

Motor Accident Insurance Commission

Annual review of premium components as at 31 December 2017

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7 March 2018



Summary

Changes at a glance



Core claim frequency

- » Notifications for 2017 were 11% higher than baseline expectations a year ago
- » We have **increased advised frequency** by **11%** from 0.172% last year to 0.191%



Claim severity profile

- » **Substantial weakening** in severity profile
- » Trends in lower severities continue. Continuing low reports and transitions have led to a step down in the expected frequency of severity 4 and 5 claims
- » This has also led us to revise the NIISQ offset downwards



Core average claim size

- » Average finalised claim size was **8% lower than forecast** for the year, and 13% lower for severity 1Y claims
- » We've **decreased** core average **claim size by 5%** in real terms over the year plus the weakening severity profile
- » There remains substantial uncertainty. Many lead indicators indicate continuing reduction



Economic assumptions

- » The gap increased from -1.18% p.a. **at the last quarter** to -0.50% p.a.

Annual reconciliation

Change in our advised Risk Premium from last annual review

- » Recent experience has shown an increase in claim frequency, but at the same time a continued decrease in average claim size

	Risk premium (\$)
Risk premium at 31 Dec 2016	195.23
Change due to:	
AWE	+3.67
Overall frequency	+21.60
Severity Profile	-9.30
Claim size	-11.64
WC&IS	+0.22
Gross change before offset	+4.54
Risk premium at 31 Dec 2017	199.77
AWE on NIISQ offset	-0.26
NIISQ offset revision	+2.65
Net change to insurers	+6.94

11% increase in frequency, BUT

Fewer high severity claims, and

Claims cost less, esp. sev 1 and 4

Fewer high severity claims means the effect of the NIISQ is smaller, so a smaller amount gets deducted

Notes :

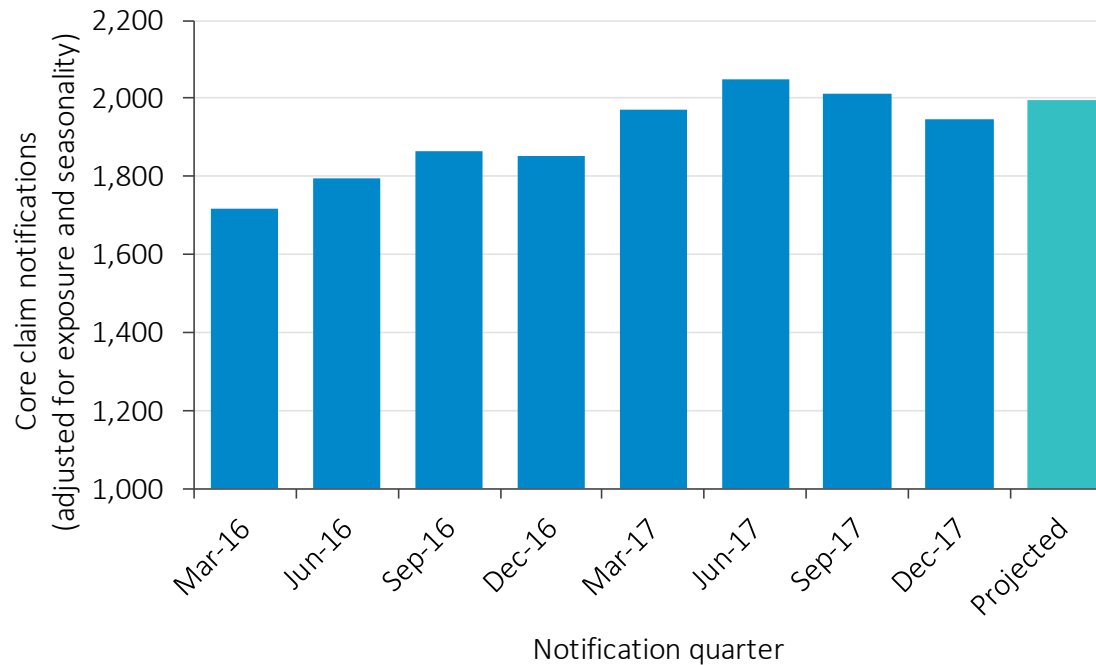
1. Risk premium **includes** WC/IS, **excludes** the NIISQ adjustment

Core claim frequency

Core = excl. Workers compensation and Interstate sharing claims

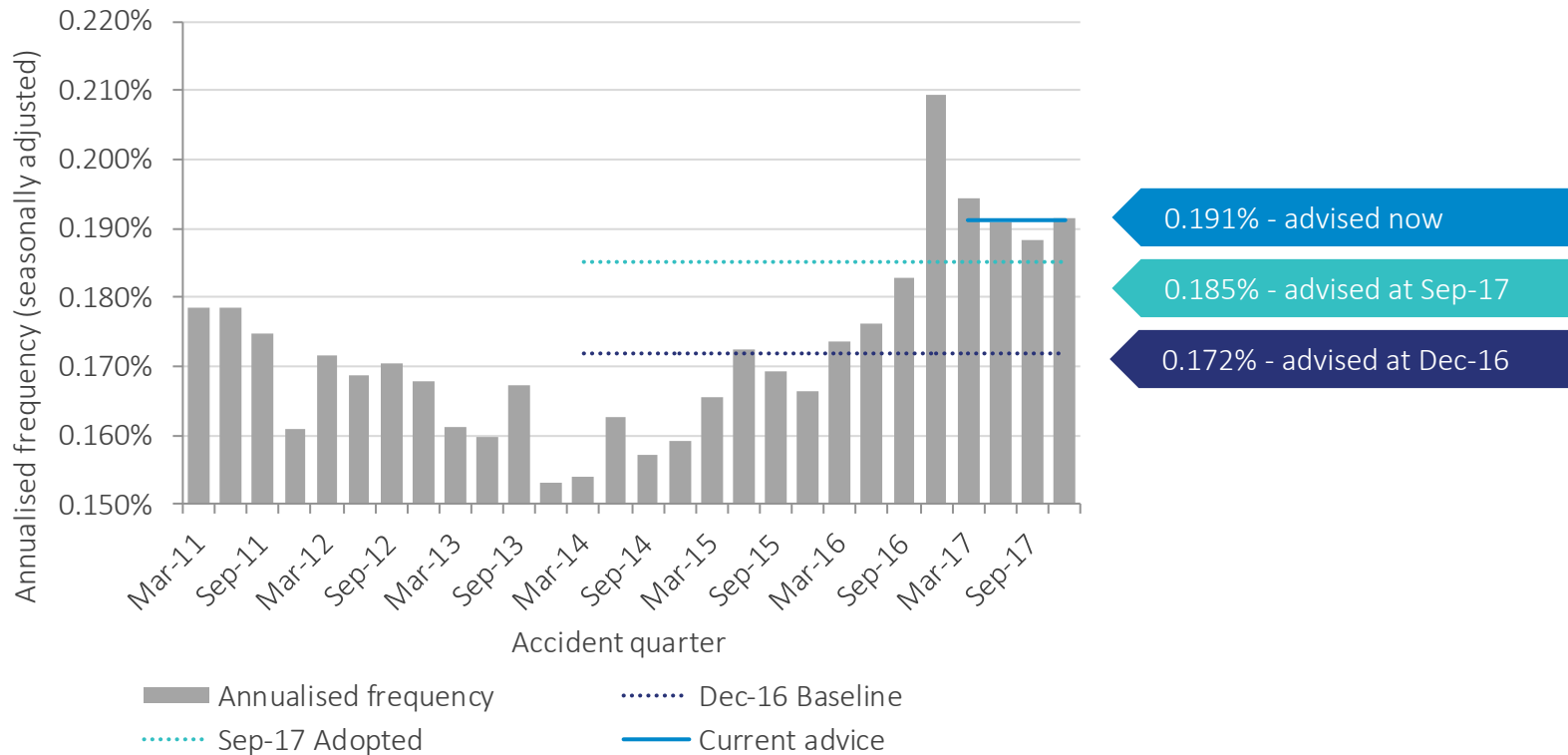
Notification projection

- » Claim notifications in 2017 were consistently higher than 2016 but appear to have stabilised and are arguably decreasing
- » We have calibrated our projection of notifications to the average of 2017



Frequency emergence

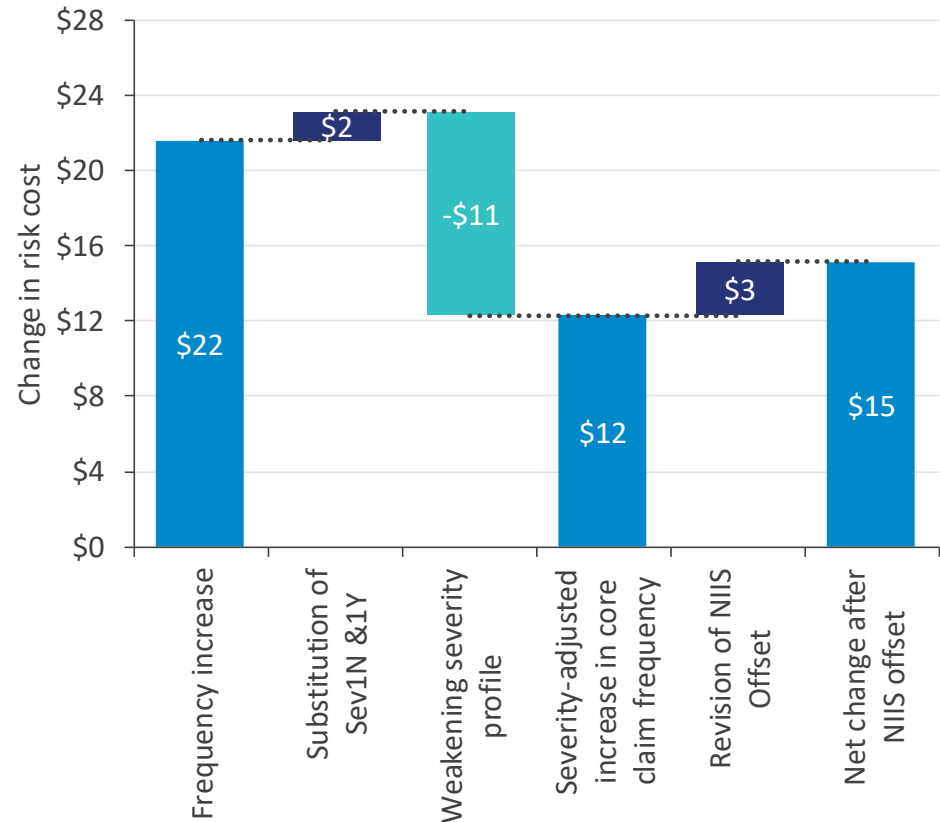
- » We now advise a forward looking frequency based on the average for 2017 i.e. **0.191%**. This is an **11% increase** over the 0.172% we advised as at Dec-16



Severity profile

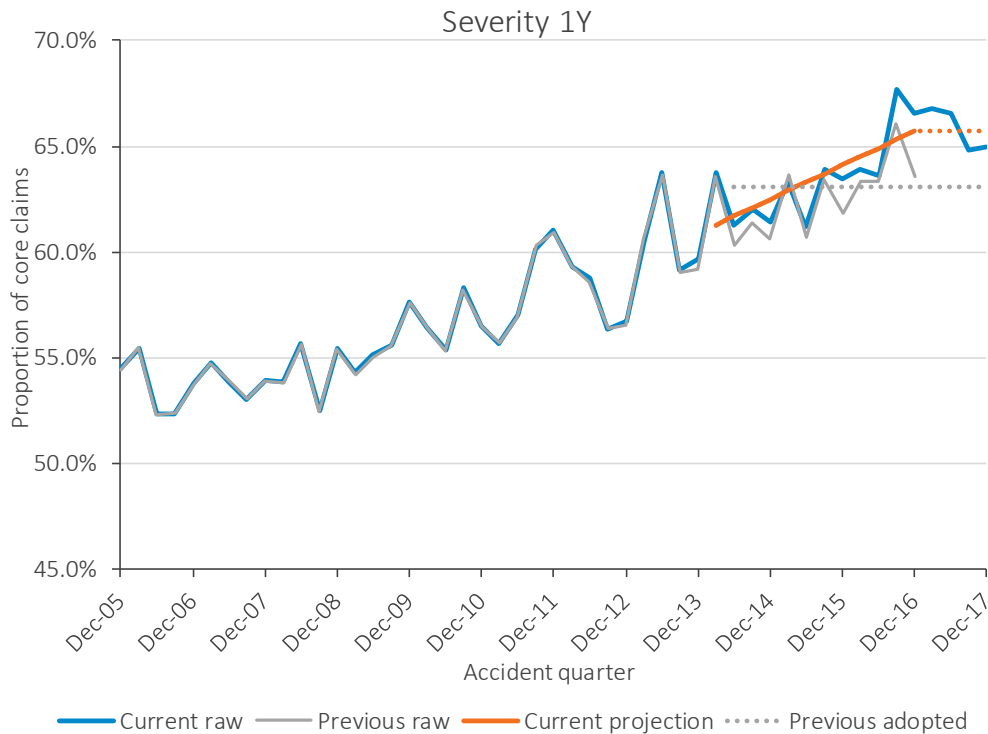
Severity specific claim frequency model

- » The 11% increase in core claim frequency increases the estimated risk premium by \$22, but the changes in severity profile offset this increase by \$9 to give an increase in the headline risk premium of **\$12**
- » There are two changes in the severity profile:
 - Increase in legal representation for severity 1 claims
 - A reduction in the proportions of severities 2-5
- » Since there expected to be fewer severity 4 and 5 claims, the effect of the NIISQ on the headline risk premium is reduced. We have reduced the NIIS offset, giving a **net increase in the risk premium retained by insurers of \$15** due to frequency and severity profile changes



Increase in legal representation of severity 1 claims

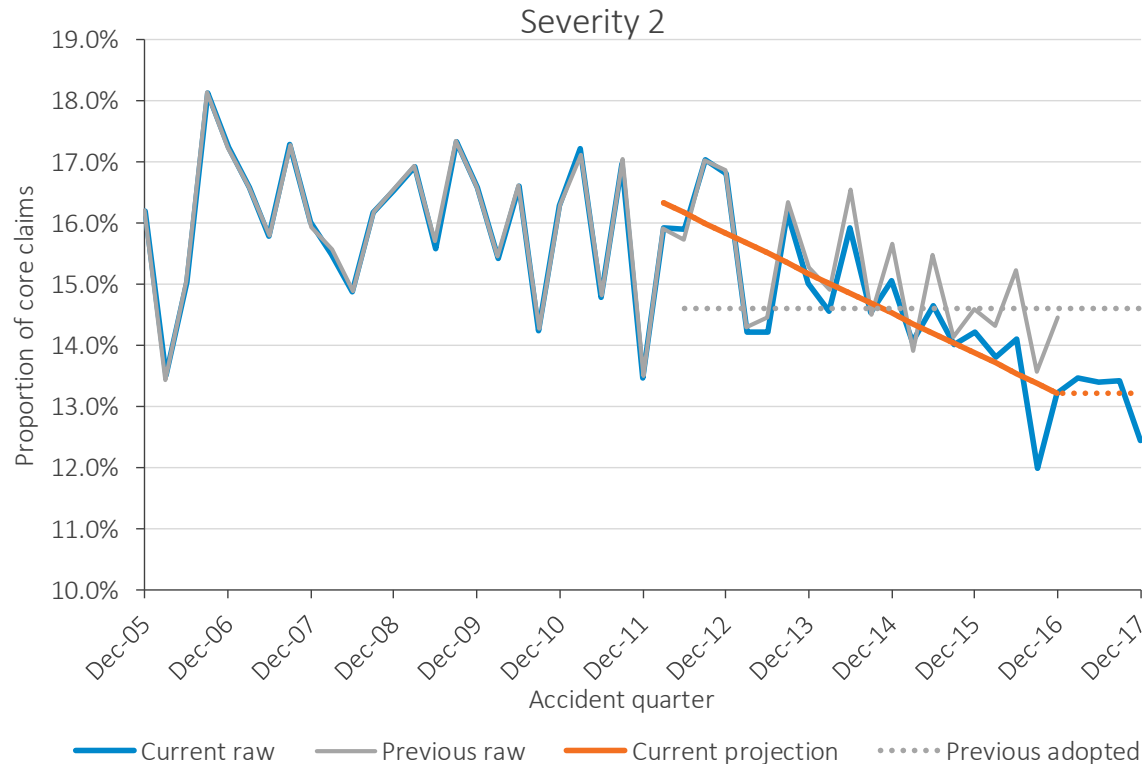
- » The proportion of claims that are severity 1 claims and legally represented (“1Y”) was previously set to incorporate the longstanding trend up to Dec-15
- » Evidence indicates a continuation of the increase in 1Y proportion since then
 - For the past year, the increase in proportion of severity 1Y claims is due mostly to the decrease in higher severities
 - The remainder is due to the substitution of 1N claims to 1Y. We estimate the effect of this increase to be **\$2**



Weakening severity profile

Severity 2

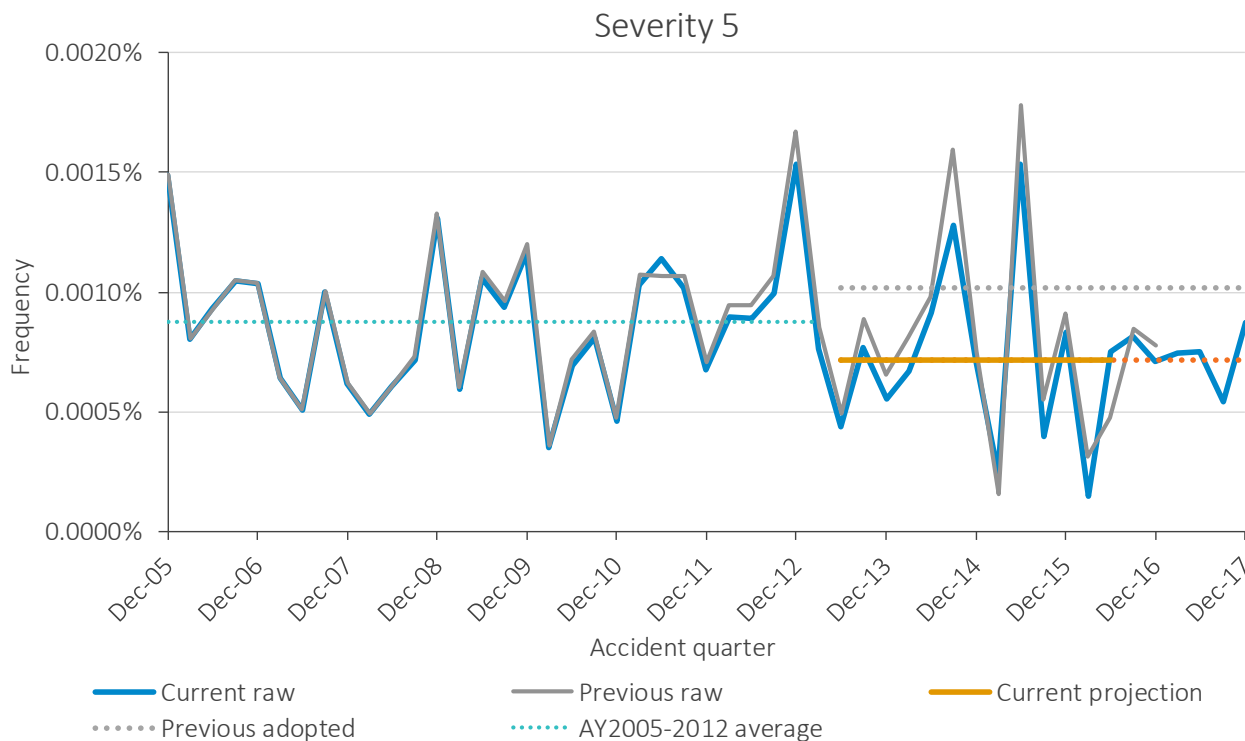
- » The previous severity profile was set on trends up to Dec-15
- » Fewer notifications and transitions have changed our view of the emerging proportion of severity 2 claims
- » Projecting the new (steeper) trend to Dec-16 gives a reduction in risk premium of \$3



Weakening severity profile

Severity 5

- » The previous severity 5 proportion was based on a lower frequency. When the overall frequency increased, the implicit assumption was that the severity 5 frequency would increase also. It hasn't
- » The previous severity 5 proportion was set on based on a long term average. There appears to have been a drop in severity 5 frequency for AY2013 onwards
- » Incorporating both of these leads to a reduction in risk premium of **\$5**
- » We foreshadowed a decrease of about this size in our presentation last year

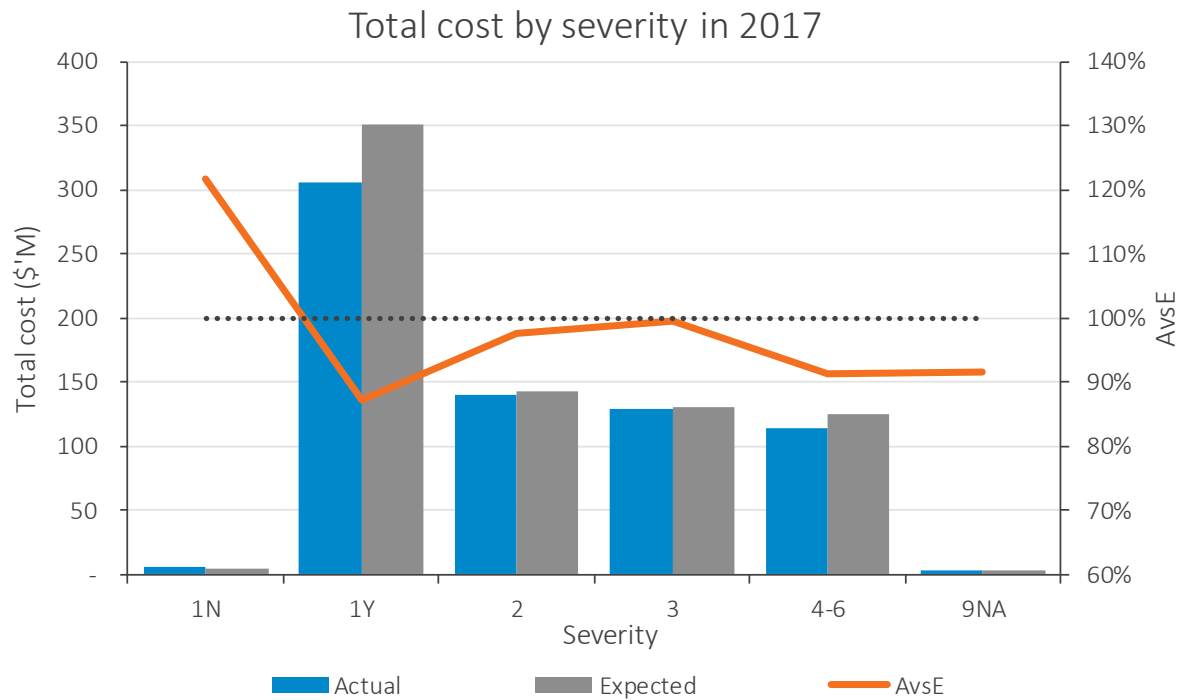


Claim size

Total core claim cost

Compared with Dec-16 model

- » Actual cost for 2017 across all severities is 8% lower than expected at Dec-16 driven by lower claim costs in severity 1Y
 - Actual cost is 13% lower than expected in severity 1Y



Average claim size by severity

Changes since Dec-16

- » We have made the following revisions to average claim size (in current values) as advised at Dec-16

Estimated average claim size in 31 December 2017 \$'s

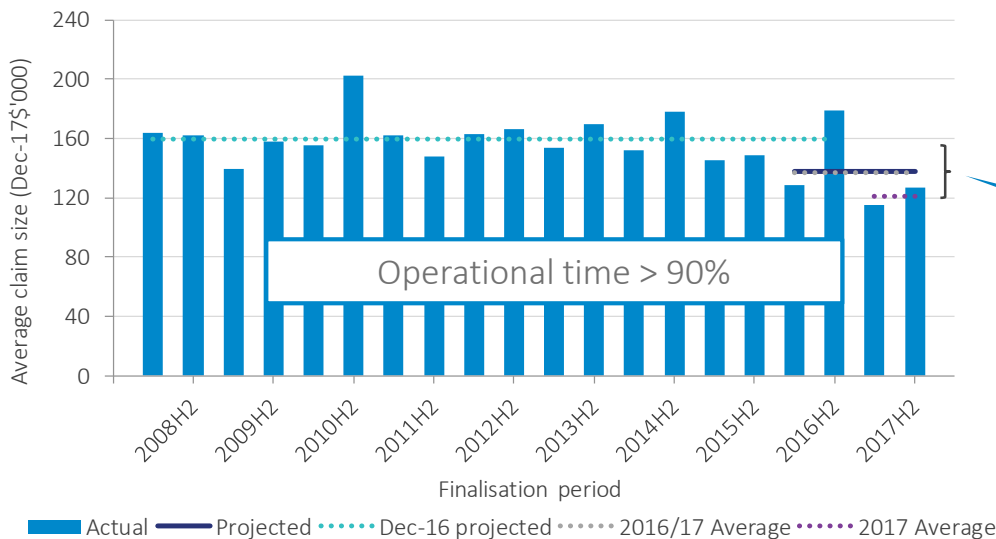
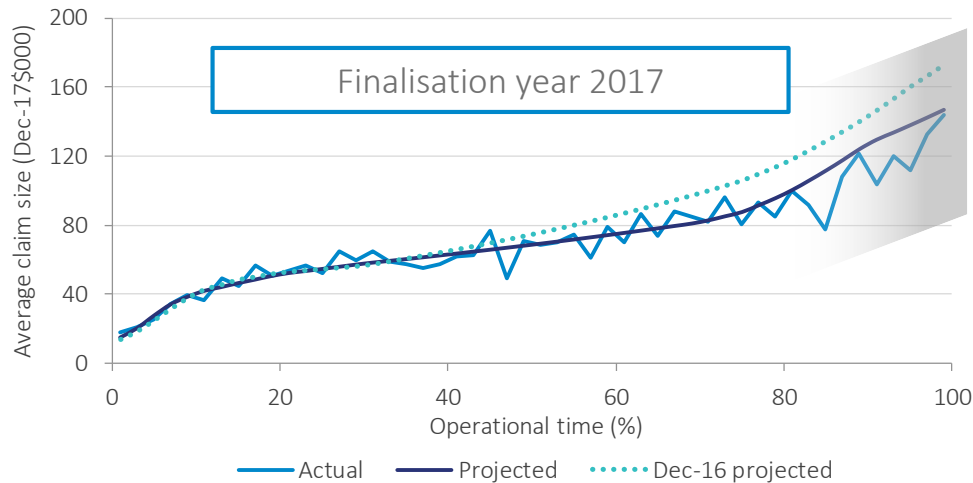
Severity	Recommended as at Dec-16	Recommended as at Dec-17	Change (%)	Change in risk premium (\$)
1N	6,053	6,689	+10.5%	+0.11
1Y	82,384	73,965	-10.2%	-10.55
2	147,116	144,310	-1.9%	-0.71
3	323,420	324,241	+0.3%	+0.09
4	869,446	783,598	-9.9%	-1.36
5	1,738,225	1,798,508	+3.5%	+0.43
6	207,577	222,952	+7.4%	+0.32
9NA	16,902	17,228	+1.9%	+0.02
All	113,684	102,720	-9.6%	-11.64

There has been continued favourable experience in severity 1Y

Includes the change in severity profile

Claim size model – severity 1Y

- » We have increased the responsiveness of the severity 1Y model at high operational times

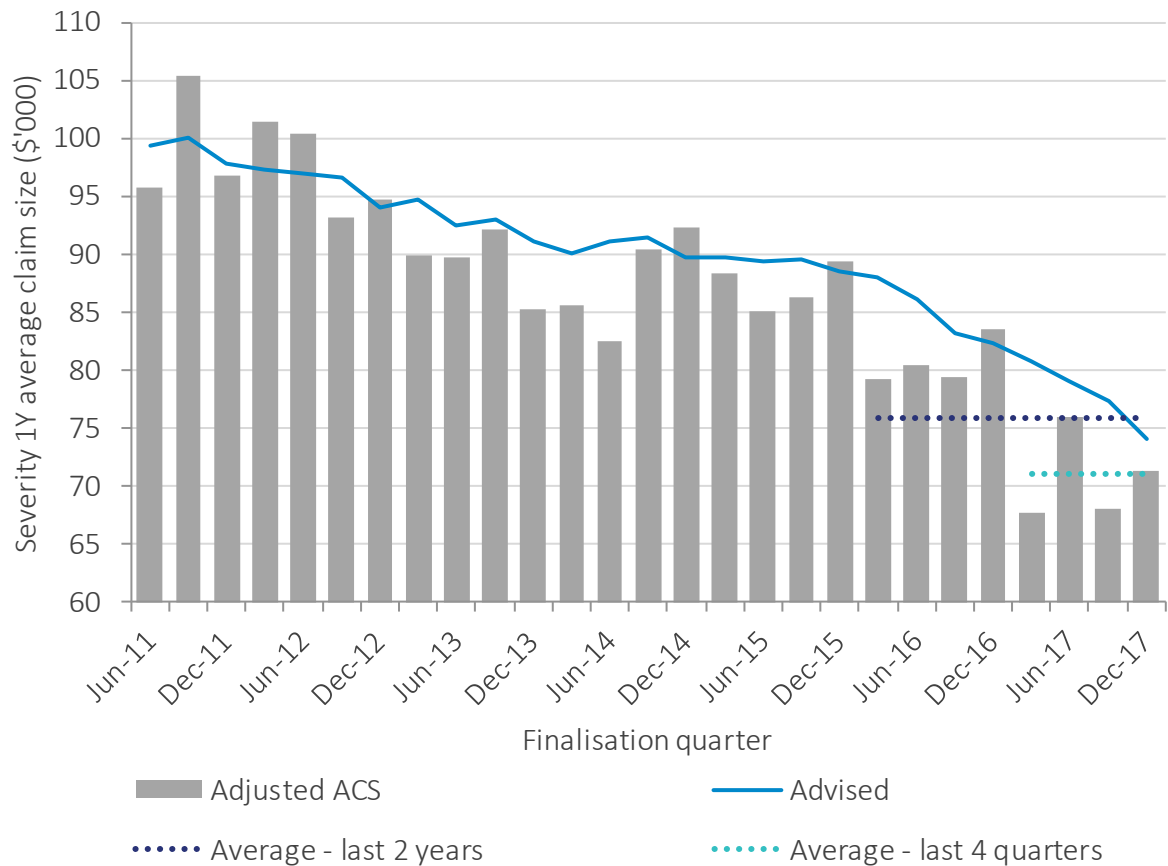


- » For claims finalised at low operational time, recent claims experience was recognised as the model adapted to experience
- » For claims finalised at operational time between 75% and 100%, the model now gradually phases to a 2-year average (previously much longer)
- » This is a partial recognition of the recent low experience for high operational time

A 24% drop, <1% likely to be due to chance

Severity 1Y average claim size

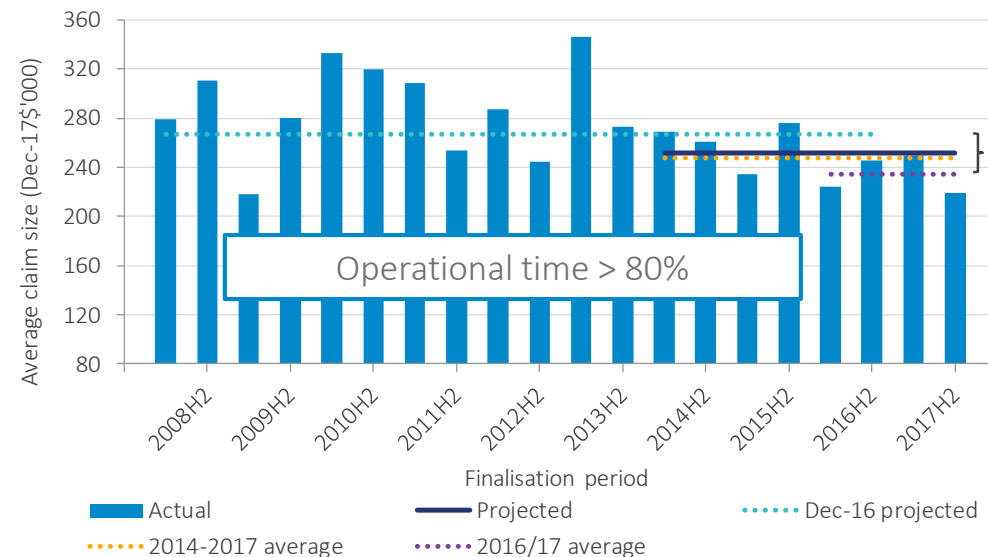
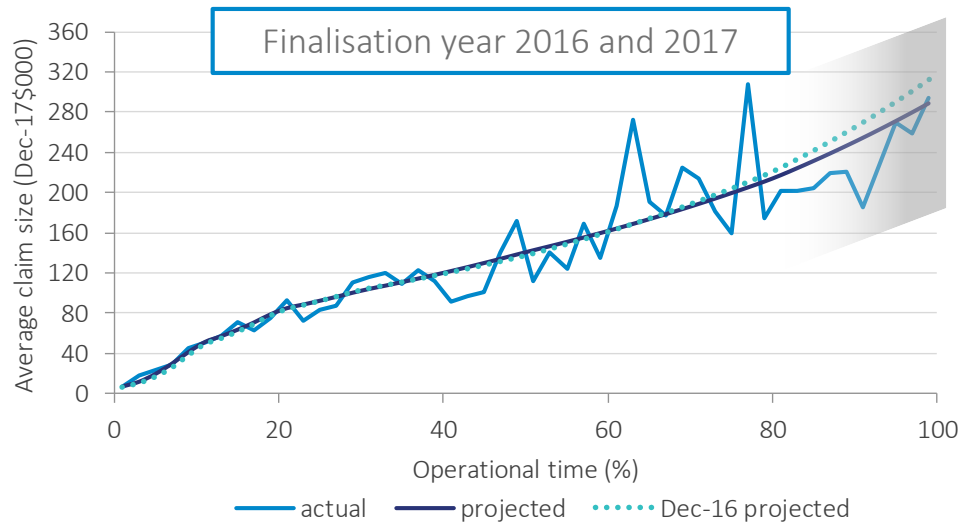
» The latest drop is a continuation of the longstanding trend



Fully adopting 2017 finalisation experience will reduce the risk premium by a further \$4

Claim size model – severity 2

- » We have made a similar increase to the responsiveness of the severity 2 model



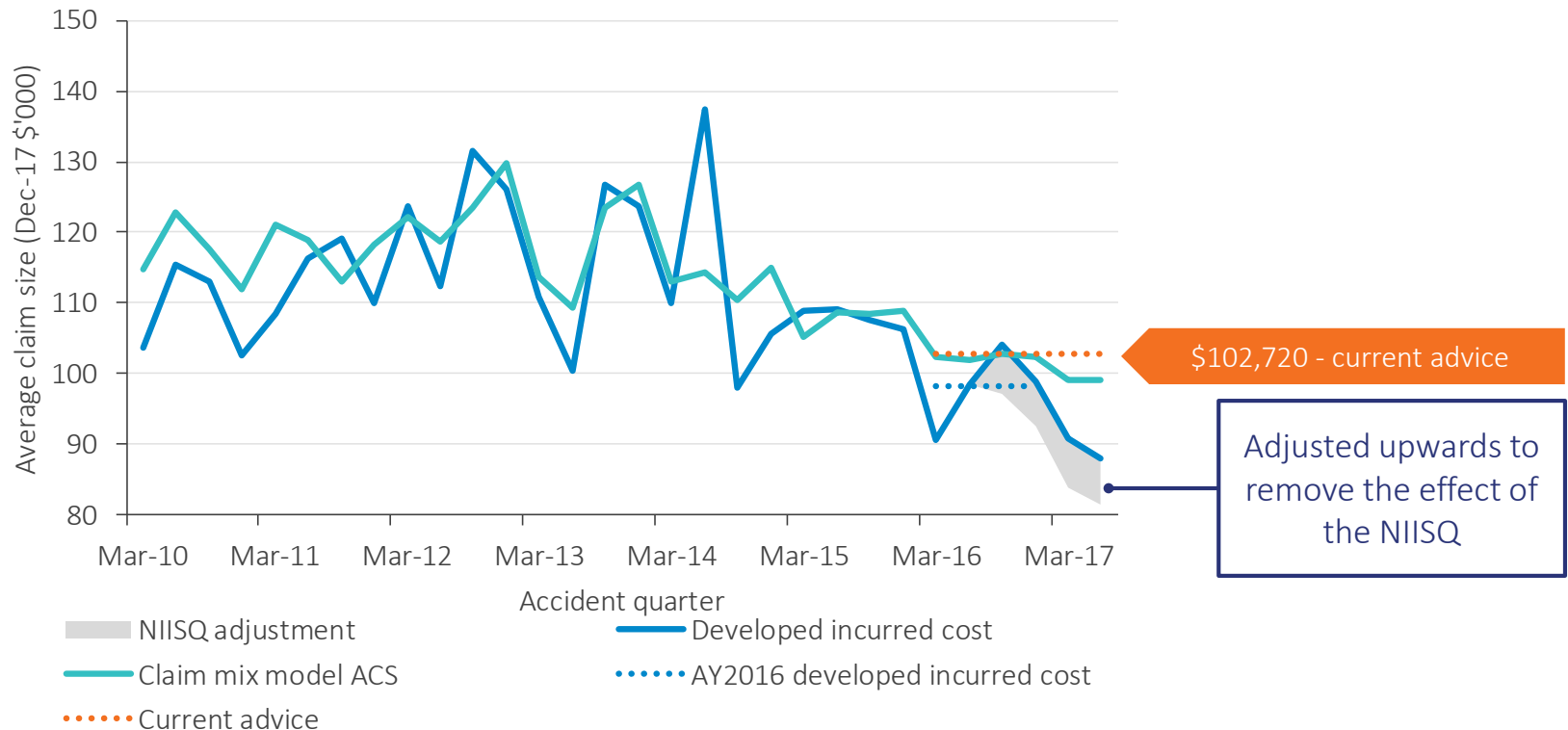
- » For the first **80%** of claims finalised, recent claims experience is recognised in the average claim size projection
- » For the final **20%** of claims finalised, the finalisation model takes a 4-year average (previously much longer)
- » Over 2017, we have reduced the severity 2 average claim size by 2%, which is equivalent to about \$1

A 16% drop, <1% likely to be due to chance

Claim size: validation

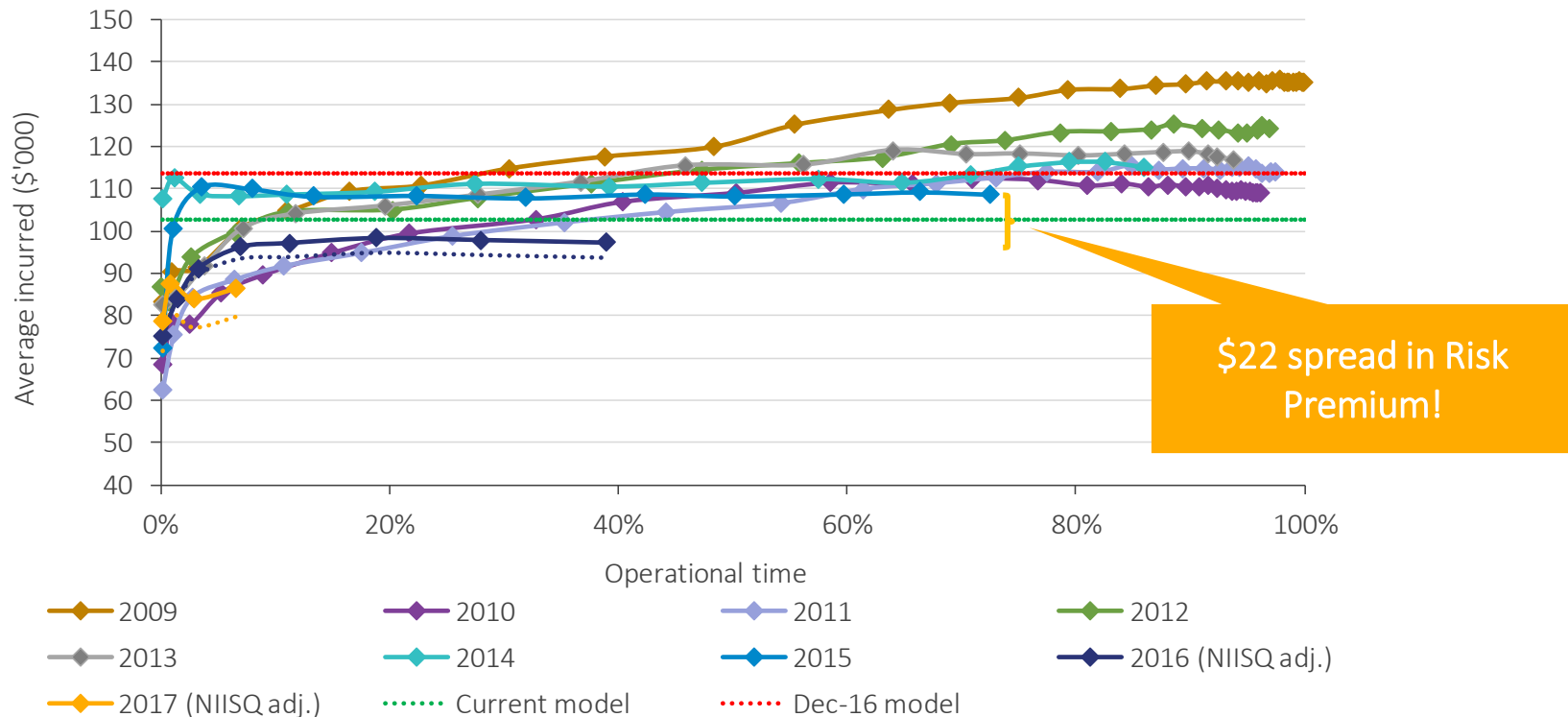
Emerging average claim size

- » Both our Claims Mix model and insurer's incurred costs (adjusted for case estimate development and NISQ) are indicating that the mix of claims is weakening
 - Despite the decrease in our finalisation model, the advised ACS sits above the estimates from the incurred costs



Incurred costs for all severities

- » The baseline finalisation model produces an average claim size above the incurred costs reported by insurers for 2016 and 2017
 - This is true even after allowing for case estimate development and adding back in the NISQ offset



\$22 spread in Risk Premium!

Risk premium

Annual reconciliation

Change in our advised Risk Premium from last annual review

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Notes :

1. Risk premium **includes** WC/IS, **excludes** the NIISQ adjustment

Scenarios

Plausible alternative outcomes

» We show the sensitivity of the risk premium to some leading indicators:

Risk premium scenarios	Impact on gross risk premium
Frequency scenarios	
Increase by 5%	+\$8
Decrease by 5%	-\$8
Average claim size scenarios	
AY2015 incurred cost	+\$12
Severity 4 and 5 claims revert to previous frequency	+\$5
Trends in severity profile continue	-\$2
AY2016 incurred cost	-\$10
AY2017 is mostly small claims	-\$11

Payment pattern

Adopted payment pattern

- » We have increased the finalisation rate at early development quarters and we have reduced the number and size of more severe claims which advances the payment pattern a little

Development year (from underwriting)	Payment pattern according to	
	Previous review (%)	Current review (%)
1	1.1	1.2
2	14.3	15.9
3	29.7	30.3
4	24.1	23.7
5	13.5	13.3
6	6.8	6.2
7	3.3	3.3
8	2.1	2.0
9	1.5	1.3
10	1.1	0.9
11	0.8	0.6
12 & later	1.7	1.3
Mean term	3.67	3.54

Economic parameters

Economic gap

- » Wage inflation decreased and the discount rate increased slightly, leading to an overall decrease in the economic gap

	Current review	Previous quarterly review	Change since previous quarter
	Estimate (% p.a.)		
Wage inflation	2.94%	3.49%	-0.55%
Discount rate	2.45%	2.31%	0.13%
Gap	-0.50%	-1.18%	0.68%

Superimposed inflation

Superimposed inflation update

- » Average claim size changes since the CLA introduction are caused by:
 1. A change in severity mix
 2. Superimposed inflation
- » We have removed component 1 by estimating the average claim size for each post-CLA accident quarter as if the severity proportions from 2002Q4 remained constant thereafter
 - The table below measures component 2
- » We have included WC & IS claims

Period (accident quarter)	Accident period superimposed inflation (p.a.)	
	Current advice (to Dec-17)	Previous advice (to Sep-17)
Sep-96 – Dec-02	-1.7%	-1.7%
Dec-02 – Mar-03	-10.3%	-10.3%
Mar-03 – Dec-17(Mar-03 – Sep-17)	1.4%	1.5%
Mar-03 –Dec-12(Mar-03 –Sep-12)	2.5%	3.1%
Sep-12 – Dec-17 (Jun-12 – Sep-17)	-0.6%	-1.5%
Sep-96 – Dec-17 (Sep-96 – Sep-17)	-0.1%	0.0%
Sep-97 – Dec-17(4-qtr moving average)	0.3%	0.3%



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Relativities

Relativities

		90% confidence limits			Current MAIC adopted
		Central estimate (post-NIISQ)	Lower	Upper	
1	Cars and station wagons	100			100
2	Motorised homes	36	19	59	100
3	Taxis	1616	1328	1928	1600
4	Hire vehicles	205	176	237	180
	Vintage, veteran, historic or street rod				
5	motor vehicles	3	1	6	12
6	Trucks, utilities and vans 4.5t GVM or less	113	107	119	115
	Trucks, utilities and vans more than 4.5t				
7	GVM	403	369	438	420
	Buses: charitable, community service, driver tuition, not otherwise for business or commercial use				
8		221	142	314	160
	Buses: school, therapy, rehabilitation, remedial or special education				
9		159	96	234	140
	Buses: not class 8, 9 or 10B but used within 350 km of base				
10A		715	514	944	630
	Buses: Translink service contract other than school or restricted school service				
10B		1367	1126	1627	1300

Relativities

		90% confidence limits			Current MAIC adopted
		Central estimate (post-NIISQ)	Lower	Upper	
11	Buses: not class 8, 9, 10A or 10B	610	488	744	520
12	Motorcycles: for driver only	19	12	28	20
13	Motorcycles: with pillion passenger/sidecar	42	33	51	50
14	Tractors	9	4	16	15
15	Self-propelled machinery or equipment, fire engines, bush fire brigade and other emergency vehicles	147	92	214	100
16	Ambulances	293	127	515	200
17	Primary production vehicles	50	35	67	45
19	Motor vehicles conditionally registered - limited access	28	15	43	35
20	Motor vehicles conditionally registered - zoned access	3	1	7	15
21	Self-propelled machinery other than a vehicle of class 14, 15, 19 or 20	15	4	31	30
22	Unregistered vehicle permits				
23	Dealer's plate issued	25	9	48	100
24	Supplementary trailer insurance including Federal/Interstate	10	2	24	20