



Motor Accident Insurance Commission

Annual review of premium components
as at 31 December 2023

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27 March 2024

Agenda

1. Claim frequency
2. Severity profile
3. Claim size
4. Summary

Appendix

1. Economic parameters
2. Risk premium uncertainties

1

Claim frequency

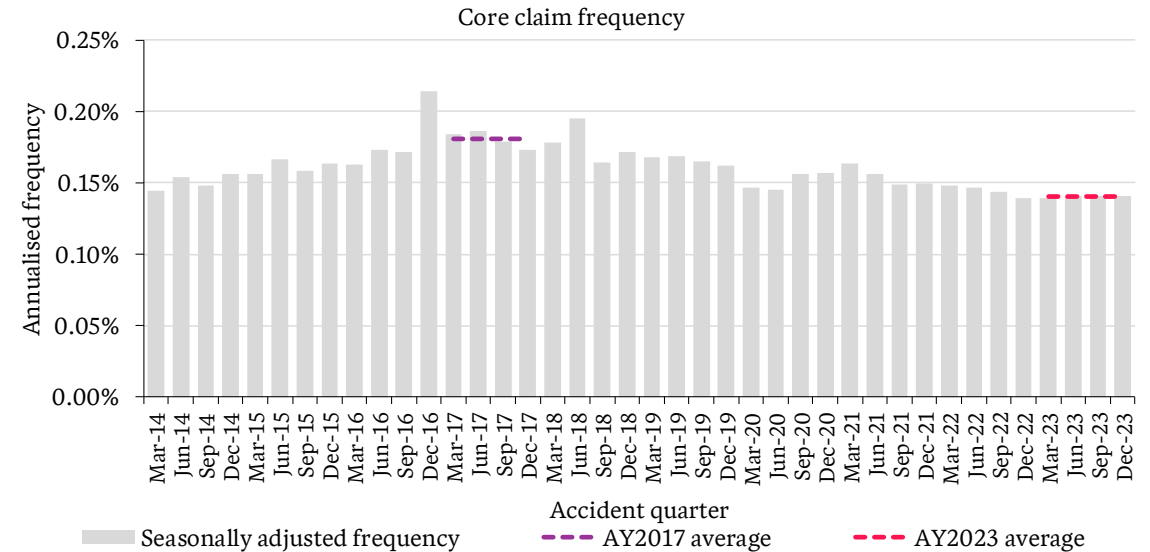
Core claim frequency

Long-term trends

- Ultimate frequency for core claims has **decreased 22%** since 2017
- The increase in frequency from 2014 to 2017 is thought in part to be due to an increase in claims farming activities
- The decrease since 2017 is likely due to:
 - Measures to combat claims farming culminating in the December 2019 legislation and prosecutions under that Act from 2022
 - Low traffic volumes and changes in WFH patterns following COVID-19
 - Safer cars and improved road safety measures such as the introduction of new cameras to detect mobile phone use and failure to wear a seatbelt

Experience

Key risks



Note: Frequency projections are adjusted for seasonality, and historical impacts of COVID-19 and the Eastern Australian Floods have been removed for affected quarters up to Mar-22.

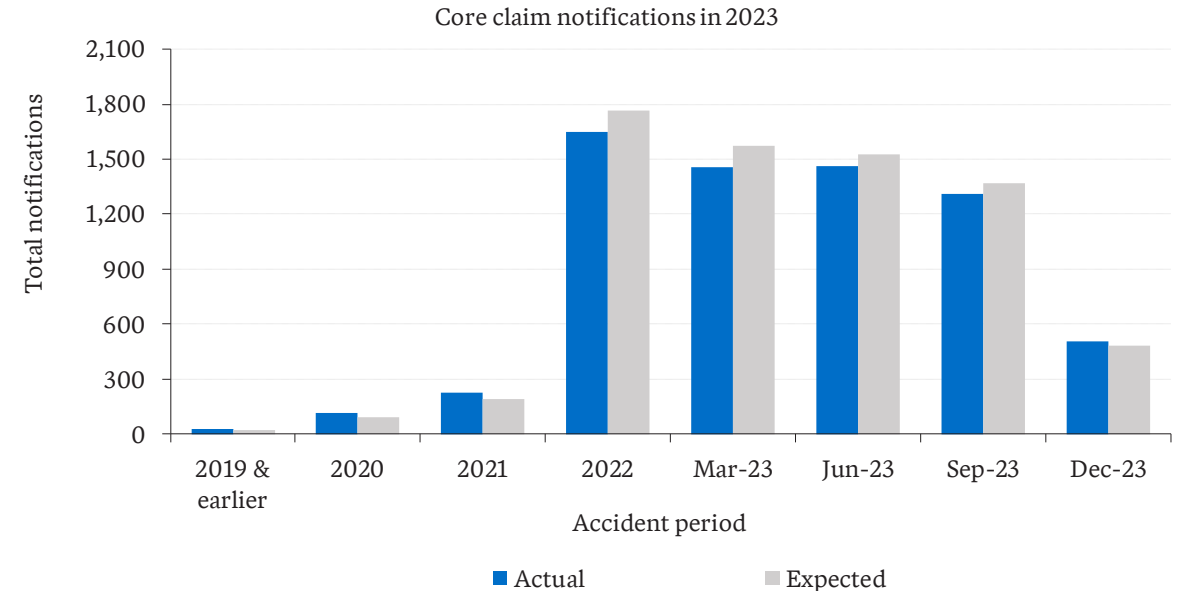
Core claim notifications emerged 4% lower than forecast

Long-term trends

Experience

Key risks

- Frequency estimates by accident quarter are made using a claim notification forecast model
- The need to strengthen or weaken those forecasts is assessed by comparing notification forecasts to actual experience
- Total notifications in 2023 were 4% lower than our notification forecasts made at Dec-22
 - This is mainly driven by lower-than-expected experience for 2022 and 2023 accident years
 - Partially offset by elevated tail notifications from the 2020 and 2021 accident years
- This experience is consistent with a continued downward trend in notification frequency in recent years



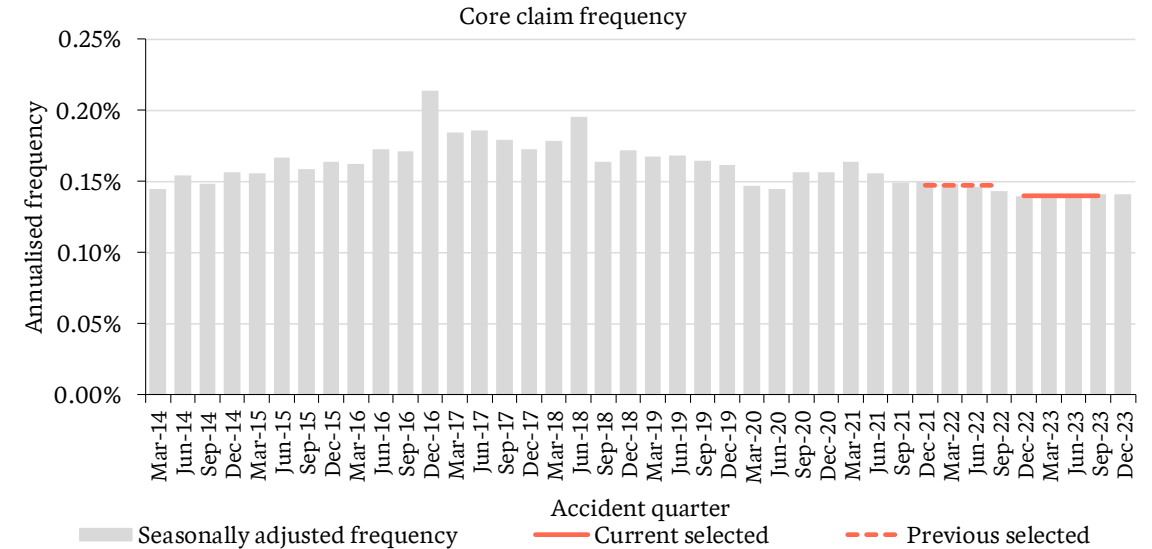
Core claim frequency projection

Long-term trends

Experience

Key risks

- In response to the lower than forecast notification experience over 2023 our core claim frequency assumption has reduced 5%
 - From 0.1475% at Dec-22 to 0.1400%
- Our core claim frequency assumption for this review is based on the four-quarter averaging period over Dec-22 to Sep-23
 - We continue to use a four-quarter average **excluding** the latest accident quarter to estimate the claim frequency assumption



Note: Frequency projections are adjusted for seasonality, and historical impacts of COVID-19 and the Eastern Australian Floods have been removed for affected quarters up to Mar-22.

Key risks – claim frequency

Long-term trends

Experience

Key risks

- The chart overlays the hindsight risk premium against quarterly claim frequency, showing **frequency is the main contributor** to changes in risk premium over time
- Persistency of low frequency is **uncertain**

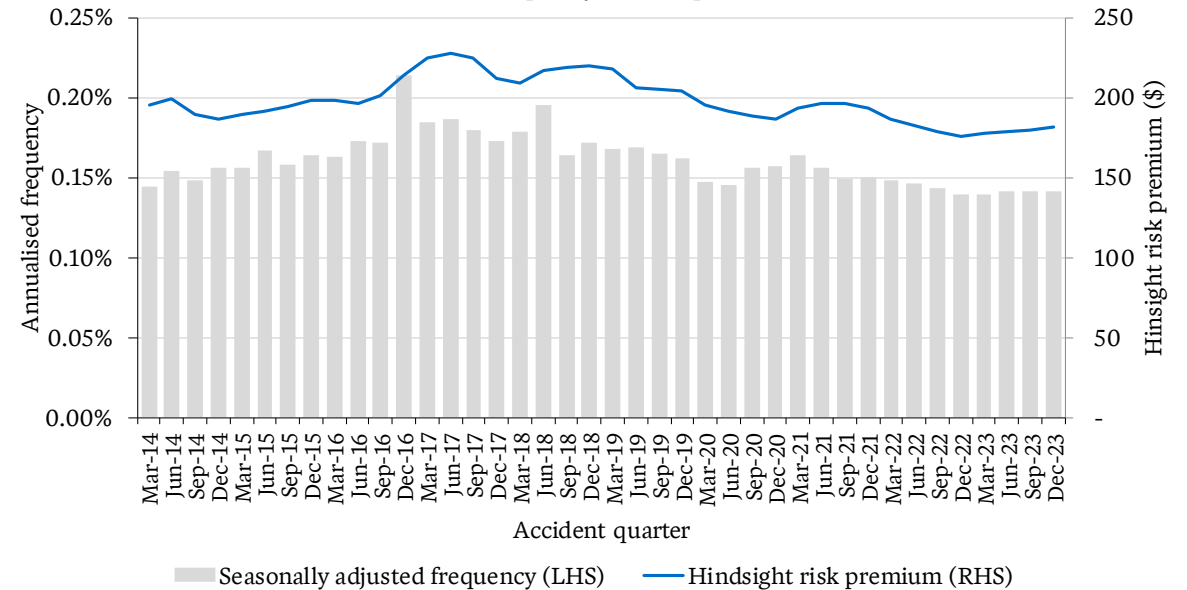
WFH patterns

More people may return to the office, reversing higher rates of WFH post Covid-related lockdowns

Claims farming legislation

Will continued successful prosecutions drive frequency lower or will claims farming activity increase as new models emerge?

Core claim frequency and risk premium



Note: The hindsight risk premium series reflects a 4-quarter moving average.

2



Severity profile

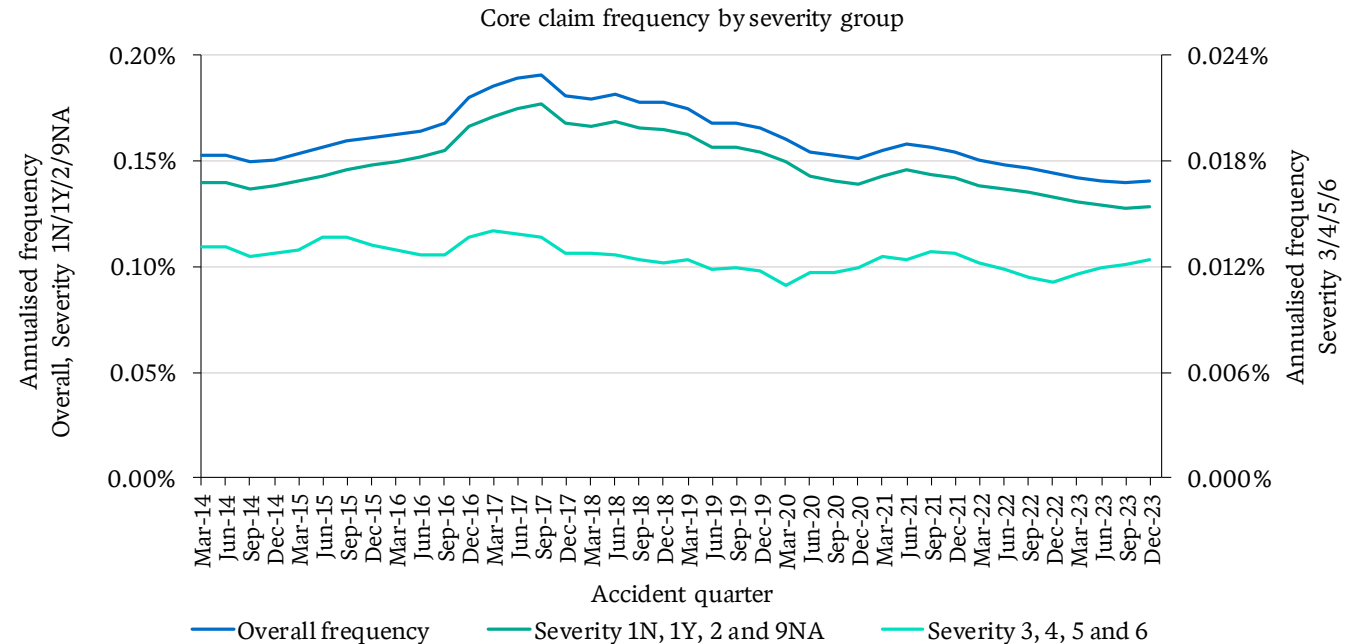
The reduction in core claim frequency is concentrated in lower severities

Long-term trends

Experience

Key risks

- The chart shows:
 - A **decreasing trend** in overall frequency over 2017-2023, mirrored in the frequency trend for **Severities 1, 2 and 9NA**
 - The frequency for **Severities 3+** has been generally **stable** over 2018-2023
- The resultant **increasing proportion** of Severity 3+ claims translates to a **strengthening severity profile** over 2017-2023
 - The average claim size for high severity claims (Severity 3+) is about **four times** that for low severity claims
 - The increasing proportion of high severity claims has resulted in a **7% increase** in average claim size since 2017



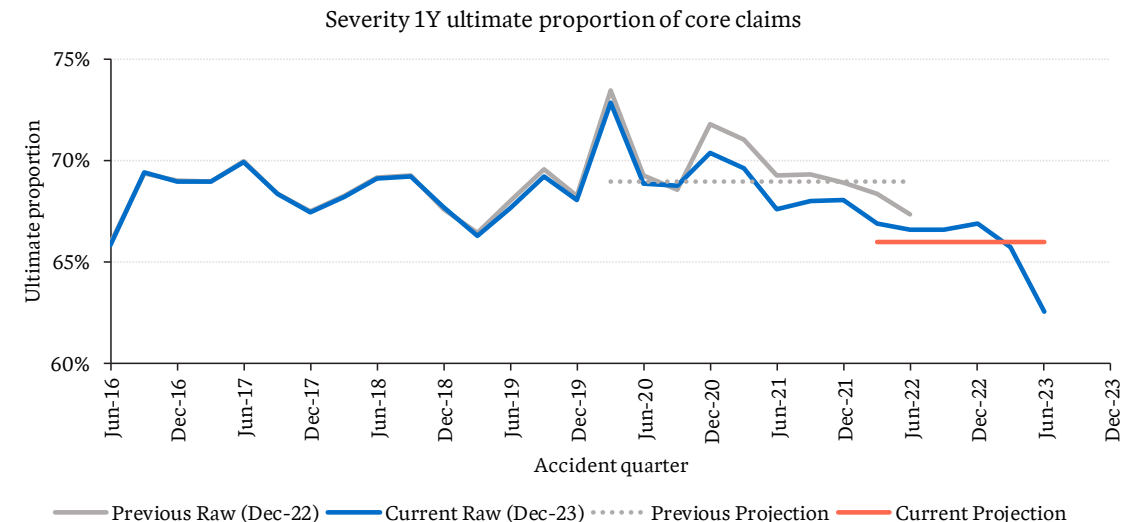
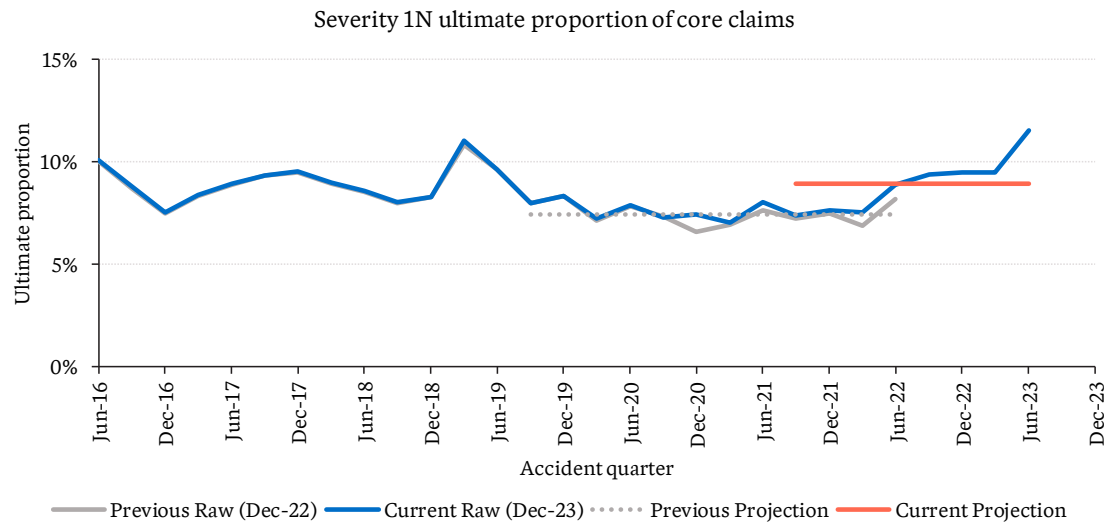
Note: The series plotted reflect a 4-quarter moving averages.

An increase in Severity 1N coincides with a decrease in Severity 1Y

Long-term trends

Experience

Key risks



- The proportion of Severity 1N claims has continued to **trend upwards**
 - We have been informed of **insurer initiatives** to streamline the claims process and encourage direct lodgement
- We have **not fully reflected** the increase due to uncertainty around the ultimate impact of these initiatives on late legal representation and average claim size (both Severity 1N and 1Y)

- The proportion of Severity 1Y claims has continued to **trend downwards**
 - Recent prosecutions under the 2019 **claims farming legislation** are a potential factor behind the decreasing trend
 - **Insurer initiatives** to streamline the claims process are also a potential contributor to the decrease

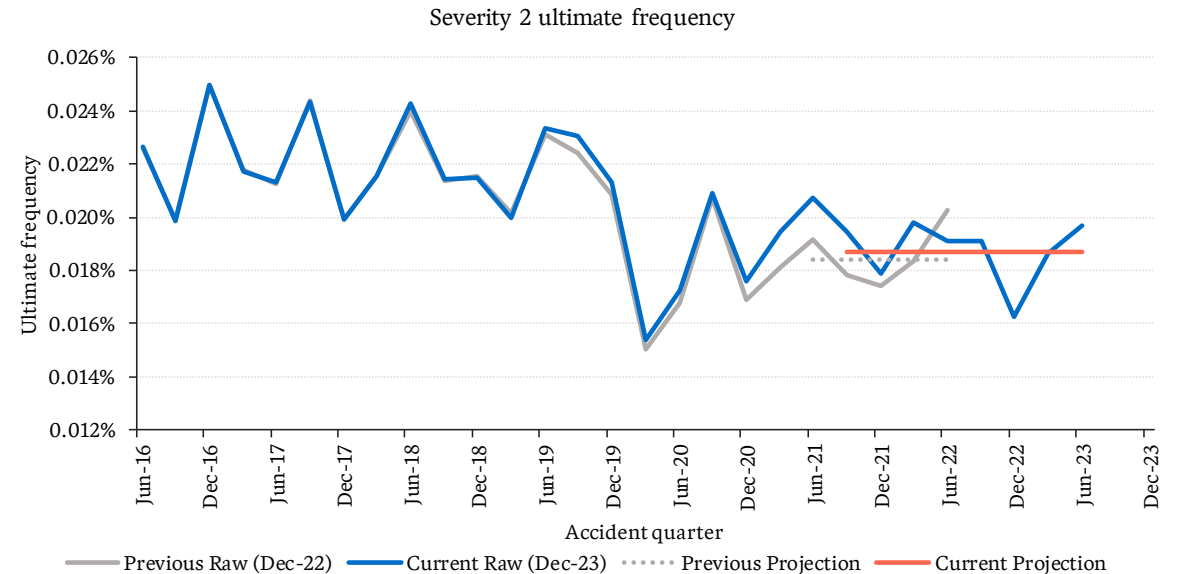
The Severity 2 frequency selection has increased

Long-term trends

Experience

Key risks

- In response to overall higher-than-expected Severity 2 experience, we now calibrate its **frequency directly** rather than selecting the proportion of Severity 2 claims
 - The result was a **strengthening** of the severity profile, with a reduction in the proportion of Severity 1Y claims
- The Severity 2 selection has **increased** from our Dec-22 selection



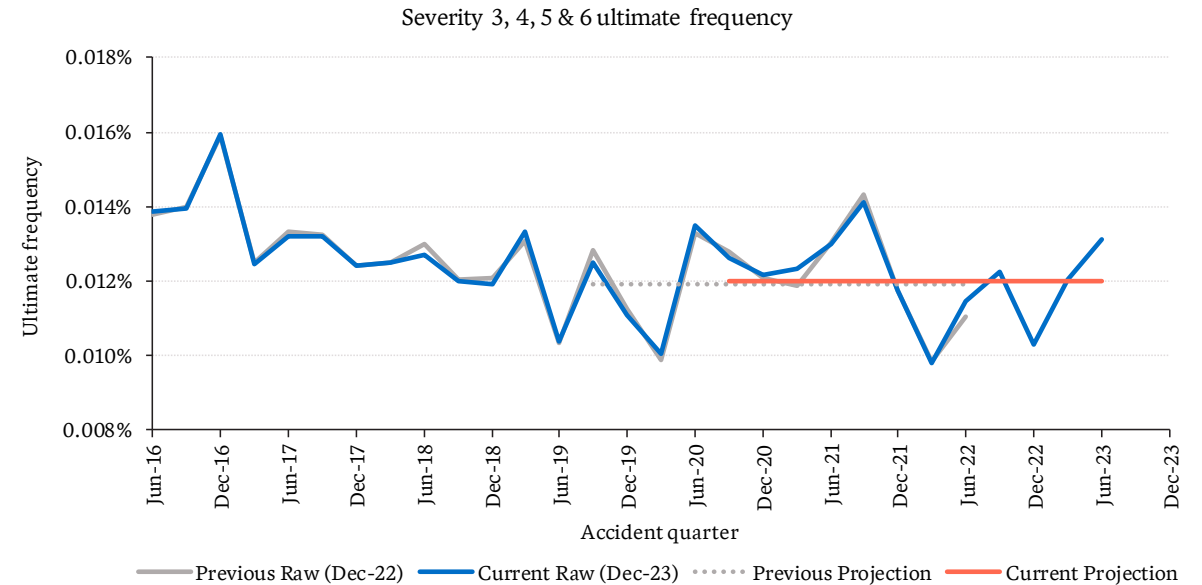
Severity 3+ experience is volatile

Long-term trends

Experience

Key risks

- There is considerable **variability** in the frequency for high severity claims
- The selection for Severities 3, 4, 5 and 6 are calibrated to **longer averaging periods**
- The Severity 3+ selections have **increased** from our Dec-22 selection



The severity profile has strengthened

- The severity profile has **strengthened**, resulting in a net **\$1.70 increase** to the risk premium since Dec-22
- **Severity 2** and **Severity 3+** frequencies have **increased**
- Partially offset by a **decrease** in the **Severity 1Y** proportion

Severity	Estimated ultimate severity profile in future			Impact on risk premium (\$)
	Dec-22 basis	Dec-23 basis	Movement	
1N	7.5%	8.9%	1.5%	+0.2
1Y	68.9%	66.0%	-3.0%	-3.9
2	12.5%	13.4%	0.9%	+2.4
3	5.8%	6.1%	0.4%	+2.0
4	0.9%	0.9%	0.1%	+0.5
5	0.4%	0.4%	0.0%	+0.3
6	1.0%	1.1%	0.1%	+0.3
9NA	3.1%	3.1%	0.1%	+0.0
All	100%	100%	-	+1.7

Key risks – severity profile

Long-term trends

Experience

Key risks

High severity claims

- Some evidence for a **longer term decrease** in frequency for high severity claims – over the last 10 years there has been a ~5% decrease
 - We use a **3-to-4-year average** to estimate frequency for high severity claims which results in a **lag** in the recognition of this trend

Mix of Severity 1 claims

- The proportion of direct claims (**Severity 1N**) has **increased**, with insurer initiatives to streamline the claims process likely a key contributor
- Severity 1N and Severity 1Y **ACS** are both expected to **increase** in response
 - An increase in Severity 1N ACS has been observed and reflected in our assumptions
 - Severity 1Y experience has been **favourable** to date – but this may not be sustained

3



Claim size

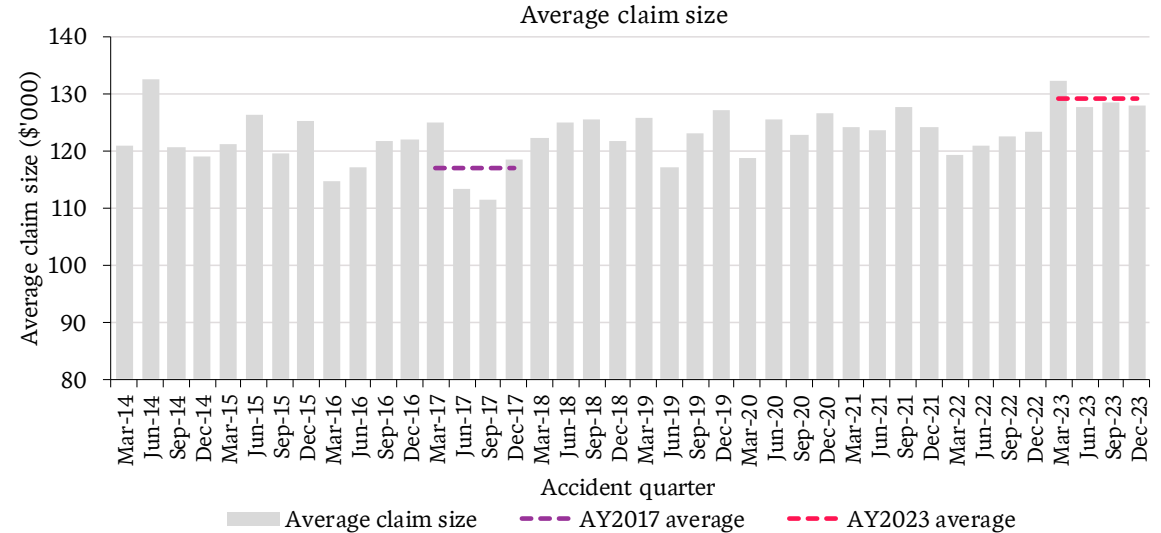
The average claim size has increased over the past 6 years

Long-term trends

Experience

Key risks

- The average core claim size **increased 10%** between AY2017 and AY2023
 - **7%** of this increase is due to a **strengthening severity profile**
 - **3%** is due to a change in mix, including an increasing proportion of **psychological claims**



The increase in ACS is mostly due to severity profile

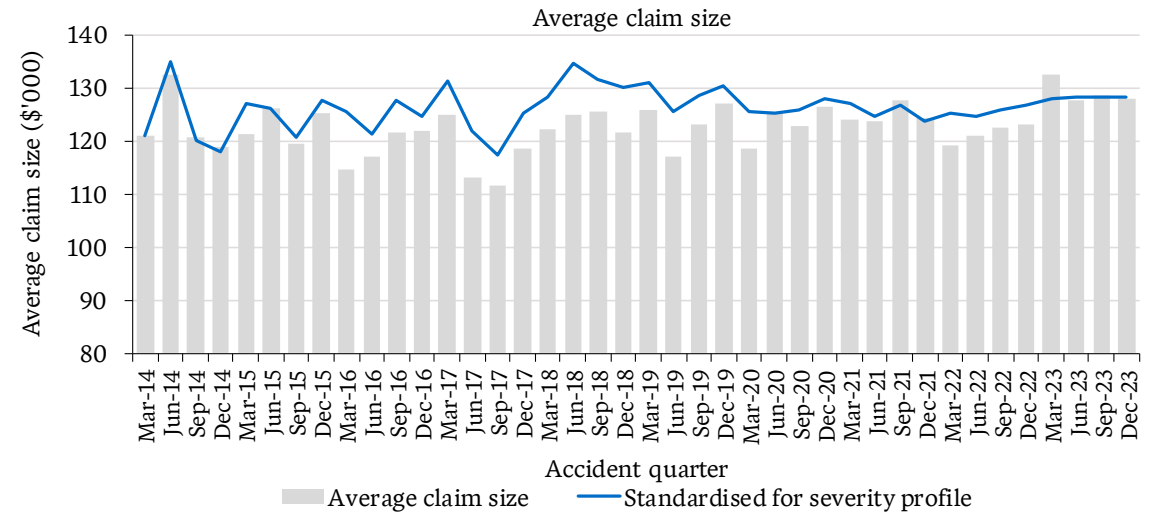
Long-term trends

Experience

Key risks

Severity profile

- This chart overlays the average core claim size **standardised for severity profile**
 - The increase in the standardised ACS between AY2017 and AY2023 is 3%, indicating **7%** of the 10% overall increase in ACS over this period is attributable to a **strengthening severity profile**



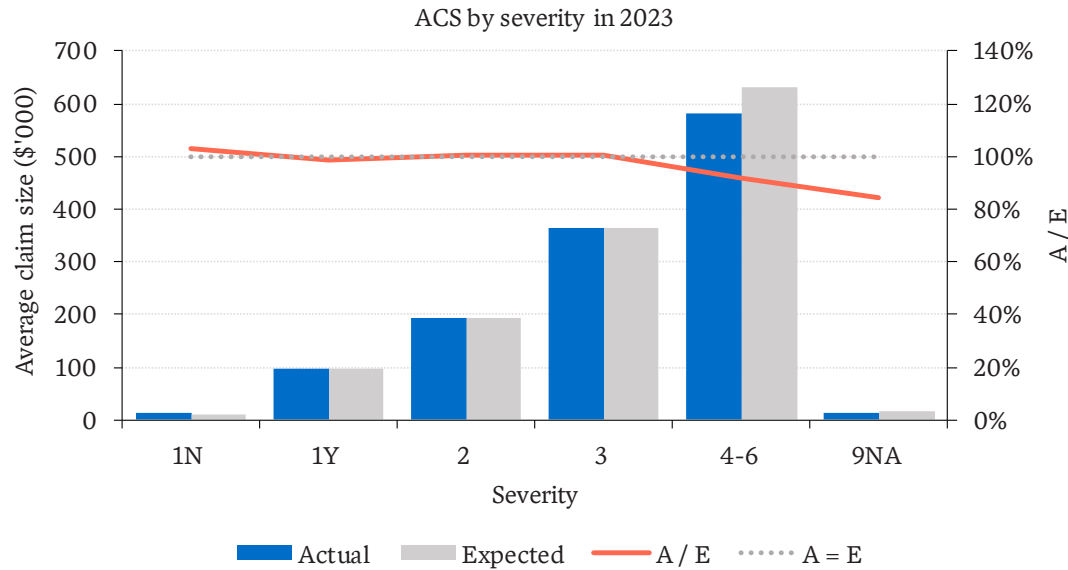
Experience over the year

Long-term trends

Experience

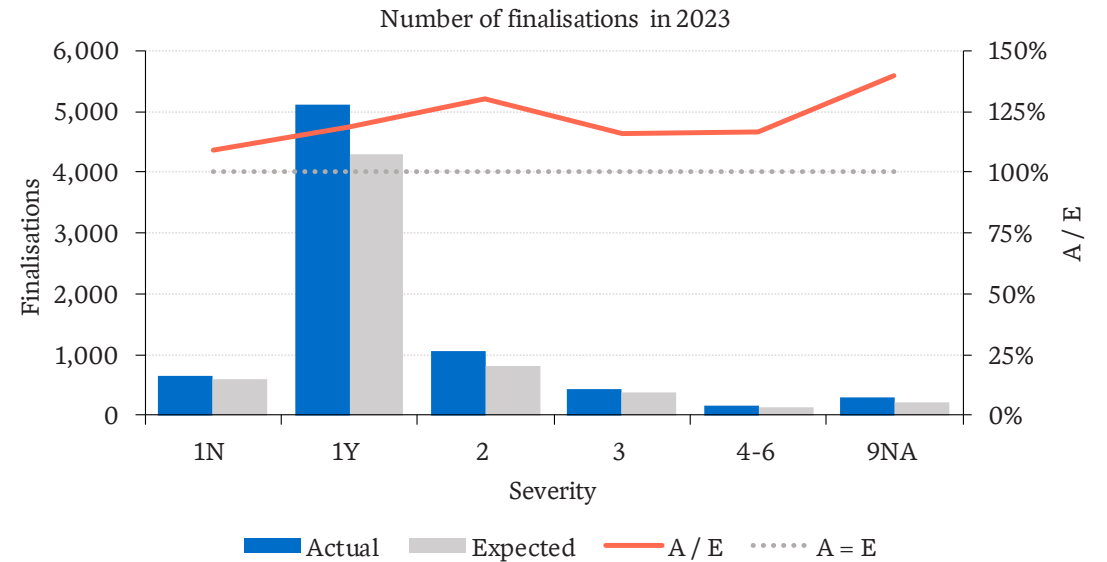
Key risks

Finalisation cost



- The average claim size in 2023 was **2% lower** than forecast at the previous annual review
- Experience for severities 4+ was **favourable**, with ACS across lower severities **in line with** Dec-22 forecasts

Finalisation speed



- The actual number of finalisations YTD has been **20% higher** than expected at Dec-22
- The **speed-up** in finalisations observed over 2022 has continued through 2023

Core claim size – All severities

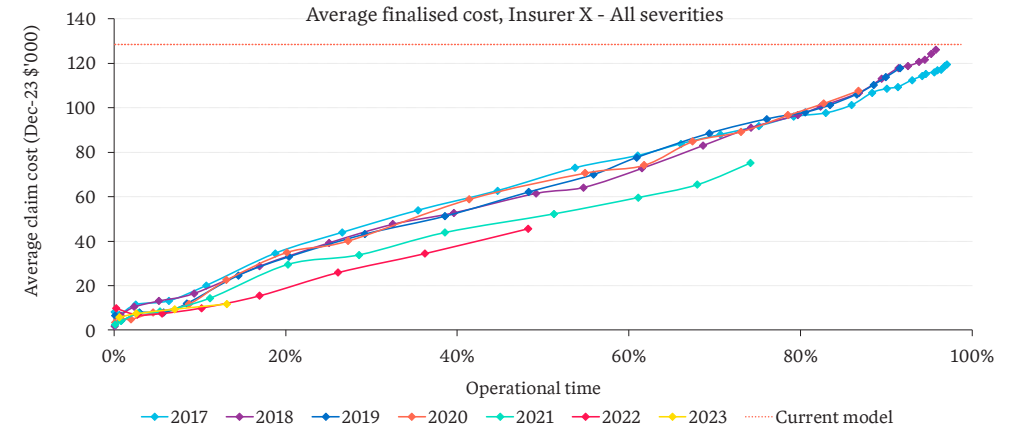
Long-term trends

Experience

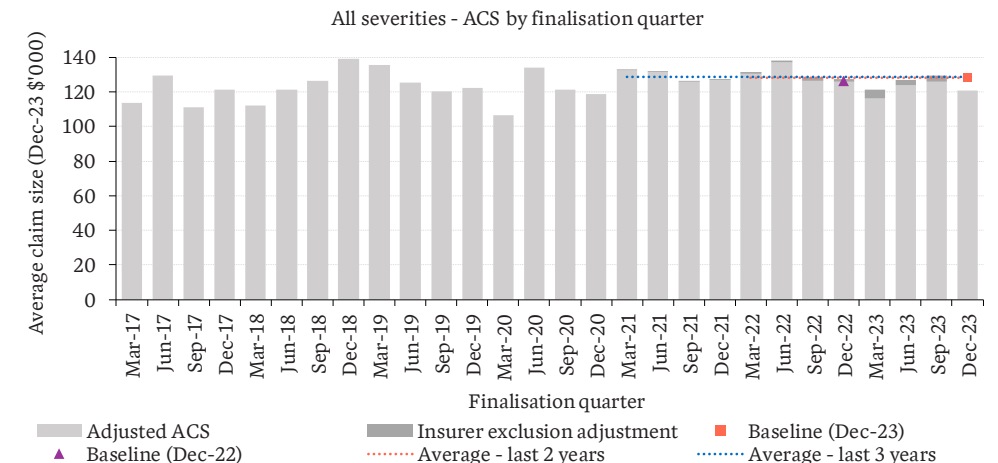
Key risks

- Average claim size assumptions are calibrated to data that **excludes** the **AY2021-2023** finalisation experience of one insurer which is **emerging significantly below** their prior accident years and the experience of the other insurers
 - We are advised this may be due to a **reordering** of finalisations rather than underlying favourable experience

- Our average claim size assumption has **increased 0.7%** after standardising for changes in severity profile
 - This is largely driven by **increases** in ACS assumptions for **Severity 1Y** and **Severity 2**
 - The overall average claim size assumption is similar to the average experience of the last 2 to 3 years



Note: in this chart we have scaled past cost data for the expected cost differences between accident years so that they can be compared to our current ACS selection



Note: The light grey bars show the average finalised size across all insurers, and the dark grey bars show the increase in the average finalised size after excluding the AY2021 to AY2023 experience of Insurer X.

Core claim size has increased overall

- The core claim size assumption has **increased by 1.6%** over the year
- This is due to:
 - An increase of 1.0% from a **strengthened severity profile**
 - An increase of 0.7% increase due to **higher average claim size assumptions**

Severity	Estimated average claim size (Dec-23 \$000s)			Impact on risk premium (\$)
	Baseline as at Dec-22	Baseline as at Dec-23	Change (%)	
1N	11	12	1.0%	+0.0
1Y	95	96	0.6%	+0.5
2	195	201	3.4%	+1.2
3	372	371	-0.3%	-0.1
4	717	685	-4.5%	-0.4
5	982	985	0.3%	+0.0
6	334	326	-2.3%	-0.1
9NA	15	15	-0.2%	-0.0
Total	128	128	0.7%	+1.2
Change in SP	126		1.0%	+1.7
Total	126	128	1.6%	+2.9

Key risks – average claim size

Long-term trends

Experience

Key risks

Psychological claims

The proportion of claims with a psychological injury **increased** between AY2015 and AY2020.

There is a risk of **re-emergence** of these trends.

Superimposed inflation

Long-term superimposed inflation has been **benign**.

Incurred costs

Incurred costs for **AY2018-2020** have emerged **2-6% higher** than our ACS estimates due to one insurer.

Incurred costs for **AY2022+** are much **higher** for another insurer.

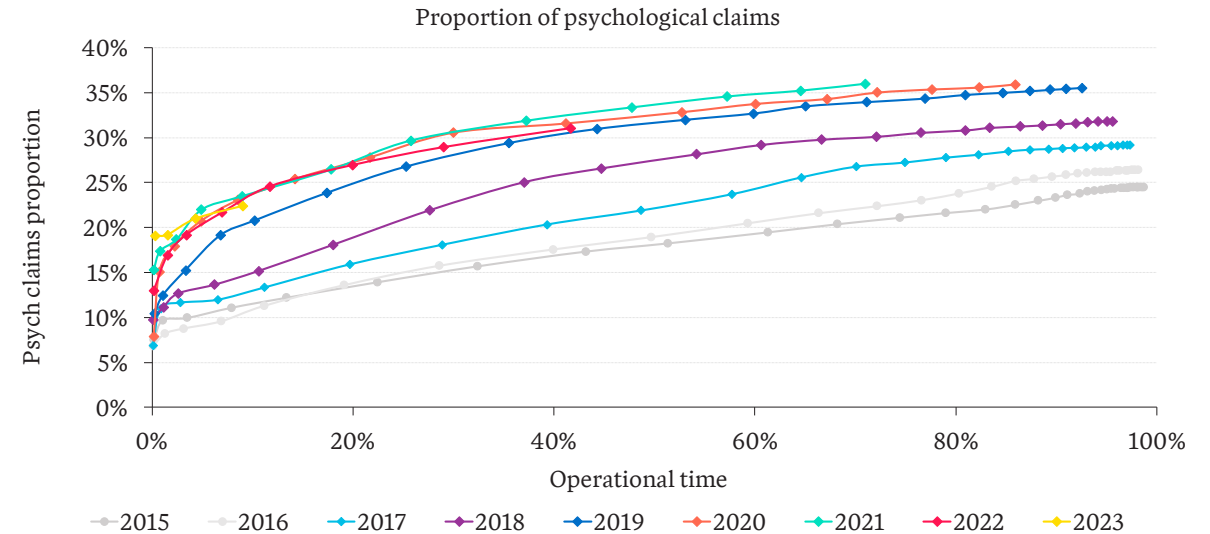
Key risk 1 – Psychological claims

Long-term trends

Experience

Key risks

- From AY2015 to AY2020, there was an **increasing trend** in the proportion of claims with a psychological injury
- The trend appears to have **stabilised** from AY2020-AY2021 onwards
- Claims with psychological injury typically **finalise for costs about three times those without** as these claims are typically more severe and complex
- Key Question – what is the cost impact of the additional psychological claims?
 - Is the increase in psychological injury because there are more complex and severe claims? If so, the cost impact would be large.
 - Is the increase in psychological injury because less severe and less complex claims are more likely to have psychological injury? In this case the cost impact would be small, limited to the additional treatment costs, mainly for anxiety.



Key risk 1 – Psychological claims (cont)

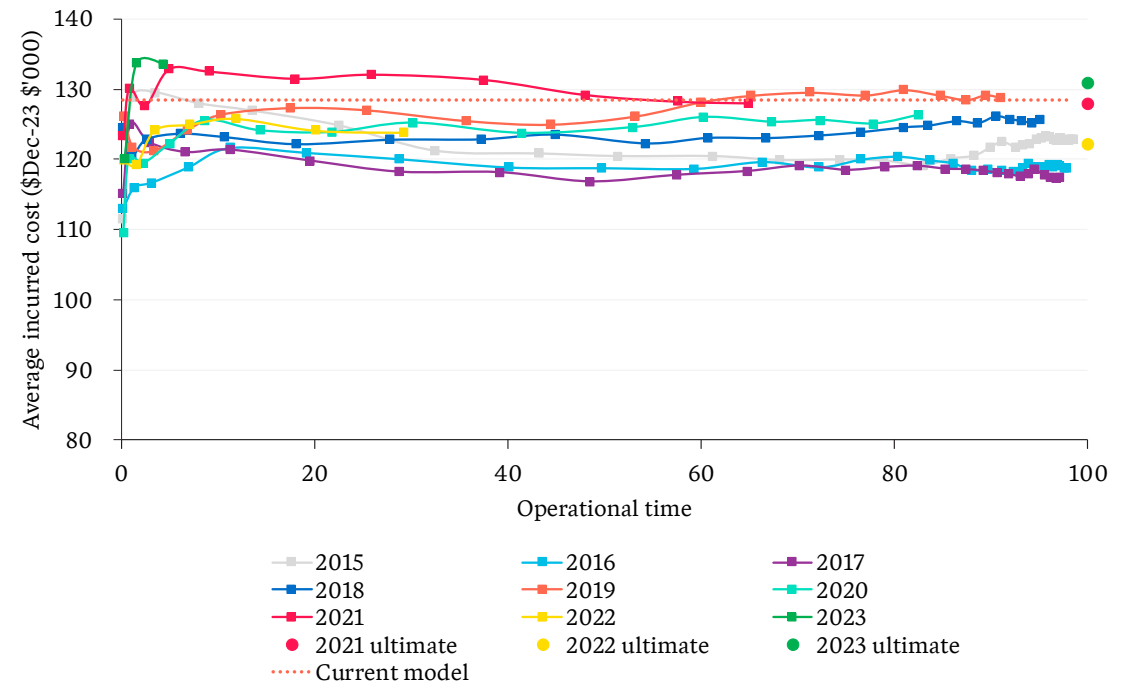
Long-term trends

Experience

Key risks

- To help answer these questions we are building an independent model to estimate incurred cost, which is responsive to changes in [claims mix](#) available on the PIR, including psychological claims
- [Preliminary findings from model](#)
 - Cost impact of additional psychological claims small – up to 3%.
 - Preliminary estimates of ACS for the most recent three years from this model are similar to the estimates from our payments-based model
 - Don't expect additional cost impact from psychological claims – unless the accident year trend re-emerges
- We will continue to monitor trends in psychological claims as a re-emergence of the increasing trend may warrant a response

Scheme incurred cost - model estimates



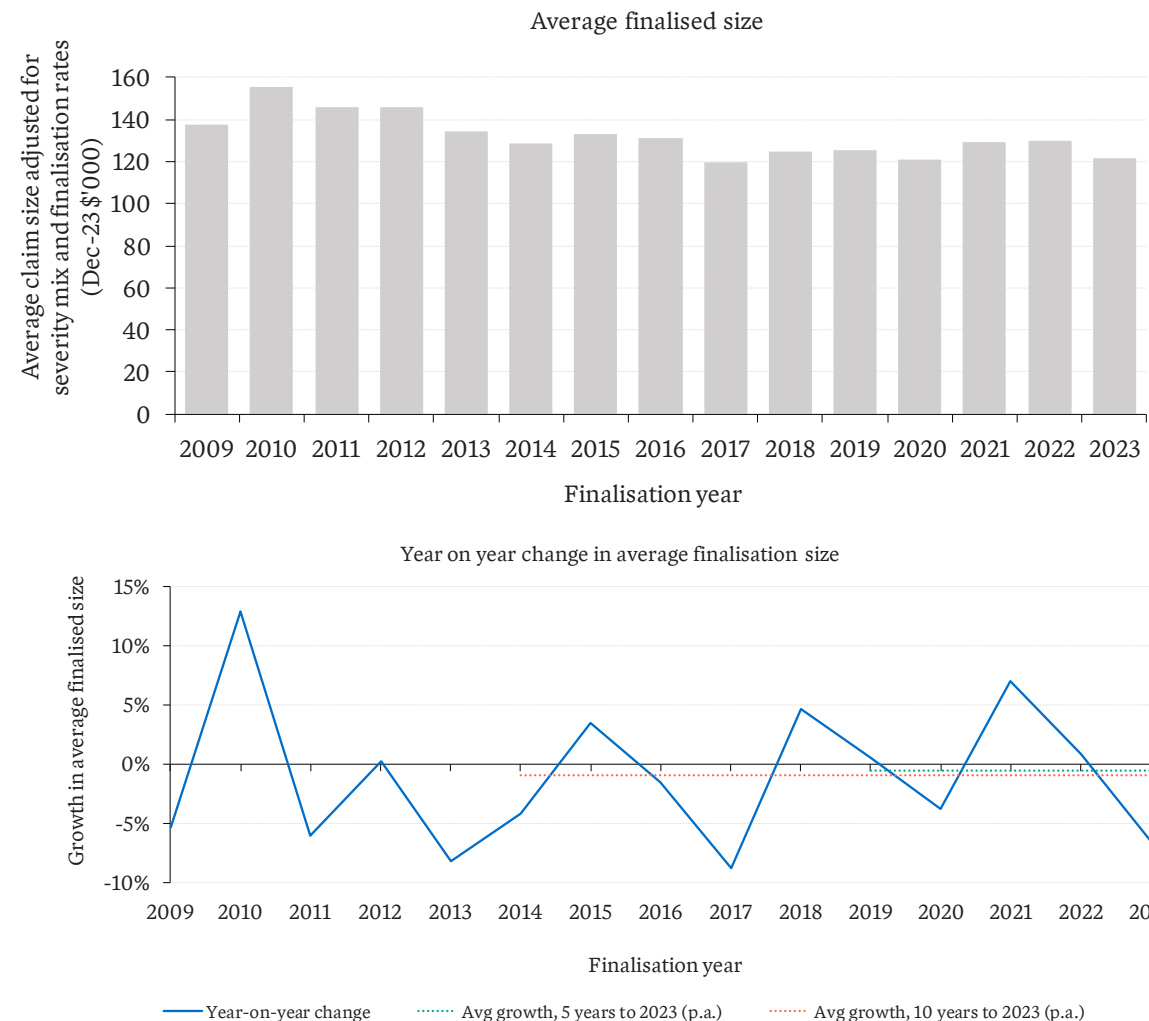
Key risk 2 - Superimposed inflation

Long-term trends

Experience

Key risks

- When estimating superimposed inflation, we **standardise the average claim size for modelled factors**
 - The top chart shows ACS after controlling for **severity profile** and **claims processing speed** (operational time)
 - The bottom chart shows the **year-on-year growth** in standardised ACS
- Over the **10-year period to 2023** the average claim size – standardised for severity mix & operational time – has **reduced** from \$134k to \$123k, implying overall **negative superimposed inflation** over this period (-1.0% p.a.)
 - Similarly, over the **5-year period to 2023** superimposed inflation remains slightly **negative**



Isolating adjustments for modelled factors in ACS

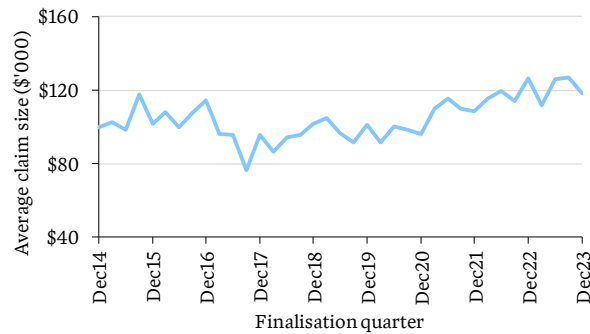
Long-term trends

Experience

Key risks

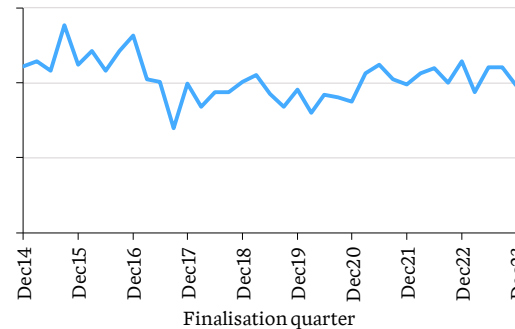
- We adjust the raw average claim size by finalisation quarter to allow for *modelled factors*, with the residual trend providing a basis towards understanding trends in superimposed inflation
- The charts below isolate the effect of each adjustment

1 Raw average claim size



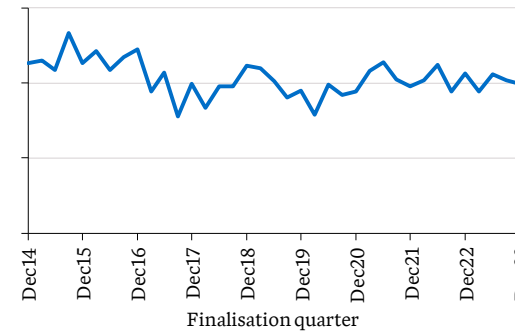
Average claim size in nominal values, unadjusted.

2 Inflated to Dec-23 values



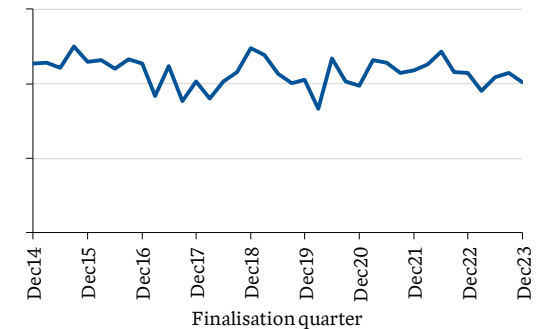
Inflation adjustment – average claim size stated in current values.

3 Adjust for operational time



Exclude the effect on average claim size of the differing mix of operational time in claims finalising each quarter.

4 Adjust for severity profile



Standardise all finalisation quarters to the current selected severity profile.

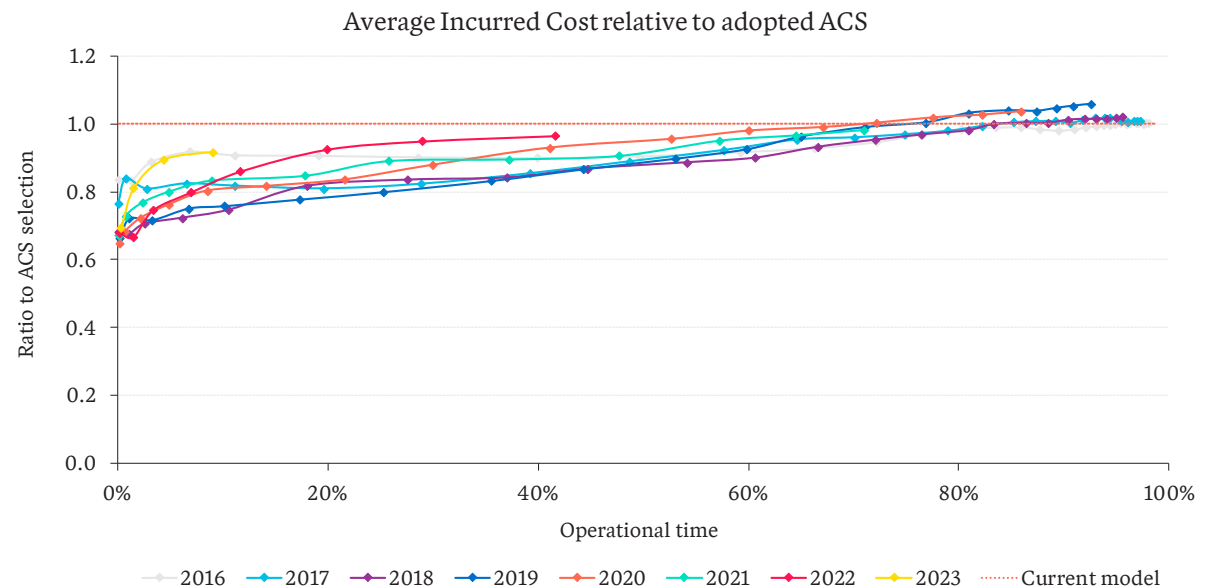
Key risk 3 – High insurer incurred costs

Long-term trends

Experience

Key risks

- Incurred costs for an accident year are the sum of:
 - Payments to date in that accident year
 - Case estimates on open claims for the accident year
- At first glance, trends in incurred costs are concerning
 - Incurred costs for accident years 2018 to 2020 have emerged 2% to 6% higher than our current estimates of ACS for those accident years
 - Incurred costs for AY2022 and AY2023 are higher than incurred costs from earlier years at the same stage of development
- However, caution is needed when using insurer case estimates



Note: in these charts we have scaled past cost data for the expected cost differences between accident years so that they can be compared to our current ACS selection

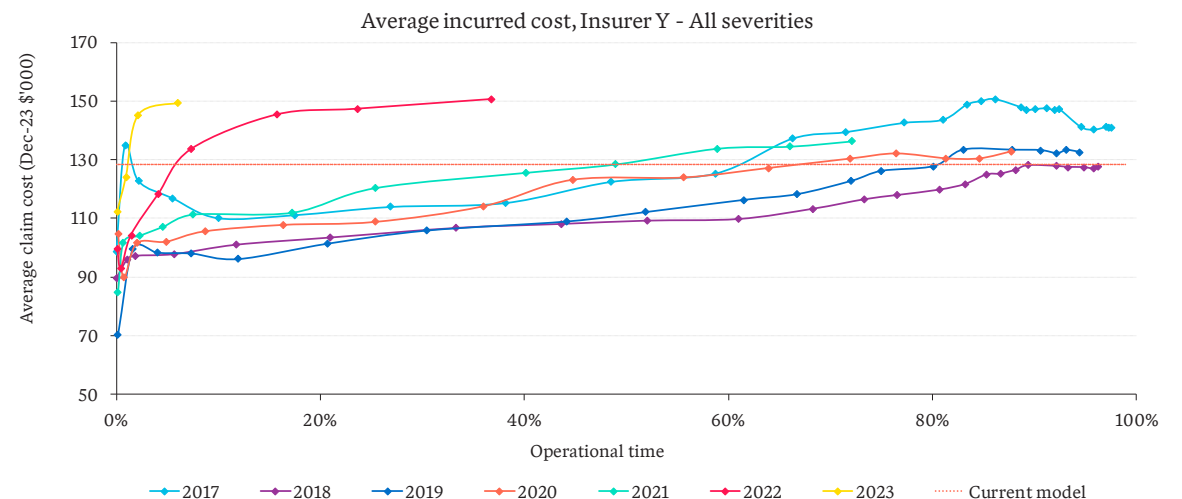
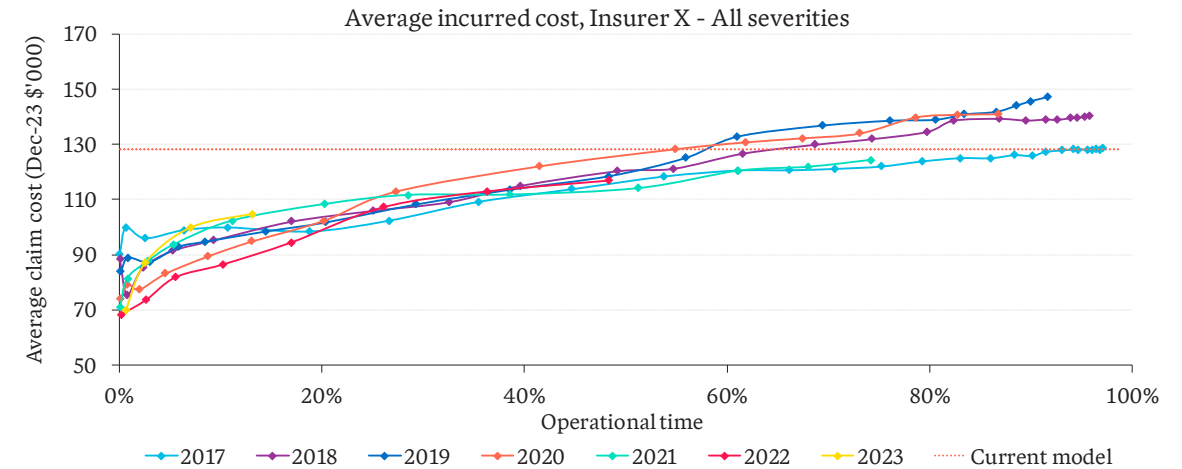
Key risk 3 – High insurer incurred costs

Long-term trends

Experience

Key risks

- Concerning trends in incurred costs isolated to two insurers
- **Insurer X:** incurred costs for **AY2018-AY2020** are materially **higher** than the insurer’s experience for other accident years, and the experience of other insurers
 - A result of claims management issues that have since been rectified
- **Insurer Y:** incurred costs for **AY2022 and AY2023** are materially **higher** than prior years and other insurers, and **not mirrored** in the finalisation experience
 - Claims mix analysis suggests the higher AY2022-2023 case estimates **are not explained by worsening claims mix**
- These observations have resulted in little weight being given to this incurred loss experience



Note: in these charts we have scaled past cost data for the expected cost differences between accident years so that they can be compared to our current ACS selection

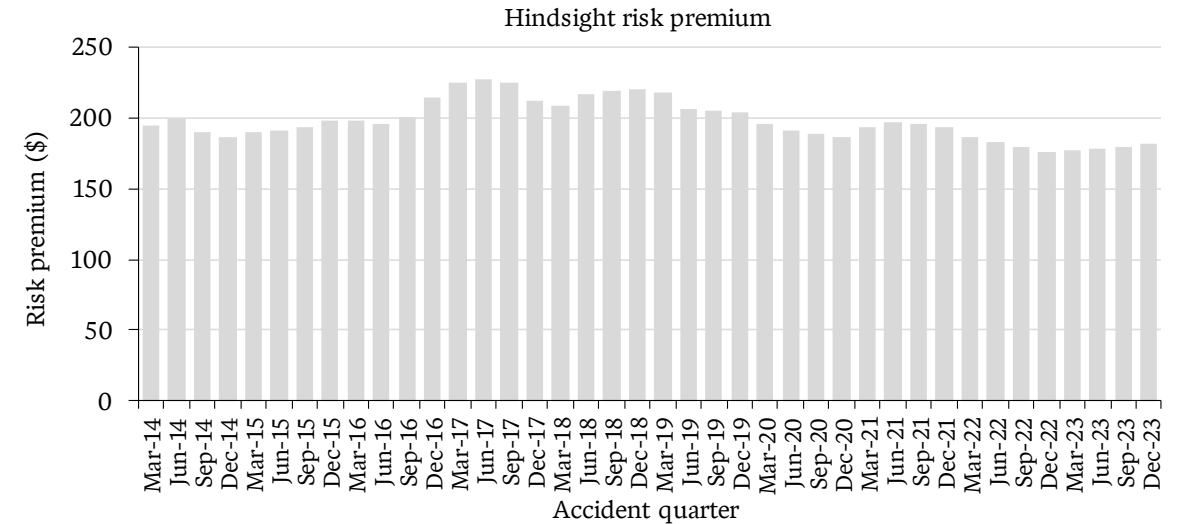
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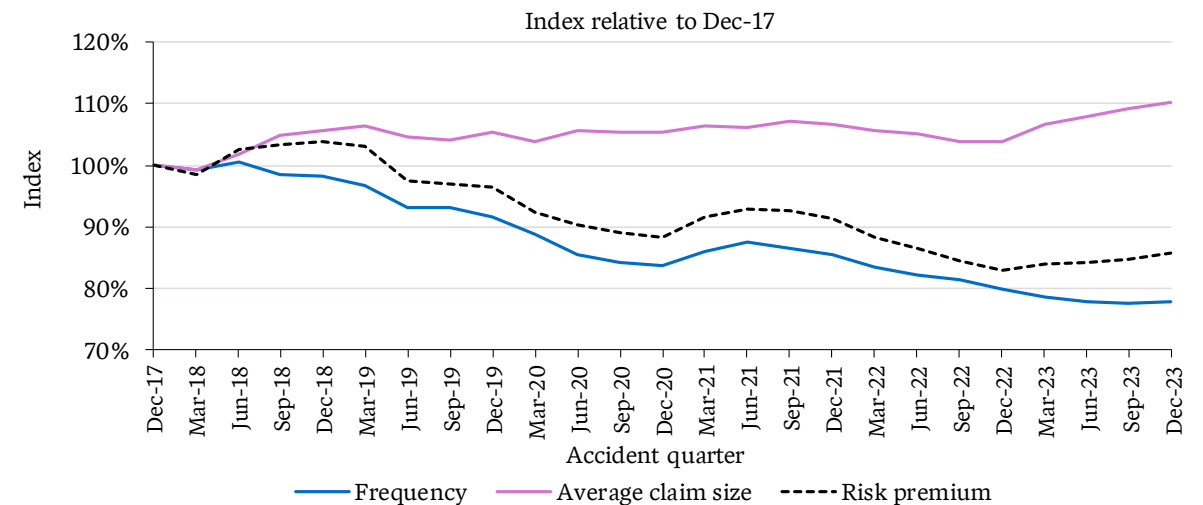
Summary

Core risk premium

- Hindsight risk premium decreased 14% over 2017-2023
 - Driven by claim frequency (blue line in bottom chart), which decreased 22% over the same period
 - Partially offset by a 10% increase in average claim size (purple line in bottom chart), mostly a result of a strengthening severity profile



Note: The hindsight risk premium series reflects a 4-quarter moving average.



Risk premium

Previous annual review
Dec-22

\$190.08

TF Advised

Frequency: 0.167%
ACS: \$113,820

This annual review
Dec-23

\$190.37

TF Advised

Frequency: 0.159%
ACS: \$119,730

Risk premium components

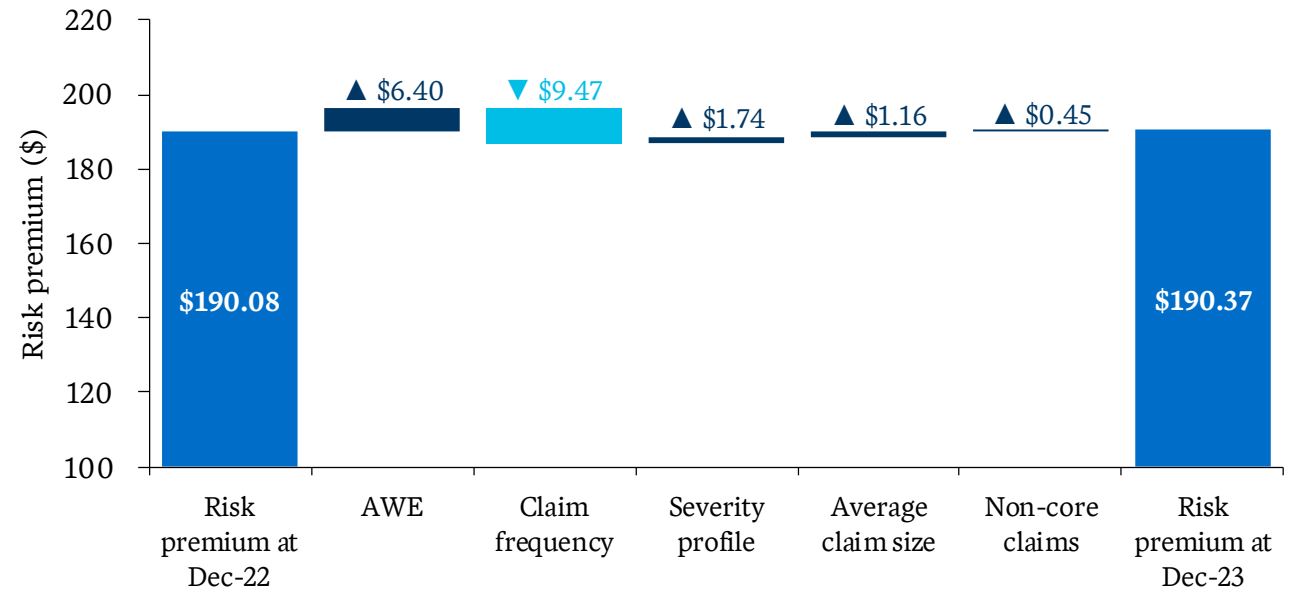
Risk premium components	Claim frequency %	Average claim size \$	Risk premium \$
Core claims	0.1400%	128,390	179.75
NSW accident postcode claims	0.0056%	155,924	8.73
Interstate sharing claims	0.0012%	72,669	0.87
Workers' compensation recovery claims	0.0120%	8,527	1.02
Estimated risk premium at 31 Dec 2023	0.1590%	119,730	\$190.37

 **\$0.29 increase** from Dec-22 estimate

Change since the Dec-22 review

The estimated risk premium at Dec-23 of **\$190.37** is **\$0.29 higher** than our estimate at Dec-22

- **AWE inflation** results in an increase of \$6.40
- The **core claim frequency** assumption has reduced by 5%, resulting in a decrease of \$9.47
- The **average claim size** assumption has increased due to the combined effect of:
 - A strengthened severity profile (increase of \$1.74)
 - Higher core ACS assumptions (increase of \$1.16)
- Changes in **non-core claims** result in an increase of \$0.45, mostly due to:
 - Higher frequency and ACS assumptions for NSW accident postcode claims



A



Appendix

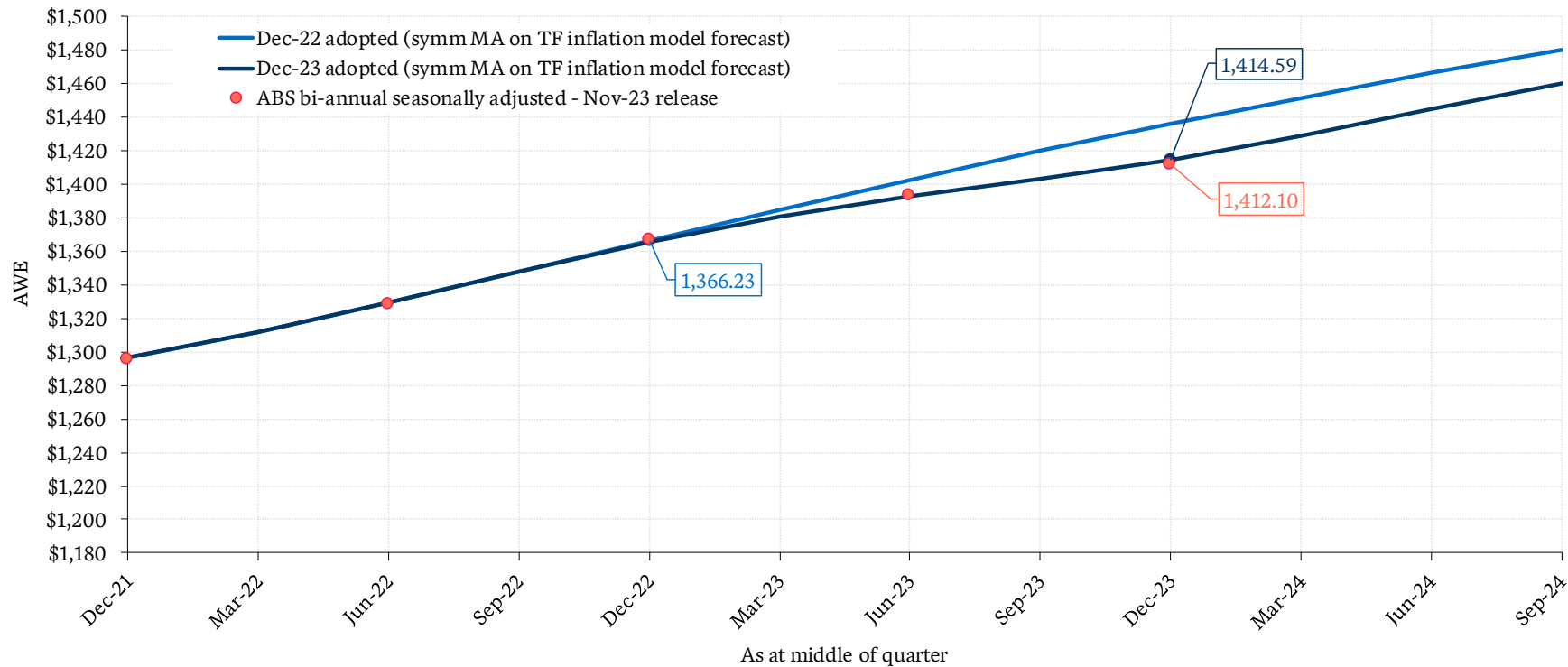
A1



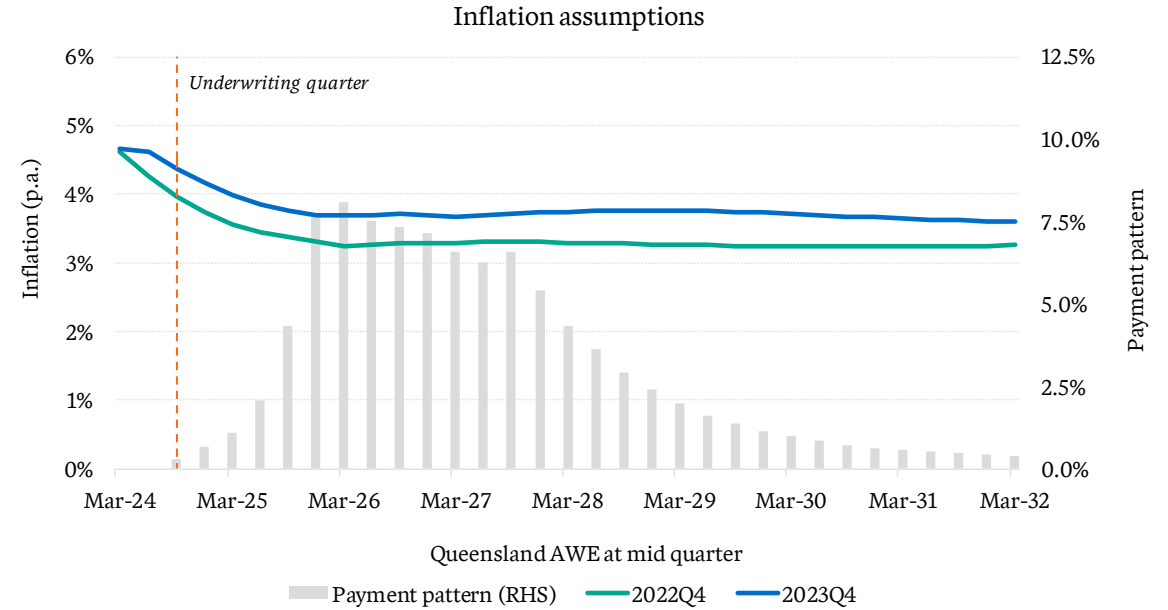
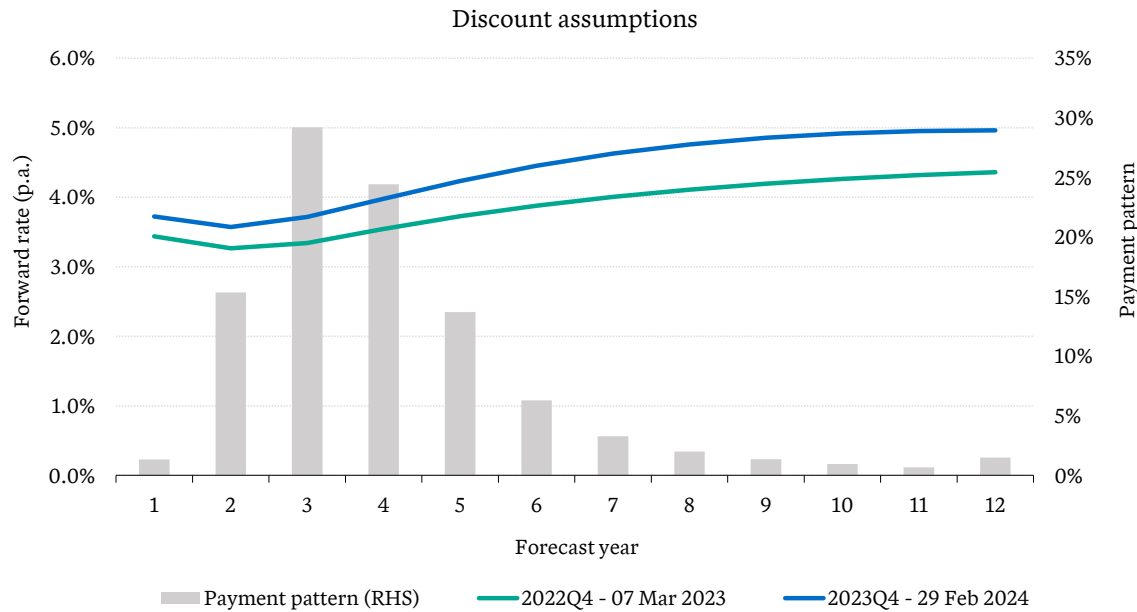
Economic parameters

Wage inflation to 31 December 2023

- We have applied the future inflation rates forecast by the TF inflation model to the AWE result released by the ABS in Feb-24
- The ABS release results in an AWE increase of 3.37% from the 31 December 2022 to 31 December 2023



Discount rates and future wage inflation



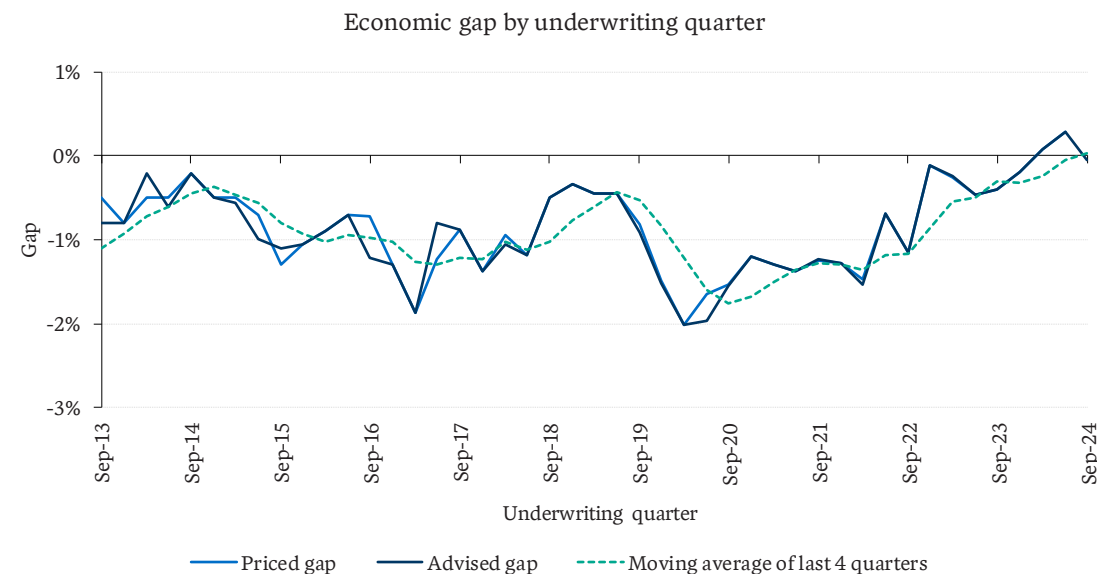
- Discount rates have been updated as at 29 February 2024
- Discount rate projections have increased in line with increases in yields on nominal bonds

- Inflation projections are higher than projected at Dec-22
- Increases are in line with the increase observed in yield on nominal bonds, with the updated projections also reflecting slight increases to assumed long-term CPI and AWE rates

Economic gap

- The gap has **increased** from -0.40% at Dec-22 to **-0.04%** at this review

Review	Economic assumption (%p.a.)		
	Discount rate	Wage inflation	Economic gap
Current	3.83%	3.87%	-0.04%
Last quarter	4.11%	3.82%	0.29%
Last annual review	3.45%	3.85%	-0.40%
Change since:			
Last quarter	-0.28%	0.05%	-0.34%
Last annual review	0.37%	0.02%	0.35%



A2



Risk premium uncertainties

Key uncertainties associated with the risk premium estimate

Risk premium scenarios	Impact on estimated risk premium	
Business as usual variation		
Estimated risk premium - 50% confidence interval	+\$14.3	-\$14.3
Key Uncertainties		
Frequency/SP scenarios		
Frequency in line with experience over Sep-21 to Jun-22, with increases for Sev1N, 1Y and 2 only		+\$8.8
Increase in proportion of Severity 1 direct claims, shifting from Sev1Y to Sev1N, incl. illustrative ACS impact		-\$0.6
Severity 3+ frequency develops in line with AY2021		+\$3.3
Severity 3+ frequency develops in line with AY2022		-\$3.9
Average claim size scenarios		
Severity 1Y ACS emerges in line with the finalisation experience over the last 1 year		-\$2.9
Severity 2 ACS emerges in line with the finalisation experience over the last 3 years		+\$0.7
ACS calibrated to data that includes Insurer X AY2021 - AY2023 experience		-\$1.9

**Business as usual variation* represents the historical level of uncertainty in risk premium estimates. The *key uncertainties* show how the risk premium estimate would change if we made alternative assumptions. The estimated risk premium impacts across *business as usual* and *key uncertainty scenarios* are not additive.



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