate development at the Scheme level. These suggest that further drops in claim size, beyond those reflected in our finalised claim models, are possible. We have reflected these possibilities in our risk premium scenarios below.

Risk premium scenarios

We have constructed scenarios with different assumptions for core claim frequency, average claim size, the expected impact of NSW CTP reforms and AWE. The average claim size scenarios incorporate both the variability in severity profile and the variability in the size of claims within severities and across accident years. 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 independent scenario was to occur, we estimate the impact to be approximately additive.

Table 3 Change in risk premium for plausible alternative scenarios

Risk premium scenarios	Impact on risk premium
Frequency scenarios	
Increase by 5% (excluding severities 4-6)	*+$8*
Decrease by 5% (excluding severities 4-6)	*-$8*
Average claim size scenarios	
AY2015 developed incurred cost	*+$12*
Number of discontinued and lapsed claims remained at pre Dec-17 levels	*+$1*
AY2016 developed incurred cost	*+$1*
Trends in severity profile continue	*-$3*
Baseline adjusted for established trends in non-serious claims[1]	*-$4*
Baseline adjusted for accelerated decrease in non-serious claims as indicated by case estimates	*-$12*
AY2017 developed incurred cost	*-$15*
AY2018 developed incurred cost	*-$36*
AWE inflation scenario	
2018H2 inflation in line with national average	*-$4*
NSW CTP reform impact scenarios	
Increase in NSW NAF claim size due to reforms is twice of what is expected (22% vs 11%)	*+$0*
Reduction in NSW NAF frequency due to reforms is half of what is expected (17.5% vs 35%)	*+$2*

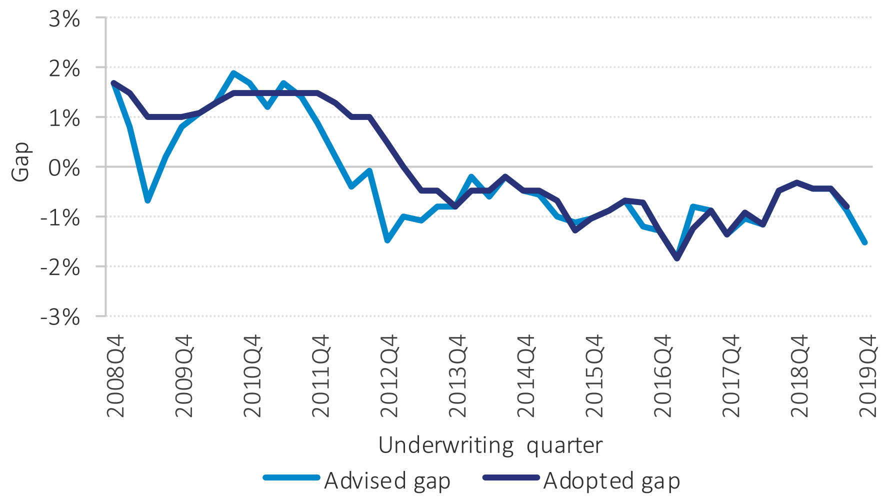
Notes:
1. *'Non-serious claims' refers to claims that are not fatal, do not result in brain and spinal cord injuries and do not require an overnight hospital stay.*

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 8 Economic gap



For the 2019Q4 underwriting quarter, **the advised economic gap is -1.52%.** This is made up of:

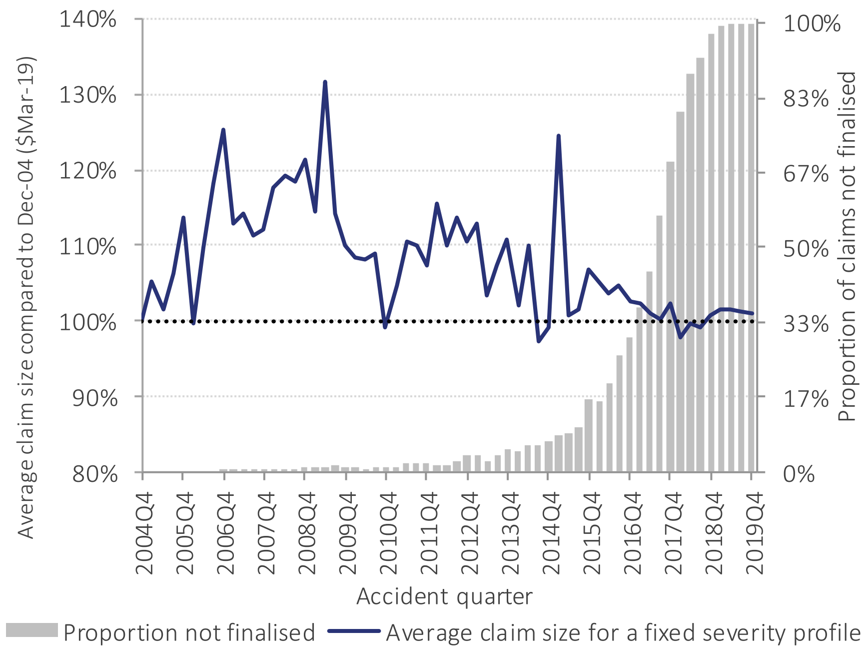
- Wage inflation of 2.73% p.a.
- Discount rate of 1.22% p.a.

The economic gap decreased from -0.90% advised at the previous review primarily due to the recent interest rate cut by the RBA.

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 0.5% p.a.

Figure 9 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 2018 and 2019 to exhibit superimposed inflation before finalisation:

- At 0% p.a. future superimposed inflation, the 5-year change in average claim size to Mar-19 is -0.13% p.a.
- At 1% p.a. future superimposed inflation, the 5-year change to Mar-19 is 0.41% p.a.

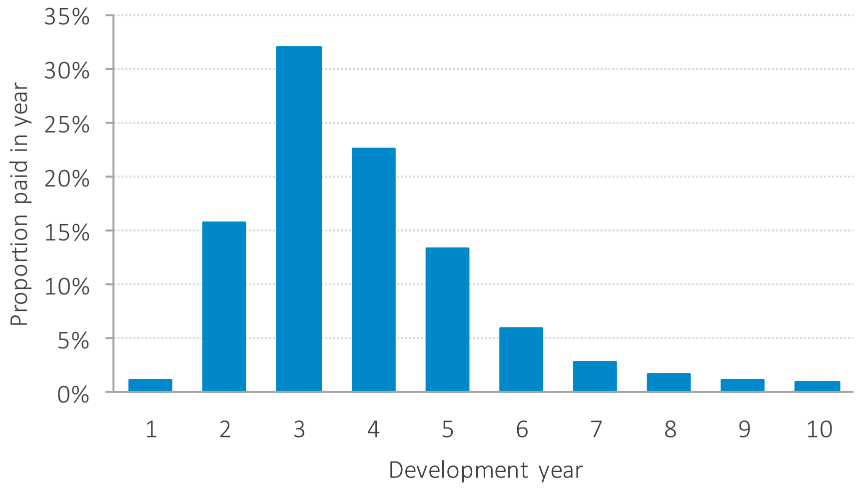
Other premium components

Taylor Fry advises on 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 10 Payment pattern



The payment pattern assumption has remained unchanged since the Dec-18 review. **The mean term from underwriting to payment is 3.50 years.**

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