

ACT Workers' Compensation Review of Scheme Performance to 30 June 2021

Chief Minister, Treasury and Economic Development Directorate

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The Chief Minister, Treasury and Economic Development Directorate (CMTEDD) have requested that Finity Consulting (Finity) undertake an actuarial review of the performance of the ACT private sector workers' compensation scheme (the Scheme) in order to inform CMTEDD on key developments in the scheme experience.

This report includes:

- An investigation of trends in the private sector claims experience to 30 June 2021
- An estimate of premium rates for the 2022/23 financial year.

The terms of reference for our work are set out in our contract with the Chief Minister and Treasury Directorate (number 2017.28453.210).

Yours sincerely

A handwritten signature in black ink that reads 'Gae Robinson'.

Gae Robinson
FIAA

A handwritten signature in black ink that reads 'Tim Jeffrey'.

Tim Jeffrey
FIAA

ACT Workers' Compensation Review of Scheme Performance to 30 June 2021

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Part I Executive summary

1 Introduction and background

The Chief Minister, Treasury and Economic Development Directorate (CMTEDD) requested that Finity undertake an actuarial review of the performance of the ACT private sector workers' compensation scheme. We investigated trends in the claims experience to 30 June 2021 and estimated reasonable premium rates for the 2022/23 policy year.

Our review included:

- Identifying major trends in the insured private sector claims experience
- Developing a reasonable premium pool and average premium rate for the insured scheme for the 2022/23 policy year
- Developing premium rates at ANZSIC class level for the 2022/23 policy year, using the ANZSIC 2006 classification system
- Comparisons of insurer market share, industry mix, premium rates, and claims experience
- Estimated levels of insurer profitability.

We used data extracted from the policy and claims system at the end of September 2021.

2 Key scheme metrics

In 2020/21 around 19,100 policies were written, covering \$12.3bn in wages (\$12.5bn in current values). Premiums of \$248m were collected in the year (\$250m in current values).

Written wages increased by 8% in 2020/21 in real terms, while written premiums increased by 6%. The combined effect led to a reduction in the written premium rate from 2.05% in 2019/20 to 2.01% in 2020/21.

3 COVID-19 impacts

We have considered the impact of COVID-19 on claim costs for:

- Direct impacts – workplace infections that lead to a workers' compensation claim
- Indirect impacts on claim numbers (due to changed working conditions) and claim outcomes.

3.1 Direct impacts

At the time data was provided for the Scheme review (September 2021), very few direct COVID-19 claims had been recorded and the ACT as a whole had very few COVID-19 cases. We received an additional dataset at the end of January 2022 to assess any increase in direct COVID-19 claims associated with the Omicron wave; claim reports remained very low.

Given the low number of claims in the data and the possibility of more widespread infection going forward (as COVID-19 lockdowns and minimisation strategies reduce), it was not possible to estimate the cost of direct COVID-19 claims for the 2022/23 premium year based on historical experience. We have therefore used scenario testing (Section 6.3) to estimate a reasonable range of direct COVID-19 claim costs for the 2022/23 premium year. We have adopted a 1% loading on our reasonable premium rate for 2022/23 to allow for direct COVID-19 costs.

3.2 Indirect impacts

In 2020/21, non-nil claim reports and lost time claim numbers reduced, influenced by the impact of COVID-19 restrictions on working conditions (including working from home). There was also lower growth in wages than seen in previous years. We attribute some of the reduction in claim frequency to COVID-19 impacts, but believe the long-term underlying reduction in claim frequency has continued.

It is difficult to establish a clear link between COVID-19 impacts and average claim sizes:

- There is some evidence that average weekly payment costs have increased since the initial COVID-19 lockdowns, indicating return to work opportunities have been impacted; however, this increase began prior to the June 2020 quarter when the pandemic first impacted in Australia
- The above-inflation increases in medical and rehabilitation costs reduced in 2020/21, which could be linked to restricted access to some medical services during lockdowns
- It is not possible to make observations on potential impacts on other payment types at this stage.

4 Claims experience

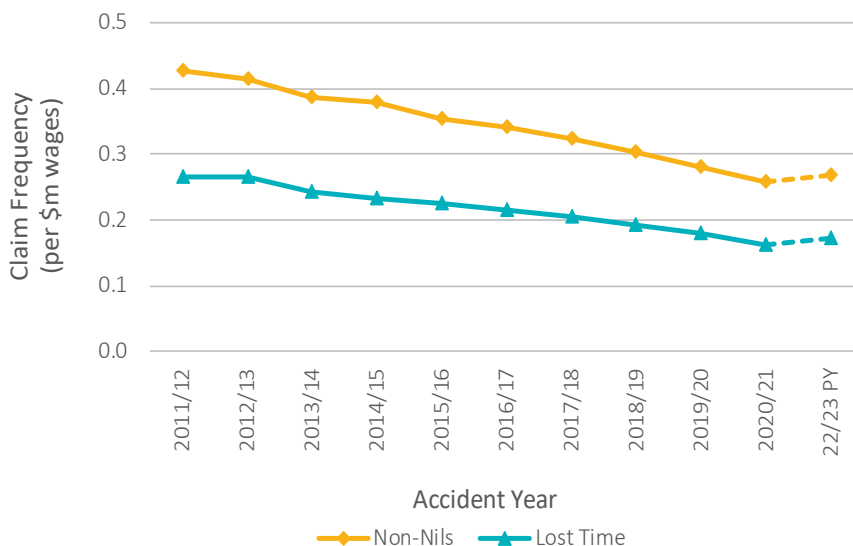
Section 2 of our report examines the claims experience that has emerged in the last year. Section 3 details how our actuarial projections respond to this experience. The main features are summarised below.

4.1 Claim numbers and frequency

The number of non-nil claims reported in 2020/21 was slightly lower than 2019/20, with just over 3,000 new non-nil claim reports. The number of new lost time claims also decreased, with around 1,900 in 2020/21.

Figure 1.1 shows our estimates of ultimate claim frequency for the Scheme.

Figure 1.1 – Estimated ultimate claims frequency



The non-nil claim frequency per \$million wages has steadily reduced since 2011/12, to an estimated 0.26 claims per \$million wages for the 2020/21 accident year. The reduction in frequency was greater for 2020/21 than previous years, and we assess that that some of the reduction is due to the impact of COVID-19 lockdowns. Because the reduction in claim numbers due to COVID-19 has partially been matched by lower wages growth, the reduction in claim frequency for 2020/21 is only slightly greater than the long-term downward trend.

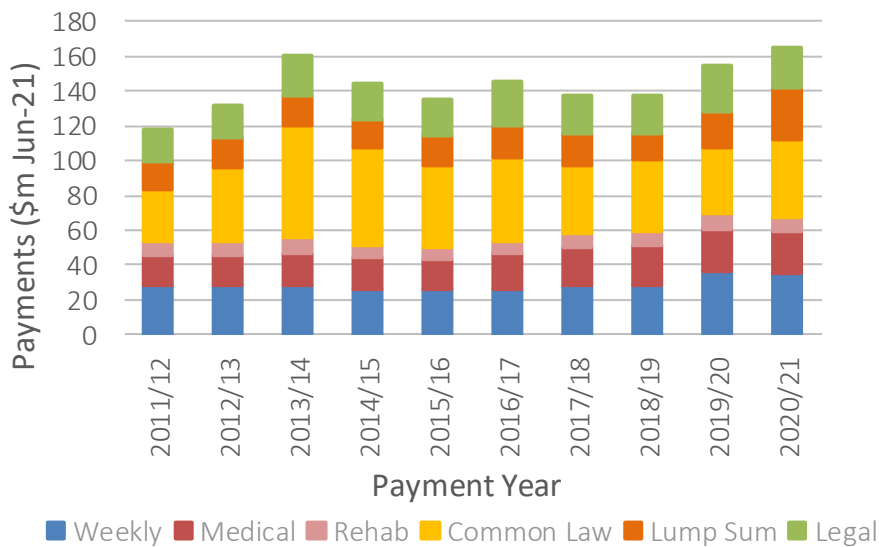
We have adopted a claim frequency for the 2022/23 policy year of 0.27 claims per \$million wages, marginally higher than our estimate for 2020/21. This is 4% lower (adjusting for actual inflation) than the claim frequency adopted for the 2021/22 policy year in our previous review. Our adopted claim frequency corresponds to 3,396 claims for the 2022/23 policy year.

The frequency of claims receiving weekly benefits has also reduced in recent years. We have adopted a lost time frequency of 0.17 claims per \$million wages for the 2022/23 policy year.

4.2 Claim payments

Figure 1.2 shows total gross claim payments made over the last ten years, by payment type. All payments have been adjusted to June 2021 values.

Figure 1.2 – Gross payments (June 2021 values)



Around \$165m of gross claim payments were made in 2020/21. Payments in the last two years were much higher than the levels observed from 2014/15 to 2018/19; the increase in 2019/20 was driven by higher weekly payments, and the further increase in 2020/21 was driven by common law and lump sum payments.

We have adopted an average claim size per non-nil claim of around \$47,200 (net of recoveries) for the 2022/23 policy year. This is 7.1% higher than our previous selection of \$44,000 (adjusted to June 2021 dollars).

5 Non-claim assumptions

We have included an expense loading of 24.7% of premium (\$71.3m) in the reasonable premium rate for 2022/23, up from 24.0% at the previous review. This is driven by increases in insurers' filed expenses and increases in levies (as provided by CMTEDD).

The reasonable premium rate for 2022/23 includes a profit margin of 11.5% of premium. This lower than our previous profit margin of 12.0%, reflecting higher expected investment returns linked to higher risk-free rates.

Our future wage inflation assumption is a flat 2.75% p.a., an increase from the assumptions at the previous review of 1.75% from 2021/22 to 2022/23 and 2.25% p.a. thereafter. We have kept our superimposed inflation rate at 4.5% p.a., reflecting ongoing average claim size increases which have offset frequency reductions. The adopted discount rate has increased from 0.75% p.a. to 1.95% p.a. (reflecting movements in risk-free rates).

6 Average premium rate for 2022/23

Our estimate of the reasonable premium pool for 2022/23 is \$289.2m, as set out in Table 1.1.

Table 1.1 – Total premium pool

Premium Rate Component	\$m
Risk Premium Pool	184.6
Expense Loading	71.3
Profit Loading	33.3
Total Premium Pool	289.2
Wages Estimate	13,052.9
Average Risk Premium (% wages)	1.41%
Average Premium Rate (% wages)	2.22%

The reasonable average premium rate for 2021/22 is 2.22% of wages, unchanged from the previous review. Although there was no movement overall, there were offsetting movements in the components:

- Claims cost changes – decrease of 0.01%, comprising:
 - > Continued reductions in underlying claim frequency – decrease of 0.11%
 - > Changes in claim size and payment pattern – increase of 0.10%¹
- Allowance for direct COVID-19 claims – increase of 0.02%
- Economic assumptions – decrease of 0.02%
- Expense, levy and profit loadings – increase of 0.01%.

7 ANZSIC class premium rates

To derive reasonable premium rates at the ANZSIC class level, we separately considered frequency relativities and cost relativities. Appendix H includes the full schedule of reasonable premium rates. The reasonable rates fall in the range 0.27% to 18.92% of wages; all include a flat loading of 1% for direct COVID-19 claim costs.

8 Reliances and limitations

Our reliances and limitations are an important part of this report and are detailed in Section 14.

¹ This change is based on expected inflation over the year, while the comparison in Section 4 uses actual inflation over the year.

Part II Detailed findings

1 Introduction

1.1 Purpose

The Chief Minister and Treasury Directorate (CMTEDD) has requested that Finity Consulting (Finity) undertake an actuarial review of the performance of the ACT private sector workers' compensation scheme (the Scheme), in order to inform CMTEDD about key developments in the Scheme experience. We were required to investigate trends in the claims experience to 30 June 2021, and provide an estimate of a reasonable premium rate for the 2022/23 policy year. We have also included a detailed comparison of the experience of individual insurers.

Our previous Scheme review was summarised in the report "ACT Workers' Compensation Review of Scheme Performance to 30 June 2020" dated 15 April 2021.

1.2 Scope

The scope of our review is limited to the insured private sector workers' compensation scheme; it does not include self-insured employers or the ACT public sector.

Our review encompassed:

- Identifying trends in the private sector experience that impact on Scheme cost, including consideration of:
 - > Claim numbers and frequency for non-nil claims, lost time claims and lump sums
 - > Injury type
 - > Claim payments, average claim sizes and payment patterns by benefit type
 - > The impacts of COVID-19 and associated lockdowns
- Estimating future claim costs for past accident years
- Developing a reasonable premium pool and average premium rate for the insured Scheme as a whole for the 2022/23 policy year
- Developing reasonable premium rates at the ANZSIC class level for the 2022/23 policy year
- Examining claim trends by injury type
- Investigating return to work rates and trends
- Comparisons of market share, industry mix, premium rates, and claims experience of the insurers
- Estimating insurer profitability, at Scheme-wide level and for each individual insurer.

Appendix B of this report summarises the various historical legislative reforms that have had a significant impact on the cost of the Scheme.

1.3 COVID-19 impacts

The COVID-19 pandemic and associated lockdowns have had significant impacts across Australia, including changes in the economic conditions and outlook. The ACT has seen less serious impacts than most other parts of Australia, particularly up to 30 June 2021.

Our review has considered potential COVID-19 impacts on the Scheme experience; see Section 2.1.

We have allowed for the impacts as follows:

- Direct COVID-19 impacts – with very low levels of community infection up to the date of our data extract, we have added an explicit loading in our premium estimates; see Section 6.3.
- Indirect COVID-19 impacts have been considered when interpreting the experience and setting our assumptions for estimated premium rates.

1.4 Data

We have prepared this advice using data as at end September 2021 sourced from CMTEDD’s Workers Compensation Management System (WCMS) that commenced late 2015.

The last full financial year of data is for the year ending 30 June 2021, and many of the graphs and commentary in this report are prepared using the experience to 30 June 2021 only. We have also used the claims experience for the three months to 30 September 2021 in projecting ultimate claim numbers. In addition, we were provided with an additional extract as at 31 January 2022 which we have used to assess COVID-19 impacts to that date.

In relation to data quality:

- We remain concerned about the reliability of **case estimates** in WCMS for older years, where it appears that case estimates have not been set to zero when claims are closed. We have therefore sourced case estimates from summarised data provided directly by each insurer.
- **Wages and premium** information for recent years appears to be of a higher quality than the data captured on AIMS (the previous data system) for older years, and:
 - > When looking at long-term trends (such as claim frequency) we have continued to rely on the summarised data provided by insurers to ensure consistency across all years
 - > For estimating ANZSIC class relativities (for which we generally analyse accidents in the last three or five years) we have relied on the WCMS data as it includes more granular information.

Further details of the data supplied and reconciliations carried out are set out in Section 12.

1.5 Structure of report

The details of our review are set out in the following report sections:

Part II – Scheme review and reasonable premium rates

Part III – Further information

Part IV – Appendices

2 Overview of claims experience

This section summarises trends in the Scheme’s claims experience. Further detail relating to claim frequency and average claim size, including projections by payment type, follows in Section 3.

Key findings

- COVID-19 appears to have had some impact on the experience in 2020/21 with claim numbers experiencing a more material drop-off than previous years; however the impact in the ACT has been lower than many other states, with low levels of community transmission and less severe lockdown restrictions.
- The number of non-nil claims reported decreased by 8% in 2020/21, to around 3,000 in 2020/21.
- The number of new lost time claims decreased by 9%, with around 1,900 in 2020/21.
- There were \$163m in gross payments in 2020/21, an increase of 10% from 2019/20. This increase was driven by Lump Sum and common law payment types.
- First lump sum numbers increased marginally in 2020/21 to 487. These numbers tend to exhibit volatility from year to year.

2.1 COVID-19

Our investigation of COVID-19 impacts includes consideration of:

- Direct impacts, including:
 - > Workplace infections that result in a workers’ compensation claim
 - > Mental health claims due to circumstances related to COVID-19
- Indirect impacts, including:
 - > Impacts on overall claim numbers due to changes in hours worked and working conditions (e.g. working from home)
 - > Impacts on return to work opportunities due to COVID-19 restrictions reducing available roles
 - > Impacts on claim duration as a result of COVID-19 restrictions reducing access to medical and treatment services.

2.1.1 Direct impacts

Since community case numbers in the ACT were very low to 30 September 2021 (our normal data extract date), we were provided with an additional extract as at 31 January 2022 which we have used to assess any direct COVID-19 impacts to date. This data allowed us to assess impacts for the Delta outbreak in the second half of 2021. We were not able to assess impacts for the Omicron outbreak, which began in December 2021; the average delay from workplace infection to report is a little over two weeks (based on limited data to date), and many industries have reduced work levels over the Christmas break, which meant that the 31 January 2022 was too early for most Omicron cases to translate to claims.

Table 2.1 summarises direct the direct COVID-19 claims experience for injury months between August 2021 and November 2021, which is roughly the period of the Delta outbreak, and relates this to total ACT case numbers.

Table 2.1 – Direct COVID-19 claims

	Workplace infection	Mental health	Both	Total
No. of claims	11	1	1	13
Incurred cost (\$)	88,867	38,400	13,400	140,667
Average claim size (\$)	8,079	38,400	13,400	10,821
Total ACT cases				2,009
Claims / total cases				0.6%

Only a small number of claims have been reported to date, with an average incurred size of just over \$10,000 (though we expect that this will develop). For this period, private sector workers’ compensation claims represented 0.6% of total ACT cases. We expect that as COVID-19 has become more widespread and there is less contact tracing (as has been the case for the Omicron outbreak), a lower proportion of total cases will become workers’ compensation claims – as it will have become harder to link infection to the workplace.

In the experience to 31 January 2022, the majority of claims have come from ANZSIC divisions Healthcare and Social Assistance, and Construction.

2.1.2 Indirect impacts

The impacts of COVID-19 and lockdowns have extended to workers’ compensation exposures (hours worked, wages), claim numbers and claim outcomes, but to 30 June 2021 the number of cases and restrictions were much lower for the ACT than other jurisdictions. Our observations on the indirect COVID-19 impacts seen in the ACT experience are summarised in Table 2.2.

Table 2.2 – Indirect COVID-19 impacts

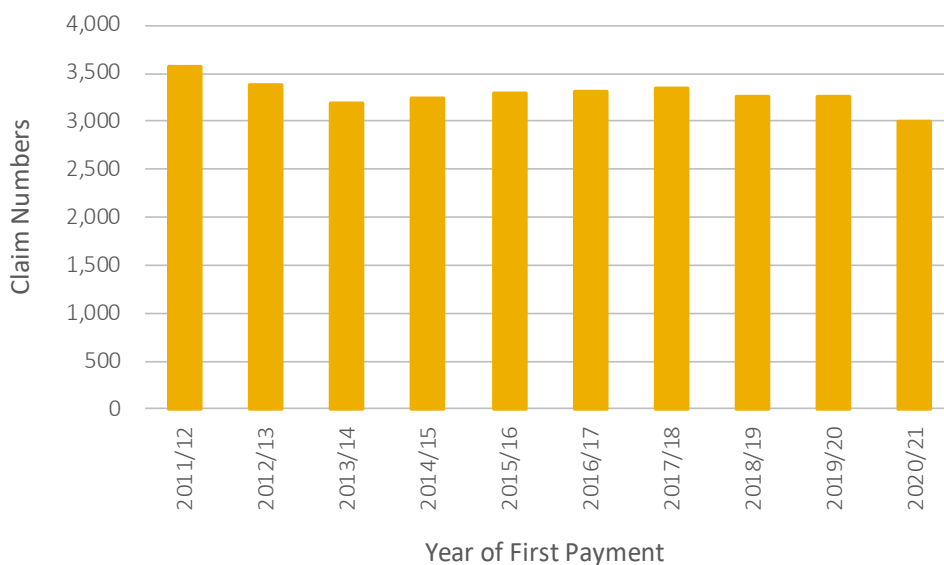
	Observations	Supporting evidence
Non-nil claim numbers	Claim numbers were fairly stable from 2013/14 to 2019/20, but dropped by 8% in 2020/21, which we believe is related to COVID-19 restrictions.	Figure 2.1
Lost time claims	Lost time claim numbers have exhibited a similar pattern to non-nil claim numbers.	Figure 2.4
Exposure	Employee numbers reduced in 2020/21, while earned wages growth was lower than previous years.	Figure 3.1, Figure 3.2
Claim frequency	Since there have been drops in both claim numbers and exposure measures, the observed claim frequency is less impacted than raw claim numbers. To the extent that some of the observed frequency reduction is due to changes in work conditions that become semi-permanent (e.g. working from home), it is likely that some of the drop in claim frequency will persist.	Extension of above observations, Figure 3.4
Weekly payments	Average weekly payments per claim increased materially in 2019/20 and stayed at similar levels in 2020/21. Some of the increase may be linked to a reduction in return to work opportunities due to COVID-19; however, the increase began prior to the June 2020 quarter when the pandemic began in Australia.	Figure 3.8

	Observations	Supporting evidence
Medical and rehabilitation payments	Up to 2019/20, the average medical and rehabilitation payments per claim had been growing at just under 10% p.a. above inflation. Above-inflation growth reduced to just under 1% in 2020/21, which may have been influenced by reduced access to some medical services due to COVID-19.	Figure 3.11, Figure 3.12
Other payment types	Common law/lump sums are the most significant of the other payment types. Due to the delay between accident date and lump sum payment, it is too early to establish a link between COVID-19 and any changes in lump sum utilisation or average sizes.	

2.2 Numbers of claims reported

The following graph shows the number of non-nil claims in each year (counted in the year of first payment).

Figure 2.1 – Non-nil claim numbers



The number of non-nil claims changed little between 2013/14 and 2019/20, then fell by 8% in 2020/21 to around 3,000 claims. It is likely that the reduction in claim numbers reflects the reduced level of in-person work undertaken during COVID-19 restrictions.

Table 2.3 compares the number of non-nil claims reported in 2020/21 with the expected experience from our previous review.

Table 2.3 – Actual vs expected claims reported in 12 months to 30 June 2021

Accident Year	Non-nil claims reported			
	Actual	Expected	Difference	% diff
Prior	-4	-1	-3	539%
2017/18	16	14	2	11%
2018/19	24	18	6	33%
2019/20	398	408	-10	-3%
2020/21	2,571	2,833	-262	-9%
Total	3,005	3,273	-268	-8%

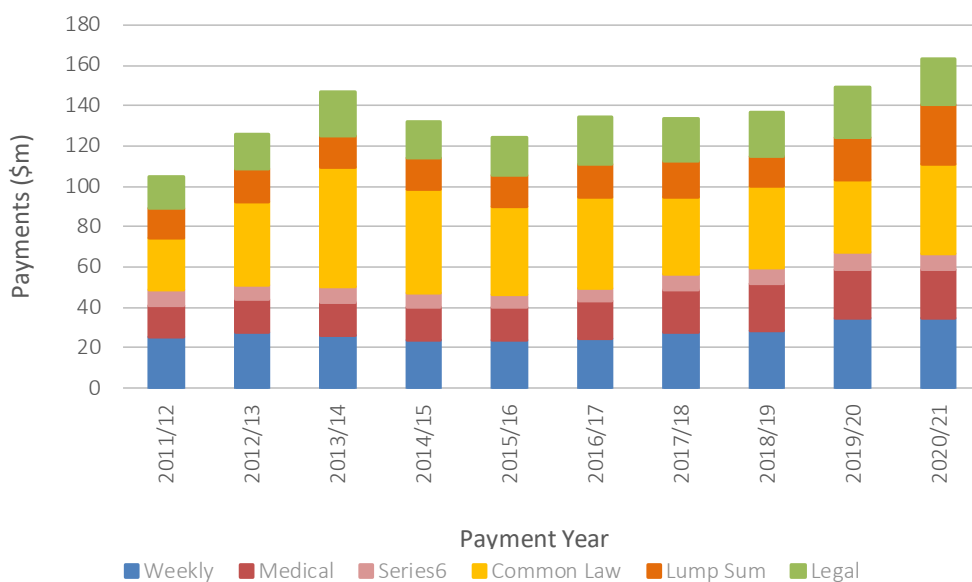
Non-nil claim reports in 2020/21 were lower than expectations by 8%, with most of the difference relating to the 2020/21 accident year. As discussed above, it is likely that some of this difference relates to lower claim reports due to COVID-19 related lockdowns.

The small number of negative claims for prior accident periods is related to an insurer administrative reversal of payments on older claims leading to some claims becoming ‘nil’ claims over the year. As this only impacts a small number of claims from older accident periods it does not impact observations on experience.

2.3 Claim payments

The following two graphs show the makeup of claim payments by payment year. Figure 2.2 shows the payments in actual historical values, while Figure 2.3 shows payments adjusted to June 2021 values.

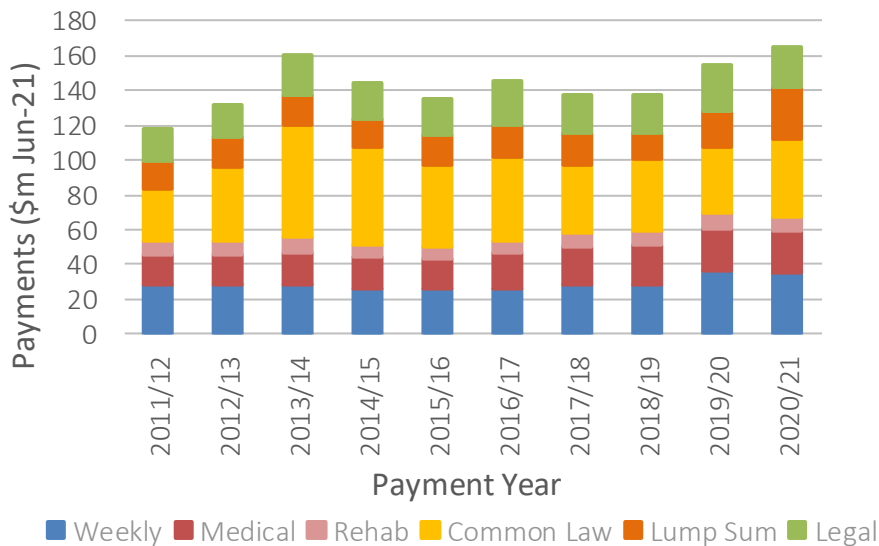
Figure 2.2 – Gross payments by type: Actual historical values



After total payments were fairly steady in the three years to 2018/19, payments increased by \$12m to \$149m in 2019/20, and by a further \$14m to \$163m in 2020/21. These are the highest payment levels in the last ten years (in nominal dollars). The increase in payments in 2019/20 was driven mostly by weekly payments. In 2020/21, lump sum and common law benefits accounted for most of the growth in payments.

Insurers received around \$5m in non-reinsurance recoveries in 2020/21, bringing net payments in the year to around \$158m.

Figure 2.3 – Gross payments by type: June 2021 values



After adjusting to current values, annual payments were at around \$140m from 2014/15 to 2018/19. Increases have followed, and were at a ten-year high of \$165m in 2020/21. The split between statutory and lump sum benefits has varied from year to year, with no clear trend in payment mix over the period shown.

Table 2.4 compares net payments in the 12 months to 30 June 2021, by payment type, to the expected payments from our previous review.

Table 2.4 – Actual vs expected payments in 12 months to 30 June 2021

Payment Type	Actual	Expected	Difference	Diff %
	\$m	\$m	\$m	
Weekly	34.8	31.3	3.5	11%
Medical	23.7	24.7	(1.0)	-4%
Rehab	8.3	8.4	(0.2)	-2%
Lump sums ¹	73.5	63.4	10.1	16%
Legal	22.8	24.3	(1.5)	-6%
Recoveries	(5.4)	(5.3)	(0.1)	2%
Total	157.7	146.9	10.9	7%

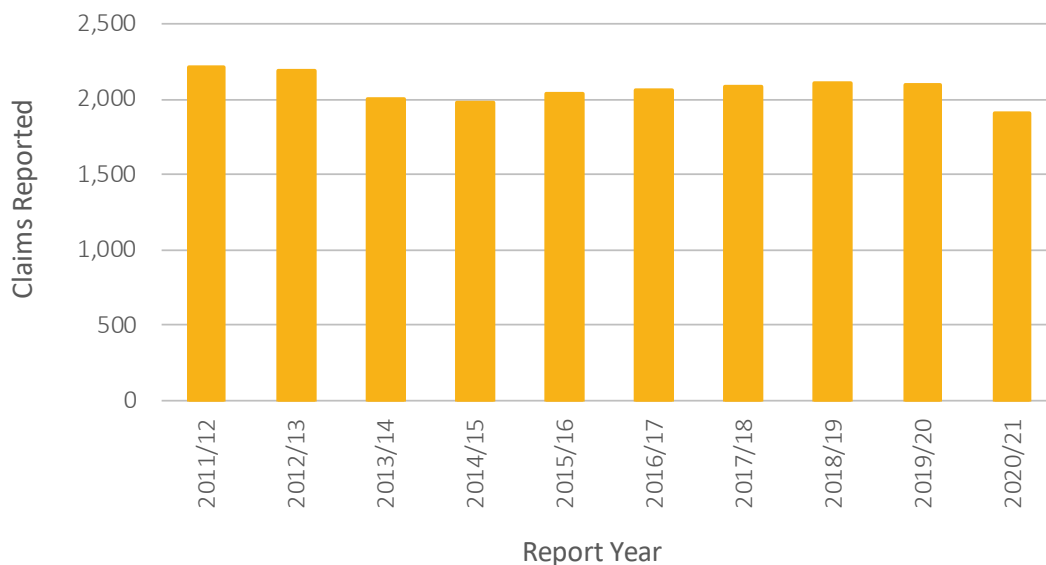
¹Includes Common Law

Total payments in 2020/21 were 7% higher than expected, driven by weekly and lump sum payments, and partly offset by lower than expected legal and medical payments.

2.4 Claims involving lost time

Figure 2.4 below shows the number of new weekly benefit claims (i.e. claims involving lost time) in each year. We count a claim as a 'new' lost time claim in the year when it first receives a weekly benefit payment.

Figure 2.4 – New lost time claims



The number of lost time claims grew at about 1% p.a. from 2013/14 to 2019/20, before falling by 9% in 2020/21 to the lowest level seen in the last ten years.

Table 2.5 shows that the number of new lost time claims in 2020/21 was 10% lower than expected. The lower numbers were driven mainly by the 2020/21 accident year, but were seen across all accident periods. As discussed above, it is possible that the lower than expected lost time claim numbers for the 2019/20 and 2020/21 accident years may be related to COVID-19 restrictions.

Table 2.5 – Actual vs expected lost time claims reported in 12 months to 30 June 2021

Accident Year	Lost time claims reported			
	Actual	Expected	Difference	Diff %
Prior	2	3	-1	-40%
2017/18	8	10	-2	-16%
2018/19	27	37	-10	-26%
2019/20	458	494	-36	-7%
2020/21	1,417	1,572	-155	-10%
Total	1,912	2,116	-204	-10%

2.5 Common law and other lump sums

Numbers of lump sums paid

Injured workers may choose to pursue either:

- A common law claim (damages awarded under Chapter 9 of the Act)
- A negotiated settlement (claimant signs a common law release but no writ is issued)
- A redemption of statutory entitlements (a ‘commutation’)
- A statutory permanent impairment benefit.

Pursuing either a common law claim or a commutation results in finalisation of the claim; all of the worker’s entitlements are settled via this path. However, payment of a statutory permanent impairment benefit results in the settlement of the impairment benefit component only – the worker continues to have an entitlement to receive future weekly benefits and medical costs. The number of claimants

pursuing statutory permanent impairment benefits is small relative to common law and commutation numbers.

Figure 2.5 shows the number of claims that have received common law, negotiated settlement, commutation, statutory impairment benefits or death benefits for the first time in each payment year (referred to as “lump sum claims reported”). Note that around 5% of claimants receive both a common law (including negotiated settlement) and lump sum payment (commutation, statutory benefit or death), with about 65% of these claims receiving both a common law and a commutation payment. For the purpose of Figure 2.5 we have counted claims using the following hierarchy:

- If a claim has a common law payment it is counted as common law
- If a claim has no common law payment but has a negotiated settlement payment, it is a settlement
 - > In the previous claims database (prior to 2013/14) there was no ability to distinguish between common law awards and negotiated settlements; all matters have been deemed to be negotiated settlements
- If a claim has neither of the above payments but has a commutation payment, it is counted as a commutation lump sum
- If a claim has none of the above payments but has a statutory impairment payment, it is counted as a statutory impairment benefit
- If a claim has none of the above payments but has a death benefit, it is counted as a death lump sum.

Figure 2.5 – Numbers of lump sum claims reported

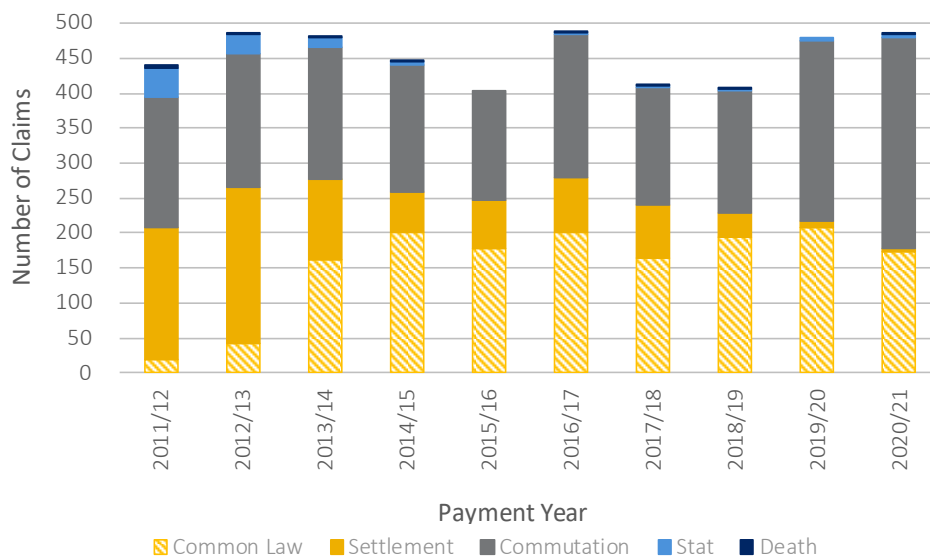


Figure 2.5 shows:

- 487 claims received a lump sum payment in 2020/21, which is similar to 2019/20 and about 20% higher than 2018/19. The number of lump sum claims can be volatile from year to year, making it difficult to draw conclusions from short-term experience; however, if high lump sum numbers were to persist in 2021/22 we would consider this an indication of higher lump sum numbers than in the previous years.
- The number of claimants receiving either common law or negotiated settlement damages (the two yellow segments combined) has trended slightly down since 2013/14.

- The number of commutations increased strongly in 2019/20 and 2020/21, to 300.
 - > Since common law/negotiated settlements and commutations result in finalisation of a claim, and they have trended in opposite directions in recent years, we do not attach significance to the individual trends for these types of payments. However, as discussed below, the average settlement size is lower for commutations which may indicate a recent preference for insurers to proactively settle via this method.
- Just five claims received only a statutory permanent impairment benefit in 2020/21; the average was 30-40 for periods prior to 2012/13. This may indicate that almost all claimants who receive a permanent impairment lump sum now also receive a lump sum benefit of another nature (common law, negotiated settlement or commutation).
- There were three new death benefit claims in 2020/21.

Table 2.6 shows the numbers of lump sums reported in 2020/21 compared with expectations from our previous review.

Table 2.6 – Actual vs expected lump sums reported in 12 months to 30 June 2021

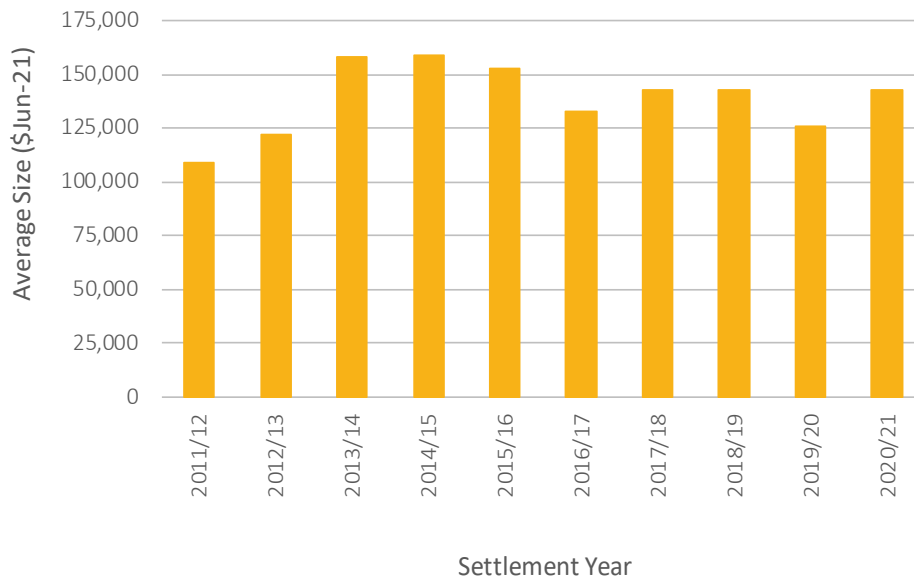
Accident Year	Lump sum claims reported			
	Actual	Expected	Difference	Diff %
Prior	7	9	-2	-20%
2012/13	7	3	4	127%
2013/14	7	5	2	43%
2014/15	16	7	9	122%
2015/16	20	22	-2	-11%
2016/17	66	56	10	17%
2017/18	99	101	-2	-2%
2018/19	134	143	-9	-6%
2019/20	120	94	26	28%
2020/21	11	11	0	2%
Total	487	451	36	8%

Overall lump sum claim numbers were 8% above expectations, with mixed experience by accident year. As discussed, the lump sum numbers can be variable, and we do not interpret the latest experience as a deterioration at this stage – although we will continue to monitor lump sum numbers.

Average size of lump sums (lump sum component)

Figure 2.6 shows the average size of lump sum claims (adjusted to June 2021 dollars) by year of settlement.

Figure 2.6 – Average size of lump sum settlements



After averaging just over \$150,000 from 2013/14 to 2015/16, the average size of lump sum settlements reduced; for claims settled from 2017/18 to 2020/21 the average settlement was roughly \$139,000.

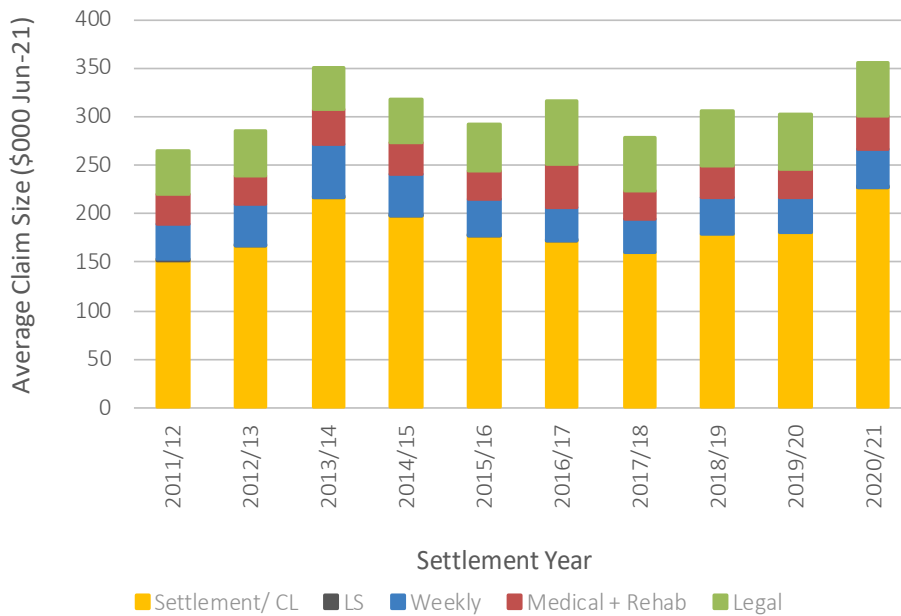
Average size of lump sums (total claim cost)

We have also investigated the total average cost of claims that receive common law or commutations (i.e. for claims receiving a common law, negotiated settlement or commutation payment, the average across all benefit payments received, not just the lump sum component).

Figure 3.11 to Figure 3.13 show the average amount received for the following claims:

- Those receiving common law or negotiated settlement
- Those receiving a commutation benefit but no common law or settlement
- Those receiving both a common law/negotiated settlement amount and a commutation.

Figure 2.7 – Average size of claims receiving common law or negotiated settlement



The average size in 2020/21 was \$355,000, which is an 18% increase from 2019/20. The average size in 2020/21 was made up as follows (in round terms):

- Common law component: \$225,000 (an increase of 26% from 2019/20)
- Weekly benefits: \$40,000 (increase of 11%)
- Medical and rehabilitation costs: \$35,000 (increase of 19%)
- Legal costs: \$55,000 (decrease of 5%).

Figure 2.8 – Average size of claims receiving commutations

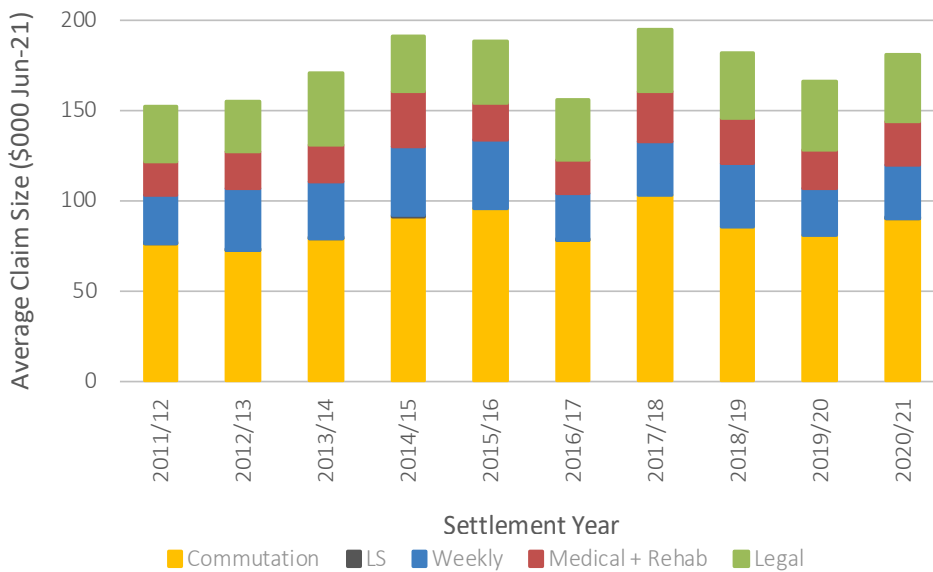
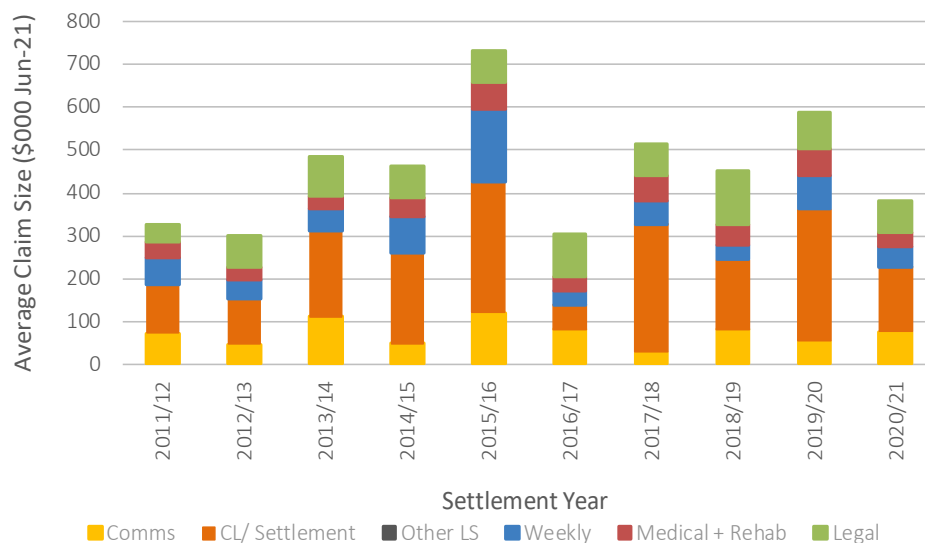


Figure 2.8 shows that the overall average cost of claims receiving commutations (but no common law) increased to \$180,000 in 2020/21, from around \$165,000 in 2019/20. The average claim size can be broken down (in round figures) as follows:

- Commutation component: \$90,000 (increase of 11% from 2019/20); over the longer term, commutation payments are around 40% of common law settlements
- Weekly benefits: \$30,000 (increase of 14%)
- Medical and rehabilitation costs: \$25,000 (increase of 16%)
- Legal costs: \$35,000 (decrease of 3%).

Figure 2.9 – Average size of claims receiving both common law & commutation



The overall average cost for claims receiving both a common law and commutation is variable from year to year, noting that there are only 10-25 such claims each year. The average size for these claims is much higher than claims receiving only a common law or commutation. In the last five years (here, we consider a longer average due to the lower numbers) the average size of \$445,000 has been made up as follows (in round figures):

- Common law component: \$195,000
- Commutation component: \$65,000 (total common law plus commutation \$260,000)
- Weekly benefits: \$50,000
- Medical and rehabilitation costs: \$45,000
- Legal costs: \$95,000.

All cost components for these claims are at least as large as for claims who receive only a common law or commutation payment (when lump sum costs are combined).

Claim size distribution

Table 2.7 shows the claim size distribution of all common law and other lump sum claims recorded in WCMS (in June 2021 values). This includes all payments made on these claims, not just the lump sum component.

Table 2.7 – Claim size distribution

Size of Settlement \$Jun-21	Common Law			Other Lump Sums		
	Number of Claims	Proportion	Average claim size in band (\$'000 Jun-21)	Number of Claims	Proportion	Average claim size in band (\$'000 Jun-21)
0-50k	345	7%	32,000	954	17%	30,000
50k-100k	535	12%	76,000	1,292	24%	74,000
100k-150k	675	15%	124,000	969	18%	123,000
150k-200k	594	13%	174,000	693	13%	173,000
200k-300k	904	19%	246,000	802	15%	245,000
300k-400k	614	13%	344,000	368	7%	343,000
400k-500k	351	8%	443,000	196	4%	439,000
500k-1m	528	11%	662,000	168	3%	633,000
>1m	101	2%	1,458,000	30	1%	2,096,000

Around half of common law claims settle for more than \$200,000, and 13% settle for \$500,000 or more. The distribution of other lump sums is skewed to lower cost claims.

3 Claim analysis and assumptions

This section describes our findings in relation to trends in exposure measures, claim numbers and frequency, claim payments and average claim size. We also document the assumptions required to estimate ultimate claim costs.

Key findings

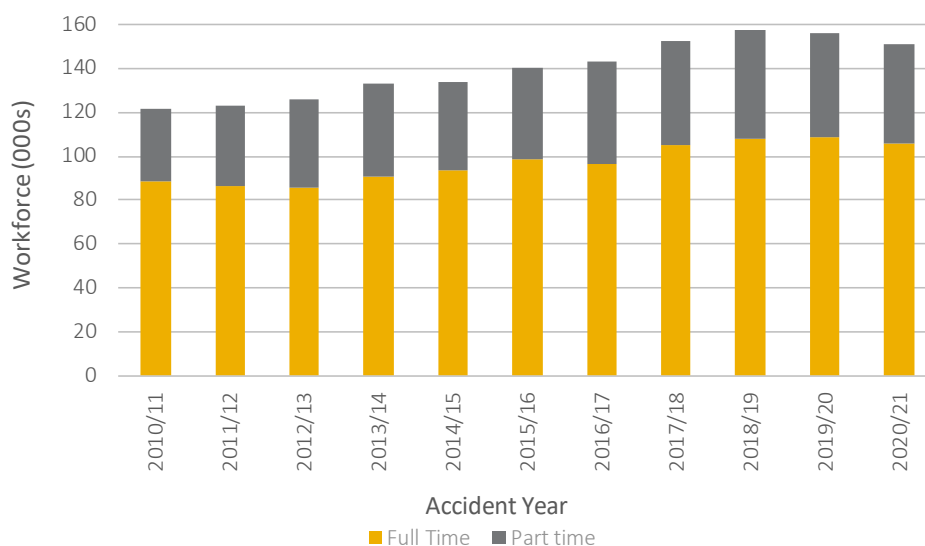
- Earned wages grew by 2.5% in real terms to \$11.7bn in 2020/21.
- We estimate there will ultimately be 2,995 non-nil claims for the 2020/21 accident year, a 6% reduction from the previous year. This continues a long-term reduction in claim frequency, but we assess that some of this reduction is due to COVID-19.
- We have adopted a non-nil claim frequency of 0.27 claims per \$m of wages for the 2022/23 policy year, 4% lower than adopted for the 2021/22 policy year. This results in a projection of 3,396 claims.
- Our selected average claim size per non-nil claim is around \$47,200 for the 2022/23 policy year, a 7% increase from our previous average size of \$44,000 (in June 2021 values).

3.1 Exposure

Number of employees

Employee numbers are used as a measure of exposure in the calculation of ultimate claim frequency. Figure 3.1 shows the estimated ACT private sector workforce relevant to each accident year, split between full time and part time workers. The number of employees is calculated as the ACT total (ABS figures), less the number of Commonwealth and ACT Government employees (provided by CMTEDD).

Figure 3.1 – Private sector workforce



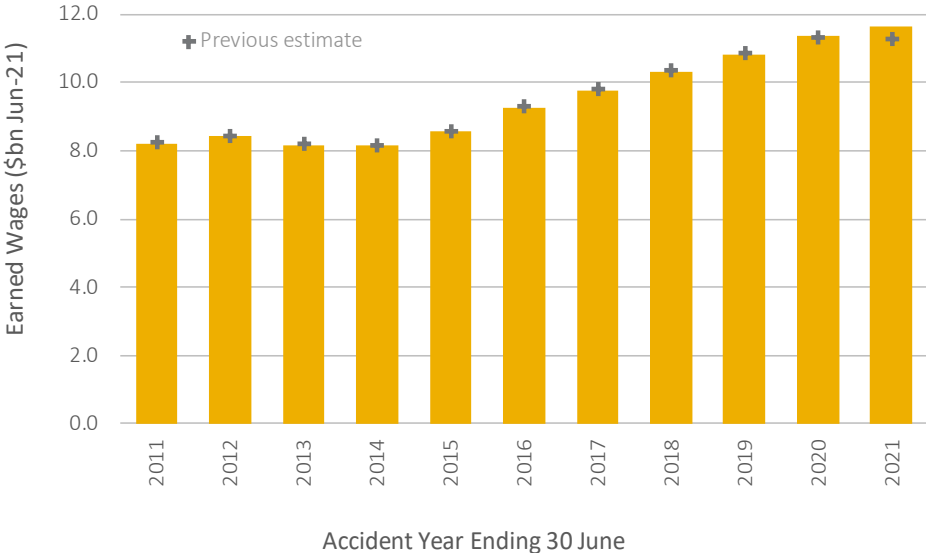
Total employee numbers reduced by 1% 2019/20, and by a further 3% in 2020/21. Typically, employee numbers have grown year on year, and we expect that the lack of growth in the last two years is related to COVID-19 lockdowns. In our calculation of ultimate claim frequency, we have used the number of **full time** ACT private sector employees as the measure of exposure.

As these employee figures are not provided by the insurers, and are compiled from two different sources of data, in our premium estimates we rely more heavily on frequency measured relative to wages rather than employee numbers.

Earned wages

Wages are used as the primary measure of exposure. Figure 3.2 shows earned wages by accident year. The wages have been adjusted for historical wage inflation (amounts are expressed in June 2021 values), which means that an increase here represents real wages growth. These figures are estimates based on information to September 2021; wages are often revised from initial estimates to actual figures at the end of the policy year (see Appendix G). We have also shown our estimates from last year, adjusted for differences in inflation.

Figure 3.2 – Estimated ultimate earned wages



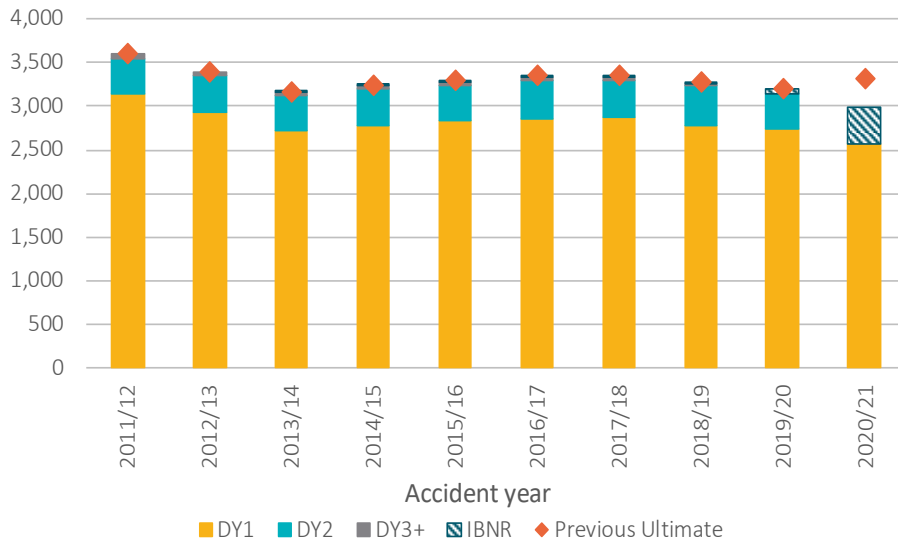
Earned wages increased by 2.5% in real terms in 2020/21, and are estimated to be around \$11.7bn in June 2021 values. This is about 3% higher than our previous estimate of wages for 2020/21.

Although wages grew by 2.5% in 2020/21, this is lower than the average 6% p.a. growth seen over the preceding six years. This supports earlier observations that COVID-19 has reduced the work levels in the ACT.

3.2 Claim numbers and frequency

Figure 3.3 shows the numbers of non-nil claims that have been reported to the insurers to 30 June 2021, as well as our estimate of ultimate numbers for each accident year. We have shown claims reported by duration, or “development years” following the accident; “DY1” represents claims reported within one year of the accident, “DY2” represents claims reported between 1 to 2 years after the accident and so on.

Figure 3.3 – Ultimate number of (non-nil) claims

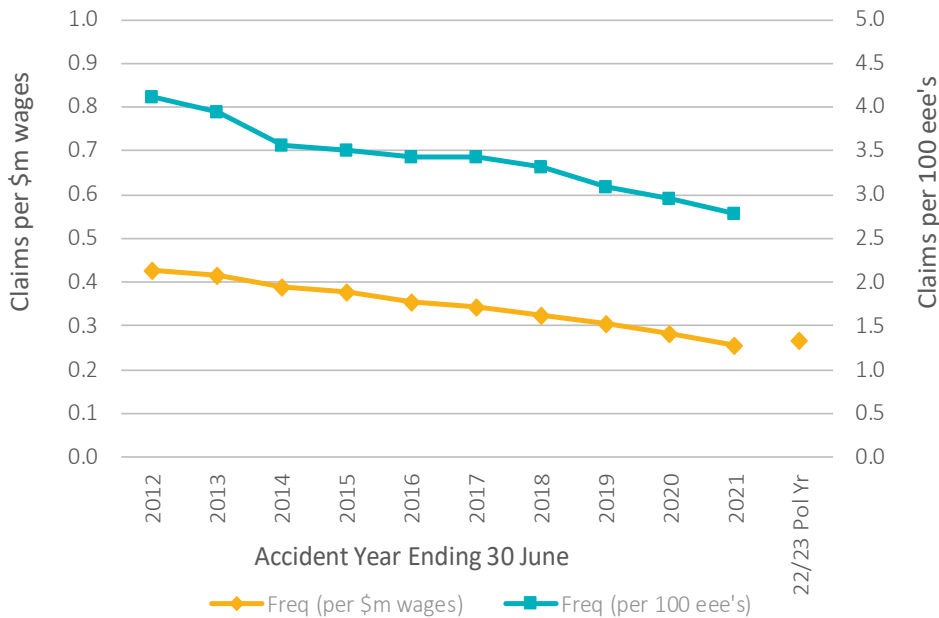


There are generally very few claims reported more than two years after the accident, and the number of Incurred But Not Reported (IBNR) claims is therefore small for all but the latest accident year.

The projected number of non-nil claims for 2020/21 is 2,995 – a decrease of 6.3% from 2019/20.

The estimated ultimate number of non-nil claims is divided by both earned wages and full time employee numbers to arrive at measures of the ultimate claim frequency; see Figure 3.4.

Figure 3.4 – Ultimate non-nil claim frequency



The non-nil claim frequency per \$million wages has steadily reduced since 2011/12, to an estimated 0.26 claims per \$million wages for the 2020/21 accident year. The initial reduction is believed to be related to the safety review of the Construction industry which took place in 2013/14, but subsequent reductions appear to be due to a mix of underlying frequency improvements, a general shift to lower risk industries, and more recently the effects of COVID-19 lockdowns.

The reduction in frequency was greater for 2020/21 than previous years, supporting the hypothesis that some of the reduction is due to the impact of COVID-19 lockdowns. We assess that reductions in claim

numbers due to COVID-19 have largely been matched by lower growth in wages, so the resulting claim frequency is only marginally lower than would have otherwise been the case.

The claim frequency per employee has also reduced over the period shown, but the year on year reductions have not been as consistent.

We have adopted a claim frequency for the 2022/23 policy year of 0.27 claims per \$million wages. This is slightly higher than our estimated frequency for 2020/21, but below the frequency estimate for 2019/20. This is consistent with our assessment that the reduction in 2020/21 is partly due to COVID-19 impacts.

Our adopted frequency for 2022/23 is 4% lower (after adjusting for actual inflation) than the claim frequency adopted for the 2021/22 policy year in our previous review, and corresponds to 3,396 claims for the 2022/23 policy year.

Appendix E provides further detail of our claim number analysis.

3.3 Injury trends

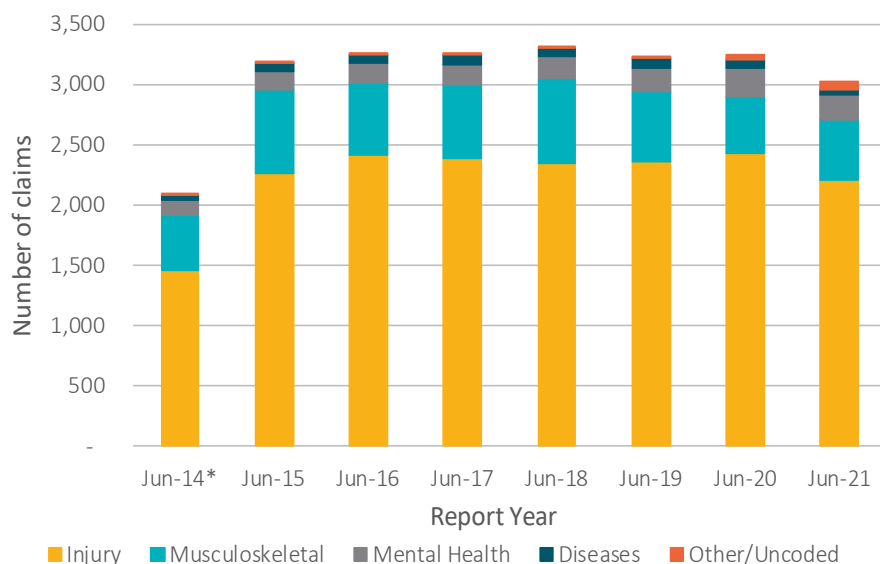
We have analysed trends in claim numbers by injury type to see whether there are changes in the types of injuries occurring. We have grouped claims into the following categories:

- Injury
- Musculoskeletal
- Mental Health
- Diseases
- Other/uncoded.

Claims have been coded under the TOOCS 3.0 classification system since September 2013, and we show data only from this point onwards. A full listing of the injuries under each group is shown in Appendix I.

Figure 3.5 shows the numbers of claims split by injury type.

Figure 3.5 – Claims by injury type



*June 2014 has only nine months of coding

Injury claims make up around 73% of total claim numbers, and musculoskeletal claims represent 18%. Since 2015 (the first year fully coded), the proportion of Mental Health claims has increased from 4.8% to 6.7% (although slightly higher for 2019/20), while the proportion of Musculoskeletal claims has been variable. Both Mental Health and Musculoskeletal claims have higher average costs than Injury claims, so a shift in mix towards these injury types would be expected to be associated with an increase in average size.

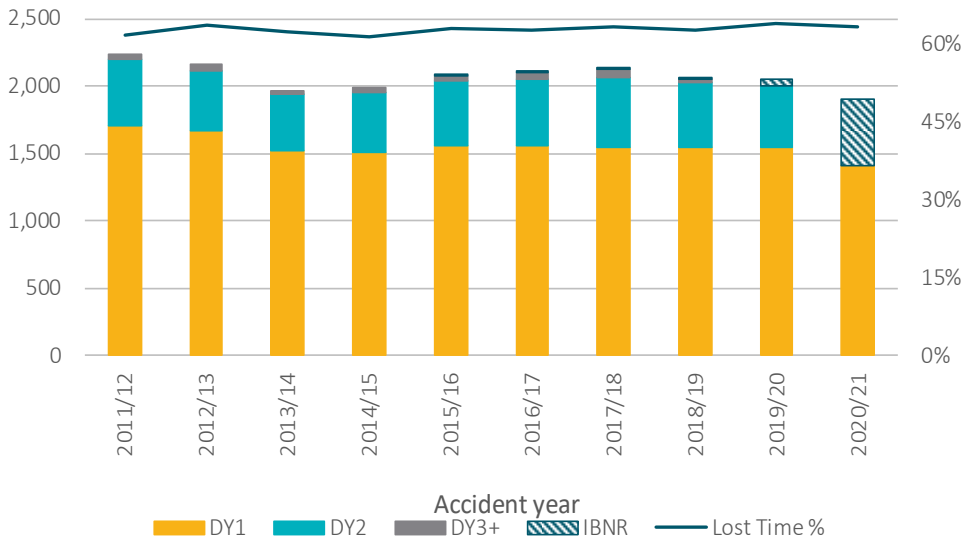
We note that our data includes only the primary injury; a proportion of claimants with non-mental health injuries will develop secondary mental health issues that will increase the claim duration.

3.4 Weekly benefits

Lost time claims

Figure 3.6 shows our estimated ultimate numbers of lost time claims, and the estimated proportion of non-nil claims that involve weekly benefits.

Figure 3.6 – Ultimate number of lost time claims



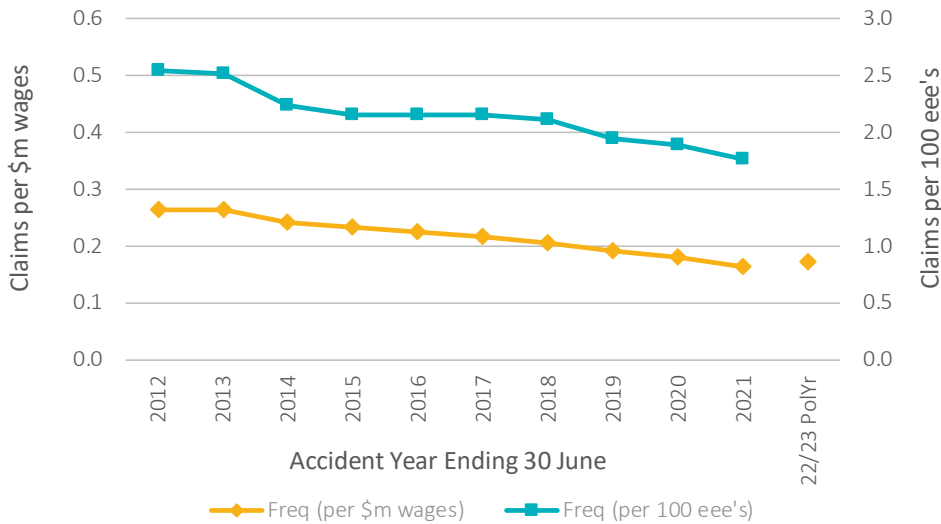
As with non-nil claims, there are very few new lost time claims more than two years after the accident, and therefore the number of IBNR claims is small for all but the latest accident year.

We project 1,901 lost time claims for 2020/21, a decrease of 7.3% from 2019/20.

The ratio of lost time claim numbers to non-nil claims has been reasonably stable since 2011/12, averaging 63%. For the 2022/23 policy year, we have adopted a lost time proportion of 63.8%, which is slightly higher than our estimate for 2020/21, and is in line with the average of the preceding two years. The adopted proportion for 2022/23 represents a small decrease from 64.1% at the previous review.

Figure 3.7 shows the ultimate number of lost time claims expressed as claim frequencies.

Figure 3.7 – Ultimate lost time claim frequency

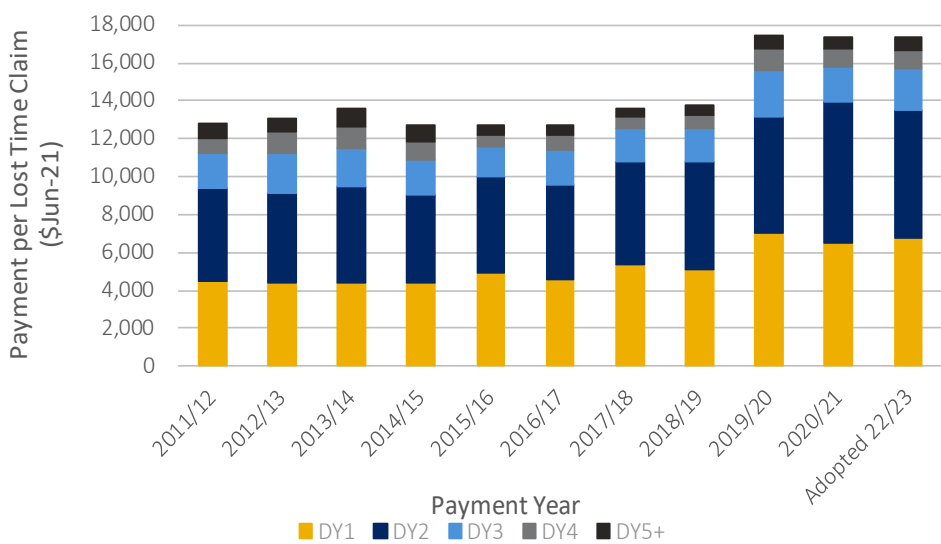


The lost time claim frequency (per \$million wages) is projected to be 0.18 for 2019/20 and 0.16 for 2020/21. We have adopted a frequency of 0.17 for the 2022/23 policy year.

Average weekly benefit payments

Figure 3.8 below shows the average weekly benefits paid per lost time claim by payment year, as well as our adopted average weekly benefit cost for the 2022/23 policy year.

Figure 3.8 – Weekly benefits per lost time claim



The average weekly payment amount increased materially in 2019/20. When looking at this in more detail, the increase appears to be a combination of increased numbers of claims reaching longer durations and increased average payment amounts. That is, it is not isolated to a single cohort and the deterioration is across both duration and average size. This is potentially linked to a reduction in return to work opportunities as a result of COVID-19 lockdowns; however, this deterioration began prior to the lockdowns.

Our selected average claim size for the 2022/23 policy year for weekly benefits is \$17,369 per lost time claim (June 2021 values). This is 20.1% higher than the selected average claim size at the previous review (June 2021 values), reflecting the emerging experience. At the previous review we did not fully respond

to the 2019/20 experience, as any COVID-19 related increase was expected to be short term and we gave more credibility to the longer term experience. However, since the higher level of payments has persisted, we have adjusted our selections for this review.

The adopted average weekly cost per **non-nil** claim (not just lost time claims) is \$11,100. This is 19.7% higher than selected at our previous review (\$9,300), driven by growth in the average cost per lost time claim shown in Figure 3.10.

The full analysis of weekly benefit average claim sizes can be found in Appendix F.

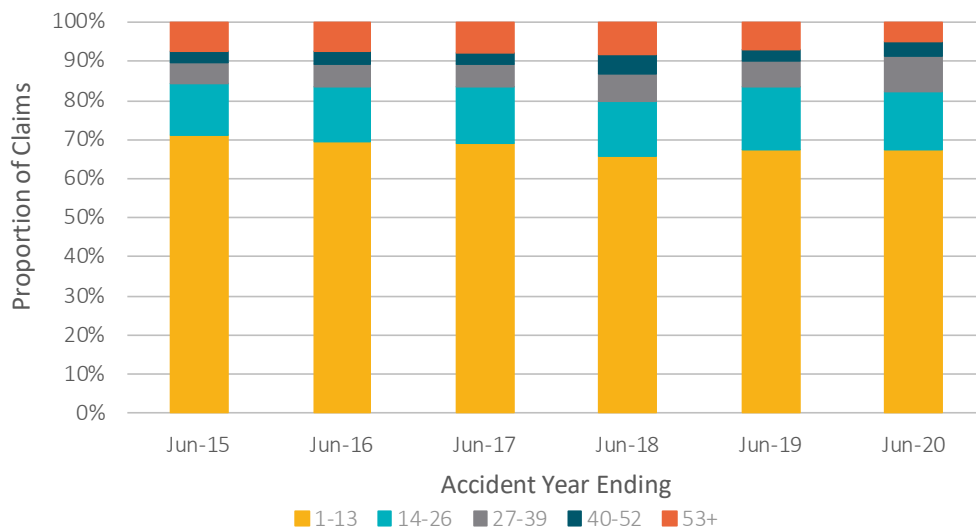
Duration of weeklies & return to work

We have performed high level analysis of the Scheme’s experience in relation to weekly claimants’ time off work and their reasons for ceasing weekly payments.

For this analysis, we have defined a week as a “week off work” if the worker has received a weekly payment (full or partial) for that week.²

Figure 3.9 shows our analysis of the distribution of weeks off work for claimants from each accident year. This analysis includes only those claimants who have ‘exited’ weekly benefits (i.e. it excludes claimants who are still receiving weekly benefits). We note that these figures do not represent the ‘final’ outcomes. We have excluded the most recent accident year, due to its immaturity.

Figure 3.9 – Weeks off work: Claimants no longer receiving weeklies



On average, claimants for accident years 2014/15 to 2017/18 have received weekly payments for 16 weeks; around 70% of these claimants have received between 1 and 13 weeks of entitlements. This percentage has been lower in the three accident years to 2019/20, averaging about 67%, which may explain part of the increase in the average weekly amount. Across all accident years, more than 80% of claimants have received 26 weeks or less of weekly payments. For the 2014/15 year (the most mature experience), 7% of weekly claims received weekly payments for more than a year.

Weekly benefits can cease for a number of reasons, including:

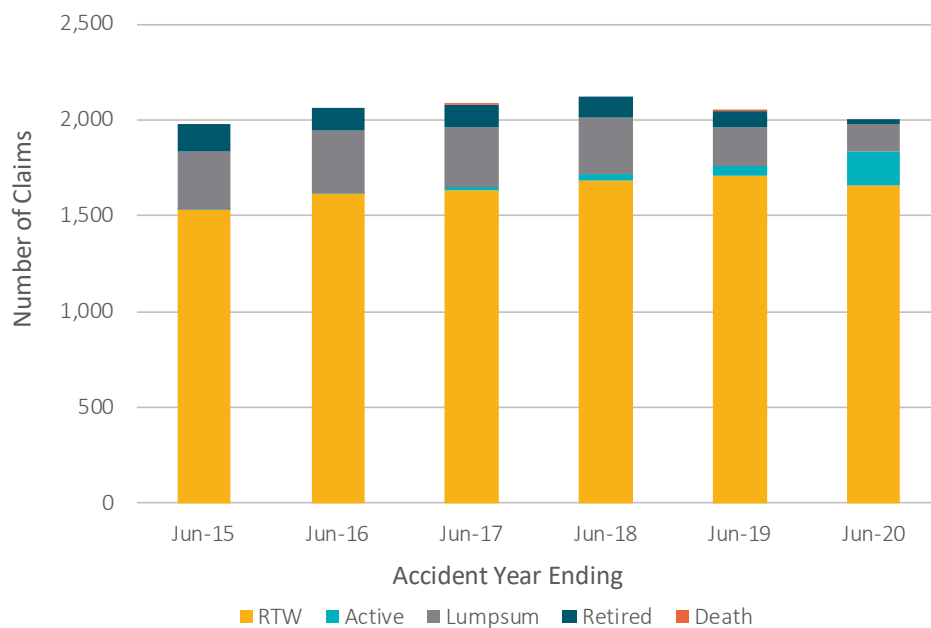
- Payment of commutation/settlement
- Death of claimant

² We can perform this analysis only for claims with an accident date after 31 October 2013, because it is only from this date that start and end dates are recorded against weekly payments.

- Retirement of claimant³
- Claimant returns to work (RTW)⁴.

We have identified the current state of each claimant who has received a weekly benefit since 31 October 2013.

Figure 3.10 – Current status of claimants with weekly benefits



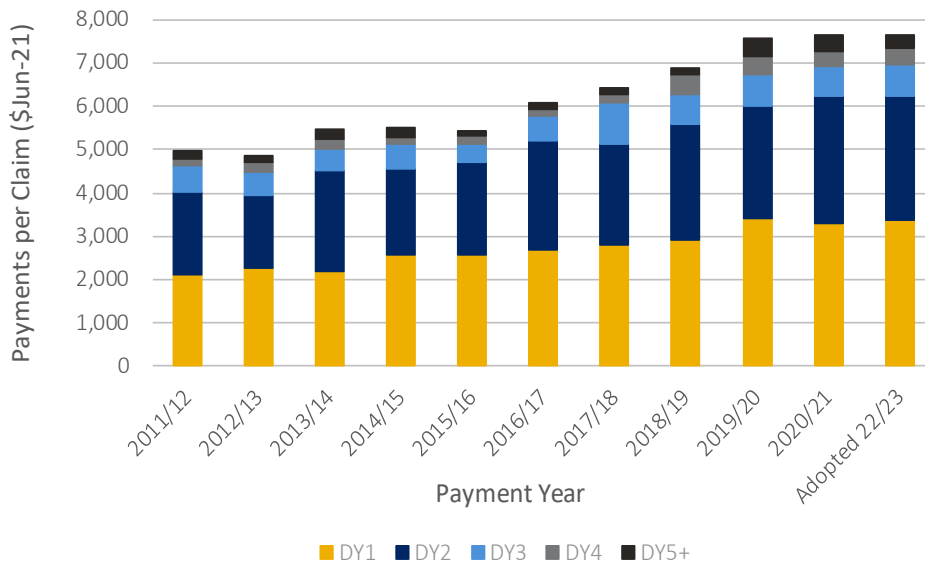
Most of the claimants who received weekly benefits have eventually returned to work. For accident years 2014/15 to 2019/20 combined, around 13% of claimants have ceased weeklies after payment of a commutation or lump sum (to date), and around 5% have received weekly benefits until retirement age³.

3.5 Medical and related payments

Figure 3.11 shows the average medical payments per non-nil claim for each past payment year, and our adopted average medical claim size for the 2022/23 policy year.

³ We have observed that some lump sums are paid more than one year after the last weekly payment. This means that some claimants who have not received a weekly for four or more weeks and have a current status 'RTW' may receive a lump sum in future years and therefore be reclassified.

Figure 3.11 – Medical benefits per non-nil claim



The five years from 2015/16 to 2019/20 saw sustained above-inflationary growth in the average medical size; over this period the medical size grew by 9% p.a. above normal inflation. In 2020/21 this growth was just 1%; it is possible that this lower growth is related to claimants having limited access to some services during COVID-19 lockdowns.

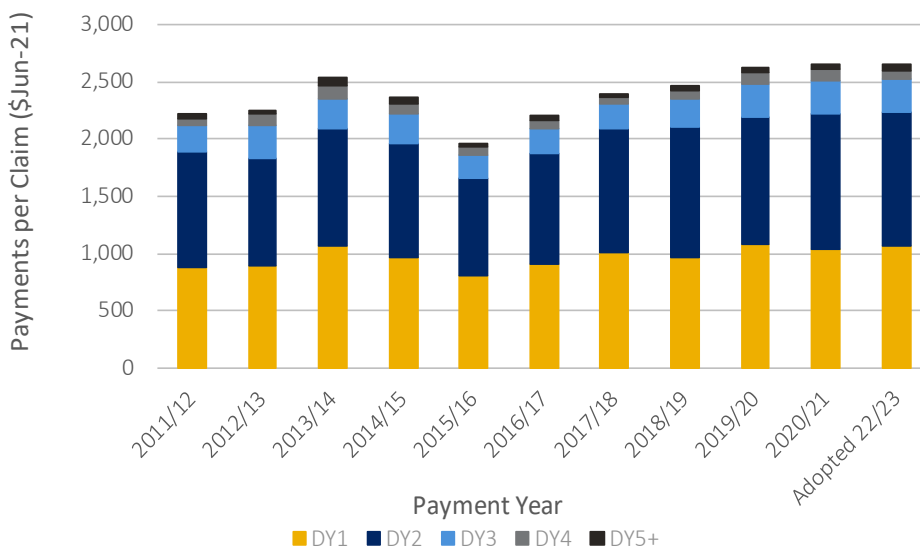
Our selected average medical cost per non-nil claim for the 2022/23 policy year is \$7,700 (June 2021 values). This is 5.1% higher than that adopted in our previous review (\$7,300; June 2021 values). Our selections for the first four development years are in line with the 2019/20 and 2020/21 experience, but for longer durations we have taken a longer term view.

The full analysis of medical and related payment average claim sizes can be found in Appendix F.

3.6 Rehabilitation

Figure 3.12 shows the average rehabilitation cost per non-nil claim, along with our adopted average rehabilitation claim size for the 2022/23 policy year.

Figure 3.12 – Rehabilitation benefits per non-nil claim



The average rehabilitation benefit per non-nil claim increased by 8% p.a. above inflation from 2015/16 to 2019/20, a level similar to medical benefits. As for medical benefits, in 2020/21 this growth was just 1%, and again may be lined to limited access to services.

Our adopted average rehabilitation cost per non-nil claim for the 2022/23 policy year is \$2,700 (June 2021 values). This is 5.7% higher than adopted at our previous review (\$2,500), and close to the 2019/20 and 2020/21 experience.

The full analysis of rehabilitation benefit average claim size can be found in Appendix F.

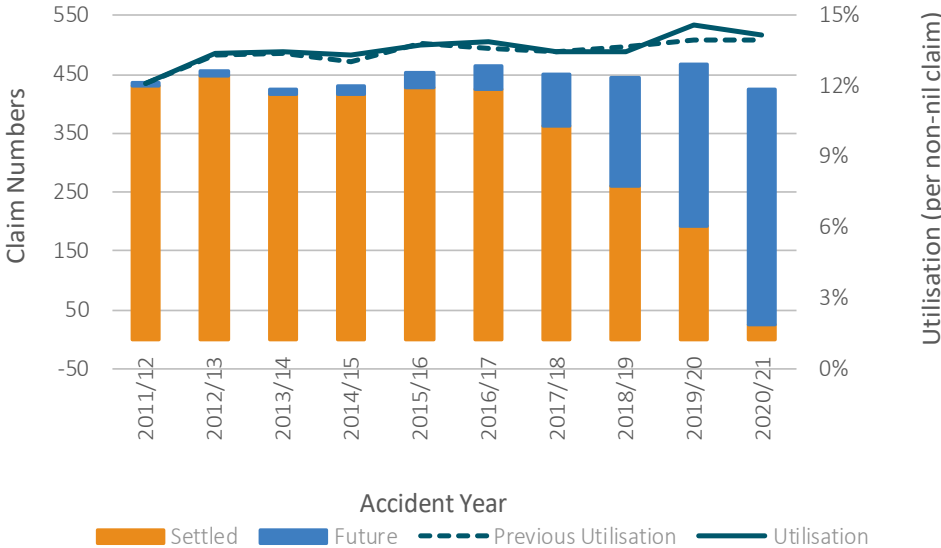
3.7 Lump sums

Number of lump sums

Due to differing practices in the classification of lump sum payment types between insurers (as discussed in Appendix C.4), we have grouped all lump sum claims together for our analysis.

Figure 3.13 shows the estimated ultimate number of lump sum claims for each past accident year. We also show the lump sum utilisation rate – the number of lump sum claims as a proportion of the number of non-nil claims.

Figure 3.13 – Ultimate lump sum numbers and utilisation



Our estimates of ultimate lump sum numbers have generally increased slightly since the previous review for recent accident years, reflecting the most recent experience. The exception is our estimates for 2020/21 which has reduced following the reduction in ultimate claim numbers.

Since there is a delay to report for lump sums, we have set the ultimate claim numbers for 2018/19 and more recent accident periods by selecting a utilisation rate per non-nil claim. For 2018/19 this is 13.5% (previously 13.65%) and for 2019/20 14.6% (previously 14.0%). Our higher utilisation for 2019/20 gives partial credibility to the higher number of lump sum claims paid to date, but also gives some credibility to the possibility of this representing a speed-up in the lump sum report pattern.

For 2020/21 our adopted frequency is 14.2% (previously 14.0%), which is between the adopted utilisations for 2018/19 and 2019/20; this frequency leads to an estimate of 425 lump sum claims for 2020/21. For the 2022/23 policy year, we are projecting 482 lump sum claims.

There is a considerable level of uncertainty in these projections, and a significant IBNR element, even for accident years up to four years old.

Settlement experience and adopted average size of lump sums

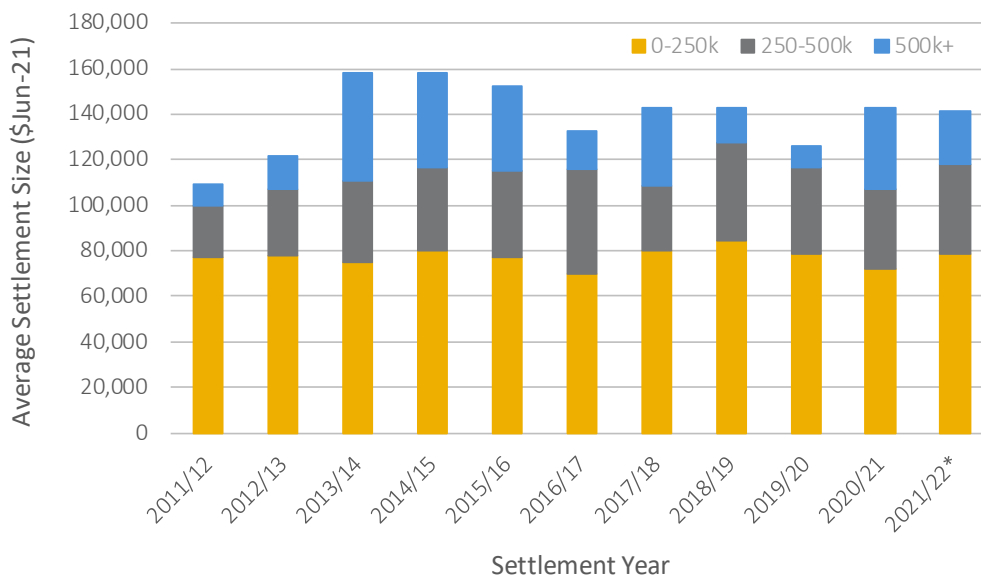
Table 3.1 shows the numbers and average size of lump sum claims by year of settlement, including the three months' settlement experience to September 2021. Figure 3.14 shows the information in graphical form, with the sizes broken down into costs attributable to claims less than \$250,000, claims between \$250,000 and \$500,000, and claims above \$500,000.

Table 3.1 – Average size of common Law & other lump sum settlements

Year of Settlement	Common Law			Lump Sums			Lump Sums & Common Law		
	No. of Claims	Avg size (\$ Jun-21)	Change from prev yr	No. of Claims	Avg size (\$ Jun-21)	Change from prev yr	No. of Claims	Avg size (\$ Jun-21)	Change from prev yr
2011/12	184	148,832		249	71,319		413	109,301	
2012/13	254	160,919	8%	242	67,535	-5%	466	121,646	11%
2013/14	281	216,103	34%	222	79,641	18%	496	159,922	31%
2014/15	289	197,892	-8%	191	86,103	8%	466	158,520	-1%
2015/16	288	180,768	-9%	177	95,180	11%	456	152,235	-4%
2016/17	294	168,186	-7%	215	77,421	-19%	499	132,418	-13%
2017/18	242	167,015	-1%	180	102,609	33%	413	142,951	8%
2018/19	231	178,544	7%	175	85,030	-17%	393	142,758	0%
2019/20	203	184,022	3%	266	78,888	-7%	460	126,125	-12%
2020/21	203	225,923	23%	338	89,983	14%	538	142,562	13%
2021/22 *	77	146,234	-35%	90	89,001	-1%	167	115,886	-19%

* 2021/22 shows settlements in the three months to September 2021 only

Figure 3.14 – Average size of lump sum settlements



* 2021/22 shows settlements in the three months to September 2021 only

Figure 3.14 demonstrates that the average settlement size for an individual year is depends strongly on the number of very large settlements (blue segments). The lump sum size has averaged around \$140,000 over the last six years.

We have adopted an average settlement size of \$141,000 (June 2021 values) for lump sum claims in the 2022/23 policy year. This is slightly above our previous selection of \$138,000 (inflated), reflecting the higher average settlement sizes in the last year. We test the sensitivity to this assumption in Section 6.5.

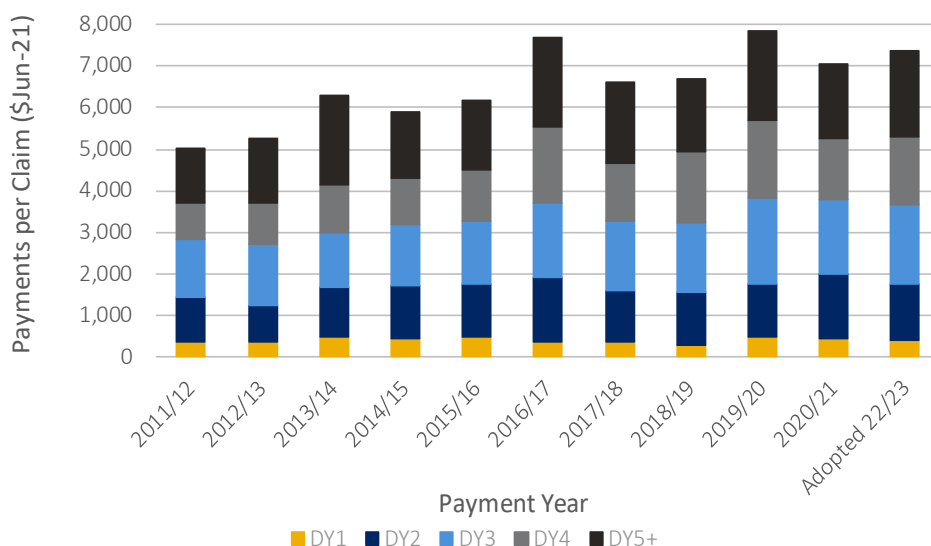
The average lump sum cost for the 2022/23 year for all non-nil claims (not just lump sum claims) is \$20,100. This is 3.5% higher than in the previous review (\$19,400).

The full analysis of average claim size for lump sum benefits can be found in Appendix F.

3.8 Legal and investigation

Figure 3.15 shows legal and investigation costs per non-nil claim, along with our adopted average size for the 2022/23 policy year.

Figure 3.15 – Legal and investigation costs per non-nil claim



The average legal and investigation cost has generally trended upwards since 2011/12, although there are some ups and downs.

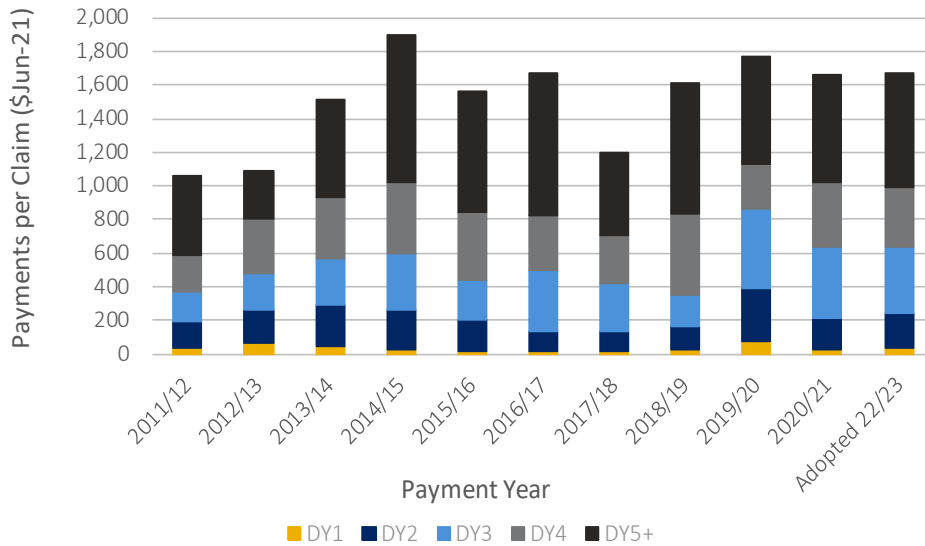
Our selected average claim size for the 2022/23 policy year for legal and investigation costs is \$7,370 per non-nil claim (June 2021 dollars). This is 2.9% higher than the average claim size adopted in the previous review (\$7,160).

The full analysis of the average claim size for legal and investigation costs can be found in Appendix F.

3.9 Recoveries

Figure 3.16 shows the amount recovered by insurers per non-nil claim, along with our selection for the 2022/23 policy year. Recoveries include recoveries from other insurers (sharing), employers (excess) and other sources.

Figure 3.16 – Recoveries per non-nil claim



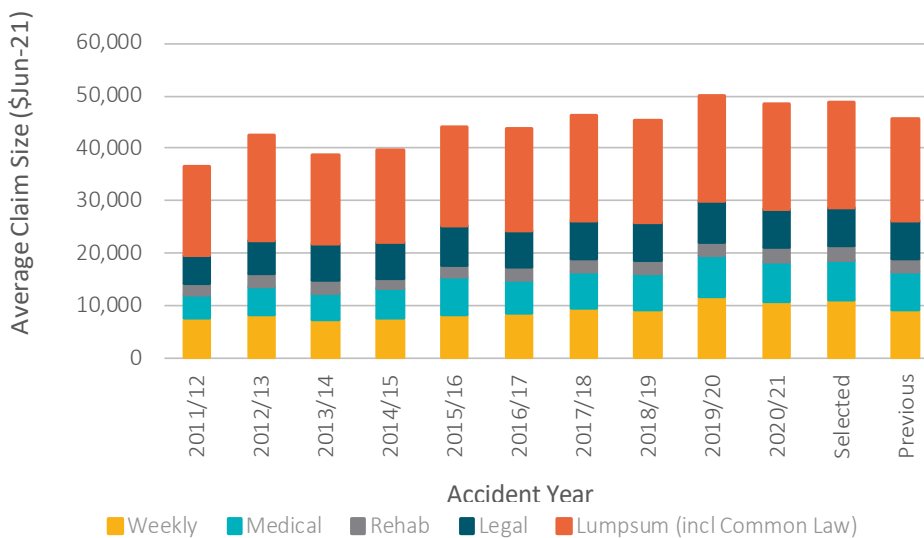
Recovery levels can be variable, but it appears there was a step-up in 2013/14 that has largely been sustained. Our selected average size for the 2022/23 policy year is \$1,670 per non-nil claim (June 2021 dollars), which is 6.6% higher than our selection from the previous review (\$1,570).

The full analysis of the average size of recoveries can be found in Appendix F.

3.10 Overall average claim size

Figure 3.17 summarises the adopted gross average claim sizes for each past accident year, and our selection for the 2022/23 policy year.

Figure 3.17 – Adopted gross average claim size (per non-nil claim) by payment type

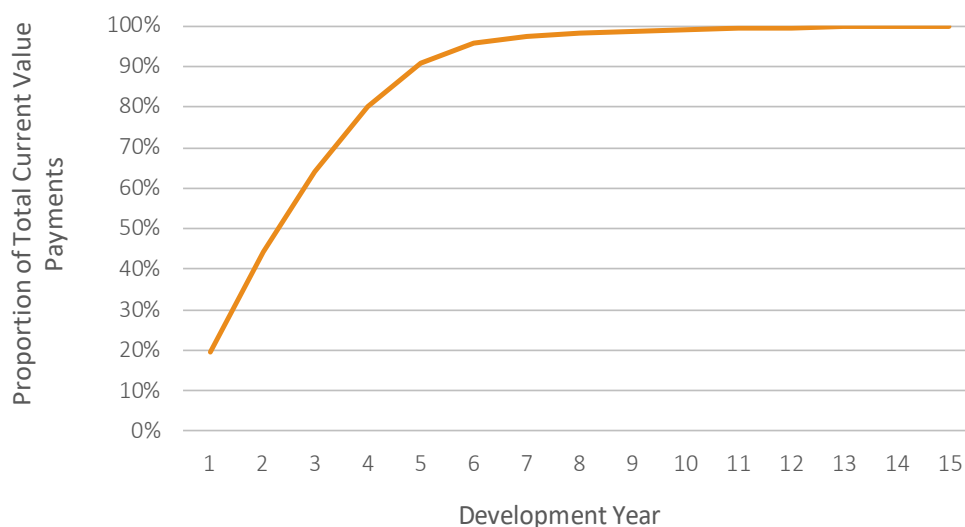


Our selected gross average claim size for the 2022/23 policy year is around \$48,800; after allowing for recoveries, this reduces to about \$47,200. This is 7.1% higher than the selected size in our previous review (\$44,000, inflated), due to the higher average claim size experience over the last two years.

3.11 Payment pattern

Our valuation methods incorporate assumptions about the pattern of payments by development year, and our payment pattern analysis is done by payment type. The adopted payment pattern for all payment types combined is shown in Figure 3.18. Full details of each of the selected payment patterns can be found in Appendix F.

Figure 3.18 – Adopted net payment pattern



The majority of payments are made in the first few years after the accident, with 90% of payments made within five years.

3.12 Summary of assumptions for 2022/23 policy year

Table 3.2 summarises the adopted claim number and average claim size assumptions for estimating reasonable premium rates for the 2022/23 policy year.

Table 3.2 – Claim assumptions for 2022/23 policy year

Payment Type	Number basis	Claim Frequency (per \$m) ¹	Ultimate Non- Nil Claim Numbers	Average Claim Size (\$Jun-21)	Avg Cost per Non- Nil Claim (\$Jun-21)
Weekly benefits	Lost time claims	0.17	2,168	17,400	11,100
Medical	Non-nil claims	0.27	3,396	7,700	7,700
Rehabilitation	Non-nil claims	0.27	3,396	2,700	2,700
Lump Sums	Lump Sum claims	0.04	482	141,200	20,100
Legal & Investigation	Non-nil claims	0.27	3,396	7,400	7,400
Recoveries	Non-nil claims	0.27	3,396	(1,700)	(1,700)
Total	Non-nil claims	0.27	3,396		47,200

¹Per \$ million of wages in \$Jun-21

3.13 Benefit changes

The Workers Compensation Amendment Bill 2017 resulted in two changes to the benefit structure:

- Cessation of weekly benefits was aligned with the Commonwealth retirement age (previously 65)
- Death benefits were aligned with the Comcare scheme.

It is likely that these changes will have had only a partial impact on the payment experience to date, due to the gradual increase in the retirement age and the low level of death benefits per year, but they will influence costs for the 2022/23 premium year. We have therefore assumed that our selected average size based on historical payments reflects 50% of the impact this will have on experience for the 2022/23 premium year.

In order to allow for the benefit changes, we have increased our average claim size assumption by 0.51%, from \$47,200 to \$47,400. The need for this explicit loading will reduce over time.

4 Economic, expense and profit assumptions

This section outlines the economic assumptions, expense assumptions and insurer margins incorporated in our assessment of a reasonable premium pool.

4.1 Summary of assumptions

Table 4.1 summarises the assumptions adopted in our estimates of a reasonable premium for the 2022/23 policy year, as well as those adopted in our previous review.

Table 4.1 – Summary of economic, expense and profit assumptions

Assumption	Adopted	Previous
Discount Rate (p.a.) - valuation assumption	0.50%	0.40%
Discount Rate (p.a.) - premium rate assumption	1.95%	0.75%
Wage Inflation (p.a.): 2021/22-2022/23	2.75%	1.75%
Wage Inflation (p.a.): thereafter	2.75%	2.25%
Economic growth (p.a.): 2021/22	-1.00%	-0.25%
Economic growth (p.a.): 2022/23	3.00%	2.75%
Superimposed Inflation (p.a.) ¹	4.50%	4.50%
Expenses (% of premium)	24.7%	24.0%
Insurer margin (% of premium)	11.5%	12.0%

¹ Average across all payment types

4.2 Discount rate

Discounted claims costs are used to estimate outstanding claims liabilities and insurer profitability. We have calculated the discount rate based on yields available on Commonwealth Government bonds corresponding to the duration of the ACT workers' compensation claim payments at 30 June 2021 (the 'valuation' date).

The discount rate adopted for this review is 0.5% p.a., slightly higher than the rate of 0.4% p.a. adopted at the previous review.

We also allow for the time value of money when estimating a reasonable premium rate for 2022/23. For this purpose we have used a risk-free rate based on forward rates implied by yields available on Commonwealth Government bonds as at 28 February 2022. Any margin above the risk-free rate earned by the licensed insurers from their actual investments contributes to profits and is taken into account in deriving an appropriate insurer margin.

The discount rate adopted for 2022/23 policy year premiums is 1.95% p.a., an increase of 1.20% from the rate used for 2021/2022 premiums. When estimating historical risk premiums, we have used this discount rate so that comparisons made between historical years and the 2022/23 policy year are on a consistent basis.

To discount past payments to the premium receipt date in calculating hindsight risk premiums, we have used the actual average historical cash rates applicable in each year from 1999 to 2021, as published by the Reserve Bank of Australia.

4.3 Inflation

Two types of inflation are incorporated into our cost models:

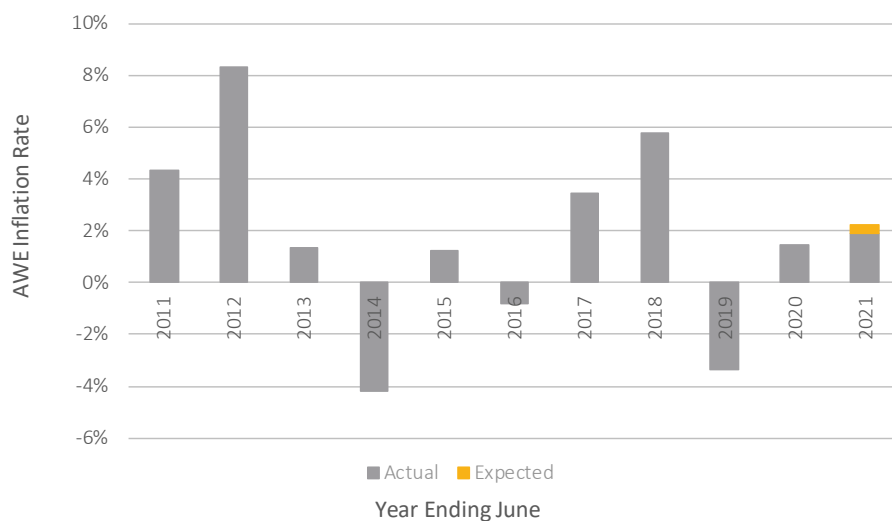
- Normal economic inflation – in this case wage inflation, based on AWE increases, since the workers' compensation benefits are income-related

- Superimposed inflation – inflation in excess of normal economic inflation.

Wage inflation

Figure 4.1 shows the historical rate of change in the Australian Bureau of Statistics' Average Weekly Earnings (AWE). The grey bars show the actual rate of change (wage inflation in the period) and the orange segment shows the wage inflation rate adopted at our previous review.

Figure 4.1 – AWE inflation



AWE has been variable, likely due to sampling error in the index, but inflation over the last eight years has been very low.

Independent forecasts for wage inflation are in the range of 2.25% to 3.25% p.a., with lower rates forecast for shorter durations and higher rates for longer durations. This is an increase from last year, particularly for shorter durations, reflecting a recovery to pre-pandemic levels.

In light of this, we have adopted wage inflation of 2.75% p.a., which is an increase from our short-term assumption of 1.75% p.a. and our mid-long term assumption of 2.25% p.a. from the previous review.

The implied gap between the discount rate and inflation rate for claim payments of -0.80% p.a. (1.95% p.a. discount rate less 2.75% p.a. inflation rate), compares to -1.5% from our previous review.

Superimposed inflation

Superimposed inflation is the tendency for payments to increase at a higher rate than normal economic inflation. Some examples of the forms superimposed inflation can take are:

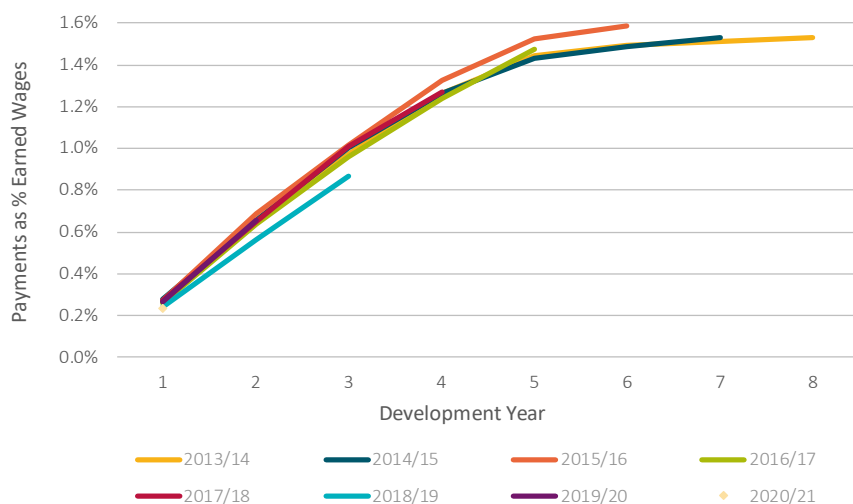
- Changes to the average severity of claims
- Longer periods of payment – for example, in the case of weekly benefits and medical costs
- More claims for particular heads of damage – for example, more claimants seeking lump sum benefits.

We analysed the experience of the ACT workers' compensation portfolio in order to look for evidence of superimposed inflation; this was done for each payment type. We observed evidence of superimposed inflation over the longer term across all payment types.

One factor that often leads to superimposed inflation in average sizes is a sustained reduction in claim frequency, as the claims that are no longer made tend to skew towards lower severity claims, and the overall severity of the remaining claims increases. As shown in Figure 3.6, the ACT claim frequency has been trending down for a number of years.

In order to assess whether there has been any offset between the reduction in frequency and average size, we have looked at total claim payments as a proportion of earned wages by development year; see Figure 4.2. If there had been no change in average size over time, the cost as a proportion of wages would reduce in line with the reduction in claim frequency.

Figure 4.2 – Payments as a proportion of earned wages



Almost all years are on a similar cost trajectory, suggesting that reductions in claim frequency from year to year are being matched by increases in average claim size. 2018/19 appears to be developing as a lower cost year.

It is difficult to pinpoint the drivers of the growth in average size. While we assess that some is due to the tendency to skew towards higher severity claims as the claim frequency reduces, we would still expect a reduction in the claims cost from year to year, since some claims are being removed. This suggests that there is underlying superimposed inflation that is not related to the claim frequency reduction.

We have adopted a superimposed inflation rate of 4.5% p.a. (unchanged from the previous review), which essentially offsets the impact of the claim frequency reductions observed since 2012/13. As for the previous review, the application is as follows:

- Our claim frequency for the 2022/23 premium year is set close to the 2020/21 accident year frequency (with an allowance for COVID-19 impacts). As we do not follow the trend in claim frequency between the 2020/21 accident year and the 2022/23 premium year, we do not apply superimposed inflation to our adopted size (in June 2021 dollars) up to the start of the 2022/23 premium year.
- From this point on we apply the superimposed inflation assumption of 4.5% p.a.

We believe that this approach is appropriate in the current circumstances, where material year on year changes in claim frequency and average size have to a large extent been offsetting. We acknowledge that it is difficult to completely capture the underlying dynamics, and this is one of the more subjective areas of our basis.

The sensitivity to the adopted superimposed inflation rate is demonstrated in Section 6.5.

4.4 Economic growth

In order to project wages for the coming policy year, we need to make an assumption about the growth of the workforce due to general growth in the economy. We have adopted growth of -1.0% for 2021/22 and 3.0% for 2022/23. The higher adopted rate of economic growth for 2022/23 assumes a 'bounce back' to normal levels of employment as the economy reopens, after 2021/22 was impacted by COVID-19 lockdowns.

4.5 Expenses

Commission/brokerage

Table 4.2 shows the commission/brokerage rates paid by each of the licensed insurers writing workers' compensation insurance in the ACT, as well as the assumptions adopted in each of the insurer's premium rate filings for 2019/20 and 2020/21.

Table 4.2 – Commission rates

Insurer	Achieved		Filed	
	2019/20	2020/21	2020/21	2021/22
AAL	3.4%	3.4%	3.5%	4.2%
IAG	3.7%	3.7%	3.3%	3.3%
QBE	3.9%	3.7%	3.8%	4.1%
SUN	4.5%	4.2%	4.1%	5.0%
ZUR	4.6%	4.3%	4.6%	4.3%
CCI	0.0%	0.0%	0.5%	0.0%
GUI	0.0%	0.0%	0.5%	0.5%
Average ¹	3.7%	3.6%	3.6%	4.2%

¹ Weighted average based on premium volume.

The overall rate of commission/brokerage paid in 2020/21 at 3.6% of premiums is 0.1% lower than the previous year, and 0.6% below the average filed rate of 4.2% for 2021/22. We have allowed for commission/brokerage of 3.65% of premium in our estimated reasonable premium pool for 2022/23, a slight increase from our previous assumption of 3.60%.

Administration expenses

Table 4.3 shows the expense rates included in the insurers' filed rates over the last three policy years; these rates exclude statutory levies.

Table 4.3 – Administration expense rates

Insurer	2019/20	2020/21	2021/22
AAL	4.3%	4.2%	4.3%
QBE	16.4%	18.3%	16.0%
SUN	13.3%	13.3%	16.1%
IAG	16.8%	18.5%	20.6%
CCI	33.1%	31.2%	30.9%
GUI	25.1%	21.9%	20.6%
ZUR	12.5%	13.1%	14.2%
Average	12.8%	13.2%	13.8%

¹ Weighted average based on premium volume.

Based on the most recent experience, we have adopted an allowance of 13.7% of premium, up from 13.3% at our previous review.

We note that the treatment of statutory levies is not consistent between insurers in the filed rates. Some are implicit within their overall expense loadings, while some are separately identified. There is therefore some uncertainty around the actual levels of administration expenses.

Statutory charges and levies

Our recommended premium rates also include the following levies for 2022/23:

- **Magistrates Court Levy:** 0.25% of premium, based on the expected collection during 2022/23 as advised by CMTEDD (unchanged from last year)
- **Default Insurance Fund (DIF) levy:** 2.6% of premium, as advised by CMTEDD (2.8% last year)
- **Regulatory Funding Levy (RFL):** 4.45% of premium, up from 4.00% last year.

Total expense loading

Table 4.4 below shows the total expense loading we have adopted, by its component parts.

Table 4.4 – Expense loadings

	Loading (% premium)	Estimated amount (\$m)
Commission & Brokerage	3.7%	10.6
Administration	13.7%	39.6
Statutory Charges & Levies		
Magistrates Levy	0.3%	0.7
DIF Levy	2.6%	7.5
Regulatory Funding Levy	4.5%	12.9
Total Expense Loading	24.7%	71.3

Our total expense loading is 24.7% of premium, up from 24.0% at the previous review.

4.6 Insurer margin

In determining an appropriate insurer margin for profit, we have used a model that projects the after-tax profits of the 2022/23 business until it has completely run off. In applying this model we have made the following long-term assumptions (in addition to those detailed above):

- Technical provisions will all be invested in risk-free assets and will, on average, earn the risk-free rate of 1.95% p.a. The duration of these assets is assumed to match the average duration of the technical liabilities (slightly under 3 years).
- Additional capital allocated to the business will be invested in a mix of risk-free and riskier assets (equity, property, managed trusts) which earn on average 3.0% p.a. above the risk-free rate. The duration of these assets is assumed to be longer than the duration of the technical liabilities (around 5 years).
- Claims provisions will incorporate a 12.5% risk margin.
- The capital held will be 1.5 to 2.0 times the APRA Prescribed Capital Amount.
- Shareholders will demand a return on capital of 10% after tax.

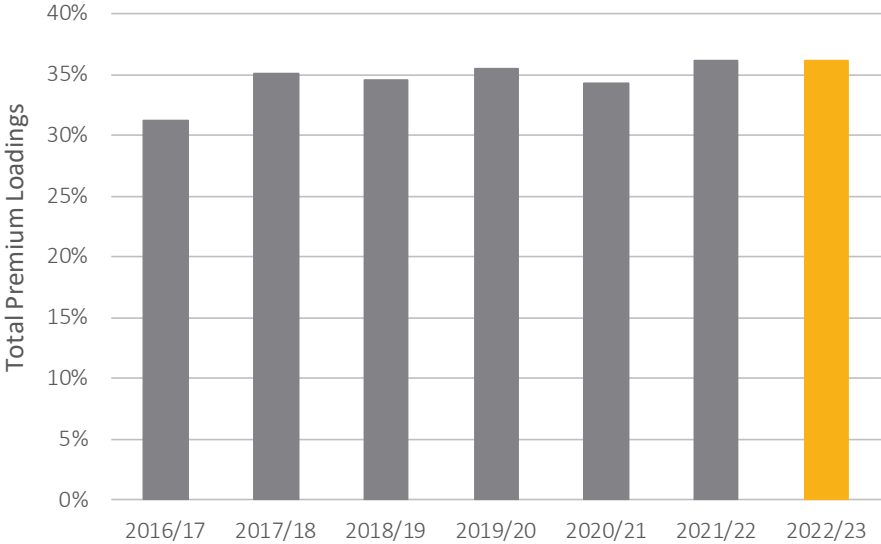
The results of our modelling indicate that, using these assumptions, an appropriate insurer margin for this business is 10% to 13% of premium. In determining a reasonable premium pool for the 2022/23 policy year, we have adopted an insurer margin of 11.5% of premium (down from 12.0% at the previous review).

The adopted margin of 11.5% compares to an average margin (weighted by premium volume) of 11.4% of premium adopted in the insurer filed rates for 2021/22.

4.7 Overall loading

We have relied on the insurers’ filed rates for deriving our loading assumptions for the 2022/23 premium pool; however, as noted above, the treatment and split of individual expense components is not always consistent or completely transparent. In Figure 4.3 we compare the overall loadings implied by insurers’ filed rates with what we have adopted for the 2022/23 premium pool.

Figure 4.3 – Total premium loadings



Our adopted total premium loading of 36.2% compares to an implied loading of 36.1% in insurers’ filed rates for 2021/22.

5 Results of hindsight analysis

We have prepared estimates of the future payments for outstanding workers' compensation claims and the ultimate claims cost for each accident year, using valuation methods which are discussed in Section 13, the claim assumptions detailed in Section 3, and the economic and other assumptions described in Section 4. This section summarises these results.

Key findings

- We estimate that ultimate claims costs for 2020/21 will be 3% lower than 2019/20. This is despite observed wage growth, and is likely an impact of COVID-19 lockdowns.
- Insurers as a whole appear to be adequately reserved, given the risk margins they hold.
- The risk premium for the 2020/21 accident year (ultimate claims costs expressed as a proportion of wages) is estimated to be 1.32%.

5.1 Estimated ultimate cost

Table 5.1 summarises our central estimate of ultimate costs by accident year, split between what has been paid to 30 June 2021 and what we estimate to be outstanding at that date.

Table 5.1 – Estimated ultimate cost

Accident Financial Year	Paid to 30-Jun-21	Estimated Outstanding	Estimated Ultimate Claims Cost ¹	Year-on-Year Change
	\$m	\$m	\$m	%
2008/09	95.9	0.8	96.7	
2009/10	115.4	1.1	116.5	20%
2010/11	124.7	1.3	126.1	8%
2011/12	115.2	1.6	116.8	-7%
2012/13	126.6	2.5	129.1	10%
2013/14	107.4	2.9	110.2	-15%
2014/15	112.9	4.3	117.2	6%
2015/16	127.4	7.1	134.5	15%
2016/17	125.6	13.7	139.4	4%
2017/18	119.5	30.8	150.2	8%
2018/19	89.0	59.0	148.0	-2%
2019/20	73.5	91.7	165.1	12%
2020/21	26.8	132.8	159.6	-3%

¹ Net of recoveries, inflated and undiscounted

The ultimate costs shown are inflated to the time of payment but undiscounted, so if there were no trends in claim numbers, average claim sizes or superimposed inflation, we would expect each year's costs to be higher than the previous year by the rate of wage inflation.

The movement from year to year in ultimate costs is variable, but over the last four years the growth has averaged 4% p.a., which is slightly lower than nominal wage growth over this period. For 2020/21, we estimate that ultimate costs will be 3% lower than 2019/20. This is largely a result of the reduction in claim numbers for 2020/21, which we believe is partly COVID-19 related, but also note that the change in claim costs is volatile from year to year.

5.2 Comparison to insurer central estimates

Table 5.2 compares our estimated outstanding claims cost (inflated to date of payment and discounted to 30 June 2021) and the central estimate of insurer reserves (case estimates plus IBNR/ER reserves) at 30 June 2021.

Table 5.2 – Comparison to insurer central estimates

Accident Financial Year	Finity Central Estimate	Insurer Case Estimates	Insurer IBNR/ER	Insurer Central Estimate	Difference (Insurer less Finity)	% Diff
	\$m	\$m	\$m	\$m	\$m	%
Prior	10	4	4	7	-3	-31%
2013/14	3	1	0	1	-1	-51%
2014/15	4	1	3	4	-1	-14%
2015/16	7	10	1	11	4	56%
2016/17	14	11	2	13	-1	-6%
2017/18	30	23	6	28	-2	-7%
2018/19	58	39	19	57	-1	-2%
2019/20	91	65	23	88	-3	-3%
2020/21	131	78	67	145	14	10%
Total	349	230	124	355	6	2%

Our central estimate of the outstanding claims liability is \$349m. Insurer case estimates plus IBNR/ER reserves of \$355m are \$8m (2%) higher than our central estimate. There is some shape by accident year, with insurers holding higher reserves for the latest accident year and our estimates higher for the most recent accident year.

We assess that the insurers as a group are adequately reserved.

This assessment of reserve adequacy is performed at a high level, for the Scheme as a whole. The adequacy of any individual insurer's reserves will depend on the insurer's own reserving practices.

5.3 Scheme risk premiums

Table 5.3 and Figure 5.1 show our estimates of the historical risk premium rates. Historical risk premiums are calculated from actual past payments plus our latest estimates of outstanding claims. Claims costs are then discounted to the beginning of the accident year and expressed as a proportion of earned wages for that year.

Table 5.3 – Risk premiums

Accident Financial Year	Est. Ultimate Claims Cost ¹	Earned Ultimate Wages	Cost as % Earned Wages
	\$m	\$m	%
2011/12	107.3	6,717	1.60%
2012/13	120.1	6,867	1.75%
2013/14	103.9	6,998	1.48%
2014/15	111.4	7,379	1.51%
2015/16	128.6	8,026	1.60%
2016/17	134.0	8,516	1.57%
2017/18	145.1	9,387	1.55%
2018/19	143.2	10,248	1.40%
2019/20	160.1	11,172	1.43%
2020/21	153.3	11,614	1.32%

¹ Net of recoveries, inflated, discounted to beginning of acc. yr

Figure 5.1 – Risk premiums



As discussed in Section 4.3, despite sustained claim frequency improvements, there was almost no change in claim payments as a proportion of wages from 2013/14 to 2017/18. Our projected risk premium over this period averages 1.54% of premium. To date, claim payments as a proportion of payments for 2018/19 have emerged lower than the preceding five years, which we have reflected in our risk premium of 1.40% for that year. Our risk premium estimate of 1.43% for 2019/20 is above 2018/19, giving partial credit to the fact that claim payments as a proportion of earned wages are emerging higher than 2018/19. Our risk premium estimate for 2020/21 of 1.32% reflects the further drop in claim frequency for this year, which we believe has been partially influence by COVID-19.

6 Premium pool for 2022/23

This section brings together the analysis of previous sections, establishing our estimate of a reasonable premium pool and the average premium rate.

Key findings

We estimate a reasonable premium rate for the 2022/23 policy year of 2.22% of wages, unchanged from the previous review. Although there is no change at an overall level, there is a range of offsetting movements:

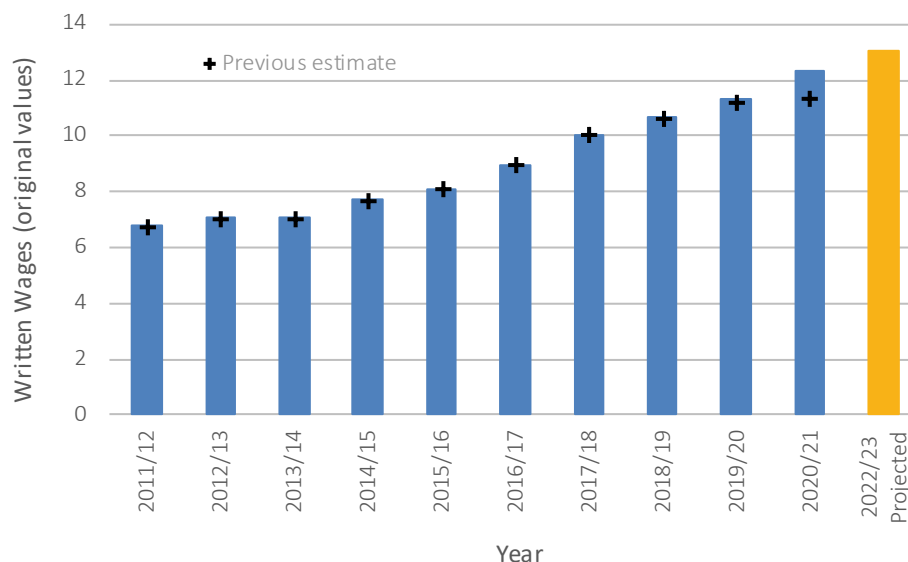
- Claims cost changes – decrease of 0.01%, comprising:
 - > Continued reductions in underlying claim frequency – decrease of 0.11%
 - > Changes in claim size – increase of 0.10%
- 1 % loading to claim costs for workplace COVID-19 infections – increase of 0.02%
- Economic assumptions (including superimposed inflation) – decrease of 0.02%
- Changes in expenses, levies and profit margin – increase of 0.01%.

6.1 Wages

We have adopted future wage inflation of 2.75% p.a. and employment growth of -1.00% p.a. in 2021/22 and 3.00% p.a. in 2022/23. These assumptions are discussed in Section 4.

We project written wages of around \$13.1bn for the 2022/23 policy year, as shown in Figure 6.1.

Figure 6.1 – Estimated wages covered



Written wages in 2020/21 were a little higher than estimated at our previous review; COVID-19 lockdowns had a lower than anticipated impact on wages.

6.2 Average renewal date

Based on past patterns of wages covered and earned wages, we have estimated that the average renewal date for workers' compensation policies in the ACT is mid-September. Hence the key dates we have assumed for the 2022/23 policy year are:

- 15 September 2022 – average renewal date, and average premium receipt date
- 15 March 2023 – average accident date, and average date of first year's claim payments
- 15 March 2024 – average date of second year's claim payments, etc.

As we have selected our average claim size in June 2021 values, the above dates mean that claims payments in the first year will need 20.5 months of inflation added, payments in the second year need 32.5 months inflation, etc. All payments are then discounted back to the average date of renewal, 15 September 2022.

6.3 Allowance for direct COVID-19 claims

It is difficult to estimate the potential additional cost of direct COVID-19 claims for 2022/23, due to a range of factors:

- There is considerable uncertainty about:
 - > The total number of ACT cases that might be expected in 2022/23
 - > The transmissibility and severity of COVID-19 strains that impact in the year (existing or new strains)
 - > The impact of any reductions in movement of people (either enforced or voluntary) during the year
 - > The likely average size of direct COVID-19 claims in 2022/23. The small numbers of ACT claims are still underdeveloped, and the long-term impacts of COVID-19 infection are not fully known.
- Due to the extremely low number of ACT claims to date, it is difficult to estimate the likely future relationship between ACT case numbers and private sector workers' compensation claims.

In this context, and emphasising the significant uncertainty involved, we have developed three scenarios relating to the potential cost of direct COVID-19 claims in 2022/23; see Table 6.1. These scenarios are not intended to represent the full range of potential outcomes.

Table 6.1 – Direct COVID-19 claim cost scenarios

	Low	Mid	High
No. of ACT cases	25,000	50,000	100,000
% of cases leading to private sector claims	0.30%	0.30%	0.30%
No. of claims	75	150	300
Average size (\$)	30,000	30,000	30,000
Total cost (\$m)	2.3	4.5	9.0

The background to the assumptions adopted in the scenarios is:

- Total ACT Omicron cases as at early March 2022 were around 50,000.

- > Our Low scenario allows for roughly half this number in 2022/23, the Mid scenario is in line with this number, and the High scenario allows for double this number of cases in 2022/23
- We assume that 0.3% of cases will result in a private sector workers' compensation claim. This is lower than the ratio observed for the Delta outbreak of 0.6% (Table 2.1). We assume that with higher case numbers, contact tracing will not be as comprehensive, making it harder for employees to establish the link between infection and employment.
- Our adopted average size of \$30,000 is based on information published to date on COVID-19 outcomes, including cases of long COVID. This compares to a reported average size of just over \$10,000 for Delta claims to date, but we consider this size to be underdeveloped and (given the small number of claims) not representative of the full range of COVID-19 outcomes.

These scenarios represent a 1-5% increase in the projected 2022/23 claim costs. For our 2022/23 premium pool, we include a 1% loading for direct COVID-19 claims costs.

6.4 Reasonable premium pool

The total Scheme risk premium for 2022/23 represents the total expected claims costs, and is derived as the adopted number of non-nil claims times the adopted average claim size (see Section 3.12), plus allowance for inflation and discounting (Sections 4.2 and 4.3). This process results in a risk premium estimate for 2022/23 of \$184.6m, or 1.41% of wages. The risk premium of 1.41% is higher than the risk premium estimated for 2020/21 (1.32%, noting 2020/21 was impacted by COVID-19 lockdowns) and close to the risk premium estimate for 2019/20 (1.43%), which are shown in Table 5.3.

When expenses (Section 4.5) and insurer profit margins (Section 4.6) are added to the risk premium, our estimate of a reasonable premium pool for 2022/23 is \$289.2m, as shown in Table 6.2.

Table 6.2 – Total premium pool

Premium Rate Component	\$m
Risk Premium Pool	184.6
Expense Loading	71.3
Profit Loading	33.3
Total Premium Pool	289.2
Wages Estimate	13,052.9
Average Risk Premium (% wages)	1.41%
Average Premium Rate (% wages)	2.22%

The estimated reasonable average premium rate for the 2022/23 policy year is 2.22% of wages. This is unchanged from our estimate at the previous review

6.5 Comparison with 2021/22 premium rate

The reasonable premium rate is unchanged from our previous review. However, there are a number of offsetting movements as shown in Table 6.3.

Table 6.3 – Movement in reasonable premium rate

	Average Premium Rate	Increase/ Decrease
Last year's suggested rate for 2021/22	2.22%	
Project to 2022/23	2.22%	0.00%
Change in claim numbers	2.11%	-0.11%
Change in average claim size	2.21%	0.10%
Loading for COVID-19 claims	2.23%	0.02%
Change in payment pattern	2.23%	0.00%
Change in wage inflation	2.28%	0.06%
Change in superimposed inflation	2.28%	0.00%
Change in discount rate	2.21%	-0.08%
Change in expense loadings	2.22%	0.02%
Change in levy	2.23%	0.01%
Change in insurer margin	2.22%	-0.02%
Total Change - suggested rate for 2022/23	2.22%	-0.01%

The movements in the components of the reasonable premium rate as:

- **Claims cost assumptions – decrease of 0.01%**
 - > The underlying claim frequency continued to reduce in 2020/21, and future claim frequency assumptions have been revised accordingly, reducing the reasonable rate by 0.11%
 - > Average size assumptions have increased, increasing the reasonable premium rate by 0.10%

We note that largely offsetting changes to claim frequency and average size are a continuation of a long-term trend in the scheme, which has seen little change to the overall claim cost as a proportion of wages.
- **Loading for workplace COVID-19 claims – increase of 0.02%**
 - > As discussed in Section 6.3, there is limited information on which to base any allowance for the cost of workplace COVID-19 infections. We have applied a loading of 1% which has been informed by scenario testing.
- **Economic assumptions – decrease of 0.02%**
 - > Yields on government bonds have increased, reducing the reasonable premium rate by 0.08%
 - > Coinciding with this, wage inflation forecasts have increased. We have reflected this in our future wage inflation assumption, increasing the reasonable premium rate by 0.06%.
- **Expenses, levies and profit margin – increase of 0.01%**
 - > Expense and levies have increased, reflecting information provided by insurers on expenses and levy information provided by CMTEDD, increasing the reasonable premium rate by 0.03%
 - > Expected investment returns have increased in response to increases in risk-free rates. This reduces the profit margin required on claim costs to achieve the same return on capital, decreasing the reasonable premium rate by 0.02%.

Other changes had minor impacts on the premium rate.

6.6 Sensitivity analysis

The estimate of the average premium rate is sensitive to the assumptions used, and the selection of our assumptions is subject to uncertainty. The effect on the average premium rate of changing each of the key assumptions is shown in Table 6.4. Note that the scenarios tested do not indicate the full range of possible outcomes. Each scenario is independent of the others shown.

Table 6.4 – Sensitivity analysis

Scenario	Best Estimate Value	Sensitivity Assumption	Premium Rate	Difference	Difference %
Base Case			2.22%		
Claim frequency up 10%	0.267	0.294	2.44%	0.22%	10%
Average claim size up 10%	47,200	51,900	2.44%	0.22%	10%
Lump sum numbers up 10%	482	530	2.32%	0.10%	5%
Lump sum average size up 10%	141,200	155,300	2.32%	0.10%	5%
Discount rate up 1% p.a.	1.95%	2.95%	2.16%	-0.06%	-3%
Superimposed inflation at 5.5% p.a.	4.5%	5.5%	2.25%	0.04%	2%
Expense loadings up 1%	24.7%	25.7%	2.25%	0.04%	2%
Insurer margins up 1%	11.5%	12.5%	2.25%	0.04%	2%

The scenarios presented show that:

- A 10% increase in frequency or a 10% increase in overall average claim size would result in a 10% increase in the average premium rate
- If the number of claims receiving lump sum benefits were to increase by 10%, or the average cost of these claims were to increase by 10%, the average premium rate would increase by 5%
- A 1% p.a. increase in the risk-free discount rate would result in a 3% reduction in the estimated average premium rate
- An increase in the superimposed inflation rate to 5.5% p.a. (applied from 2022/23, as described in Section 4.3) increases our estimate of the average premium rate by around 2%
- If expenses or insurer margins were to increase by 1% of premium, the average premium rate required would be 2% higher.

7 Suggested relativities and reasonable premium rates

This section documents our suggested relativities and average premium rates by ANZSIC division, and provides some comparisons with insurer achieved rates.

Key findings

- The experience across ANZSIC classes shows considerable variation, with our reasonable rates falling in the range 0.27% to 18.92% of wages
- Relativity movements have been capped at 15% (prior to mix changes) to minimise volatility in rates, with the exception of a small number of ANZSIC classes
- Our reasonable premium rates by ANZSIC class include a 1% loading for COVID-19 claims. While we do not vary this by ANZSIC class, we provide some discussion on which divisions may be more impacted.

7.1 Relativities

Our approach to calculating the relativities is explained in Section 13.6. Appendix H contains a summary of the results of our analysis for each ANZSIC class with non-nil wages in the ACT. The table shows:

- ANZSIC class and description
- Observed claim frequency relativity – average last three years
- Observed capped claims cost relativity – average last five years
- Our selected relativity
- Our estimate of a reasonable premium rate.

7.2 Reasonable premium rates

The following example (for ANZSIC Code 7000 – Computer System Design and Related Services) shows how we have applied the selected relativities to determine the ANZSIC premium rates:

- 1 Average reasonable premium rate for Scheme = 2.22% of wages (Section 6.3)
- 2 Suggested relativity for ANZSIC 7000 = 14 (Appendix H)
- 3 Average premium rate (prior to scaling) for ANZSIC 7000 = 0.31% of wages $[2.22\% * 14/100]$
- 4 Average premium rate (post scaling) for ANZSIC 7000 = 0.31% of wages $[0.31\% * 1.02]$

The scaling factor (1.02 at this review) is applied to ensure that the overall average premium rate is achieved. We followed this process to derive an average premium rate for each ANZSIC class.

The experience across the range of ANZSIC classes shows considerable variation, with our reasonable rates falling in the range 0.27% to 18.92% of wages.

The rates shown in Appendix H are indicative of the average rates that we consider to be appropriate for the employers at ANZSIC class level, consistent with a target average rate of 2.22% of wages overall. The actual rates charged by insurers to individual employers would be expected to differ from these rates, reflecting the following:

- The actual expense loadings and profit requirements will differ from insurer to insurer

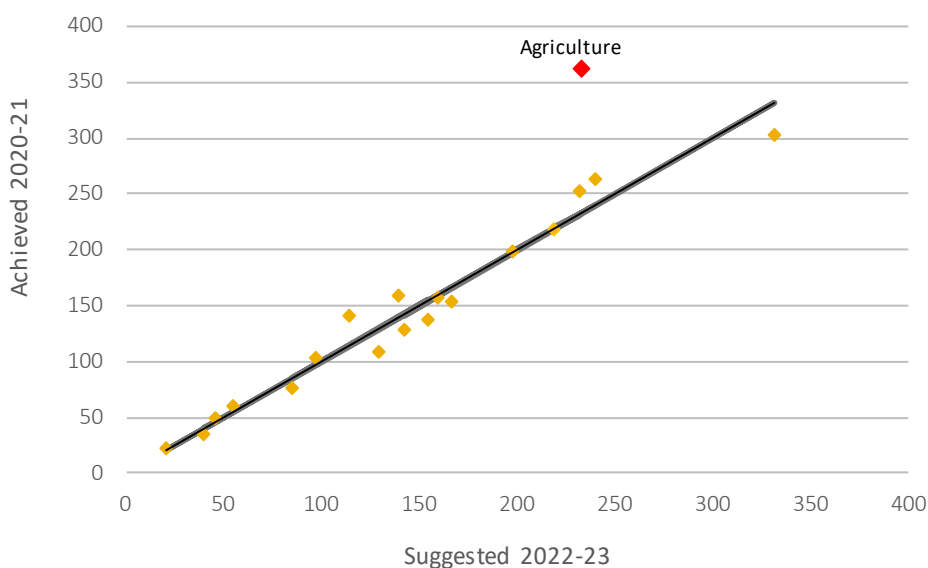
- The experience of an individual employer will be taken into account by the insurer in determining the appropriate rate to be charged; inferior risks will likely be charged additional premiums, while superior risks may be given discounts (compared with the average)
- The rates are determined on the basis of an assessment of the profitability for a single year's business; insurers who write business over a period of years may increase or decrease rates in response to accumulated profitability and competitive positioning
- The application by insurers of minimum premiums (reflecting administrative costs which are incurred independent of the claims cost or 'riskiness').

7.3 Comparison with insurer relativities

The following graph compares the relativities (after applying the 15% cap on movements) of the 2022/23 reasonable rates with the relativities of licensed insurers' achieved rates for 2020/21. Each point on the graph represents one of the 19 ANZSIC divisions.

The 45-degree line indicates where suggested relativities are equal to the achieved relativities. A point above the 45-degree line indicates our suggested relativity is lower than the achieved relativity, and for points below the line our suggested relativity is higher than the achieved relativity.

Figure 7.1 – Suggested (after cap) vs achieved relativities

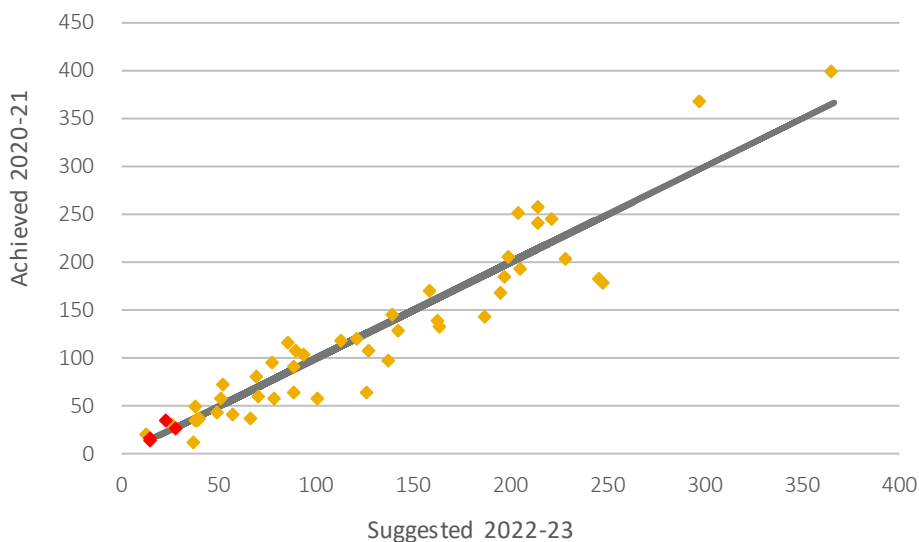


At the division level, the achieved relativities tend to be close to our suggested relativities. There is one notable outlier – Agriculture, where the achieved relativity is significantly higher than our suggested relativity:

- This industry accounts for less than 1% of total wages covered in 2020/21, and can be subject to year on year volatility in its achieved rates.
- It is possible that in setting their rates for this industry insurers use experience from other jurisdictions that have more exposure, while our analysis is limited to exposure within the ACT.

There is greater variability between recommended and achieved relativities at ANZSIC class level. Figure 7.2 shows the achieved and recommended relativities for the top 50 ANZSIC classes (as measured by wage volume in 2020/21).

Figure 7.2 – Suggested (after cap) vs achieved relativities – Top 50 ANZSIC classes



The largest four ANZSIC classes (shown in red) make up 35% of ACT private sector wages. Of these four classes, only one does not have an achieved relativity close to the suggested relativity: “Engineering design and engineering consulting services”, where the achieved relativity is higher than the suggested relativity.

7.4 Allowance for direct COVID-19 claims

As discussed in Section 6.3, we assess that a reasonable loading for COVID-19 costs for the 2022/23 year is between 1% and 5%, although there is significant uncertainty involved. For our overall reasonable premium rates and reasonable rates by ANZSIC class, we have applied a flat 1% cost loading. Given the very small number of COVID-19 claims to date, it is not possible to accurately use the COVID-19 claims history to estimate loadings for individual ANZSIC classes. However, we do provide some guidance on which ANZSIC divisions we consider to be ‘higher risk’ in relation to COVID-19 claims. In identifying higher risk divisions, we have considered:

- A qualitative assessment of workplace exposure to COVID-19. For this purpose, we grouped divisions into the following categories:
 - > Low risk – divisions that involve little exposure to the public, and with the capacity to limit interaction between co-workers (e.g. work from home)
 - > Medium risk – divisions that have low to moderate exposure to the public and modest capacity to limit co-worker interaction
 - > High risk – divisions that have high exposure to the public and no ability to limit interaction between co-workers
- High level benchmarks from experience in other jurisdictions
- The claims experience to date.

We also observe that social restrictions in future outbreaks may not align with past restrictions. For example, remote learning was in place for much of the Education sector during the Delta outbreak, but to date this has not been the case for the Omicron outbreak.

Based on the above considerations, our indicative assessments of relative risk are set out in Table 7.1.

Table 7.1 – Indicative COVID-19 claims risk by ANZSIC division

COVID-19 risk	Division
Low	Agriculture, Forestry and Fishing
	Financial and Insurance Services
	Information Media and Telecommunications
	Professional, Scientific and Technical Services
Medium	Administrative and Support Services
	Arts and Recreation Services
	Construction
	Electricity, Gas, Water and Waste Services
	Manufacturing
	Mining
	Other Services
	Rental, Hiring and Real Estate Services
	Transport, Postal and Warehousing
	Wholesale Trade
	High
Education and Training	
Health Care and Social Assistance	
Public Administration and Safety	
Retail Trade	

Part III Further information

8 Data

This section describes the data items we were supplied with for this investigation, the results of our reconciliations and the data summaries produced.

8.1 Data supplied

CMTEDD administers the ACT Workers Compensation Management System (WCMS). WCMS was established in 2015 and contains workers' compensation premium and claim information from all insurers and self-insurers operating in the Scheme. As part of our review, CMTEDD supplied us with the following information from WCMS:

- Individual claim file showing the accident and report date, insurer code, current liability status, total payments to date and estimated future payments outstanding for each claim reported or having had a payment between 1 July 1999 and October 2021
- Claim payment transaction file with payments made (by type and month) between 1 July 1999 and October 2021
- Individual policy files, with the ANZSIC division and insurer codes for each policy written or renewed between 1 July 1999 and October 2021.

In addition to the information provided, we also received the following summarised data from each of the insurers:

- Policies written in each year
- Written premiums and wages in each year, split into single-year and multi-year policies
- Earned premiums and wages in each year, split by ANZSIC division
- Triangulations of claims reported and claim payments to 30 September 2021
- Case estimates and IBNR/ER allowances as at 30 June 2021.

We have also compiled workforce figures from information available from the Australian Bureau of Statistics (ABS) and the Australian Public Service Employment Database (APSED), as well as information on the number of ACT public sector employees supplied by CMTEDD.

Refer to Appendix A for a more detailed listing of the data.

8.2 Reinsurance and other recoveries

The data supplied for the purposes of our review did not include details of reinsurance recovery amounts. Therefore, all data and projections contained in this review are gross of any reinsurance recoveries, but net of all other recoveries.

8.3 Reconciliation

Key findings

- *Claim number information on WCMS is fairly reliable and is satisfactory for the purposes of our actuarial review.*
- *Claim payment information on WCMS for 2001/02 and later years is of reasonable quality and is satisfactory for the purposes of our actuarial review.*
- *Premium and wages information on WCMS cannot be used at this time, because the previous system did not adequately capture policy adjustments for historical periods. We have instead relied on information sourced directly from insurers.*
- *Case estimates from WCMS are on average 13% higher for accident years after 2013/14, and much higher for prior years. We have not relied on case estimates in our analysis of ultimate claim size or costs. However, when assessing ANZSIC level relativities we place some reliance on case estimates, limited to the 2017 and more recent accident years.*

As a result of the reconciliation differences observed in older years, we do not rely on case estimates in our analysis of ultimate claim size or costs, and use case estimates supplied directly by insurers instead of that in WCMS when comparing to our projected central estimates. However, when assessing ANZSIC level relativities we place some reliance on case estimates as our analysis for this is limited to 2017 and more recent accident years where differences are less material.

In preparing this advice we have relied on the claims information supplied by CMTEDD, premium and wages from both CMTEDD and insurers depending on the period being analysed and case estimate information supplied by the insurers.

We have compared the WCMS data provided for this review with the data provided for our previous review (see Appendix C.3). The data from the two extracts matched reasonably well for payments and non-nil claim numbers but not for case estimates.

We have also reviewed and checked the WCMS data for reasonableness and consistency. Reliance was placed on, but not limited to, the accuracy of the information described in this report.

8.4 Data summaries & adjustments

Scheme performance analysis

In performing our claims analysis we have identified and separately considered claims which have zero payments made to date (“nil claims”).

Further, in determining the number of claims receiving common law and lump sum benefits, we have excluded from those claims which received total common law or lump sum benefits of less than \$500. We have excluded these from lump sum claim counts on the basis that the payment will most likely reflect a small investigation or administration expense rather than a lump sum payment; the costs of such claims continue to be included in our claim payment summaries.

Workforce information

We have calculated an approximate private sector workforce as follows:

- Total workforce in the ACT

- *Less ACT public sector employees*
- *Less Commonwealth public sector employees.*

We do not have a 'full time equivalent' number of workers, and have used the numbers of full time workers to approximate the total ACT private sector workforce; see Appendix G.

Relativities analysis

For the premium relativities analysis, we have:

- Calculated claim frequency based on non-nil claims only
- Calculated average claim size using both
 - > Wage-inflation adjusted payments
 - > Wage-inflation adjusted payments to date plus current case estimates (incurred costs).

9 Compliance with standards and approach

This section describes our compliance with relevant standards, and the approach used for the projection of ultimate costs and premium rates.

9.1 Compliance with relevant Australian Standards

The purpose of this review is to provide an overview of the performance of the Scheme, not to advise any individual entity on the financial reporting of its workers' compensation liabilities. Accordingly, Professional Standard 302 "Valuations of General Insurance Claims" (PS 302) issued by the Institute of Actuaries of Australia does not apply to this review. In the absence of any other applicable professional standard, we have used PS 302 for guidance on our approach to the review, but our review and report are not intended to comply with all requirements of PS 302.

This report has been prepared in accordance with the Institute of Actuaries of Australia's Code of Professional Conduct for the provision of actuarial advice.

9.2 Basis of estimates

The estimates of future claims costs provided in this report are intended to be central estimates, which means they are based on assumptions selected without deliberate bias towards either over-estimation or under-estimation.

The premium rate estimates have been developed on the basis of the following principles:

- Estimates of expected claims costs should be central estimates, incorporating allowance for both 'normal' and 'superimposed' inflation
- Claims costs are to be discounted to allow for the time value of money
- Estimates of claims costs should take into account any amounts recoverable
- Premiums should allow for the expenses of writing the business and administering claims
- Premiums should include an appropriate allowance for profit.

9.3 Methodology for actuarial analysis

For the purpose of analysis, all data has been grouped by accident years – the year of occurrence of the injury which gave rise to the claim. Development of this data is then analysed and projected by development year – a measure of the number of years since the accident occurred, e.g. development year 2 is the year after the accident year. All analysis has been carried out on a financial year basis (years ending 30 June).

In conducting our analysis of the Scheme experience, we have followed the same approach as in the previous review. This involved examining claim numbers and frequency, and average size by benefit type. The development analysis allows us to project future claim reports and costs in respect of injuries which have already occurred, from which we can estimate the ultimate number and cost of claims arising from each accident year. This allows analysis of the underlying trends in Scheme experience and provides a basis for assessing a reasonable level of premium.

Claim numbers

In order to estimate ultimate numbers of claims we use the Chain Ladder method to estimate the number of claims that are yet to be reported (Incurred But Not Reported or "IBNR" claims). The estimated ultimate number of claims (reported to date plus IBNR claims) is then expressed as a claim frequency by dividing the ultimate number of claims in each accident year by a measure of exposure.

Claim numbers were modelled by the following groups:

- Non-nil claims – we analysed the ultimate number of claims that are expected to result in a payment by the insurer, and estimated frequency relative to both ultimate inflation-adjusted wages earned in the period and full time employee numbers in the period. Further detail on the calculation of ultimate inflation-adjusted wages can be found in Appendix G
- Lost time - we analysed the numbers of claims receiving weekly benefits (“lost time”) and the frequency of lost time claims relative to non-nil claims
- Lump sums – we analysed the numbers of lump sum claims (common law, statutory impairment, commutations and death benefits, excluding claims with total lump sum payments less than \$500) and utilisation rate (the ultimate number of lump sum claims divided by ultimate number of non-nil claims).

Claim duration

We examined trends in duration of weekly benefit claims by analysing the number of claims that remain active in each development quarter. A claim received an ‘active’ flag and was counted if it received a weekly payment in the quarter. We excluded from our active count any claims where total weekly payments to date were negative or where the weekly payments made in a quarter totalled zero.

Average claim size

Claim payments were analysed and projected using the following benefit type groupings:

- Weekly benefits – modelled using a Payments Per Claim Incurred (PPCI) approach, where the claim count used is the estimated ultimate number of lost time claims. We supplemented this primary model with a Payments Per Active Claim (PPAC) model
- Medical and related benefits - modelled using a PPCI approach, where the claim count used is the estimated ultimate number of non-nil claims
- Rehabilitation benefits - modelled using a PPCI approach, where the claim count used is the estimated ultimate number of non-nil claims
- Lump sums - modelled using a Payments Per Claim Settled (PPCS) approach, where the claim count used is the ultimate number of lump sum claims
- Legal and other benefits - modelled using a PPCI approach, where the claim count used is the estimated ultimate number of non-nil claims
- Recoveries - modelled using a PPCI approach, where the claim count used is the estimated ultimate number of non-nil claims.

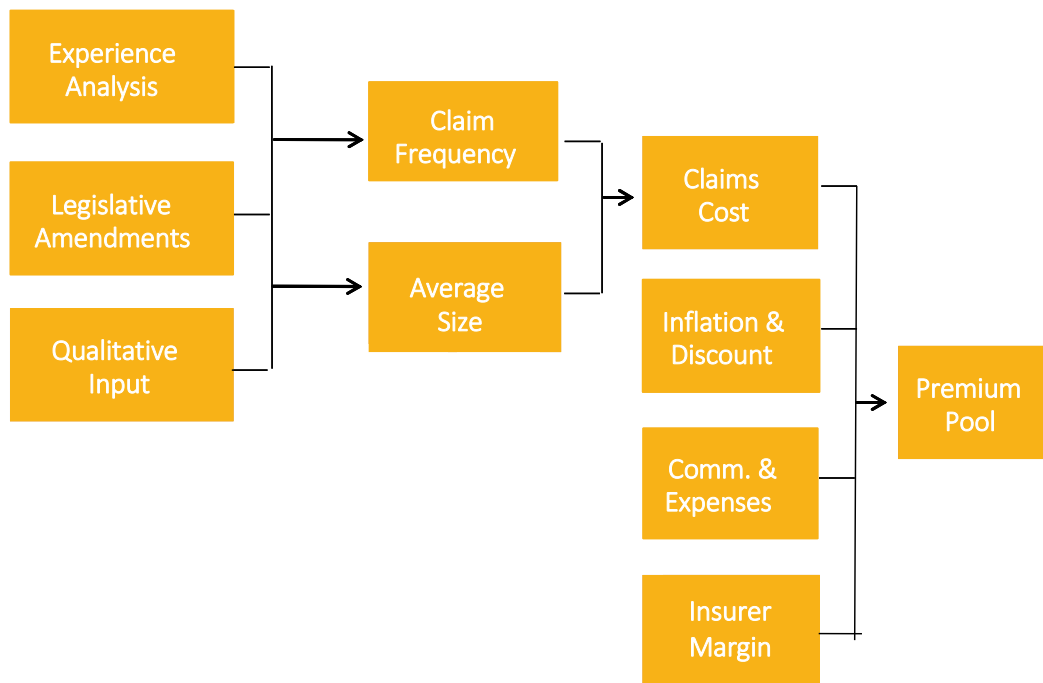
An explanation of these methods can be found in Appendix D.

From each of the above models we estimate the average payment, by payment type and development year. The overall average claim size for each accident year is the result of adding our estimated payments for each payment type and dividing by the projected ultimate number of claims.

9.4 Reasonable premium pool

The estimation of a reasonable premium pool includes allowance for claims, expenses and profit. Diagrammatically this can be represented as follows:

Figure 9.1 – Reasonable premium pool



We have assessed each element separately, and then tested the reasonableness of the estimated premium pool resulting from the combination of all assumptions.

The estimate of the total premium pool, which includes allowances for expenses, levies and reasonable insurer profit margins, is divided by insured wages to derive a reasonable Scheme average premium rate. The derived rate for past years can be compared with the actual rates charged by insurers.

Claims cost

The claims cost assumptions come from the actuarial analysis of the historical Scheme claims experience discussed in Section 3.

Inflation and discount

The long-tailed nature of workers' compensation means that it is appropriate to allow for both future inflation and the time value of money in assessing the premium rate.

For the purpose of establishing the average rates for this report we have based our assumptions on the following:

- Discount rate - expected returns on Australian government bonds over the period in which claim payments are made
- Normal economic inflation - claims inflation was based on current economic forecasts for medium term wage inflation; wage inflation until 2021/22 was based on recent wage inflation experience and wage inflation forecasts, to reflect the impact of COVID-19.
- Superimposed inflation - analysis of recent Scheme experience, together with expectations for the future (necessarily judgemental).

Commission and expenses

We were supplied with average commission rates currently paid by each of the licensed insurers writing workers' compensation insurance in the ACT. Based on their market shares (as measured by premium volume), we have estimated the overall average commission paid by the Scheme as a whole.

We have allowed for other administration costs based on insurer information, along with expense rates included in the insurer's rates, and our knowledge of expense rates in other state workers' compensation schemes. We have also allowed for the Regulatory Funding Levy, Default Insurance Fund (DIF) Levy and Magistrates Court Levy.

Insurer margin

In determining an appropriate margin for profit, we have used a model that projects the after tax profits of a single underwriting year's business in each future year until the cohort of business has completely run off. On the basis of a series of assumptions regarding investment returns earned by insurers, the capital required to support this business, and the return on capital required by the insurer shareholders, we have derived an insurer margin we view as appropriate for this business.

9.5 ANZSIC 2006 Division premium rates

The ANZSIC 2006 codes have a 'tree' structure comprising categories at four levels, namely Divisions (1 digit level), Subdivisions, Groups and Classes (4 digit level). There are 19 Divisions within the ANZSIC coding, each identified by an alphabetical character (A is agriculture, B is mining, etc.).

The determination of a reasonable premium rate for each ANZSIC division proceeds from the estimate of the total premium pool. The past claims experience is analysed to determine claims cost relativities between Divisions. The resulting relativities are then applied to the Scheme average premium rate to determine a set of rates for each ANZSIC division, which should result in premiums that add to produce the total premium pool. These rates will spread total premium costs across ANZSIC divisions in proportion to each industry's contribution to the costs of the workers' compensation scheme.

Relativities

Our methodology to setting ANZSIC class relativities uses statistical modelling to provide claim frequency and average size predictions. The frequency and average size predictions are combined to give a claims cost expressed as a percent of wages which can then be used to calculate relativities for each ANZSIC class.

Any approach to estimating ANZSIC class relativities is a trade-off between providing granular estimates that are subject to greater volatility in their estimation and using less granular approaches which are likely to introduce cross-subsidies. The statistical methodology we have adopted is more granular in nature, and we therefore also consider the uncertainty around the predictions when setting relativities.

In some cases our methodology results in significant movements in the (raw) estimated relativity. In the past three reviews we have applied a 15% cap on the year-to-year movement in relativities before taking into account any change in the distribution of wages. This cap is intended to smooth the transition from the relativities that were adopted three reviews ago (based on the previous methodology) to those calculated under the current methodology.

10 Reliances & limitations

10.1 Data

We have relied on the accuracy and completeness of all data and other information (qualitative, quantitative, written and verbal) provided to us by CMTEDD and private insurers for the purpose of this report. We have not independently verified or audited the data but we have reviewed it for general reasonableness and consistency. It should be noted that if any data or other information is inaccurate or incomplete, we should be advised, so that our advice can be revised, if warranted.

Specific data limitations identified and the impact of these on our review are discussed further in Appendix C.

10.2 Uncertainty

The estimates of future claims costs are intended to be a central estimate and are based on assumptions selected without deliberate bias towards either over-estimation or under-estimation. Please note however, that it is not possible to put a value on future claims cost with certainty. As well as difficulties caused by limitations on the historical information, outcomes remain dependent on future events, including legislative, social, and economic forces. Although we have prepared estimates in conformity with what we believe to be the likely future experience, actual experience could vary considerably from our estimates. Deviations are normal and are to be expected.

The uncertainty at this valuation is heightened due to COVID-19. This comes about from both the cost of direct (workplace) COVID-19 infections, of which there have been very few claims made to date, and indirect impacts due to lockdowns/restrictions in movement impacting return to work opportunities and access to medical services. As the level of COVID-19 infection and government/community response continues to evolve, the impact of COVID-19 on future costs cannot be observed by reviewing historical experience and so uncertainty in future costs are elevated.

In our judgement, we have employed techniques and assumptions that are appropriate, and the conclusions presented herein are reasonable, given the information currently available. However, it should be recognised that future claim emergence will likely deviate, perhaps materially, from our estimates.

10.3 Distribution and use

This report is being provided for the use of CMTEDD for the purposes stated in Section 2.1 of this report. It is not intended, nor necessarily suitable, for any other purpose. This report should only be relied on by CMTEDD for the purpose for which it is intended. No other use of, or reference to, this report may be made without the prior written consent of Finity, nor should any part of the report be disclosed to any other person. The report should be considered as a whole.

Third parties, whether authorised or not to receive this report, should recognise that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data contained herein which would result in the creation of any duty or liability by Finity to the third party.

Finity has performed the work assigned and has prepared this report in conformity with its intended utilisation by a person technically competent in the areas addressed and for the stated purposes only. Judgements about the conclusions drawn in this report should be made only after considering the report in its entirety, as the conclusions reached by a review of a section or sections on an isolated basis may be incorrect.

Part IV Appendices

A Glossary of terms

The terms described below may have different meanings ascribed to them in other actuarial reports.

Term	Definition
Accident Year	The year (years ending 30 June) in which the injury occurred which gave rise to a claim. E.g. a claim occurring on either 30 September 2008 or 30 March 2009 is said to belong to the 2008/09 accident year.
Active claim	A claim which has received a weekly payment in the quarter, excluding any claims where total weekly payments to date were negative or where the weekly payments made in the quarter total zero.
Central Estimate	An estimate of the liability which is intended to contain no deliberate bias to either over- or under-estimation and does not include allowance for claims handling expenses.
Claim Frequency	Estimated ultimate number of claims divided by a measure of exposure (either wages or employees).
Continuance Rate	The number of claimants in receipt of weekly benefits in one quarter divided by the number in receipt of weekly benefits in the preceding quarter. For example, the rate for development quarter 1:2 is calculated as the number of claimants receiving weekly benefits the second quarter after the accident quarter, compared with the number receiving weekly benefits in the accident quarter.
Development Year	The number of years since the year in which the accident occurred, e.g. development year 1 is the same as the year of accident, development year 2 is the year following the accident year, etc.
Earned Premium	Policy-year premiums spread over the period of cover. All premiums shown are exclusive of GST and inclusive of brokerage/commissions.
Earned Wages	Policy-year wages spread over the period of cover. All wages shown are exclusive of superannuation, but include salary, overtime, shift and other allowances, over-award payments, bonus, commissions, payments for public and annual holidays (including loadings), payments for sick and long service leave, value of board/lodging provided by employer, reimbursement for expenses incurred by the worker due to employment, any amount expended on behalf of the worker, directors' fees, and fringe benefits costs.
Loss Ratio	Estimated ultimate cost (net of recoveries) divided by gross earned premium for that year. Ultimate costs have been discounted to the mid-point of the relevant accident year.
IBNR	Incurred but Not Reported Claims – i.e. claims that have occurred at the review date but have not yet been reported.
Nil claims	Claims which have no payments made to date. Some nil claims will always remain nil (“report only claims”) while others will become non-nil claims as payments are made
Outstanding Claims Costs	Includes the costs of IBNR claims and allowance for further payments on already reported claims.

PPCF	Payment per Claim Finalised
PPCI	Payment per Claim Incurred
PPCS	Payment per Claim Settled
Premium Pool	Estimated claims costs plus allowance for expenses and insurer margins.
Premium Rate	Premiums divided by wages. The premium rate may be calculated on either a written or earned basis.
Risk Premium	Total expected claim costs divided by wages. Historical risk premiums are calculated from actual past payments plus our estimate of outstanding claims.
Superimposed Inflation	The tendency for claims costs to increase at a higher rate than normal economic inflation (i.e. wage inflation).
Ultimate Claim Numbers	The total expected number of claims for an accident year. This will include all claims reported to the review date together with any IBNR claims for the accident year.
Ultimate Claims Costs	The total expected claim costs for an accident year. This includes all amounts paid to the review date (net of recoveries) plus outstanding claims costs.

B Scheme background

This section covers the background to the workers' compensation scheme in the ACT, including the impacts of the major legislative amendments.

B.1 Introduction

The ACT workers' compensation scheme (Scheme) is a privately underwritten scheme, operating under the Workers' Compensation Act 1951 (the Act). CMTEDD is responsible for the administration of the Act.

Under the Act, employers are required to take out a workers' compensation insurance policy with an approved insurer (approved by the Minister) or be granted an exemption to self-insure these risks by the Minister. There are currently seven licensed insurers providing workers' compensation insurance in the ACT:

- QBE (including the run-off of Mercantile Mutual Insurance)
- Allianz
- IAG (including the run-off of CGU, FAI, HIH, NZI and VACC)
- Suncorp (written through the GIO licence and including the run-off of Vero)
- Zurich
- Guild
- Catholic Church Insurance (CCI).

B.1.1 The Default Insurance Fund

The Default Insurance Fund (DIF) is a body established under the Act to cover the cost of claims for compensation where the employer is uninsured, bankrupt or insolvent. The DIF is funded by a levy on premiums, and on notional premiums in the case of self-insurers. We have excluded the cost of claims covered by the DIF from the analysis of claim performance of the Scheme and have included an allowance for the DIF levy in determining the reasonable premium pool.

B.2 Compensation types

Under the Act, a worker is entitled to compensation as described below.

B.2.1 Weekly benefits

Compensation is provided to a worker who is incapacitated for work as a result of an injury or disease arising out of, or in the course of, the worker's employment. Weekly payments may continue for the duration of the incapacity, or to Commonwealth retirement age. The level of the weekly payment ("the replacement ratio") varies by duration of incapacity as shown in Table B.1 below.

Table B.1 – Weekly benefit entitlements

Weeks on Benefit	Total Incapacity	Partial Incapacity
0-26 weeks	100% of average pre-incapacity weekly earnings.	100% of the difference between average pre-incapacity weekly earnings and average weekly amounts the worker is being paid or could earn in reasonably available suitable employment.
26 weeks +	<p>* 100% of average pre-incapacity weekly earnings, if average pre-incapacity weekly earnings are less than the pre-incapacity floor (i.e. the federal minimum wage immediately before the incapacity); or</p> <p>* Maximum of either 65% of average pre-incapacity weekly earnings and the statutory floor.</p>	<p>A percentage of the difference between average pre-incapacity weekly earnings (subject to the minimum statutory floor and maximum statutory ceiling of 150% of AWE) and average weekly amounts the worker is being paid or could earn in reasonably available suitable employment, with this percentage varying depending on the weekly hours worked relative to pre-incapacity hours of the employer.</p>

The weekly benefits described above have been in place since 1 July 2002, with the exception of the alignment of benefits ceasing with the Commonwealth retirement age.

B.2.2 Medical and rehabilitation benefits

The Act provides for compensation to the injured worker for costs associated with medical treatment (including hospital), rehabilitation services, alterations to the worker’s place of residence, wages lost by the worker whilst attending treatment, transport to/from treatment, accommodation (including meals) while at treatment, repair/replacement of damaged clothing, etc. The total amount of medical costs relating to repair or replacement of contact lenses, crutches, prosthesis, spectacles, artificial aids and for loss or damage to a worker’s clothing is capped at \$500 (as of July 2021, CPI indexed to approximately \$778).

B.2.3 Death benefits

Death benefits were aligned to the Comcare scheme in December 2017, leading to around a doubling in the benefit scale. Currently, dependants are entitled to lump sum compensation on the death of the worker, capped at approximately \$583,000. In addition, dependants may be entitled to receive weekly payments of approximately \$160 per week and funeral expenses of around \$12,600.

B.2.4 Impairment lump sums

Workers who suffer a permanent impairment from a work-related injury or disease are entitled to receive a maximum lump sum payment of \$100,000 (CPI indexed to approximately \$156,000 as of July 2021) for a single injury or \$150,000 (CPI indexed to approximately \$234,000 as of July 2021) for multiple injuries. The level of the lump sum payment varies between 2% and 100% of the maximum amount for a total loss as shown in Schedule 1 of the Act. For partial losses, the claimant is entitled to a proportionate reduction on the Schedule 1 amount. In most cases, a claim for an impairment lump sum cannot be made earlier than two years after the injury. Weekly benefits may continue to be payable despite payment of a lump sum benefit, subject to negotiation between the injured worker and employer or insurer.

B.2.5 Redemption of statutory entitlements

In certain circumstances, subject to negotiation between the injured worker and the employer or insurer, claimants may commute their statutory benefits. The redemption may include amounts for the worker’s entitlement to weekly benefits, medical and other expenses. Throughout the report we refer to the redemption of statutory entitlements as “commutations”.

B.2.6 Common law

A worker may be entitled to seek compensation damages under common law where the work-related injury or disease was caused or contributed to by the negligence of a third party. Damages awarded are reduced by the amount of compensation already paid to the worker. Access to common law and the maximum amount of compensation available are unlimited under the Act.

Common law payments may include either damages awarded at court or negotiated lump sum settlements (a lump sum payment accompanied by a common law release).

B.2.7 Legal costs

An injured worker may also seek reimbursement for the costs of legal and other expenses incurred as a result of pursuing common law damages or negotiating a settlement of their statutory entitlement.

B.3 Journey claims

Workers are covered for injuries arising out of journeys both to and from work and undertaken for work purposes.

B.4 Employer excess

The level of employer excess is not prescribed under the Act, but can be negotiated between the employer and the insurer.

B.5 Legislative reform

This section summarises the legislative reforms that have had a significant impact on our review. The reader is referred to the relevant legislation for full details of the changes.

B.5.1 2002 amendments

The Workers' Compensation Amendment Act 2001 came into effect on 1 July 2002, and applies to injuries where the accident occurred on or after this date.

The amendments from the previous legislation may be summarised as follows:

- Weekly benefits
 - > Benefits cease upon return to work or pension age (previously death)
 - > Benefits depend on average pre-injury earnings including overtime (previously did not include overtime or allowances)
 - > Benefits for incapacity post 26 weeks drop to 65% of pre-injury earnings (previously based on a statutory rate) subject to a minimum of a statutory floor
 - > Benefits for partial incapacity subject to a minimum of a statutory floor (the federal minimum wage) and statutory ceiling (150% of AWE) (previously based on a statutory amount).
- Lump sums
 - > Introduction of 6% threshold for access to compensation for hearing loss
 - > Expanded the Table of Maims
 - > Increased maximum impairment, death and funeral benefits
 - > Introduction of a two year waiting period before a worker could claim for permanent impairment benefits.

- Medical benefits
 - > Increased maximum amount for specified medical costs.
- Common law
 - > Reduced statute of limitations for common law to 3 years (previously 6 years).
- Other
 - > Definition of worker expanded to include volunteers
 - > Definition of employment-related diseases tightened
 - > Definition of journey claims tightened
 - > Increased focus on injury management processes, including the strengthening of requirements for employers to provide suitable return to work
 - > Encouraged early notification of claims.

B.5.2 Civil Law (Wrongs) Act 2002

The amendments introduced as part of the Civil Law (Wrongs) Act 2002 came into force in late 2002 and resulted in changes to legal proceedings in the ACT. In September 2003, the legislation was amended to exclude workers' compensation claims from the Wrongs Act.

B.5.3 2006 amendments

The Workers' Compensation Act 2006 and Workers' Compensation Amendment Act 2006 (No 2) became effective 1 July 2006 and resulted in the:

- Establishment of the Default Insurance Fund
- Change in definition of maximum duration of weekly compensation to 65 years of age
- Categorisation of some 'carers' as workers
- Encouragement of early reporting of injury
- Specific mention of rehabilitation costs.

B.5.4 2009 amendments

The Workers' Compensation Amendment Act 2009 introduced a range of amendments that:

- Allowed the appointment of a rehabilitation service provider in the event that an injured worker had been unable to return to work in their pre-injury hours and duties within 4 weeks
- Introduced new offences and penalties for non-compliance by employers.

B.5.5 2011 amendments

The Workers' Compensation Amendment Regulation 2011 came into effect on 1 September 2011 and introduced amendments requiring compliance audits of Approved Insurers and Self-Insurers.

B.5.6 2013 amendments – regulatory levy

The Workers Compensation Amendment Bill 2013, passed in October 2013, amends the Act to enable funding of Work Health and Safety regulatory costs via an insurer levy.

B.5.7 2015 amendments – cross-border arrangements

The Workers Compensation (Cross-border Workers) Amendment Bill 2015 aligned cross-border state of connection to employment with updated national guidelines. These amendments provide guidance in the event of dispute regarding relevant jurisdiction and connection to employment in the ACT.

B.5.8 2017 amendments – retirement age and death benefits

The Workers Compensation Amendment Bill 2017:

- Aligned the cessation of weekly benefits with the Commonwealth retirement age (previously weekly benefits ceased at age 65)
- Aligned death benefits with the Comcare scheme.

C Data

This section summarises the data provided to us for this review and documents the reconciliations performed.

C.1 WCMS Data

The WCMS data provided to us by CMTEDD is detailed below.

C.1.1 Claim file

We received an individual claim file listing all claims reported or having had a payment between 1 July 1999 and September 2021, which included the following variables:

- 1 Claim ID (WCMS assigned)
- 2 Claim number (insurer assigned)
- 3 Policy number
- 4 Coverage ID and reference (unique identifiers to link to the coverage file)
- 5 Accident date
- 6 Report date, the date claim was notified to the insurer by the employer
- 7 Lodgement date, the date claim was lodged with employer
- 8 ANZSIC 1993 and 2006
- 9 Type of injury (“Injury”)
- 10 Mechanism of injury (“Mechanism”)
- 11 Part of body injured (“Body Location”)
- 12 Agency causing the injury (“Agency”)
- 13 Worker details (date of birth, gender, duty status, employment status, hours worked, pre-injury earnings)
- 14 Whole Person Impairment (WPI) percentage
- 15 Claim finalised date
- 16 Date reopened
- 17 Claim status
- 18 Total estimated payments
- 19 Total estimate lost time.

C.1.2 Payment transaction file

We received a claim payment transaction file with payments made (by payment type and month) between 1 July 1999 and September 2021, which included the following variables:

- 1 Payment ID (WCMS assigned)
- 2 Payment reference (insurer assigned)
- 3 Claim ID and reference (unique identifiers to link to the claim file)
- 4 Insurer number and name
- 5 Date of transaction

- 6 Service date
- 7 Payment type
- 8 Payment amount
- 9 Payment Source (i.e. employer or insurer)
- 10 Time Lost in Minutes.

C.1.3 Case estimate file

We received an individual claim file listing all claims reported or having had a payment between 1 July 1999 and September 2021, which included the following variables:

- 1 Claim ID (WCMS assigned)
- 2 Claim number (insurer assigned)
- 3 Insurer Name
- 4 Total estimated payments
- 5 Total payments to date
- 6 Total outstanding amounts.

C.1.4 Policy file

We received an individual policy file for all policies written or renewed between 1 July 1999 and September 2021, which contained the following variables:

- 1 Policy ID (WCMS assigned)
- 2 Policy number (insurer assigned)
- 3 Insurer number and name
- 4 Employer ABN
- 5 Employer name
- 6 Employer postcode.

C.1.5 Coverage file

We received an individual premium file for all policies exposed from 1 July 1988 that included the variables listed below:

- 1 Policy ID (WCMS assigned)
- 2 Policy number (insurer assigned)
- 3 Cover ID (WCMS assigned)
- 4 Coverage reference (insurer assigned)
- 5 Insurer number and name
- 6 Employer ABN
- 7 ANZSIC 1993 and ANZSIC 2006
- 8 Start date of period of cover (“Effective Date”)
- 9 End date of period of cover (“Expiry Date”)
- 10 Number of workers (“Estimated Workers” and “Actual Workers”)

- 11 Wages in dollars (“Estimated Wages” and “Actual Wages”)
- 12 Premiums charged (“Initial Deposit”, “Adjusted Amount” and “Actual Final”)
- 13 Lapse reason code
- 14 Coverage type (e.g. new policy, adjustment, renewal, etc)
- 15 Policy type (e.g. normal, burning cost, minimum premium).

C.2 Information provided by insurers

Each of the insurers of workers’ compensation in the ACT provided us with summarised premium, wages and claims information, including:

- Written policies for policy years ending 30 June 2004 to 30 June 2021, separately for burner and all other policies, and split into single-year and multi-year policies
- Written wages for policy years ending 30 June 2004 to 30 June 2021. Insurers provided both initial (i.e. that initially estimated at the start of the policy period) and final adjusted written wages, separately for burner and all other policies, and split into single-year and multi-year policies
- Written premium for policy years ending 30 June 2004 to 30 June 2021. Insurers provided both initial and adjusted written premiums, separately for burner and all other policies
- Earned wages for accident years ending 30 June 2004 to 30 June 2021, and by ANZSIC division. Insurers provided adjusted earned wages
- Earned premium for accident years ending 30 June 2004 to 30 June 2021, and by ANZSIC division. Insurers provided adjusted earned premiums.
- Numbers of claims reported, subdivided by accident year and report year
- Claim payments made, subdivided by accident year and payment year
- Case estimates and IBNR/ER allowances as at 30 June 2021, subdivided by accident year.

We compared the premium and wages information supplied for this review with that supplied for the previous review and found some increases in wages and premiums recorded for more recent policy years. This reflects expected development on policies as information is updated with final wages estimates and changes to burner policies reflect emerging claims experience. The differences were not unexpected.

We compared the claim number, claim payment and case estimate information supplied by the insurers to that on WCMS. The reconciliations are detailed in Appendix C.3 below. Our findings were:

- There are some significant differences between WCMS claim number data and insurer records arising from differences in recording and reporting of nil claims and notifications for one insurer. This is not expected to impact our analysis as our average payment models are based on the number of non-nil claims.
- There were some substantial differences in the case estimate information between WCMS and insurer data, relating primarily to three insurers. There were also some less material differences relating to three other insurers.

We have utilised case estimate information directly from the insurers.

C.3 Data reconciliations

We compared the WCMS data provided for this review with the data provided for our previous review. The following table summarises the comparison of claim reports and claim payments to 30 June 2020 from the two data sources.

Table C.1 – Reconciliation to previous data

Accident Year	Claim Numbers				Claim Payments (\$m)			
	Current Dataset	Previous Dataset	Difference	% Difference	Current Dataset	Previous Dataset	Difference	% Difference
2010/11	3,622	3,625	-3	0%	124.8	124.8	0.0	0%
2011/12	3,598	3,599	-1	0%	114.8	114.8	0.0	0%
2012/13	3,392	3,392	0	0%	125.7	125.7	0.0	0%
2013/14	3,158	3,157	1	0%	105.7	105.7	0.0	0%
2014/15	3,242	3,242	0	0%	109.9	109.9	0.0	0%
2015/16	3,291	3,291	0	0%	122.5	122.5	0.0	0%
2016/17	3,341	3,340	1	0%	105.7	105.7	0.0	0%
2017/18	3,325	3,324	1	0%	94.9	94.9	0.0	0%
2018/19	3,241	3,241	0	0%	57.4	57.4	0.0	0%
2019/20	2,947	2,929	18	1%	29.6	29.6	0.0	0%
Total	33,157	33,140	17	0%	991.0	991.0	0.0	0%

The data from the two sources matched closely.

We also received summaries of claim and policy data from the insurers operating in the Scheme in response to our request to confirm the validity of the WCMS data.

Table C.2 shows a reconciliation of the number of non-nil claims on the WCMS database to those supplied by insurers.

Table C.2 – Non-nil claim numbers reported: WCMS vs insurer data

Accident Year	WCMS Data	Insurer Data	Difference	% Difference
2010/11	3,623	3,600	23	1%
2011/12	3,599	3,577	22	1%
2012/13	3,393	3,364	29	1%
2013/14	3,159	3,139	20	1%
2014/15	3,245	3,253	-8	0%
2015/16	3,292	3,274	18	1%
2016/17	3,347	3,315	32	1%
2017/18	3,340	3,358	-18	-1%
2018/19	3,265	3,262	3	0%
2019/20	3,158	3,159	-1	0%
2020/21	2,748	2,794	-46	-2%

All analysis relies only on non-nil claims; hence we have shown this comparison here. The data from the two sources matched closely.

Table C.3 shows a reconciliation of claim payments in WCMS to that supplied by insurers.

Table C.3 – Claim payments: WCMS vs insurer data

Payment Year	WCMS	Insurer	Difference	Difference
	Data	Data		
	\$000	\$000	\$000	%
2010/11	97,121	96,134	987	1%
2011/12	101,614	99,584	2,029	2%
2012/13	122,348	118,741	3,607	3%
2013/14	139,534	136,318	3,217	2%
2014/15	126,240	126,919	-679	-1%
2015/16	119,691	123,507	-3,816	-3%
2016/17	129,273	131,307	-2,034	-2%
2017/18	129,666	131,364	-1,698	-1%
2018/19	131,747	134,891	-3,144	-2%
2019/20	143,290	145,225	-1,936	-1%
2020/21	157,246	158,641	-1,395	-1%

Differences in payments between the insurer data and WCMS database between 2010/11 to 2020/21 years are sufficiently close for actuarial analysis. As such, our view is that the claim payment data on the WCMS database reconciles satisfactorily to the insurer data.

Table C.4 shows a reconciliation of case estimates in WCMS to that supplied by insurers.

Table C.4 – Case estimates: WCMS vs insurer data

Accident Year	WCMS		Difference	Difference
	Data	Insurer Data		
	\$000	\$000	\$000	%
Prior	55,968	1,933	54,034	2795%
2011/12	18,815	456	18,359	4028%
2012/13	23,730	122	23,608	19350%
2013/14	4,099	1,164	2,935	252%
2014/15	7,070	657	6,412	975%
2015/16	16,108	2,382	13,726	576%
2016/17	12,621	13,998	-1,377	-10%
2017/18	23,044	14,187	8,857	62%
2018/19	36,033	29,904	6,129	20%
2019/20	64,129	59,739	4,390	7%
2020/21	72,969	84,524	-11,555	-14%

Table C.5 shows the same comparison but setting case estimates equal to zero for closed claims in WCMS.

Table C.5 – Case estimates: WCMS (closed set to nil) vs insurer data

Accident Year	WCMS		Difference	Difference
	Data	Insurer Data		
	\$000	\$000	\$000	%
Prior	2,604	1,933	671	35%
2011/12	287	456	-169	-37%
2012/13	1,588	122	1,466	1201%
2013/14	1,150	1,164	-14	-1%
2014/15	3,528	657	2,871	437%
2015/16	11,762	2,382	9,380	394%
2016/17	7,474	13,998	-6,524	-47%
2017/18	19,125	14,187	4,938	35%
2018/19	33,591	29,904	3,686	12%
2019/20	63,338	59,739	3,599	6%
2020/21	72,909	84,524	-11,615	-14%

The case estimates from WCMS appear to be significantly overstated for older periods. The WCMS data system was only on place from 2014 onwards, therefore we believe that the very high level of discrepancy prior to this period is likely to be a legacy issue from the AIMS data system. It appears that case estimates on closed claims were not set to nil when the transfer from AIMS to WCMS occurred, which is backed up by the improved reconciliation when we set case estimates to zero on closed claims as shown in Table C.5.

For more recent years, differences in the timing of the WCMS data versus the date insurers supplied case estimates could explain some of the discrepancies, however it does appear that there are some discrepancies that exist beyond just timing differences particularly when this reconciliation is done at an insurer level.

As a result of the reconciliation differences observed in older years, we do not rely on case estimates in our analysis of ultimate claim size or costs, and use case estimates supplied directly by insurers instead of that in WCMS when comparing to our projected central estimates. However, when assessing ANZSIC level relativities we place some reliance on case estimates as our analysis for this is limited to 2017 and more recent accident years. While there remain some differences in this window, when we combine payments and case estimates to calculate incurred costs, the differences between WCMS and the insurer data are less material.

Table C.6 shows a reconciliation of the WCMS wages data to that supplied by insurers.

Table C.6 – Wages & premiums: WCMS vs insurer data

Policy Year	Wages				Premiums				Premium Rate			
	WCMS Data	Insurer Data	Difference	Difference	WCMS Data	Insurer Data	Difference	Difference	WCMS Data	Insurer Data	Difference	Difference
	\$m	\$m	\$m	%	\$m	\$m	\$m	%	%	%	%	%
2009/10	5,751	5,902	-151	-3%	150	143	8	5%				
2010/11	6,282	6,622	-340	-5%	157	156	1	0%	2.50%	2.36%	0.14%	6%
2011/12	6,774	6,773	1	0%	169	160	9	5%	2.49%	2.36%	0.13%	5%
2012/13	6,981	7,073	-92	-1%	166	170	-5	-3%	2.37%	2.41%	-0.04%	-2%
2013/14	7,184	7,059	125	2%	167	165	2	1%	2.33%	2.34%	-0.01%	-1%
2014/15	7,534	7,709	-174	-2%	167	161	6	4%	2.22%	2.09%	0.13%	6%
2015/16	8,240	8,109	131	2%	170	166	4	2%	2.06%	2.04%	0.02%	1%
2016/17	8,944	8,943	1	0%	181	177	3	2%	2.02%	1.98%	0.04%	2%
2017/18	9,370	10,051	-681	-7%	184	190	-6	-3%	1.96%	1.89%	0.07%	4%
2018/19	10,523	10,682	-159	-1%	202	205	-3	-1%	1.92%	1.92%	0.00%	0%
2019/20	11,138	11,295	-157	-1%	216	224	-8	-3%	1.94%	1.98%	-0.04%	-2%
2020/21	11,855	12,303	-448	-4%	230	240	-10	-4%	1.94%	1.95%	-0.01%	0%

The discrepancies between the data captured on WCMS and sourced directly from the insurers are relatively small. Although there are some larger differences at an individual insurer level, we have also checked the distribution of wages by ANZSIC class on both WCMS and from insurers and they are very similar. We have therefore relied on insurer information for aggregate level wage and premium information, but for ANZSIC class information we have partially relied on WCMS data as it allows for a more granular assessment of performance.

C.4 Coding of data on WCMS

C.4.1 Common law, commutations and impairment benefits

Discussions with CMTEDD have revealed historical differences in coding practices of common law, commutation and impairment benefit payments. Specific examples include:

- For claims where a common law action is commenced and is subsequently settled out of court, some insurers code the payments as common law while others code the payment as a commutation
- Some insurers are negotiating commutations with the claimant and having the claimant sign a common law deed of release. These are being coded as common law rather than commutations

- Some insurers are coding what are essentially impairment benefit payments as commutations.

As a result of these differences in practices, we have grouped all common law, commutation and impairment benefit payments together in undertaking our review.

C.4.2 GST and ITCs

We understand that all claim payments made in the post-GST environment are reported inclusive of GST for all insurers. However, practices vary in relation to the treatment of ITC recoveries – some insurers net them off in payments captured on WCMS while others do not. We understand that the WCMS data specification is in the process of being amended to offer greater clarity to insurers on the treatment of ITCs. However, historical information will not be amended.

As we have analysed payment data net of ITC recoveries, we have had to adjust the data for those insurers who have not netted off the ITC recoveries. Given that the majority of workers' compensation payments do not attract GST, we have only netted off estimated ITC amounts from legal and investigation costs for these insurers. Some elements of medical and rehabilitation payments will also attract GST (e.g. home modifications, vocational rehabilitation services) and hence should have ITC recoveries netted off. However we do not know what proportion of medical and rehabilitation payments attract GST, and have therefore not adjusted these payments. We believe this is immaterial in the context of our review.

C.4.3 Incident notifications

We understand that some insurers are submitting incident notifications as well as claim records to WCMS, and that the treatment of this varies by insurers.

By looking at the numbers of non-nil claims, we should effectively capture the true number of actual claims involving workers compensation claim payments and the differences in reporting of notifications is therefore not expected to have a material impact on our analysis.

D Valuation approach

D.1 Chain ladder method

The chain ladder method estimates the ultimate number of claims incurred in each accident year by analysing past claim reporting patterns and estimating a pattern for the future.

The chain ladder method can be applied to any cumulative data triangle that summarises the experience by accident year and development period.

Chain ladder ratios are calculated from the data triangle by taking, for each accident period:

Cumulative Number of Claims reported to Development Period t

Cumulative Number of Claims reported to Development Period $(t - 1)$

Ratios for projection are selected taking into account the observed ratios in recent periods and changes expected in the future. The ratios generated are then applied to the most recent cumulative claim figures (separately for each accident period) to project reported claims to ultimate.

D.2 Payments Per Claim Incurred

The Payments Per Claim Incurred (PPCI) method models the claim process by assuming that the payments in respect of a group of claims will develop in a predictable pattern over a period of years. This pattern is defined by:

- An average claim size
- The proportion of claim payments that will be made in each development year.

The PPCI method proceeds as follows:

- 1 Estimate the ultimate number of claims incurred in each accident year by using the Chain Ladder method.
- 2 Inflate past claim payments, subdivided by accident and payment years, to the monetary values of the latest accident year using an appropriate measure of past inflation.
- 3 For each accident year divide the inflation adjusted claim payments [derived in (ii)] by the estimated ultimate number of claims incurred [calculated in (i)] to obtain an historical PPCI pattern of payments.
- 4 Taking into account the result for (iii) and expectations for the future, select the average claims size together with the proportion of the payments made in each development year.
- 5 Using an assumed future rate of claim inflation calculate projected future payments for each accident year by multiplying together:
 - a The estimated ultimate number of claims incurred
 - b The average claim size in current dollars
 - c The proportion of payments by development year
 - d The assumed inflation factor.

The present value of liabilities is calculated by discounting projected payments to the valuation date at the assumed discount rate.

D.3 Payments Per Claim Settled

This method models the claims process by assuming that the payments in respect of a group of claims will develop in a predictable pattern over a period of years. This pattern is often expressed as the payments per claim settled together with the proportion of claims which will be settled in each development year.

There can sometimes be a timing mismatch between the date a claim first receives a lump sum payment and the date of final payment, and we note that a small amount of common law and lump sum claims do involve multiple common law or lump sum payments. We therefore define date of settlement to be the date of last payment. We note that the method may be susceptible to changes in data due to re-openings and payment of further benefits, but this is not expected to materially alter the results of our analysis providing the rate of such re-openings remains stable over time.

In order to use this method, we need to make assumptions about:

- The number of claims incurred in each accident year
- The average payment per claim settled in the monetary values of the latest accident year (not necessarily the same average cost for all accident years)
- The proportion of claims settled in each development period, before allowance for claim inflation
- Rates of future claim inflation and investment earnings.

Future payments are projected by multiplying together:

- The number of claims outstanding
- The payment per claim settled in current dollars
- The proportion of claims settled by development period
- The proportion of future settlements paid by development period
- The inflation index based on projected rates of claims inflation.

The present value of liabilities is then calculated by discounting projected payments to the valuation date at the adopted discount rate.

D.4 Continuance model

The continuance model is in effect a Payments Per Active Claim (“PPAC”) model which assumes that the payments in respect of a group of claims will develop in a predictable pattern over a period of years. This pattern is defined by:

- An average claim size
- The proportion of claims will remain active and receiving benefits in each development year.

The PPAC method proceeds as follows:

- 1 Estimate the ultimate number of active claims incurred in each accident year by using the Chain Ladder method, taking into account the number of claims active in the most recent period and assumed continuance rates in future.
- 2 Inflate past claim payments, subdivided by accident and payment years, to the monetary values of the latest accident year using an appropriate measure of past inflation.

- 3 For each accident year divide the inflation adjusted claim payments [derived in (ii)] by the estimated ultimate number of active claims [calculated in (i)] to obtain an historical pattern of average weekly benefits per continuing claim.
- 4 Taking into account the result for (iii) and expectations for the future, select the average claims size together with the proportion of the payments made in each development year.
- 5 Using an assumed future rate of claim inflation, calculate projected future payments for each accident year by multiplying together:
 - a The estimated ultimate number of active claims incurred
 - b The average claim size in current dollars
 - c The proportion of payments by development year
 - d The assumed inflation factor.

The implied payments were then converted into PPCIs for comparison with the PPCI model.

E Claim number analysis

ACT Workers' Compensation Scheme Review

All Claims
Excludes Nil Claims
Chain Ladder Model

E1.1 Cumulative Number of Claims (excluding nil claims)

Accident Quarter	Development Quarter (delay to first payment)																														Reported to date	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Sep-14	535	807	837	847	853	854	857	861	862	864	863	865	865	866	866	866	866	868	868	868	869	869	869	869	869	869	869	869	869	869	869	869
Dec-14	450	698	729	735	739	742	742	744	747	748	748	749	751	751	752	752	752	752	752	752	752	752	751	751	751	751	751	751	751	751	751	
Mar-15	392	743	773	784	792	798	802	806	806	806	806	808	808	809	809	809	809	810	810	810	810	811	811	811	811	812	812	812	812	812	812	
Jun-15	459	738	772	791	797	798	800	801	801	801	801	802	803	804	806	806	806	806	806	806	806	806	806	806	806	808	808	808	808	808	808	
Sep-15	491	751	787	797	799	799	799	799	799	799	799	800	800	802	803	803	803	803	802	803	803	803	803	803	803	803	803	803	803	803	803	
Dec-15	486	727	769	779	786	787	792	792	793	796	798	799	799	801	801	801	801	801	802	803	803	803	803	803	803	803	803	803	803	803	803	
Mar-16	425	745	773	786	787	790	794	796	796	796	796	799	801	801	802	802	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	
Jun-16	541	812	849	862	863	862	864	867	871	874	874	874	875	876	876	877	877	879	878	878	878	879	879	879	879	879	879	879	879	879	879	
Sep-16	486	763	800	808	812	813	813	816	824	824	825	824	826	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	
Dec-16	475	768	796	807	816	818	819	819	819	819	819	821	821	822	821	822	822	822	822	822	822	822	822	822	822	822	822	822	822	822	822	
Mar-17	463	771	796	809	818	827	827	829	829	830	830	831	833	833	833	833	836	836	836	836	836	836	836	836	836	836	836	836	836	836	836	
Jun-17	485	779	820	828	838	838	838	838	839	840	842	844	844	847	848	849	849	849	849	849	849	849	849	849	849	849	849	849	849	849	849	
Sep-17	526	803	842	855	861	869	868	869	871	871	871	872	872	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	
Dec-17	456	721	764	778	781	783	784	786	786	787	789	790	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	
Mar-18	479	778	814	835	836	841	845	848	850	851	852	854	854	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857	
Jun-18	469	765	790	799	801	805	805	806	807	809	811	811	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	
Sep-18	544	836	862	874	880	882	884	886	885	887	888	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	
Dec-18	461	724	755	769	777	778	778	778	779	780	781	781	781	781	781	781	781	781	781	781	781	781	781	781	781	781	781	781	781	781	781	
Mar-19	454	773	804	821	830	833	834	838	840	841	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842	842	
Jun-19	380	683	716	728	737	741	742	743	745	749	749	749	749	749	749	749	749	749	749	749	749	749	749	749	749	749	749	749	749	749	749	
Sep-19	526	829	858	879	887	888	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	
Dec-19	469	716	754	765	767	770	771	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	772	
Mar-20	440	703	731	749	754	756	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	759	
Jun-20	413	690	719	728	731	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	
Sep-20	435	734	758	767	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774	
Dec-20	447	666	693	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	
Mar-21	430	700	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734	
Jun-21	411	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	663	

E1.1 Chain Ladder Factors

Accident Quarter	Development Quarter (delay to first payment)																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Sep-14	1.5084	1.0297	1.0193	1.0071	1.0012	1.0035	1.0047	1.0012	1.0023	0.9988	1.0023	1.0000	1.0012	1.0000	1.0000	1.0000	1.0023	1.0000	1.0012	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Dec-14	1.5511	1.0444	1.0082	1.0054	1.0041	1.0000	1.0027	1.0040	1.0013	1.0000	1.0013	1.0027	1.0000	1.0000	1.0013	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Mar-15	1.8954	1.0404	1.0142	1.0102	1.0076	1.0050	1.0050	1.0000	1.0000	1.0000	1.0025	1.0000	1.0012	1.0000	1.0000	1.0000	1.0012	1.0000	1.0000	1.0000	1.0012	1.0000	1.0000	1.0012	1.0000	1.0012	1.0000	1.0000	1.0000	1.0000	
Jun-15	1.8078	1.0481	1.0246	1.0076	1.0013	1.0025	1.0013	1.0000	1.0000	1.0000	1.0012	1.0012	1.0012	1.0025	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Sep-15	1.5295	1.0308	1.0168	1.0025	1.0025	1.0000	1.0038	1.0025	1.0000	1.0025	1.0000	1.0025	1.0000	1.0025	1.0000	1.0000	0.9988	1.0012	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Dec-15	1.4959	1.0578	1.0130	1.0090	1.0013	1.0064	1.0000	1.0013	1.0038	1.0025	1.0013	1.0038	1.0025	1.0000	1.0000	1.0000	1.0012	1.0012	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Mar-16	1.7529	1.0376	1.0168	1.0013	1.0038	1.0051	1.0025	1.0000	1.0000	1.0000	1.0000	1.0038	1.0025	1.0012	1.0000	0.9988	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Jun-16	1.5009	1.0456	1.0153	1.0012	0.9988	1.0023	1.0035	1.0046	1.0034	1.0000	1.0000	1.0011	1.0011	1.0000	1.0011	1.0023	0.9988	1.0000	1.0011	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Sep-16	1.5712	1.0485	1.0000	1.0012	1.0000	1.0037	1.0098	1.0000	1.0012	0.9988	1.0000	1.0024	1.0048	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Dec-16	1.6168	1.0365	1.0138	1.0112	1.0025	1.0012	1.0000	1.0000	0.9988	1.0012	1.0000	1.0024	1.0000	1.0012	0.9988	1.0012	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Mar-17	1.6652	1.0324	1.0163	1.0111	1.0110	1.0000	1.0024	1.0000	1.0012	1.0000	1.0012	1.0024	1.0000	1.0000	1.0036	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Jun-17	1.6062	1.0526	1.0098	1.0121	1.0010	1.0000	1.0000	1.0012	1.0012	1.0024	1.0024	1.0024	1.0000	1.0036	1.0012	1															

ACT Workers' Compensation Scheme Review

Lost Time Claims
Excludes Nil Claims
Chain Ladder Model

E2.1 Cumulative Number of Claims

Accident Year	Development Year (of first Weekly Benefit Payment)								Reported to date
	1	2	3	4	5	6	7	8	
2013/14	1,521	1,944	1,968	1,973	1,973	1,973	1,973	1,973	1,973
2014/15	1,512	1,960	1,983	1,990	1,992	1,992	1,992	1,992	1,992
2015/16	1,561	2,040	2,065	2,073	2,077	2,077			2,077
2016/17	1,554	2,053	2,087	2,101	2,102				2,102
2017/18	1,550	2,069	2,119	2,127					2,127
2018/19	1,549	2,031	2,058						2,058
2019/20	1,545	2,003							2,003
2020/21	1,417								1,417

E2.2 Chain Ladder Factors

Accident Year	Development Year (of first Weekly Benefit Payment)						
	1:2	2:3	3:4	4:5	5:6	6:7	7:8
2013/14	1.2781	1.0123	1.0025	1.0000	1.0000	1.0000	1.0000
2014/15	1.2963	1.0117	1.0035	1.0010	1.0000	1.0000	1.0000
2015/16	1.3069	1.0123	1.0039	1.0019	1.0000		
2016/17	1.3211	1.0166	1.0067	1.0005			
2017/18	1.3348	1.0242	1.0038				
2018/19	1.3112	1.0133					
2019/20	1.2964						
2020/21							

E2.3 Selected Chain Ladder Factors

	Development Year (of first Weekly Benefit Payment)						
	1:2	2:3	3:4	4:5	5:6	6:7	Tail
Jun-21 Selected	1.3100	1.0180	1.0045	1.0010	1.0005	1.0001	1.0000

E2.4 Incremental Projected Number of Claims

Accident Year	Development Year (of first Weekly Benefit Payment)								Tail	Ultimate Claims
	1	2	3	4	5	6	7	8		
2013/14	1,521	423	24	5	0	0	0	0	0	1,973
2014/15	1,512	448	23	7	2	0	0	0	0	1,992
2015/16	1,561	479	25	8	4	0	0	0	0	2,077
2016/17	1,554	499	34	14	1	0	0	0	0	2,103
2017/18	1,550	519	50	8	2	1	0	0	0	2,130
2018/19	1,549	482	27	9	2	1	0	0	0	2,071
2019/20	1,545	458	36	9	2	1	0	0	0	2,052
2020/21	1,417	439	33	9	2	1	0	0	0	1,901

ACT Workers' Compensation Scheme Review

Claim Number Summary

E3.1 Ultimate Number of Claims

Accident Year	All Claims (excl Nils)			Lost Time Claims		
	Reported	IBNR	Ultimate	Reported	IBNR	Ultimate
2013/14	3,155	0	3,155	1,973	0	1,973
2014/15	3,240	2	3,242	1,992	0	1,992
2015/16	3,286	4	3,290	2,077	0	2,077
2016/17	3,338	8	3,346	2,103	0	2,103
2017/18	3,335	13	3,348	2,127	3	2,130
2018/19	3,262	24	3,286	2,059	12	2,071
2019/20	3,155	41	3,196	2,016	36	2,052
2020/21	2,870	125	2,995	1,724	177	1,901

ACT Workers' Compensation Scheme Review

Common Law & Lump Sum
Excludes Nil Claims
Chain Ladder Model

E4.1 Cumulative Number of Claims

Accident Year	Development Year (of first Common Law Payment)							Reported to date
	1	2	3	4	5	6	7	
2013/14	11	106	228	335	385	398	408	415
2014/15	9	99	237	329	380	400	416	416
2015/16	11	122	243	335	407	427		427
2016/17	10	105	242	352	418			418
2017/18	10	102	247	346				346
2018/19	10	97	231					231
2019/20	23	143						143
2020/21	11							11

E4.2 Chain Ladder Factors

Accident Year	Development Year (of first Common Law Payment)						
	1:2	2:3	3:4	4:5	5:6	6:7	7:8
2013/14	9.6364	2.1509	1.4693	1.1493	1.0338	1.0251	1.0172
2014/15	11.0000	2.3939	1.3882	1.1550	1.0526	1.0400	
2015/16	11.0909	1.9918	1.3786	1.2149	1.0491		
2016/17	10.5000	2.3048	1.4545	1.1875			
2017/18	10.2000	2.4216	1.4008				
2018/19	9.7000	2.3814					
2019/20	6.2174						
2020/21							

E4.3 Selected Chain Ladder Factors

	Development Year (of first Common Law Payment)						
	1:2	2:3	3:4	4:5	5:6	6:7	Tail
Jun-21 Selected	9.0000	2.4000	1.4000	1.1700	1.0500	1.0200	1.0386

E4.1 Incremental Projected Number of Claims

Accident Year	Development Year (of first Common Law Payment)								Tail	Ultimate Claims
	1	2	3	4	5	6	7	8		
2013/14	11	95	122	107	50	13	10	7	11	426
2014/15	9	90	138	92	51	20	16	5	11	432
2015/16	11	111	121	92	72	20	9	5	12	452
2016/17	10	95	137	110	66	21	9	5	12	465
2017/18	10	92	145	99	59	20	9	5	12	450
2018/19	10	87	134	103	62	21	9	5	12	444
2019/20	23	120	134	92	55	19	8	5	11	467
2020/21	11	86	136	93	56	19	8	5	11	425

F Claim size analysis

ACT Workers' Compensation Scheme Review

Weekly Benefits
PPCI Model

F1.1 Incremental Inflated Payments (\$000 Jun-21)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2013/14	8,645	9,111	3,114	1,526	417	338	94	149	23,393	8,645
2014/15	8,741	10,088	3,634	1,344	420	162	73		24,463	17,852
2015/16	10,212	10,348	3,567	1,629	937	388			27,081	23,414
2016/17	9,682	11,440	3,619	2,368	818				27,927	26,920
2017/18	11,412	12,119	5,233	2,032					30,796	28,859
2018/19	10,547	12,592	3,829						26,968	30,286
2019/20	14,450	15,243							29,693	35,500
2020/21	12,435								12,435	34,149

F1.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2013/14	4,382	4,618	1,578	773	211	171	48	76
2014/15	4,388	5,064	1,824	675	211	81	37	
2015/16	4,916	4,982	1,717	784	451	187		
2016/17	4,603	5,439	1,721	1,126	389			
2017/18	5,357	5,688	2,456	954				
2018/19	5,094	6,081	1,849					
2019/20	7,043	7,430						
2020/21	6,540							

F1.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-21 Selected	6,800	6,750	2,150	1,000	400	140	46	35	48

F1.4 Actual & Projected Payments Inflated to Payment Date (\$000)

Accident Year	Development Year (of Payment)								Tail	Ultimate	
	1	2	3	4	5	6	7	8		Costs	Outstanding
2013/14	7,848	8,367	2,882	1,409	401	338	91	179	106	21,621	106
2014/15	8,039	9,338	3,359	1,302	420	157	83	71	115	22,883	186
2015/16	9,409	9,557	3,451	1,624	903	387	99	80	128	25,638	308
2016/17	9,028	11,055	3,614	2,283	871	305	108	87	139	27,491	639
2017/18	11,185	12,128	5,044	2,009	883	331	117	94	151	31,942	1,577
2018/19	10,437	12,129	3,783	2,144	920	345	122	98	158	30,136	3,788
2019/20	14,001	15,058	4,568	2,279	978	367	130	104	168	37,652	8,593
2020/21	12,339	13,290	4,540	2,265	972	365	129	104	167	34,170	21,831

ACT Workers' Compensation Scheme Review

Medical & Related Costs (excl. rehab)
PPCI Model

F2.1 Incremental Inflated Payments (\$000 Jun-21)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2013/14	6,956	6,330	1,340	504	290	95	32	29	15,575	6,956
2014/15	8,277	7,002	1,807	600	260	46	25		18,016	14,606
2015/16	8,402	8,368	3,165	1,416	1,158	852			23,360	16,743
2016/17	8,947	7,757	2,344	1,420	461				20,929	20,100
2017/18	9,422	8,910	2,514	1,108					21,953	22,387
2018/19	9,624	8,541	2,229						20,394	22,819
2019/20	10,859	9,425							20,284	24,258
2020/21	9,875								9,875	23,543

F2.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2013/14	2,205	2,006	425	160	92	30	10	9
2014/15	2,553	2,160	557	185	80	14	8	
2015/16	2,554	2,543	962	430	352	259		
2016/17	2,674	2,318	701	424	138			
2017/18	2,814	2,661	751	331				
2018/19	2,928	2,599	678					
2019/20	3,398	2,949						
2020/21	3,297							

F2.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-21 Selected	3,375	2,850	750	380	200	80	12	8	8

F2.4 Actual & Projected Payments Inflated to Payment Date (\$000)

Accident Year	Development Year (of Payment)								Tail	Ultimate	
	1	2	3	4	5	6	7	8		Costs	Outstanding
2013/14	6,319	5,811	1,241	466	280	95	31	28	29	14,301	29
2014/15	7,611	6,484	1,669	581	260	44	24	28	32	16,733	60
2015/16	7,745	7,725	3,052	1,411	1,117	843	194	31	35	22,152	260
2016/17	8,332	7,477	2,342	1,368	456	277	44	33	38	20,368	393
2017/18	9,220	8,917	2,422	1,094	693	298	48	36	41	22,768	1,115
2018/19	9,544	8,219	2,203	1,293	730	313	50	38	43	22,433	2,467
2019/20	10,503	9,310	2,482	1,349	761	327	52	39	45	24,869	5,055
2020/21	9,793	8,839	2,495	1,356	765	328	52	39	45	23,713	13,920

ACT Workers' Compensation Scheme Review

Rehabilitation
PPCI Model

F3.1 Incremental Inflated Payments (\$000 Jun-21)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2013/14	3,383	3,139	647	232	70	22	0	3	7,497	3,383
2014/15	3,131	2,757	703	182	58	7	5		6,843	6,270
2015/16	2,671	3,207	723	240	80	27			6,947	6,075
2016/17	3,026	3,583	854	352	123				7,938	7,538
2017/18	3,396	3,818	994	351					8,559	8,189
2018/19	3,162	3,647	957						7,766	8,295
2019/20	3,442	3,750							7,192	8,521
2020/21	3,121								3,121	8,213

F3.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2013/14	1,072	995	205	74	22	7	0	1
2014/15	966	850	217	56	18	2	1	
2015/16	812	975	220	73	24	8		
2016/17	905	1,071	255	105	37			
2017/18	1,014	1,140	297	105				
2018/19	962	1,110	291					
2019/20	1,077	1,173						
2020/21	1,042							

F3.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-21 Selected	1,060	1,170	294	80	27	9	4	3	4

F3.4 Actual & Projected Payments Inflated to Payment Date (\$000)

Accident Year	Development Year (of Payment)								Tail	Ultimate	
	1	2	3	4	5	6	7	8		Costs	Outstanding
2013/14	3,071	2,882	599	215	67	22	0	3	13	6,873	13
2014/15	2,880	2,553	649	176	58	7	5	11	14	6,352	25
2015/16	2,461	2,957	697	239	77	26	15	12	16	6,500	42
2016/17	2,821	3,453	855	339	121	30	16	13	17	7,665	75
2017/18	3,328	3,826	958	347	93	32	17	14	18	8,632	173
2018/19	3,129	3,510	945	273	97	33	18	14	19	8,040	455
2019/20	3,331	3,704	973	285	102	35	19	15	20	8,483	1,448
2020/21	3,098	3,629	978	286	102	35	19	15	20	8,182	5,084

ACT Workers' Compensation Scheme Review

Legal & Investigation Costs
PPCI Model

F4.1 Incremental Inflated Payments (\$000 Jun-21)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2013/14	1,473	4,008	4,848	5,773	3,294	1,383	596	350	21,725	1,473
2014/15	1,511	4,067	5,796	4,524	3,232	1,727	778		21,634	5,518
2015/16	1,615	5,098	5,438	5,647	4,382	1,460			23,640	10,530
2016/17	1,213	4,142	5,667	6,176	3,153				20,351	17,912
2017/18	1,245	4,183	6,924	4,861					17,213	18,684
2018/19	985	4,256	5,864						11,105	22,355
2019/20	1,508	5,027							6,535	24,254
2020/21	1,315								1,315	19,655

F4.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2013/14	467	1,270	1,536	1,830	1,044	438	189	111
2014/15	466	1,255	1,788	1,395	997	533	240	
2015/16	491	1,550	1,653	1,716	1,332	444		
2016/17	363	1,238	1,694	1,846	942			
2017/18	372	1,249	2,068	1,452				
2018/19	300	1,295	1,784					
2019/20	472	1,573						
2020/21	439							

F4.3 Selected Payments per Claim Incurred

Development Year (of Payment)	1	2	3	4	5	6	7	8	Tail
	Jun-21 Selected	413	1,350	1,889	1,650	1,175	500	180	75

F4.4 Actual & Projected Payments Inflated to Payment Date (\$000)

Accident Year	Development Year (of Payment)								Tail	Ultimate	
	1	2	3	4	5	6	7	8		Costs	Outstanding
2013/14	1,338	3,683	4,479	5,354	3,185	1,387	573	344	546	20,889	546
2014/15	1,389	3,758	5,366	4,384	3,225	1,668	768	252	602	21,411	854
2015/16	1,486	4,730	5,286	5,618	4,223	1,446	613	274	655	24,331	1,542
2016/17	1,132	4,025	5,641	5,966	3,117	1,733	669	299	714	23,296	3,415
2017/18	1,225	4,152	6,680	4,805	4,074	1,859	718	321	767	24,602	7,739
2018/19	974	4,113	5,804	5,615	4,289	1,957	756	338	807	24,653	13,762
2019/20	1,465	4,976	6,253	5,857	4,473	2,041	788	352	842	27,048	20,607
2020/21	1,306	4,187	6,285	5,886	4,496	2,052	792	354	846	26,204	24,898

ACT Workers' Compensation Scheme Review

Recoveries
PPCI Model

F5.1 Incremental Inflated Payments (\$000 Jun-21)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2013/14	-128	-749	-723	-1,042	-435	-513	-296	-168	-4,055	-128
2014/15	-71	-628	-1,186	-933	-1,590	-229	-11		-4,647	-820
2015/16	-41	-398	-934	-1,585	-1,436	-558			-4,952	-1,392
2016/17	-38	-384	-646	-902	-1,246				-3,216	-2,686
2017/18	-59	-470	-1,592	-1,283					-3,404	-2,830
2018/19	-68	-1,015	-1,395						-2,478	-5,818
2019/20	-247	-602							-849	-6,098
2020/21	-66								-66	-4,082

F5.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2013/14	-41	-237	-229	-330	-138	-163	-94	-53
2014/15	-22	-194	-366	-288	-490	-71	-3	
2015/16	-13	-121	-284	-482	-437	-169		
2016/17	-11	-115	-193	-270	-372			
2017/18	-18	-140	-475	-383				
2018/19	-21	-309	-424					
2019/20	-77	-189						
2020/21	-22							

F5.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-21 Selected	-40	-200	-400	-350	-330	-145	-77	-48	-82

F5.4 Actual & Projected Payments Inflated to Payment Date (\$000)

Accident Year	Development Year (of Payment)									Ultimate	
	1	2	3	4	5	6	7	8	Tail	Costs	Outstanding
2013/14	-116	-688	-670	-964	-416	-511	-286	-166	-293	-4,110	-293
2014/15	-65	-579	-1,098	-903	-1,596	-220	-11	-162	-323	-4,956	-485
2015/16	-38	-369	-899	-1,588	-1,386	-551	-263	-177	-351	-5,621	-791
2016/17	-36	-375	-646	-872	-1,229	-873	-287	-193	-383	-4,893	-1,736
2017/18	-58	-468	-1,541	-1,267	-1,144	-539	-308	-207	-411	-5,944	-2,609
2018/19	-68	-982	-1,378	-1,191	-1,204	-568	-324	-218	-433	-6,366	-3,938
2019/20	-240	-595	-1,324	-1,242	-1,256	-592	-338	-227	-451	-6,267	-5,431
2020/21	-65	-620	-1,331	-1,249	-1,263	-595	-340	-228	-454	-6,144	-6,079

ACT Workers' Compensation Scheme Review

Common Law & Lump Sum
Excludes Nil Claims
PPCS Model

F6.1 Incremental Number of Claims Settled as Lump Sum or Common Law

Accident Year	Development Year (of Last LS_CL Payment)								Settled to date
	1	2	3	4	5	6	7	8	
2013/14	7	76	134	110	51	18	11	8	415
2014/15	8	78	133	102	55	23	17		416
2015/16	9	102	117	97	79	23			427
2016/17	6	85	129	116	77				413
2017/18	6	68	144	124					342
2018/19	7	67	145						219
2019/20	8	116							124
2020/21	7								7

F6.2 Lump Sum/Common Law Proportion Settled (% of Ultimate Lump Sums/Common Law)

Accident Year	Development Year (of Last LS_CL Payment)							
	1	2	3	4	5	6	7	8
2013/14	1.6%	17.8%	31.5%	25.8%	12.0%	4.2%	2.6%	1.9%
2014/15	1.9%	18.1%	30.8%	23.6%	12.7%	5.3%	3.9%	
2015/16	2.0%	22.5%	25.9%	21.4%	17.5%	5.1%		
2016/17	1.3%	18.3%	27.7%	24.9%	16.6%			
2017/18	1.3%	15.1%	32.0%	27.5%				
2018/19	1.6%	15.1%	32.7%					
2019/20	1.7%	24.9%						
2020/21	1.6%							

F6.3 Selected Proportion Settled

	Development Year (of Last LS_CL Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-21 Selected	1.52%	18.98%	29.42%	23.72%	14.21%	4.93%	3.04%	1.14%	3.05%

F6.4 Incremental Projected Number of Claims Settled as Lump Sum or Common Law

Accident Year	Development Year (of Last LS_CL Payment)								Tail	Ultimate Finalised
	1	2	3	4	5	6	7	8		
2013/14	7	76	134	110	51	18	11	8	11	426
2014/15	8	78	133	102	55	23	17	4	12	432
2015/16	9	102	117	97	79	23	11	4	11	452
2016/17	6	85	129	116	77	21	13	5	13	465
2017/18	6	68	144	124	58	20	12	5	13	450
2018/19	7	67	145	106	64	22	14	5	14	444
2019/20	8	116	127	102	61	21	13	5	13	467
2020/21	7	81	125	101	60	21	13	5	13	425

ACT Workers' Compensation Scheme Review

Common Law & Lump Sum
Excludes Nil Claims
PPCS Model

F6.5 Incremental Inflated Payments (\$000 Jun-21)

Accident Year	Development Year (of Last LS_CL Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2013/14	282	5,822	16,003	15,089	9,137	2,734	874	1,366	51,308	282
2014/15	426	6,561	15,794	15,070	10,611	2,905	2,153		53,521	6,248
2015/16	382	9,100	15,296	17,606	11,860	3,212			57,456	22,946
2017/18	438	7,061	15,042	15,315	17,224				55,080	40,421
2017/18	238	6,930	19,721	19,306					46,195	46,802
2018/19	338	5,962	19,769						26,069	53,261
2019/20	405	11,141							11,547	57,043
2020/21	317								317	74,488

F6.6 Inflated Payments per Claim Settled in \$Jun-21 (\$000)

Accident Year	Development Year (of Last LS_CL Payment)							
	1	2	3	4	5	6	7	8
2013/14	40	77	119	137	179	152	79	171
2014/15	53	84	119	148	193	126	127	
2015/16	42	89	131	182	150	140		
2016/17	73	83	117	132	224			
2017/18	40	102	137	156				
2018/19	48	89	136					
2019/20	51	96						
2020/21	45							

F6.7 Selected Payments per Claim Settled in \$Jun-21 (\$000)

	Development Year (of Last LS_CL Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-21 Selected	48.0	90.0	130.0	150.0	186.4	190.0	190.0	190.0	190.0

F6.8 Actual & Projected Payments Inflated to Payment Date (\$000)

Accident Year	Development Year (of Payment)									Ultimate	
	1	2	3	4	5	6	7	8	Tail	Costs	Outstanding
2013/14	294	6,369	14,143	14,059	9,112	2,075	817	1,312	2,477	50,657	2,477
2014/15	411	6,384	16,102	13,445	10,087	2,592	2,116	948	2,737	54,821	3,685
2015/16	512	9,037	14,955	17,418	11,136	2,745	2,054	944	2,726	61,528	5,725
2016/17	537	7,038	15,284	15,023	16,602	5,062	2,111	970	2,802	65,429	10,946
2017/18	303	7,349	20,196	17,603	10,701	5,583	2,329	1,070	3,090	68,223	22,773
2018/19	385	6,052	20,172	16,181	12,348	6,443	2,687	1,235	3,566	69,070	42,461
2019/20	574	11,386	16,325	17,179	13,110	6,840	2,853	1,311	3,786	73,363	61,404
2020/21	356	6,827	17,638	18,560	14,164	7,390	3,082	1,417	4,090	73,523	73,168

ACT Workers' Compensation Scheme Review

All Payments

F7.1 Actual & Projected Payments Inflated to Payment Date (\$000)

Accident Year	Development Year (of Payment)																													Acc Yr Ultimate	
Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	Tail	Ultimate
2013/14	18,754	26,424	22,674	20,539	12,629	3,406	1,227	1,700	671	571	482	386	277	228	151	43	27	10	7	6	5	4	3	2	2	1	1	1	1	110,230	
2014/15	20,264	27,937	26,047	18,986	12,454	4,247	2,985	1,148	741	630	533	426	305	252	166	48	29	11	8	6	5	4	3	2	2	2	1	1	1	117,245	
2015/16	21,575	33,638	26,540	24,723	16,070	4,896	2,713	1,164	745	633	537	429	308	256	171	51	31	11	8	6	5	4	3	2	2	2	1	1	1	134,528	
2016/17	21,814	32,673	27,091	24,107	19,939	6,533	2,661	1,209	770	654	556	445	319	267	181	55	33	11	9	7	5	4	3	3	2	2	1	1	1	139,356	
2017/18	25,203	35,904	33,758	24,590	15,299	7,564	2,920	1,328	848	720	611	489	350	293	197	59	36	13	9	7	6	4	3	2	2	1	1	1	150,224		
2018/19	24,401	33,042	31,529	24,316	17,180	8,524	3,309	1,505	969	824	697	558	400	330	219	64	39	14	11	8	7	5	4	3	3	2	2	1	1	147,967	
2019/20	29,634	43,838	29,278	25,705	18,167	9,018	3,504	1,595	1,028	874	739	591	423	349	231	67	41	15	11	9	7	5	4	3	3	2	2	1	1	165,148	
2020/21	26,825	36,152	30,606	27,104	19,236	9,575	3,735	1,701	1,104	939	791	633	454	371	243	69	42	16	12	9	7	6	5	4	3	2	2	1	1	159,648	

F7.2 Actual & Projected Payments Inflated to Payment Date & Discounted to Middle of Accident Year (\$000)

Accident Year	Development Year (of Payment)																													Acc Yr Ultimate	
Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	Tail	Ultimate
2013/14	18,754	25,793	21,665	19,290	11,684	3,105	1,106	1,527	601	508	428	340	243	199	131	38	23	8	6	5	4	3	2	2	1	1	1	1	0	105,470	
2014/15	20,264	27,346	25,060	17,994	11,630	3,924	2,747	1,053	676	572	481	383	273	224	147	42	26	9	7	6	4	3	3	2	2	1	1	1	1	112,884	
2015/16	21,575	33,062	25,698	23,587	15,169	4,602	2,542	1,085	691	584	493	393	280	232	154	46	28	10	7	6	4	3	3	2	2	1	1	1	1	130,262	
2016/17	21,814	32,187	26,295	23,151	19,070	6,229	2,525	1,142	723	611	517	412	293	245	165	49	30	10	8	6	5	4	3	2	2	1	1	1	1	135,501	
2017/18	25,203	35,376	32,909	23,875	14,806	7,284	2,798	1,266	804	679	574	457	326	271	181	54	33	11	9	7	5	4	3	2	2	2	1	1	1	146,945	
2018/19	24,401	32,691	31,068	23,883	16,790	8,289	3,202	1,449	928	785	661	526	375	308	204	59	36	13	10	8	6	5	4	3	2	2	1	1	1	145,712	
2019/20	29,634	43,660	29,065	25,391	17,855	8,819	3,409	1,544	991	838	705	561	400	328	216	62	38	14	10	8	6	5	4	3	2	2	2	1	1	163,577	
2020/21	26,825	36,034	30,355	26,748	18,889	9,355	3,631	1,645	1,062	899	754	600	428	348	227	64	39	15	11	9	7	5	4	3	3	2	2	1	1	157,968	

G Workforce, wages and premiums

G.1 Workforce

We have compiled workforce figures from information available from the Australian Bureau of Statistics (ABS) and the Australian Public Service Employment Database (APSED), plus information on the number of ACT public sector employees supplied by CMTEDD.

We have calculated an approximate private sector workforce as:

- Total full time workforce in the ACT
- Less full time Commonwealth public sector employees
- Less full time ACT public sector employees.

This is shown in Table G.1 below.

Table G.1 – Calculation of ACT Private Sector Workforce (full time employees)

Accident Year	ABS	C'wealth	ACT	ACT Private Sector Workforce
		Government Public Servants	Government Public Servants	
2011/12	157,338	56,313	14,897	86,128
2012/13	155,636	54,612	15,424	85,599
2013/14	157,030	49,887	16,088	91,055
2014/15	155,313	45,490	16,359	93,463
2015/16	160,471	45,309	16,458	98,704
2016/17	158,568	45,459	16,655	96,454
2017/18	167,748	45,431	17,139	105,178
2018/19	169,316	43,710	17,823	107,782
2019/20	171,969	45,292	17,666	109,011
2020/21	170,871	46,339	18,450	106,082

G.2 Earned wages

Recorded wages can change over time as employers update their initial estimate over the course of the policy period. In order to arrive at an estimate of the ultimate earned wages we examined the development of reported wages for older policy years and as a result selected a multiplier to gross up the reported wages for the more recent policy years to ultimate. This is shown in Table G.2 below.

Table G.2 – Earned wages data

Accident Year	Reported	Gross-up Factor	Estimated Ultimate	Inflated Ultimate ¹
	\$m		\$m	\$m
2011/12	6,717.1	1.000	6,717.1	8,416.3
2012/13	6,867.5	1.000	6,867.5	8,159.5
2013/14	6,997.8	1.000	6,997.8	8,143.8
2014/15	7,379.4	1.000	7,379.4	8,555.7
2015/16	8,026.0	1.000	8,026.0	9,270.5
2016/17	8,516.4	1.000	8,516.4	9,763.9
2017/18	9,385.3	1.000	9,387.1	10,332.6
2018/19	10,242.1	1.001	10,248.5	10,810.7
2019/20	11,156.2	1.001	11,171.9	11,371.7
2020/21	11,589.1	1.002	11,614.2	11,653.7

¹ In 30 June 2021 values

G.3 Earned premium

Table G.3 shows the reported earned premium amounts by calendar year. As for wages, they have been inflated and grossed-up to ultimate estimates by analysing the development of reported premiums for older policy years.

Table G.3 – Earned premium data

Accident Year	Reported	Gross-up Factor	Estimated Ultimate	Inflated Ultimate ¹
	\$m		\$m	\$m
2011/12	159.1	1.000	159.1	199.4
2012/13	166.4	1.000	166.4	197.8
2013/14	166.5	1.000	166.5	193.7
2014/15	165.0	1.000	165.0	191.3
2015/16	166.8	1.000	166.8	192.7
2016/17	173.3	1.004	174.0	199.5
2017/18	186.1	1.010	187.9	206.9
2018/19	198.2	1.016	201.3	212.4
2019/20	215.3	1.033	222.3	226.2
2020/21	229.1	1.028	235.5	236.3

¹ In 30 June 2021 values

G.4 Historical premium rates

Table G.4 shows the calculation of the historical premium rate. The earned premiums and wages have both been grossed up to ultimate as discussed above, and are expressed in nominal values.

Table G.4 – Calculation of premium rate

Accident Year	Gross Earned Premium	Gross Earned Wages	Premium to Wages
	\$m	\$m	
2010/11	150.5	6,212.4	2.42%
2011/12	159.1	6,717.1	2.37%
2012/13	166.4	6,867.5	2.42%
2013/14	166.5	6,997.8	2.38%
2014/15	165.0	7,379.4	2.24%
2015/16	166.8	8,026.0	2.08%
2016/17	174.0	8,516.4	2.04%
2017/18	187.9	9,387.1	2.00%
2018/19	201.3	10,248.5	1.96%
2019/20	222.3	11,171.9	1.99%
2020/21	235.5	11,614.2	2.03%

H Recommended rates by ANZSIC division

ACT Workers' Compensation Scheme Review

H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated Wages for 2022/23 (\$m)	Claim Freq Rel - last 3 years	Capped Claim Cost Rel - last 5 years	2022/23 Selected Relativity	2022/23 Suggested Premium Rate
0112	Nursery Production (Outdoors)	2.0	90	38	214	4.85%
0113	Turf Growing	1.4	195	36	188	4.25%
0144	Sheep-Beef Cattle Farming	0.6	496	206	250	5.67%
0172	Poultry Farming (Eggs)	5.6	55	281	190	4.31%
0191	Horse Farming	0.2	1,500	1,926	237	5.37%
0199	Other Livestock Farming n.e.c.	2.2	0	0	236	5.36%
0301	Forestry	0.2	0	0	496	11.25%
0302	Logging	0.5	0	1,276	651	14.76%
0510	Forestry Support Services	0.8	330	22	219	4.96%
0522	Shearing Services	0.1	1,055	449	219	4.96%
0529	Other Agriculture and Fishing Support Services	0.7	0	1,337	219	4.96%
0911	Gravel and Sand Quarrying	1.2	111	102	144	3.27%
0919	Other Construction Material Mining	8.7	451	150	226	5.12%
1090	Other Mining Support Services	0.2	0	0	139	3.15%
1131	Milk and Cream Processing	7.2	0	0	203	4.61%
1171	Bread Manufacturing (Factory based)	6.7	328	474	328	7.43%
1172	Cake and Pastry Manufacturing (Factory based)	0.2	0	0	300	6.80%
1174	Bakery Product Manufacturing (Non-factory based)	17.0	86	76	113	2.56%
1199	Other Food Product Manufacturing n.e.c.	1.4	488	744	301	6.83%
1211	Soft Drink, Cordial and Syrup Manufacturing	0.1	0	0	216	4.89%
1212	Beer Manufacturing	0.5	575	89	164	3.73%
1213	Spirit Manufacturing	0.4	0	0	152	3.44%
1214	Wine and Other Alcoholic Beverage Manufacturing	1.3	0	0	146	3.32%
1333	Cut and Sewn Textile Product Manufacturing	1.0	0	0	160	3.62%
1340	Knitted Product Manufacturing	0.1	0	0	190	4.30%
1351	Clothing Manufacturing	0.3	0	0	168	3.80%
1492	Wooden Structural Fitting and Component Manufacturing	38.1	310	337	317	7.19%
1499	Other Wood Product Manufacturing n.e.c.	0.6	0	0	238	5.39%
1611	Printing	16.5	153	148	130	2.95%
1612	Printing Support Services	0.1	0	0	150	3.39%
1620	Reproduction of Recorded Media	0.1	0	0	137	3.11%
1709	Other Petroleum and Coal Product Manufacturing	1.5	0	0	172	3.89%
1811	Industrial Gas Manufacturing	0.1	0	0	177	4.02%
1812	Basic Organic Chemical Manufacturing	0.3	0	0	184	4.17%
1841	Human Pharmaceutical and Medicinal Product Manufacturing	1.9	0	5	81	1.83%
1912	Rigid and Semi-Rigid Polymer Product Manufacturing	0.6	763	110	192	4.35%
2010	Glass and Glass Product Manufacturing	2.0	538	399	469	10.63%
2032	Plaster Product Manufacturing	0.3	385	56	268	6.07%
2033	Ready-Mixed Concrete Manufacturing	1.0	272	99	348	7.88%
2034	Concrete Product Manufacturing	3.3	521	1,647	378	8.56%
2090	Other Non-Metallic Mineral Product Manufacturing	5.6	152	72	183	4.14%
2142	Aluminium Rolling, Drawing, Extruding	0.4	0	0	203	4.59%
2221	Structural Steel Fabricating	12.9	425	215	326	7.40%
2222	Prefabricated Metal Building Manufacturing	2.1	92	33	418	9.48%
2223	Architectural Aluminium Product Manufacturing	13.5	333	293	252	5.71%
2224	Metal Roof and Guttering Manufacturing (except Aluminium)	0.2	3,031	182	265	6.02%
2229	Other Structural Metal Product Manufacturing	9.6	674	876	340	7.70%
2239	Other Metal Container Manufacturing	0.1	1,198	90	257	5.82%
2240	Sheet Metal Product Manufacturing (except Metal Structural and Container Products)	4.6	300	552	297	6.73%
2291	Spring and Wire Product Manufacturing	0.1	0	0	391	8.87%
2293	Metal Coating and Finishing	0.5	301	556	343	7.77%
2299	Other Fabricated Metal Product Manufacturing n.e.c.	2.2	229	493	348	7.88%
2312	Motor Vehicle Body and Trailer Manufacturing	0.2	0	0	186	4.21%
2393	Railway Rolling Stock Manufacturing and Repair Services	2.2	350	509	187	4.24%
2394	Aircraft Manufacturing and Repair Services	9.2	169	214	187	4.25%
2411	Photographic, Optical and Ophthalmic Equipment Manufacturing	0.2	0	0	78	1.76%
2412	Medical and Surgical Equipment Manufacturing	1.6	0	0	71	1.61%
2419	Other Professional and Scientific Equipment Manufacturing	3.4	78	71	77	1.74%
2421	Computer and Electronic Office Equipment Manufacturing	3.9	95	277	88	1.99%
2422	Communications Equipment Manufacturing	12.9	0	0	73	1.66%
2429	Other Electronic Equipment Manufacturing	0.6	0	0	75	1.71%
2432	Electric Lighting Equipment Manufacturing	1.1	170	61	124	2.82%
2449	Other Domestic Appliance Manufacturing	0.8	284	2	183	4.14%
2452	Fixed Space Heating, Cooling and Ventilation Equipment Manufacturing	1.7	313	340	155	3.51%
2462	Mining and Construction Machinery Manufacturing	0.3	0	0	129	2.94%
2463	Machine Tool and Parts Manufacturing	0.1	0	0	137	3.10%
2469	Other Specialised Machinery and Equipment Manufacturing	0.2	0	18	148	3.35%
2491	Lifting and Material Handling Equipment Manufacturing	15.6	248	163	206	4.67%
2499	Other Machinery and Equipment Manufacturing n.e.c.	1.1	206	16	171	3.88%
2511	Wooden Furniture and Upholstered Seat Manufacturing	10.2	340	180	252	5.72%
2512	Metal Furniture Manufacturing	1.3	428	134	293	6.65%
2513	Mattress Manufacturing	1.1	110	845	183	4.14%
2519	Other Furniture Manufacturing	0.1	151	192	184	4.17%

H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated Wages for 2022/23 (\$m)	Claim Freq Rel - last 3 years	Capped Claim Cost Rel - last 5 years	2022/23 Selected Relativity	2022/23 Suggested Premium Rate
2591	Jewellery and Silverware Manufacturing	0.9	0	0	84	1.90%
2592	Toy, Sporting and Recreational Product Manufacturing	0.2	0	0	152	3.43%
2599	Other Manufacturing n.e.c.	2.6	60	9	153	3.46%
2619	Other Electricity Generation	0.6	395	1,075	166	3.77%
2630	Electricity Distribution	81.4	92	196	162	3.67%
2811	Water Supply	63.8	121	129	100	2.26%
2812	Sewerage and Drainage Services	6.6	393	222	115	2.60%
2911	Solid Waste Collection Services	20.3	305	502	504	11.42%
2919	Other Waste Collection Services	1.5	317	142	499	11.31%
2921	Waste Treatment and Disposal Services	3.7	528	617	379	8.59%
2922	Waste Remediation and Materials Recovery Services	10.7	207	262	349	7.91%
3011	House Construction	103.8	235	238	214	4.85%
3019	Other Residential Building Construction	57.9	172	193	214	4.85%
3020	Non-Residential Building Construction	183.5	186	144	159	3.59%
3101	Road and Bridge Construction	19.9	347	249	361	8.17%
3109	Other Heavy and Civil Engineering Construction	36.4	333	307	201	4.56%
3211	Land Development and Subdivision	3.8	0	267	67	1.51%
3212	Site Preparation Services	55.8	231	459	340	7.71%
3221	Concreting Services	44.8	199	384	442	10.01%
3222	Bricklaying Services	12.5	258	484	624	14.13%
3223	Roofing Services	13.9	275	500	630	14.28%
3224	Structural Steel Erection Services	16.1	308	597	533	12.08%
3231	Plumbing Services	105.6	206	164	199	4.51%
3232	Electrical Services	227.2	176	109	164	3.71%
3233	Air Conditioning and Heating Services	84.0	165	251	204	4.62%
3234	Fire and Security Alarm Installation Services	68.3	90	77	85	1.94%
3239	Other Building Installation Services	47.6	248	210	134	3.04%
3241	Plastering and Ceiling Services	21.5	238	483	338	7.67%
3242	Carpentry Services	72.7	344	446	365	8.27%
3243	Tiling and Carpeting Services	22.6	148	216	269	6.09%
3244	Painting and Decorating Services	29.0	192	281	269	6.09%
3245	Glazing Services	11.9	347	215	358	8.12%
3291	Landscape Construction Services	30.8	317	220	359	8.14%
3292	Hire of Construction Machinery with Operator	7.4	177	366	338	7.65%
3299	Other Construction Services n.e.c.	72.4	190	432	297	6.74%
3319	Other Agricultural Product Wholesaling	0.7	0	0	145	3.29%
3321	Petroleum Product Wholesaling	2.8	101	114	113	2.57%
3322	Metal and Mineral Wholesaling	9.9	239	269	213	4.83%
3323	Industrial and Agricultural Chemical Product Wholesaling	3.2	43	39	103	2.34%
3331	Timber Wholesaling	2.7	219	421	250	5.66%
3332	Plumbing Goods Wholesaling	13.3	266	275	252	5.70%
3339	Other Hardware Goods Wholesaling	23.4	157	229	198	4.49%
3411	Agricultural and Construction Machinery Wholesaling	2.2	0	0	101	2.29%
3419	Other Specialised Industrial Machinery and Equipment Wholesaling	1.1	170	33	122	2.77%
3491	Professional and Scientific Goods Wholesaling	11.5	108	90	65	1.47%
3492	Computer and Computer Peripheral Wholesaling	38.6	58	9	22	0.49%
3493	Telecommunication Goods Wholesaling	3.2	58	125	75	1.71%
3494	Other Electrical and Electronic Good Wholesaling	61.4	76	76	69	1.57%
3499	Other Machinery and Equipment Wholesaling n.e.c.	10.7	43	11	104	2.36%
3501	Car Wholesaling	0.5	0	0	136	3.09%
3504	Motor Vehicle New Parts Wholesaling	7.7	158	45	129	2.92%
3505	Motor Vehicle Dismantling and Used Parts Wholesaling	2.6	0	0	107	2.42%
3601	General Line Grocery Wholesaling	31.3	281	382	316	7.16%
3602	Meat, Poultry and Smallgoods Wholesaling	2.4	425	482	234	5.31%
3605	Fruit and Vegetable Wholesaling	4.2	45	277	234	5.30%
3606	Liquor and Tobacco Product Wholesaling	8.1	105	125	169	3.84%
3609	Other Grocery Wholesaling	14.2	85	101	127	2.89%
3711	Textile Product Wholesaling	0.2	0	0	102	2.32%
3712	Clothing and Footwear Wholesaling	3.9	37	4	87	1.98%
3720	Pharmaceutical and Toiletry Goods Wholesaling	12.6	81	92	168	3.80%
3731	Furniture and Floor Covering Wholesaling	5.8	165	110	168	3.81%
3733	Kitchen and Diningware Wholesaling	0.4	604	36	180	4.08%
3734	Toy and Sporting Goods Wholesaling	0.3	0	0	180	4.08%
3735	Book and Magazine Wholesaling	0.3	0	107	174	3.93%
3736	Paper Product Wholesaling	1.6	0	1	180	4.08%
3739	Other Goods Wholesaling n.e.c.	0.6	127	893	180	4.08%
3800	Commission-Based Wholesaling	8.2	66	27	61	1.39%
3911	Car Retailing	117.2	162	83	137	3.10%
3912	Motor Cycle Retailing	4.9	140	149	117	2.66%
3913	Trailer and Other Motor Vehicle Retailing	0.8	0	0	116	2.64%
3921	Motor Vehicle Parts Retailing	11.1	262	120	221	5.00%
3922	Tyre Retailing	9.2	232	377	221	5.01%
4000	Fuel Retailing	16.9	77	55	113	2.57%
4110	Supermarket and Grocery Stores	193.2	208	200	246	5.57%
4121	Fresh Meat, Fish and Poultry Retailing	11.1	261	395	195	4.41%
4122	Fruit and Vegetable Retailing	7.0	76	108	125	2.84%
4123	Liquor Retailing	5.3	110	9	127	2.88%

H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated Wages for 2022/23 (\$m)	Claim Freq Rel - last 3 years	Capped Claim Cost Rel - last 5 years	2022/23 Selected Relativity	2022/23 Suggested Premium Rate
4129	Other Specialised Food Retailing	12.0	101	113	130	2.96%
4211	Furniture Retailing	36.0	325	250	234	5.29%
4212	Floor Coverings Retailing	9.7	165	492	226	5.11%
4213	Houseware Retailing	47.2	141	182	191	4.32%
4214	Manchester and Other Textile Goods Retailing	5.6	95	132	186	4.22%
4221	Electrical, Electronic and Gas Appliance Retailing	42.4	103	78	60	1.36%
4222	Computer and Computer Peripheral Retailing	9.9	0	0	55	1.25%
4229	Other Electrical and Electronic Goods Retailing	4.8	57	84	77	1.74%
4231	Hardware and Building Supplies Retailing	17.4	212	225	252	5.72%
4232	Garden Supplies Retailing	8.4	103	285	211	4.79%
4241	Sport and Camping Equipment Retailing	32.7	77	74	87	1.97%
4242	Entertainment Media Retailing	1.4	0	0	72	1.64%
4243	Toy and Game Retailing	5.1	109	49	75	1.71%
4244	Newspaper and Book Retailing	10.9	33	80	75	1.71%
4251	Clothing Retailing	54.2	176	156	140	3.16%
4252	Footwear Retailing	11.9	80	273	121	2.74%
4253	Watch and Jewellery Retailing	11.4	80	82	79	1.78%
4259	Other Personal Accessory Retailing	4.8	398	335	257	5.83%
4260	Department Stores	20.4	251	169	162	3.67%
4271	Pharmaceutical, Cosmetic and Toiletry Goods Retailing	64.1	88	67	77	1.75%
4272	Stationery Goods Retailing	1.3	0	0	78	1.76%
4273	Antique and Used Goods Retailing	7.6	357	178	90	2.04%
4274	Flower Retailing	4.3	151	303	193	4.36%
4279	Other Store-Based Retailing n.e.c.	31.3	120	76	183	4.15%
4310	Non-Store Retailing	19.7	145	242	87	1.97%
4320	Retail Commission-Based Buying and/or Selling	0.7	242	8	99	2.23%
4400	Accommodation	114.3	231	144	139	3.15%
4511	Cafes and Restaurants	262.5	173	121	127	2.87%
4512	Takeaway Food Services	98.2	173	92	142	3.22%
4513	Catering Services	16.1	148	168	145	3.29%
4520	Pubs, Taverns and Bars	28.5	114	61	118	2.68%
4530	Clubs (Hospitality)	67.9	227	233	186	4.22%
4610	Road Freight Transport	37.3	314	520	579	13.13%
4621	Interurban and Rural Bus Transport	6.0	228	506	556	12.59%
4622	Urban Bus Transport (Including Tramway)	6.9	634	944	304	6.90%
4623	Taxi and Other Road Transport	0.7	206	525	257	5.82%
4720	Rail Passenger Transport	1.2	0	0	179	4.07%
4900	Air and Space Transport	20.2	176	181	164	3.72%
5010	Scenic and Sightseeing Transport	0.2	0	91	176	3.98%
5021	Pipeline Transport	3.3	0	0	133	3.02%
5029	Other Transport n.e.c.	2.5	143	234	189	4.28%
5101	Postal Services	10.6	69	64	78	1.77%
5102	Courier Pick-up and Delivery Services	5.4	72	52	300	6.80%
5220	Airport Operations and Other Air Transport Support Services	9.1	150	110	168	3.80%
5292	Freight Forwarding Services	4.0	144	39	210	4.76%
5299	Other Transport Support Services n.e.c.	4.6	490	456	268	6.07%
5309	Other Warehousing and Storage Services	7.1	83	78	118	2.67%
5411	Newspaper Publishing	18.1	42	18	54	1.23%
5412	Magazine and Other Periodical Publishing	2.2	0	0	54	1.23%
5413	Book Publishing	0.6	0	0	57	1.29%
5419	Other Publishing (except Software, Music and Internet)	1.2	0	0	55	1.26%
5420	Software Publishing	30.5	6	15	14	0.32%
5511	Motion Picture and Video Production	11.6	54	14	65	1.47%
5512	Motion Picture and Video Distribution	0.3	0	0	57	1.30%
5513	Motion Picture Exhibition	6.3	88	66	60	1.36%
5514	Post-production Services and Other Motion Picture and Video Activities	1.0	0	0	58	1.30%
5522	Music and Other Sound Recording Activities	2.5	55	2	57	1.29%
5610	Radio Broadcasting	14.3	27	87	47	1.06%
5621	Free-to-Air Television Broadcasting	15.5	43	9	53	1.20%
5622	Cable and Other Subscription Broadcasting	0.2	0	0	46	1.04%
5700	Internet Publishing and Broadcasting	5.0	35	4	53	1.21%
5801	Wired Telecommunications Network Operation	0.8	0	319	61	1.38%
5802	Other Telecommunications Network Operation	7.8	32	21	36	0.82%
5809	Other Telecommunications Services	22.5	24	93	50	1.14%
5910	Internet Service Providers and Web Search Portals	2.9	0	0	60	1.36%
5921	Data Processing and Web Hosting Services	9.6	0	40	56	1.26%
5922	Electronic Information Storage Services	7.1	78	80	37	0.84%
6020	Other Information Services	0.2	0	17	55	1.25%
6221	Banking	13.9	20	23	50	1.12%
6222	Building Society Operation	2.2	0	1	59	1.35%
6223	Credit Union Operation	0.9	0	24	107	2.42%
6229	Other Depository Financial Intermediation	0.1	0	0	58	1.32%
6240	Financial Asset Investing	9.0	0	0	46	1.04%
6310	Life Insurance	0.5	0	0	51	1.14%
6321	Health Insurance	1.8	57	9	54	1.22%
6322	General Insurance	19.8	84	90	100	2.28%
6330	Superannuation Funds	10.8	38	35	41	0.93%

H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated Wages for 2022/23 (\$m)	Claim Freq Rel - last 3 years	Capped Claim Cost Rel - last 5 years	2022/23 Selected Relativity	2022/23 Suggested Premium Rate
6411	Financial Asset Broking Services	22.0	0	11	22	0.50%
6419	Other Auxiliary Finance and Investment Services	79.7	26	32	25	0.57%
6420	Auxiliary Insurance Services	92.7	14	42	37	0.83%
6611	Passenger Car Rental and Hiring	3.4	124	247	167	3.79%
6619	Other Motor Vehicle and Transport Equipment Rental and Hiring	2.0	45	1	180	4.08%
6631	Heavy Machinery and Scaffolding Rental and Hiring	10.0	266	160	226	5.12%
6639	Other Goods and Equipment Rental and Hiring n.e.c.	6.5	226	260	169	3.82%
6711	Residential Property Operators	9.4	76	191	58	1.31%
6712	Non-Residential Property Operators	64.2	59	43	52	1.18%
6720	Real Estate Services	183.2	31	30	37	0.84%
6910	Scientific Research Services	81.3	74	41	37	0.84%
6921	Architectural Services	60.6	21	21	12	0.27%
6922	Surveying and Mapping Services	20.5	81	31	38	0.86%
6923	Engineering Design and Engineering Consulting Services	340.8	24	27	22	0.49%
6924	Other Specialised Design Services	20.4	42	80	62	1.40%
6925	Scientific Testing and Analysis Services	13.4	69	6	46	1.03%
6931	Legal Services	198.9	30	27	49	1.10%
6932	Accounting Services	418.5	10	7	14	0.31%
6940	Advertising Services	12.6	49	51	29	0.67%
6950	Market Research and Statistical Services	12.5	23	20	23	0.51%
6961	Corporate Head Office Management Services	158.3	28	40	39	0.89%
6962	Management Advice and Related Consulting Services	719.1	17	12	28	0.63%
6970	Veterinary Services	43.1	554	65	93	2.11%
6991	Professional Photographic Services	2.2	148	22	89	2.01%
6999	Other Professional, Scientific and Technical Services n.e.c.	13.6	27	85	73	1.66%
7000	Computer System Design and Related Services	3,150.4	8	10	14	0.31%
7211	Employment Placement and Recruitment Services	236.5	85	89	66	1.49%
7212	Labour Supply Services	37.7	187	278	225	5.10%
7220	Travel Agency and Tour Arrangement Services	9.5	0	1	38	0.86%
7291	Office Administrative Services	133.4	41	68	70	1.59%
7292	Document Preparation Services	0.9	65	164	75	1.70%
7293	Credit Reporting and Debt Collection Services	0.5	525	10	59	1.34%
7294	Call Centre Operation	0.4	28	20	47	1.06%
7299	Other Administrative Services n.e.c.	26.1	92	27	51	1.15%
7311	Building and Other Industrial Cleaning Services	152.4	238	230	228	5.16%
7312	Building Pest Control Services	7.3	324	191	299	6.78%
7313	Gardening Services	21.1	461	555	328	7.42%
7320	Packaging Services	0.2	0	31	295	6.69%
7510	Central Government Administration	28.9	0	0	89	2.03%
7520	State Government Administration	4.6	0	0	98	2.23%
7530	Local Government Administration	0.7	0	7	66	1.50%
7552	Foreign Government Representation	48.3	94	118	121	2.73%
7600	Defence	3.0	41	5	98	2.22%
7712	Investigation and Security Services	103.6	118	252	195	4.41%
7719	Other Public Order and Safety Services	6.7	221	350	166	3.77%
7720	Regulatory Services	0.2	1,637	97	128	2.90%
8010	Preschool Education	5.9	285	142	125	2.84%
8021	Primary Education	89.5	114	62	78	1.76%
8022	Secondary Education	125.9	109	56	88	1.99%
8023	Combined Primary and Secondary Education	165.9	135	104	88	2.00%
8101	Technical and Vocational Education and Training	42.2	107	81	108	2.44%
8102	Higher Education	47.1	47	100	55	1.26%
8211	Sports and Physical Recreation Instruction	16.3	118	148	90	2.03%
8212	Arts Education	9.5	156	71	104	2.36%
8219	Adult, Community and Other Education n.e.c.	18.7	87	89	84	1.89%
8220	Educational Support Services	32.2	44	71	49	1.10%
8401	Hospitals (Except Psychiatric Hospitals)	98.5	217	161	126	2.85%
8511	General Practice Medical Services	91.4	41	26	56	1.28%
8512	Specialist Medical Services	117.6	36	36	51	1.15%
8520	Pathology and Diagnostic Imaging Services	57.4	184	197	103	2.34%
8531	Dental Services	44.8	93	70	72	1.64%
8532	Optometry and Optical Dispensing	23.5	17	74	27	0.61%
8533	Physiotherapy Services	41.1	17	33	33	0.74%
8534	Chiropractic and Osteopathic Services	9.9	15	58	47	1.07%
8539	Other Allied Health Services	53.8	121	73	116	2.63%
8591	Ambulance Services	0.1	0	0	94	2.14%
8599	Other Health Care Services n.e.c.	79.4	117	127	89	2.02%
8601	Aged Care Residential Services	167.8	251	201	247	5.60%
8609	Other Residential Care Services	95.4	211	301	220	5.00%
8710	Child Care Services	225.0	307	202	196	4.45%
8790	Other Social Assistance Services	226.4	214	191	205	4.64%
8910	Museum Operation	3.6	0	0	38	0.87%
8921	Zoological and Botanical Gardens Operation	3.1	206	651	258	5.85%
8922	Nature Reserves and Conservation Parks Operation	1.8	853	371	252	5.70%
9001	Performing Arts Operation	2.7	287	73	113	2.57%
9002	Creative Artists, Musicians, Writers and Performers	2.7	92	81	108	2.44%
9003	Performing Arts Venue Operation	7.2	92	83	154	3.48%

H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated Wages for 2022/23 (\$m)	Claim Freq Rel - last 3 years	Capped Claim Cost Rel - last 5 years	2022/23 Selected Relativity	2022/23 Suggested Premium Rate
9111	Health and Fitness Centres and Gymnasia Operation	29.4	97	176	101	2.29%
9112	Sports and Physical Recreation Clubs and Sports Professionals	26.3	113	99	53	1.20%
9113	Sports and Physical Recreation Venues, Grounds and Facilities Operation	21.2	229	85	137	3.10%
9114	Sports and Physical Recreation Administrative Service	17.5	42	14	48	1.09%
9129	Other Horse and Dog Racing Activities	2.1	1,688	2,546	835	18.92%
9131	Amusement Parks and Centres Operation	2.4	106	22	185	4.19%
9139	Amusement and Other Recreational Activities n.e.c.	2.7	135	490	162	3.68%
9201	Casino Operation	13.1	117	130	105	2.39%
9202	Lottery Operation	0.2	0	0	69	1.57%
9209	Other Gambling Activities	3.2	78	47	109	2.47%
9411	Automotive Electrical Services	4.2	32	5	120	2.72%
9412	Automotive Body, Paint and Interior Repair	41.1	111	260	189	4.28%
9419	Other Automotive Repair and Maintenance	52.1	158	218	196	4.44%
9421	Domestic Appliance Repair and Maintenance	5.8	133	104	157	3.56%
9422	Electronic (except Domestic Appliance) and Precision Equipment Repair and Maintenance	15.6	45	125	49	1.11%
9429	Other Machinery and Equipment Repair and Maintenance	8.3	141	9	153	3.47%
9491	Clothing and Footwear Repair	2.9	0	3	115	2.61%
9499	Other Repair and Maintenance n.e.c.	4.2	122	44	79	1.79%
9511	Hairdressing and Beauty Services	59.8	75	105	112	2.54%
9512	Diet and Weight Reduction Centre Operation	0.4	0	0	137	3.10%
9520	Funeral, Crematorium and Cemetery Services	4.4	351	161	146	3.32%
9531	Laundry and Dry-Cleaning Services	4.3	139	138	288	6.52%
9532	Photographic Film Processing	0.1	0	0	167	3.78%
9533	Parking Services	2.7	826	107	168	3.81%
9534	Brothel Keeping and Prostitution Services	0.4	511	471	195	4.43%
9539	Other Personal Services n.e.c.	7.2	497	456	200	4.54%
9540	Religious Services	67.2	92	64	93	2.11%
9551	Business and Professional Association Services	245.1	39	48	39	0.88%
9552	Labour Association Services	13.9	82	83	57	1.30%
9559	Other Interest Group Services n.e.c.	68.2	89	113	121	2.74%
9601	Private Households Employing Staff	1.2	95	256	156	3.54%
9603	Undifferentiated Service-Producing Activities of Private Households for Own Use	1.6	0	0	158	3.57%

I Injury codes groupings

Table I.1 – Injury

Code	Major Group	Description
101	Intracranial injuries	Brain injury
108	Intracranial injuries	Other intracranial injury, not elsewhere classified
109	Intracranial injuries	Intracranial injury, unspecified
111	Fractures	Fractured skull and facial bones
112	Fractures	Fracture of vertebral column without mention of spinal cord lesion
118	Fractures	Other fractures, not elsewhere classified
119	Fractures	Fractures, unspecified
129	Wounds, lacerations, amputations and internal organ damage	Internal injury of chest, abdomen and pelvis
139	Wounds, lacerations, amputations and internal organ damage	Traumatic amputation
145	Wounds, lacerations, amputations and internal organ damage	Injury to major blood vessel
149	Wounds, lacerations, amputations and internal organ damage	Laceration or open wound not involving traumatic amputation
154	Wounds, lacerations, amputations and internal organ damage	Medical sharp/needle-stick puncture
159	Wounds, lacerations, amputations and internal organ damage	Superficial injury
169	Wounds, lacerations, amputations and internal organ damage	Contusion, bruising and superficial crushing
171	Burn	Electrical burn
172	Burn	Chemical burn
173	Burn	Cold burn
174	Burn	Hot burn
175	Burn	Friction burn
178	Burn	Combination burn or burn not elsewhere classified
179	Burn	Burns, unspecified
181	Injury to nerves and spinal cord	Quadriplegia involving spinal cord injury
182	Injury to nerves and spinal cord	Paraplegia involving spinal cord injury
188	Injury to nerves and spinal cord	Injuries to nerves and spinal cord, not elsewhere classified
189	Injury to nerves and spinal cord	Injuries to nerves and spinal cord, unspecified
201	Trauma to joints and ligaments	Dislocation
218	Trauma to joints and ligaments	Trauma to joints and ligaments, not elsewhere classified
219	Trauma to joints and ligaments	Trauma to joints and ligaments, unspecified
222	Trauma to muscles and tendons	Traumatic tearing away part of the muscle/tendon structure, avulsion
223	Trauma to muscles and tendons	Trauma to muscles
224	Trauma to muscles and tendons	Trauma to tendon
228	Trauma to muscles and tendons	Trauma to muscles and tendons, not elsewhere classified
229	Trauma to muscles and tendons	Trauma to muscles and tendons, unspecified
239	mechanisms	information to code elsewhere
301	Other injuries	reproductive tract
302	Other injuries	Poisoning and toxic effects of substances
311	Other injuries	Electrocution, shock from electric current
312	Other injuries	Traumatic deafness from air pressure or explosion
313	Other injuries	Heat stress/heat stroke
314	Other injuries	Hypothermia and effects of reduced temperature
319	Other injuries	elsewhere classified
329	Other injuries	Multiple injuries
349	Other injuries	Other specified injuries, not elsewhere classified
399	Other injuries	Unspecified injuries

Table I.2 – Musculoskeletal

Code	Major Group	Description
401	Musculoskeletal and connective tissue diseases	Osteoarthritis/osteoarthrosis
402	Musculoskeletal and connective tissue diseases	Inflammatory arthritis/arthropathies
403	Musculoskeletal and connective tissue diseases	Infectious arthritis/arthropathies
404	Musculoskeletal and connective tissue diseases	Arthropathies, not elsewhere classified
405	Musculoskeletal and connective tissue diseases	Arthropathies, unspecified
406	Musculoskeletal and connective tissue diseases	Meniscus degenerate/detached/retained/chronic tear
407	Musculoskeletal and connective tissue diseases	Acquired musculoskeletal deformities
409	Musculoskeletal and connective tissue diseases	Other chronic joint and ligament diseases
418	Musculoskeletal and connective tissue diseases	Joint and other articular cartilage diseases, not elsewhere classified
419	Musculoskeletal and connective tissue diseases	Joint and other articular cartilage diseases, unspecified
422	Musculoskeletal and connective tissue diseases	Disc displacement, prolapse, degeneration or hernia
423	Musculoskeletal and connective tissue diseases	Infectious diseases involving the spine
459	Musculoskeletal and connective tissue diseases	Back pain, lumbago, and sciatica
479	Musculoskeletal and connective tissue diseases	Neck pain, cervicalgia
488	Musculoskeletal and connective tissue diseases	Spinal vertebrae and intervertebral discs diseases, not elsewhere classified
489	Musculoskeletal and connective tissue diseases	Spinal vertebrae and intervertebral discs diseases, unspecified
501	Musculoskeletal and connective tissue diseases	Synovitis and tenosynovitis
503	Musculoskeletal and connective tissue diseases	Ganglion, trigger finger, Dupuytren's contracture
518	Musculoskeletal and connective tissue diseases	Diseases of synovium and related tissue, not elsewhere classified
519	Musculoskeletal and connective tissue diseases	Diseases of synovium and related tissue, unspecified
526	Musculoskeletal and connective tissue diseases	Tendinitis
527	Musculoskeletal and connective tissue diseases	Epicondylitis
531	Musculoskeletal and connective tissue diseases	Frozen shoulder (adhesive capsulitis)
532	Musculoskeletal and connective tissue diseases	Fasciitis
533	Musculoskeletal and connective tissue diseases	Muscle/tendon strain (non-traumatic)
538	Musculoskeletal and connective tissue diseases	Diseases of muscle, tendon and related tissue, not elsewhere classified
539	Musculoskeletal and connective tissue diseases	Diseases of muscle, tendon and related tissue, unspecified
541	Musculoskeletal and connective tissue diseases	Bursitis
542	Musculoskeletal and connective tissue diseases	Occupational overuse syndrome
548	Musculoskeletal and connective tissue diseases	Fibromyalgia, fibrositis and myalgia
557	Musculoskeletal and connective tissue diseases	Complex regional pain syndrome
568	Musculoskeletal and connective tissue diseases	Other specified soft tissue diseases, not elsewhere classified
571	Musculoskeletal and connective tissue diseases	Osteopathies and chondropathies
579	Musculoskeletal and connective tissue diseases	to code in groups H3 to H5
599	Musculoskeletal and connective tissue diseases	Musculoskeletal and connective tissue diseases, unspecified

Table I.3 – Mental health

Code	Major Group	Description
702	Mental diseases	Post-traumatic stress disorder
703	Mental diseases	Anxiety/stress disorder
704	Mental diseases	Depression
705	Mental diseases	Anxiety/depression combined
706	Mental diseases	Short term shock from exposure to disturbing circumstances
707	Mental diseases	Reaction to stressors - other, multiple or not specified
718	Mental diseases	Other mental diseases, not elsewhere classified
719	Mental diseases	Mental diseases unspecified

Table I.4 – Diseases

Code	Major Group	Description
721	Digestive system diseases	Hernias
722	Digestive system diseases	Ulcers and gastritis
738	Digestive system diseases	Diseases of the digestive system, not elsewhere classified.
739	Digestive system diseases	Diseases of the digestive system, unspecified.
741	Skin and subcutaneous tissue diseases	Contact dermatitis
742	Skin and subcutaneous tissue diseases	Other and unspecified dermatitis or eczema
758	Skin and subcutaneous tissue diseases	Other diseases of skin and subcutaneous tissue, not elsewhere classified
759	Skin and subcutaneous tissue diseases	Diseases of skin and subcutaneous tissue, unspecified.
761	Nervous system and sense organ diseases	Diseases of the brain, spinal cord and peripheral nervous system
762	Nervous system and sense organ diseases	Diseases of nerve roots, plexuses and single nerves
763	Nervous system and sense organ diseases	Carpal tunnel syndrome
764	Nervous system and sense organ diseases	Diseases of the conjunctiva and cornea
769	Nervous system and sense organ diseases	Other diseases of the eye
771	Nervous system and sense organ diseases	Deafness
772	Nervous system and sense organ diseases	Audio shock, audio shriek
777	Nervous system and sense organ diseases	Other diseases of the ear and mastoid process
778	Nervous system and sense organ diseases	Diseases of the nervous system and sense organs, not elsewhere classified
779	Nervous system and sense organ diseases	Diseases of the nervous system and sense organs, unspecified
781	Respiratory system diseases	Asthma
782	Respiratory system diseases	Legionnaires' disease
783	Respiratory system diseases	Asbestosis
784	Respiratory system diseases	Silicosis
785	Respiratory system diseases	Pneumoconiosis due to coal dust
786	Respiratory system diseases	Pneumoconiosis excluding asbestosis, silicosis and coal workers' pneumoconiosis
787	Respiratory system diseases	Other respiratory conditions due to substances
788	Respiratory system diseases	Chronic bronchitis, emphysema and allied conditions
798	Respiratory system diseases	Other diseases of the respiratory system, not elsewhere classified
799	Respiratory system diseases	Other diseases of the respiratory system, unspecified
801	Circulatory system diseases	Ischaemic heart disease
802	Circulatory system diseases	Other heart disease excluding ischaemic heart disease
803	Circulatory system diseases	Cerebrovascular disease
804	Circulatory system diseases	Arterial disease
805	Circulatory system diseases	Vibration white finger - secondary Raynaud's Disease
806	Circulatory system diseases	Hypertension
807	Circulatory system diseases	Venous thromboembolism
808	Circulatory system diseases	Venous disease, not elsewhere classified
818	Circulatory system diseases	Other diseases of the circulatory system, not elsewhere classified
819	Circulatory system diseases	Other diseases of the circulatory system, unspecified
821	Infectious and parasitic diseases	Intestinal infectious diseases
822	Infectious and parasitic diseases	Anthrax
823	Infectious and parasitic diseases	Brucellosis
824	Infectious and parasitic diseases	Q-fever
825	Infectious and parasitic diseases	Leptospirosis
826	Infectious and parasitic diseases	Other zoonoses, not elsewhere classified
827	Infectious and parasitic diseases	Protozoal diseases
828	Infectious and parasitic diseases	Specified sexually transmitted diseases excluding HIV/AIDS
831	Infectious and parasitic diseases	Hepatitis A
832	Infectious and parasitic diseases	Hepatitis B
833	Infectious and parasitic diseases	Hepatitis C
834	Infectious and parasitic diseases	Viral hepatitis, not elsewhere classified or unspecified
835	Infectious and parasitic diseases	Human immunodeficiency virus (HIV)/AIDS
837	Infectious and parasitic diseases	Fungal conditions (mycoses)
836	Infectious and parasitic diseases	Viral diseases, not classified elsewhere.
838	Infectious and parasitic diseases	Meningococcal disease
848	Infectious and parasitic diseases	Infectious and parasitic diseases, not elsewhere classified
849	Infectious and parasitic diseases	Infectious and parasitic diseases, unspecified
861	Neoplasms (cancer)	Malignant neoplasm of mesothelium (mesothelioma)
862	Neoplasms (cancer)	Malignant melanoma of skin
863	Neoplasms (cancer)	Other malignant neoplasm of skin
864	Neoplasms (cancer)	Malignant neoplasm of lymphatic and haematopoietic tissue
865	Neoplasms (cancer)	Carcinoma in situ of skin
866	Neoplasms (cancer)	Other malignant neoplasms and carcinomas
867	Neoplasms (cancer)	Benign neoplasm of skin
868	Neoplasms (cancer)	Other benign neoplasms
879	Neoplasms (cancer)	Neoplasm, not specified as benign or malignant
941	Other diseases	Other diseases, not elsewhere classified
949	Other diseases	Unspecified diseases

Table I.5 – Other

Code	Major Group	Description
951	Other claims	Exposure to substances without current injury or disease apparent
961	Other claims	Damage to artificial aid(s)
999	Other claims	Not Known