

# **ACT Workers' Compensation Review of Scheme Performance to 30 June 2020**

Chief Minister, Treasury and Economic  
Development Directorate

April 2021

## ACT Workers' Compensation Review of Scheme Performance to 30 June 2020

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 the CMTEDD on key developments in the scheme experience.

This report includes:

- An investigation of trends in the private sector claims experience to 30 June 2020
- An estimate of reasonable premium rates for the 2021/22 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

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

Tim Jeffrey

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# ACT Workers' Compensation Review of Scheme Performance to 30 June 2020

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# Part I Executive Summary

## 1 Introduction & 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 2020 and estimated reasonable premium rates for the 2021/22 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 2021/22 policy year
- Developing premium rates at the ANZSIC Class level for the 2021/22 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 October 2020.

## 2 Key Scheme Metrics

In 2019/20 around 18,000 policies were written, covering \$11.2 billion in wages (\$11.4 billion in inflated dollars). Premiums of \$223 million were collected in the year (\$227 million when inflated).

Written wages increased at around the same rate as premiums in 2019/20, leading to a stable written premium rate of 1.99%.

## 3 COVID-19 Impacts

Table 1 summarises the impacts of COVID-19 on the exposure and claim experience over the year, as well as how we have allowed for this in our 2021/22 reasonable premium rate calculation.

**Table 1 – COVID-19 Impacts**

Area	Insurer Feedback	Observed	Treatment
Exposure	ACT less impacted than other states, but industries directly impacted by shutdown had reduced wages in the June quarter.	Growth in wages for directly impacted industries lower than previously. Estimate written wages between 0.3% and 0.7% lower for 2019/20 due to COVID-19.	Assumed a slightly higher level of economic growth between 2019/20 and 2021/22 as economy bounces back.
Direct claims	Some notifications, but none or minimal claims cost.	Not possible to isolate in data provided.	No allowance.
Claim numbers	Some reduction in claim numbers,	Directly impacted industries have lower claim numbers after COVID-19 shutdown. Estimate	Assumed a marginally higher claim frequency for 2021/22 premium year than observed

	particularly during initial lockdown.	non-nil claims down by around 0.5% to 1.5% and lost time claims down 0.5% to 1.0%.	for 2019/20 accident year, as it seems impact greater for claim numbers than wages.
Weekly payments	Return to work outcomes may have been impacted, but difficult to directly attribute to COVID-19.	Small spike in weekly payments in June quarter, but experience had already deteriorated before this. Estimate weekly payments could be higher by up to 4%.	Have not fully reflected high weekly payment experience in 2019/20 in selections, as some is likely related to COVID-19 impacting return to work opportunities.
Medical payments	Shift to telehealth services and delays in elective surgery may have reduced medical payments.	Some evidence that upward trend in medical payments abated in March and June quarters. Estimate medical payments could be lower by up to 3.5%.	Have selected a medical average size that it is in line with experience in 2019/20 rather than taking a longer-term view.

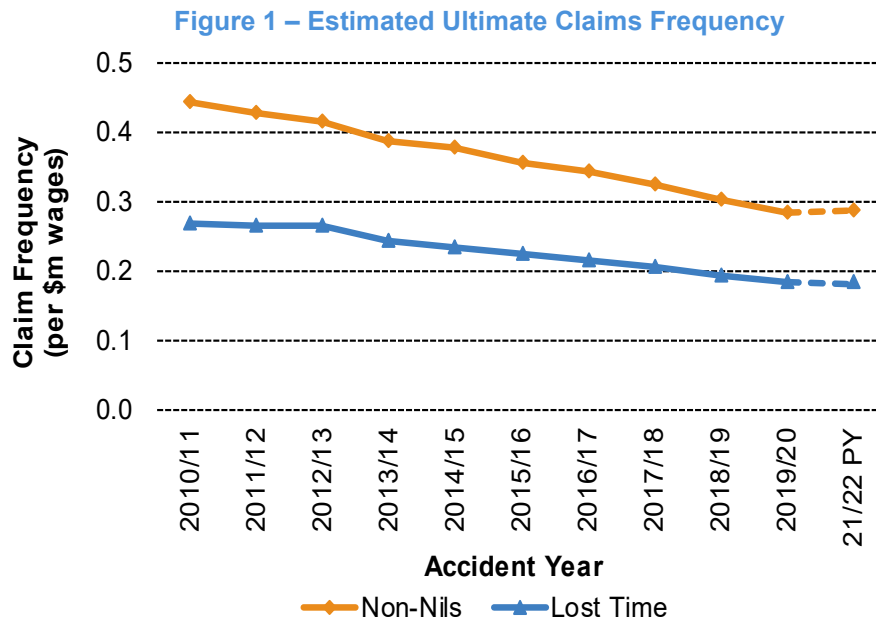
## 4 Claims Experience

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.

### Claim Numbers and Frequency

The number of non-nil claims reported in 2019/20 was slightly higher than 2018/19, with just over 3,250 new non-nil claim reports. The number of new lost time claims decreased slightly, with around 2,100 in 2019/20.

Figure 1 shows our estimates of ultimate claim frequencies for the Scheme.



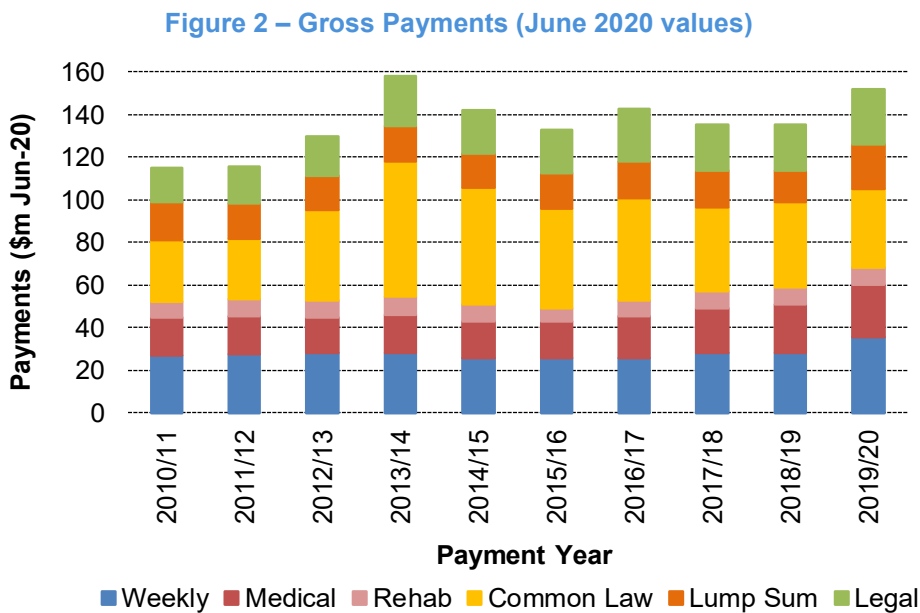
The non-nil claim frequency per \$ million wages has steadily reduced since 2010/11, to an estimated 0.28 claims per million wages for the 2019/20 accident year.

We have adopted a claim frequency for the 2021/22 policy year of 0.29 claims per \$ million of wages, marginally higher than our estimate for 2019/20. This is 3% lower (adjusting for actual inflation) than the claim frequency adopted for the 2020/21 policy year in our previous review. Our adopted claim frequency corresponds to 3,339 claims for the 2021/22 policy year.

The frequency of claims receiving weekly benefits has also reduced in recent years. We have adopted a lost time frequency of 0.18 claims per \$ million wages for the 2021/22 policy year.

### Claim Payments

Figure 2 shows total gross claim payments made over the last ten years, broken down by payment type. All payments have been inflated to June 2020 values.



Around \$152 million of gross claim payments were made in 2019/20, a large increase from the average observed over the last five years; the increase was driven by statutory benefits and in particular weekly payments.

We have adopted an average claim size per non-nil claim of around \$43,900 (net of recoveries) for the 2021/22 policy year. This is slightly higher than our previous selection of \$43,000 (adjusted to June 2020 dollars).

## 5 Non-Claim Assumptions

We have included an expense loading of 24.0% of premium (\$63.4 million) in the reasonable premium rate for 2021/22, up from 23.7% at the previous review. This is driven by increases in insurers’ filed administration expenses, which we have reflected in our expense assumptions.

The reasonable premium rate for 2021/22 includes a profit margin of 12.0% of premium. This lower than our previous profit margin of 13.5%, reflecting a reduction in the adopted target return on capital from 12% to 10% in the current low interest rate environment.

Our future wage inflation assumption is 1.75% per annum from 2019/20 to 2021/22 and 2.25% per annum thereafter, a reduction from a flat 3.0% per annum. We have increased our superimposed inflation from 1.0% per annum to 4.5% per annum (although the application is slightly different, as discussed in the body of the report), reflecting sustained average size increases which offset frequency reductions. The adopted discount rate has increased marginally from 0.70% per annum to 0.75% per annum.

## 6 Average Premium Rate for 2021/22

Our estimate of a reasonable premium pool for 2021/22 is \$264.6 million, as set out in Table 2.

**Table 2 – Total Premium Pool**

Premium Rate Component	\$m
Risk Premium Pool	169.4
Expense Loading	63.4
Profit Loading	31.7
Total Premium Pool	264.6
Wages Estimate	11,903.4
Average Risk Premium (% wages)	1.42%
Average Premium Rate (% wages)	2.22%

The reasonable average premium rate for 2021/22 is 2.22% of wages, a decrease of 0.11% from 2020/21 (a 5% proportionate decrease). The movement is the net result of the following:

- Allowance for one year's superimposed inflation (to 2021/22) – increase of 0.02%
- Claims cost changes – decrease of 0.09%, comprising:
  - ▶ A shift in the insured population to lower risk industries – decrease of 0.02%
  - ▶ Continued reductions in underlying claim frequency – decrease of 0.05%
  - ▶ Changes in claim size and payment pattern – decrease of 0.01% <sup>1</sup>
- Economic assumptions – increase of 0.01%
- Expense loadings – decrease of 0.04%.

## 7 ANZSIC Class Premium Rates

To derive reasonable premium rates at the ANZSIC Class level in the ACT, 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 16.64% of wages.

## 8 Reliances and Limitations

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

<sup>1</sup> This decrease is based on expected inflation over the year, while the comparison in Section 4 uses actual inflation over the year.

## Part II Detailed Findings

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### 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 2020, and provide an estimate of a reasonable premium rate for the 2021/22 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 2019" dated 31 March 2020.

#### 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 shutdowns.
- 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 2021/22 policy year
- Developing reasonable premium rates at the ANZSIC Class level for the 2021/22 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 shutdowns 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.

Our review has considered potential COVID-19 impacts in relation to:

- Additional claims relating to employees who contract COVID-19. Feedback from insurers indicated that while there were a very small amount of notifications, there will negligible claims relating to contracting COVID-19 at work. We have therefore not given further consideration to direct claims.
- Changes in claim frequency (claim numbers) due to changing levels and patterns of work (e.g. reduced hours, working from home) (Section 2.1)
- Impact on BAU claims (indirect impacts):
  - ▶ Changes in return to work rates e.g. due to reduced opportunities due to lack of suitable duties or other restrictions (Section 2.1)
  - ▶ Impacts from reduced access to medical services including surgery – e.g. potential delays in medical spend, changes in claims costs depending on the consequences of the delayed access, delays in WPI assessments (Section 2.1).

Our assessment of the Scheme performance, as well as our premium estimates, have been prepared on the basis that the COVID-19 infection rate continues to be low, and there are no further material disruptions.

In addition, the deterioration in economic conditions due to COVID-19 and the shutdowns have impacted on the economic assumptions adopted for this review.

### 1.4 Data

We have prepared this advice using data as at October 2020 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 2020, and many of the graphs and commentary in this report are prepared using experience to 30 June 2020 only. We have also specifically used the claims data for the three months to 30 September 2020 in projecting ultimate claim numbers.

We remain concerned about the reliability of case estimates in WCMS for older years, where it appears 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. 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; however for ANZSIC class relativities (for which we generally analyse accidents in the last three or five years) we have relied on 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

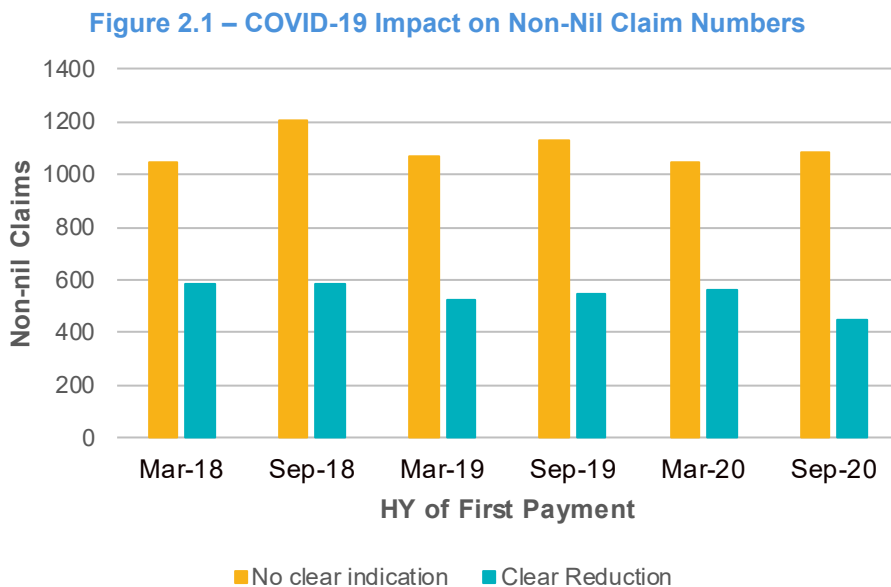
- COVID-19 appears to have had some impact on the experience in 2019/20; however the impact in the ACT has been lower than many other states, with low levels of community transmission and less severe lockdown restrictions.
- The number of non-nil claims reported increased slightly in 2019/20, to just over 3,250.
- The number of new lost time claims decreased by 1%, with around 2,100 in 2019/20.
- There were \$149m in gross payments in 2019/20, an increase from 2018/19. All payment types saw increases, but Weekly benefits saw the greatest increase.
- First lump sum numbers increase in 2019/20 to 480. These numbers tend to exhibit volatility from year to year.

### 2.1 COVID-19

COVID-19 and the resulting shutdowns have had broad impacts on the Australian economy which have extended to workers’ compensation exposures, claim numbers and claim outcomes. Here we consider the impacts on claim numbers and claim payments.

#### Non-Nil Claim Numbers

Figure 2.1 shows the numbers of non-nil claims reported by half year. We have shown this separately for (1) industries identified by the ABS as having a clear reduction in both ‘payroll jobs’ and wages due to COVID-19 and (2) industries where the COVID- 19 impact is either mixed or has not been negative.

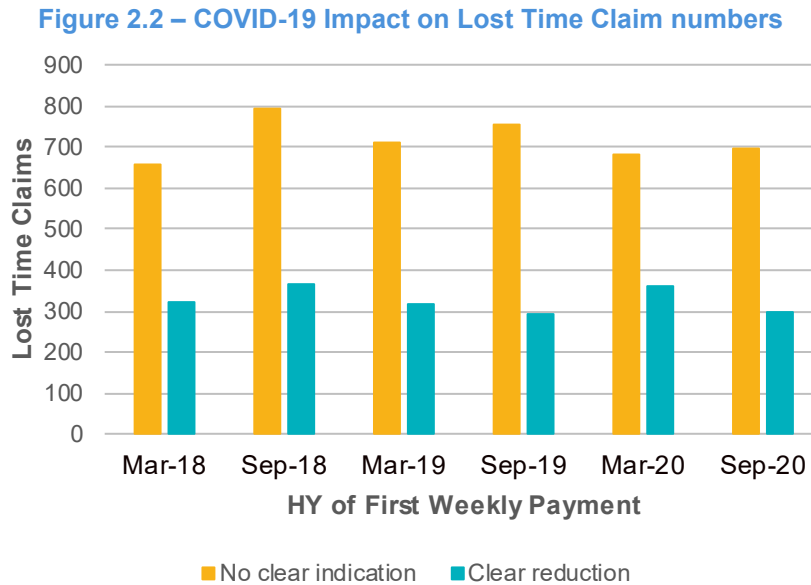


For industries without negative COVID-19 impacts, the claim numbers have remained fairly stable. However, for industries affected by COVID-19 there was a reduction of about 20% in non-nil claim reports in the six months to September 2020.

Overall we estimate that non-nil claim numbers reported in 2019/20 might be between 0.5% and 1.5% lower than they otherwise would have been.

### Lost Time Claims

Figure 2.2 shows the same information for lost time claims.



Here the drop in claim numbers for industries affected by COVID-19 impact is less pronounced, with a fall of about 10% in the six months to September 2020 compared to the preceding five periods. It is possible that reduced work opportunities led to more claims accessing weekly benefits, resulting in a smaller drop in lost time claims than non-nil claims.

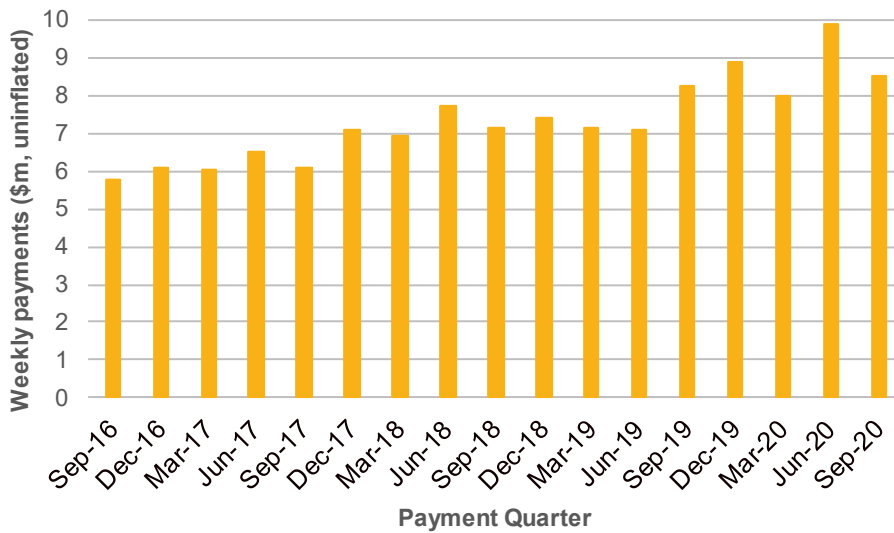
Overall we estimate that lost time claim numbers reported in 2019/20 might be between 0.5% and 1.0% lower than they otherwise would have been.

### Claim Payments

#### Weekly Payments

Figure 2.3 shows weekly payments made in each quarter from September 2016 to September 2020.

**Figure 2.3 – COVID-19 Impact on Weekly Claim Payments**



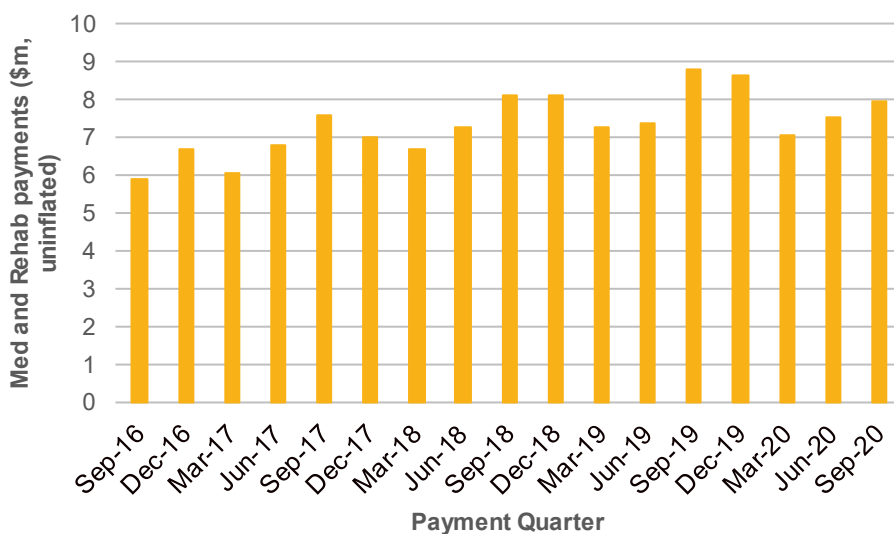
It appears that weekly payments ‘spiked’ in the June 2020 quarter, which may be linked to a lack of return to work opportunities due to COVID-19 shutdowns. However, we note a ‘step-up’ in payments from September 2019, which overall has been sustained. We therefore assess that it is likely that there are additional drivers of higher weekly payments in 2019/20.

Overall we estimate that weekly claim payments in 2019/20 might be between 0% and 4% higher than they otherwise would have been.

### Medical and Rehabilitation Payments

Figure 2.4 shows the same information for medical and rehabilitation payments.

**Figure 2.4 – COVID-19 Impact on Medical and Rehabilitation Payments**



Medical and rehabilitation costs trended generally upward until the December 2019 quarter, before reducing in the March 2020 and June 2020 quarters. With elective surgeries being delayed and a shift to telehealth services it is likely that some of this reduction is a result of COVID-19.

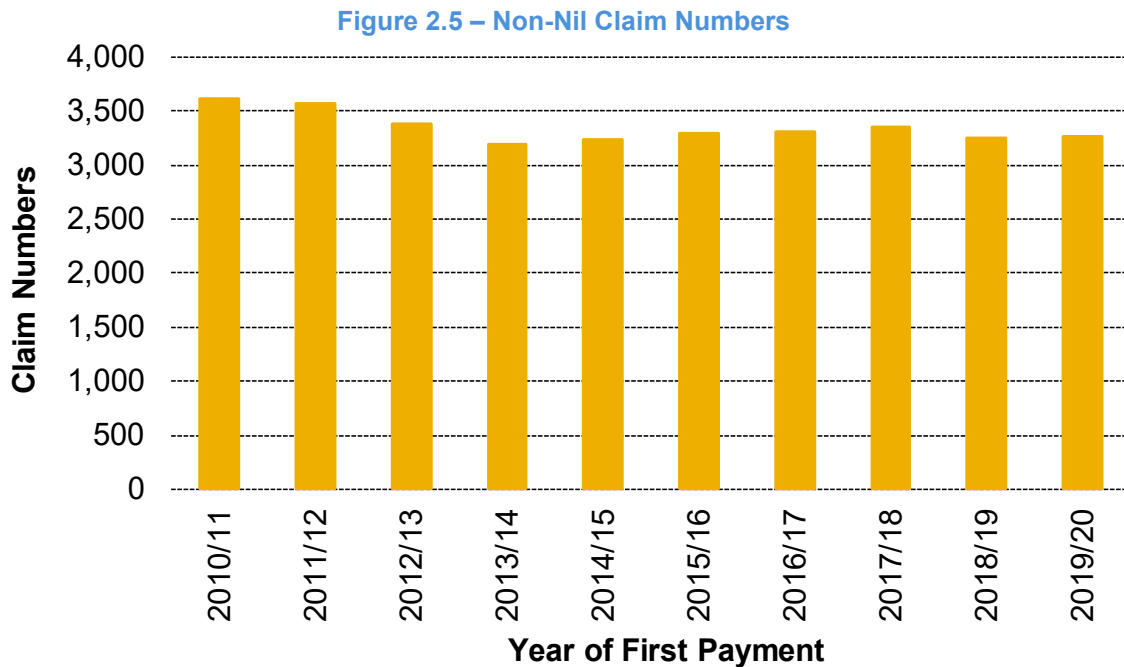
Overall we estimate that medical and rehabilitation claim payments in 2019/20 might be between 0% and 3.5% lower than they otherwise would have been.

## Other Payments

Although other payment types may have been impacted by COVID-19, the impacts have been either not significant enough to observe or are masked by underlying trends.

## 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).



Between 2010/11 and 2013/14 the number of non-nil claims reduced by around 4% per annum to a low of just under 3,200; we understand that the reduction in 2013/14 may have been related to a safety review of the Construction industry conducted in 2012/13 and subsequent improvements in WHS practices. Since 2013/14 claim numbers have been fairly stable. Exposure has continued to grow over this period, leading to a reduction in claim frequency.

Table 2.1 compares the number of non-nil claims reported in 2019/20 with the expected experience from our previous review.

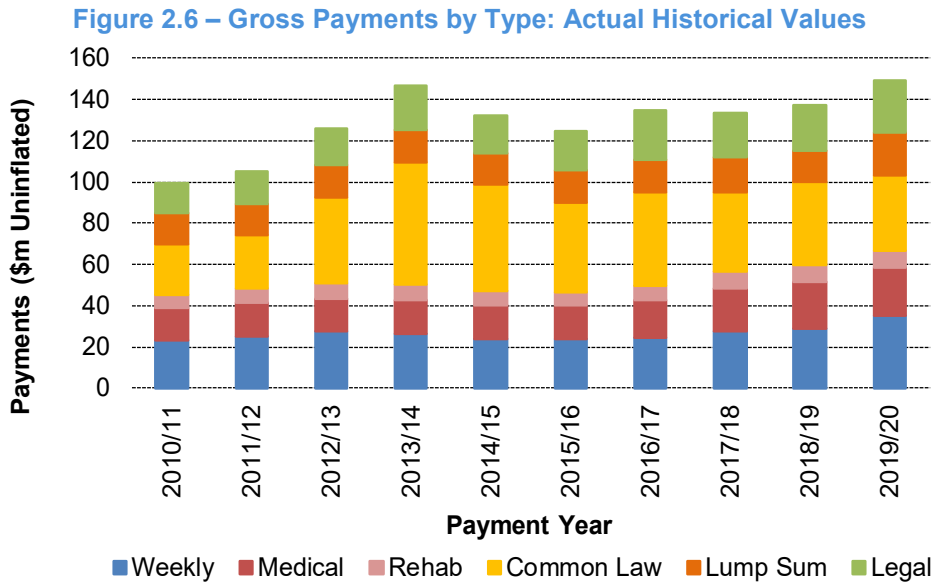
**Table 2.1 – Actual vs Expected Claims Reported in 12 months to 30 June 2020**

Accident Year	Non-nil claims reported			
	Actual	Expected	Difference	Difference
Prior	15	13	2	18%
2016/17	17	11	6	55%
2017/18	24	26	-2	-7%
2018/19	452	437	15	3%
2019/20	2,751	2,837	-86	-3%
<b>Total</b>	<b>3,259</b>	<b>3,323</b>	<b>-64</b>	<b>-2%</b>

Non-nil claim reports in the year were lower than expectations by 2%, with most of the difference due to the 2019/20 accident year. As discussed above, it is likely that some of this difference relates to lower claim reports in the June 2020 quarter due to COVID-19 related shutdowns.

### 2.3 Claim Payments

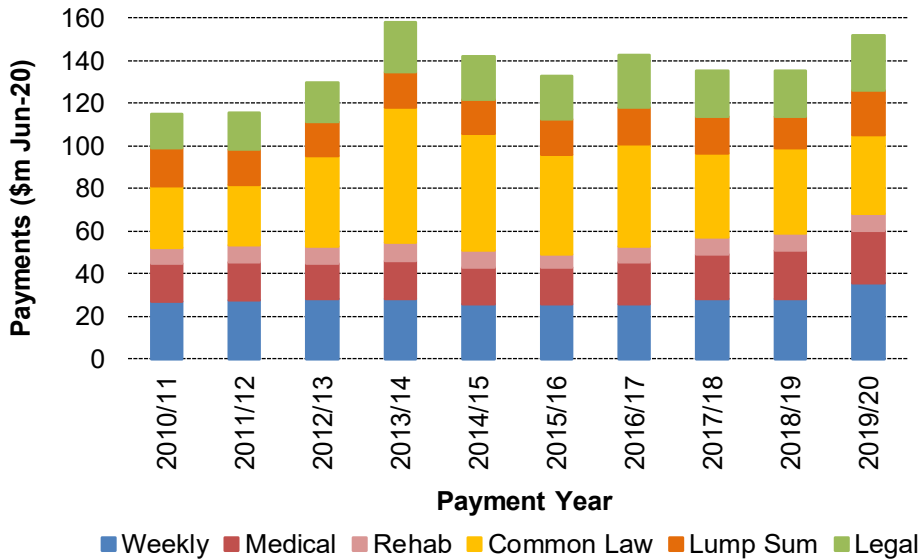
The following two graphs show the mix of claim payments by year and type. Figure 2.6 shows the payments in actual historical values, while Figure 2.7 shows payments inflated to June 2020 values.



After exhibiting little growth over the three years to 2018/19, payments increased by \$12 million to \$149 million in 2019/20, the highest level in the last ten years (in nominal dollars). The increase in payments was observed across all payment types with Weekly benefits growing by the largest amount. While some of the increase in Weekly benefits was observed in the June 2020 quarter, which may be associated with COVID-19 lockdowns impacting return to work opportunities, the first three quarters of 2019/20 were materially higher than previously observed; this suggests an underlying increasing trend in Weekly payments (as shown in Figure 2.7).

Insurers received around \$6 million in non-reinsurance recoveries in 2019/20, bringing net payments in the year to around \$143 million.

**Figure 2.7 – Gross Payments by Type: Inflated to June 2020 values**



After adjusting for historical wage inflation, payments averaged just under \$120 million until 2011/12, and increased to around \$160 million in 2013/14, driven by higher common law costs. Annual payments averaged just under \$140 million from 2014/15 to 2018/19, and 2019/20 payments were higher at \$152 million. Since 2013/14 statutory benefits have increased their share of total payments, from 34% to 45% in 2019/20.

The following table compares net payments in the 12 months to 30 June 2020, by payment type, to the expected payments from our previous review.

**Table 2.2 – Actual vs Expected Payments in 12 months to 30 June 2020**

Payment Type	Actual \$m	Expected \$m	Difference \$m	Difference %
Weekly	34.9	28.9	6.1	21%
Medical	23.8	23.1	0.7	3%
Rehab	8.3	8.1	0.1	2%
Lump sums <sup>1</sup>	56.9	64.7	-7.8	-12%
Legal	25.0	22.9	2.1	9%
Recoveries	-5.7	-4.9	-0.7	15%
<b>Total</b>	<b>143.3</b>	<b>142.8</b>	<b>0.5</b>	<b>0%</b>

<sup>1</sup>Includes Common Law

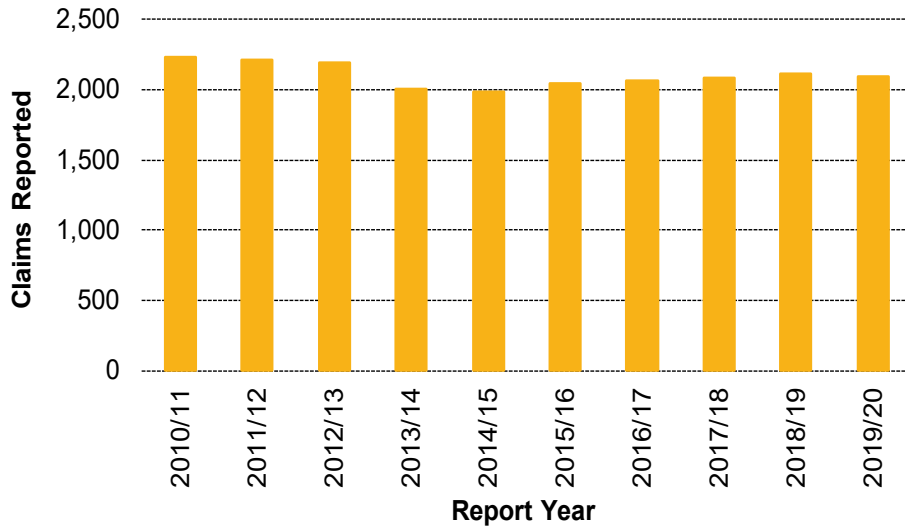
Total payments in 2019/20 were in line with expectations in aggregate, although there were offsetting differences at payment type level.

## 2.4 Claims Involving Lost Time

Figure 2.8 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 2.8 – New Lost Time Claims**



Following a safety review of the Construction industry, claim numbers fell by 8% in 2013/14 and again by 1% in 2014/15 to a low of around 1,980. Numbers then increased gradually to 2018/19, before falling slightly in 2019/20.

Table 2.3 shows that the number of new lost time claims in 2019/20 was close to expectations, with lower than expected lost time claims for the two most recent accident years and higher reports for older accident periods. As discussed above, it is possible that the lower than expected lost time claim numbers for the 2019/20 accident year may be related to COVID-19 shutdowns.

**Table 2.3 – Actual vs Expected Lost Time Claims Reported in 12 months to 30 June 2020**

Accident Year	Lost time claims reported			
	Actual	Expected	Difference	Difference
Prior	4	3	1	23%
2016/17	14	10	4	40%
2017/18	50	34	16	47%
2018/19	483	512	-29	-6%
2019/20	1,545	1,560	-15	-1%
<b>Total</b>	<b>2,096</b>	<b>2,119</b>	<b>-23</b>	<b>-1%</b>

## 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 commutations.

Figure 2.9 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 4% of claimants receive both a common law (including negotiated settlement) and lump sum payment (commutation, statutory benefit or death), with the bulk of these claims (around 80%) receiving both a common law and a commutation payment. For the purpose of this graph 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.

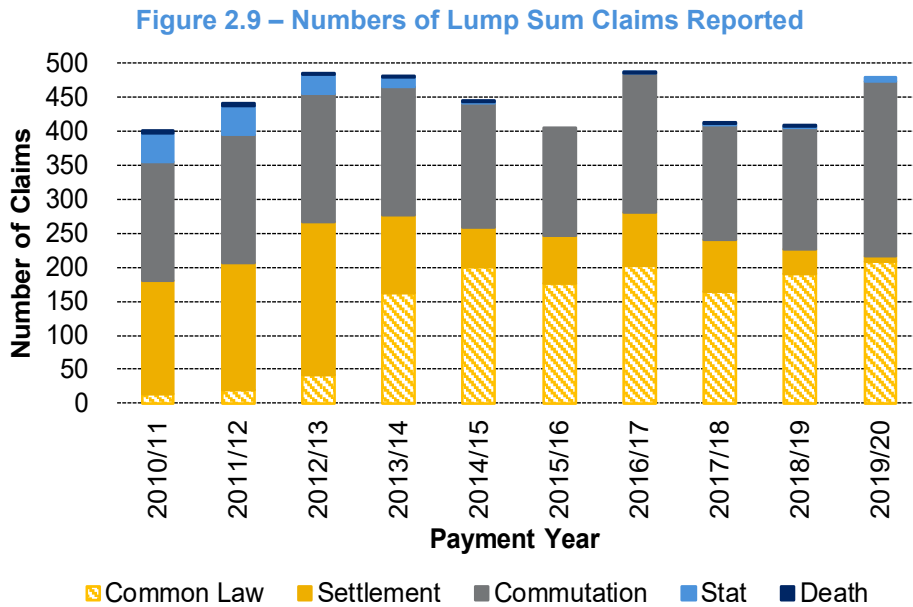


Figure 2.9 shows:

- 480 claims received a lump sum payment in 2019/20, which is around 18% higher than 2018/19. The number of lump sum claims can be volatile from year to year, making it difficult to draw conclusions from the experience of a single year.
- The number of claimants receiving either common law or negotiated settlement damages (the two yellow segments combined) has overall trended slightly down since 2013/14.

- The number of commutations increased strongly in 2019/20 to 260
- Only six claims received only a statutory permanent impairment benefit in 2018/19; 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 no new death benefit claims in 2019/20.

Table 2.4 shows the numbers of lump sums reported in 2019/20 compared with expectations from our previous review.

**Table 2.4 – Actual vs Expected Lump Sums Reported in 12 months to 30 June 2020**

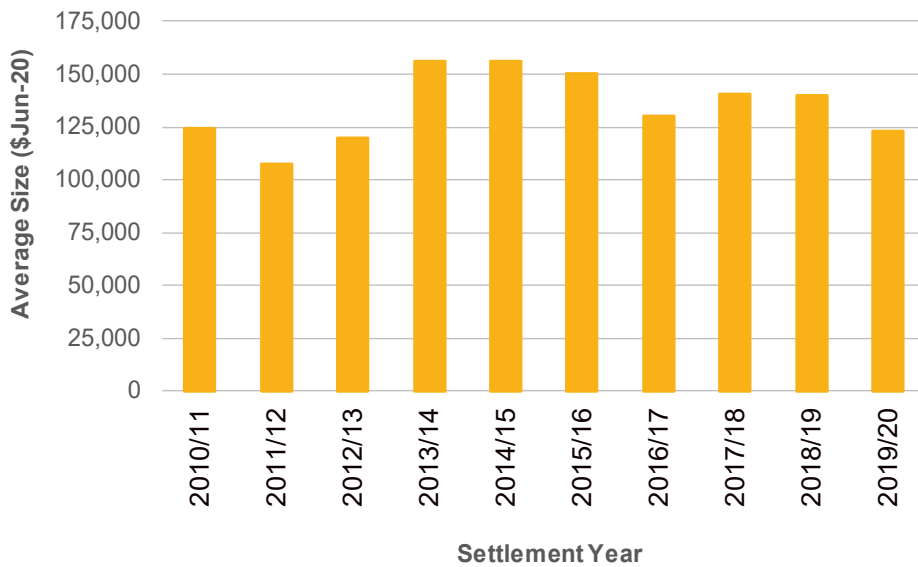
Accident Year	Lump sum claims reported			
	Actual	Expected	Difference	Difference
Prior	8	9	-1	-7%
2011/12	1	4	-3	-77%
2012/13	4	7	-3	-39%
2013/14	10	8	2	26%
2014/15	20	21	-1	-4%
2015/16	72	54	18	34%
2016/17	110	97	13	14%
2017/18	145	135	10	7%
2018/19	87	101	-14	-14%
2019/20	23	11	12	119%
Total	480	445	35	8%

Overall lump sum claims were 8% above expectations, driven by mid-duration accidents. As discussed the lump sum numbers can be variable, and we do not interpret the latest experience as a deterioration at this stage.

### Average Size of Lump Sums (Lump Sum Component)

Figure 2.10 shows the average size of lump sum claims (inflated to June 2020 dollars) by year of settlement.

**Figure 2.10 – 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 to around \$130,000 in 2016/17; the average for the last two years is \$131,000.

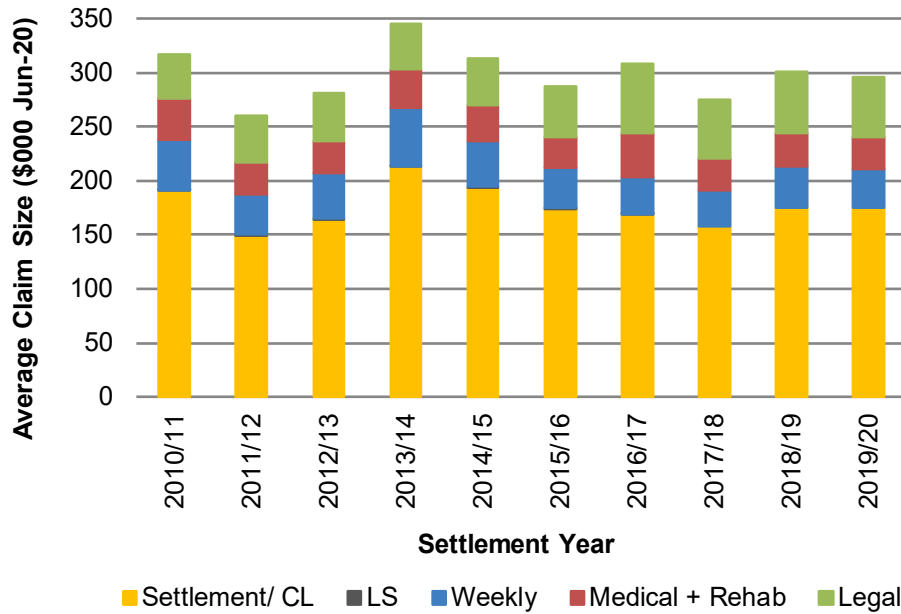
**Average Size of Lump Sums (Total Claim Cost)**

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 2.11 to Figure 2.13 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 2.11 – Average Size of Claims Receiving Common Law or Negotiated Settlement**



The average size in 2019/20 was \$295,000, which is made up as follows (in round terms):

- Common law component: around \$175,000
- Weekly benefits: about \$35,000
- Medical and rehabilitation costs: around \$30,000
- Legal costs: about \$55,000.

**Figure 2.12 – Average Size of Claims Receiving Commutations**

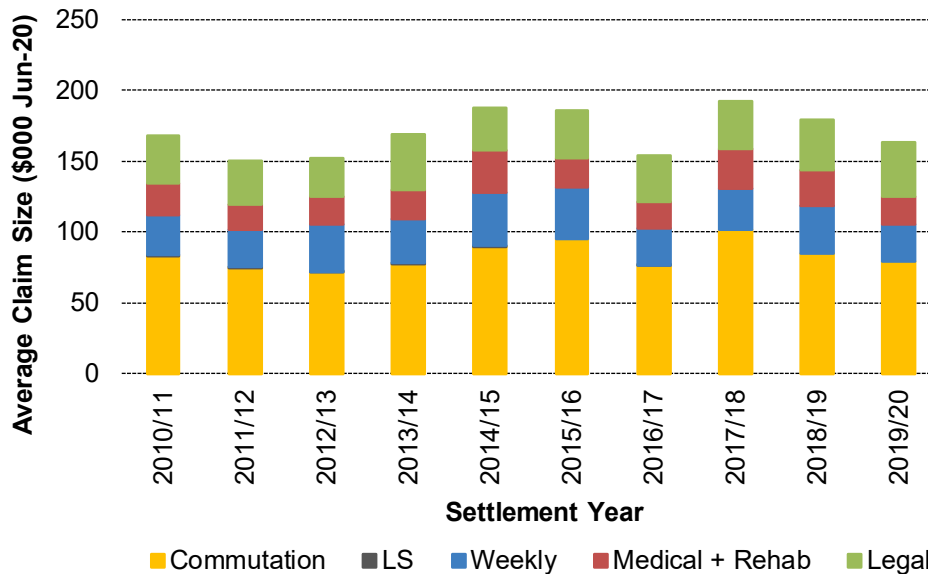
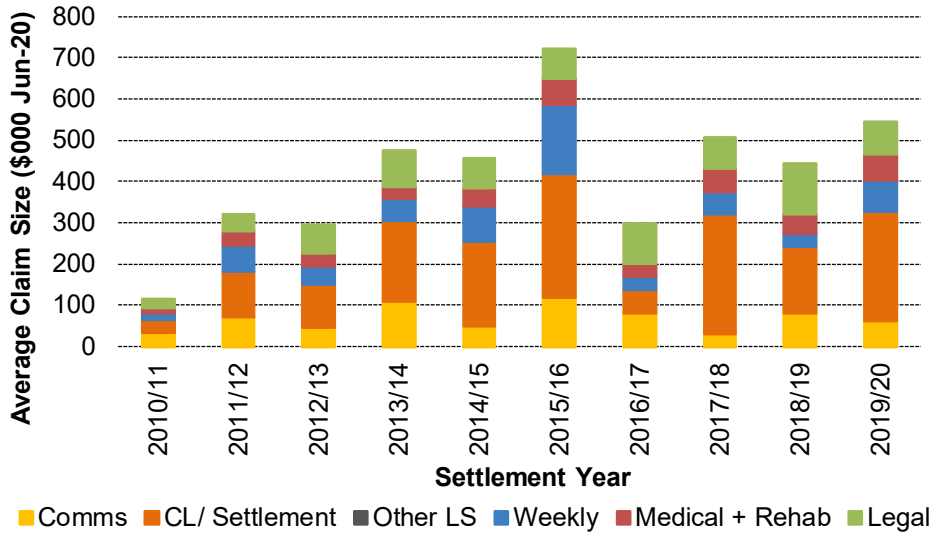


Figure 2.12 shows that the overall average cost of claims receiving commutations (but no common law) decreased to \$165,000 in 2019/20 from around \$180,000 in 2018/19. The average claim size is broken down as follows:

- Commutation component: around \$80,000; this is about half the amount that common law claims receive as a common law component
- Weekly benefits: about \$25,000
- Medical and rehabilitation costs: around \$20,000
- Legal costs: about \$35,000.

**Figure 2.13 – 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 \$510,000 has been made up as follows:

- Common law component: around \$220,000
- Commutation component: about \$75,000 (total common law plus commutation \$295,000)
- Weekly benefits: around \$75,000
- Medical and rehabilitation costs: around \$50,000
- Legal costs: about \$90,000.

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 2.5 shows the claim size distribution of all common law and other lump sum claims recorded in WCMS (in June 2020 values). This includes all payments made on these claims, not just the lump sum component.

**Table 2.5 – Claim Size Distribution**

Size of Settlement \$Jun-20	Common Law			Other Lump Sums		
	Number of Claims	Proportion	Average claim size in band (\$000 Jun-20)	Number of Claims	Proportion	Average claim size in band (\$000 Jun-20)
0-50k	348	8%	32,000	945	18%	30,000
50k-100k	543	12%	76,000	1,235	24%	74,000
100k-150k	658	15%	125,000	932	18%	123,000
150k-200k	573	13%	175,000	644	12%	174,000
200k-300k	867	19%	248,000	728	14%	244,000
300k-400k	566	13%	343,000	360	7%	343,000
400k-500k	330	7%	442,000	171	3%	441,000
500k-1m	492	11%	659,000	146	3%	636,000
>1m	89	2%	1,413,000	25	0%	2,196,000

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.

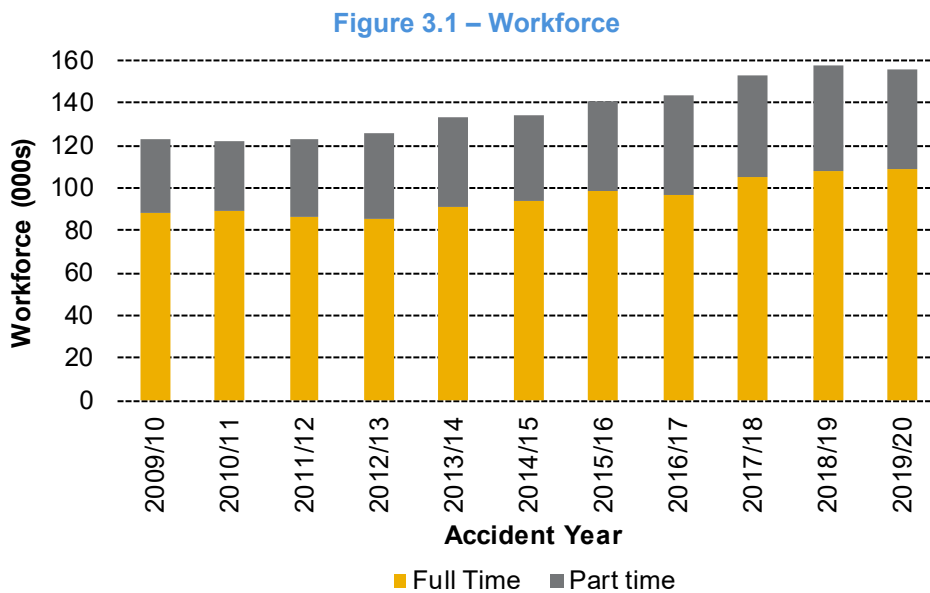
#### Key Findings

- Earned wages grew by 4.3% in real terms to \$11.3 billion in 2019/20.
- We estimate there will ultimately be 3,207 non-nil claims for the 2019/20 accident year, a slight reduction from the previous year. This represents a decrease in claim frequency, as wages continue to grow while claim numbers reduced slightly.
- We have adopted a non-nil claim frequency of 0.29 claims per \$ million of wages for the 2021/22 policy year, 3% lower (adjusting for actual inflation) than adopted for the 2020/21 policy year. This results in a projection of 3,339 claims.
- Our selected average claim size per non-nil claim is around \$43,900 for the 2021/22 policy year, a slight reduction from our previous average size of \$43,000 (inflated to June 2020).

### 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 (as shown in ABS figures), less the number of Commonwealth and ACT Government employees (provided by CMTEDD).



Total employee numbers were close to flat in 2019/20. Typically, employee numbers have grown year on year and we expect that the lack of growth in 2019/20 is related to COVID-19 shutdowns, which we

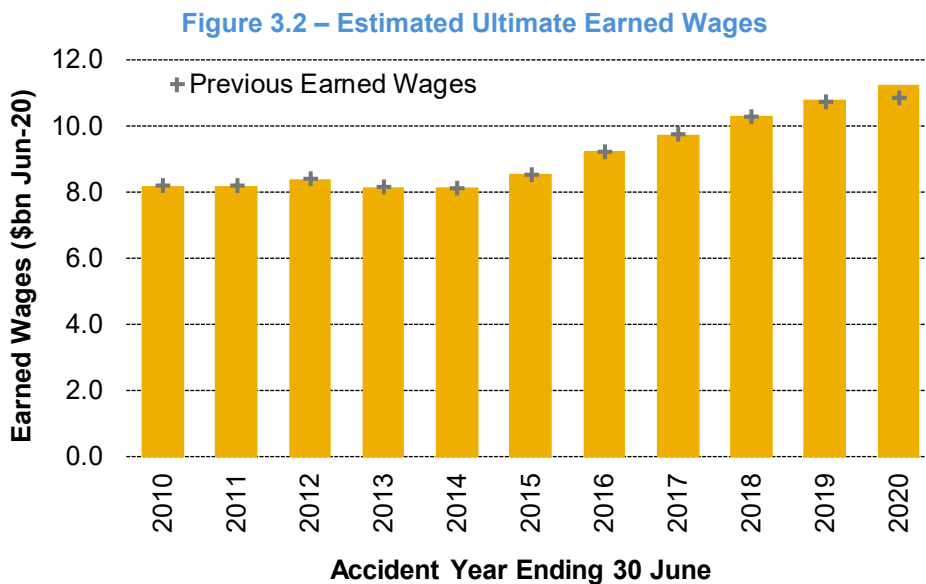


discuss below. In our calculation of ultimate claim frequency, we have used the number of **full time** ACT private sector employees as the measure of exposure.

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

As noted, 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 2020 values), which means that an increase here represents real growth in total wages. These figures are estimates based on information to September 2020; 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.



Earned wages increased by 4.3% in real terms in 2019/20, and are estimated to be around \$11.3 billion in June 2020 values. This is about 4% higher than our previous estimate of wages for 2019/20.

### COVID-19 Exposure Impacts

It is likely that the COVID-19 related shutdowns in the June 2020 quarter suppressed both exposure measures. We have reviewed the potential impact of this in three ways:

1. Insurers have provided general feedback on how COVID-19 has impacted written wages and exposure in the ACT
2. We have reviewed wages by industry, concentrating on divisions which insurers and/or ABS statistics have identified as being severely impacted by shutdowns
3. We have reviewed COVID-19 job and wages statistics for the ACT from the ABS.

### Insurer Feedback

The key feedback in regard to wages from insurers was:

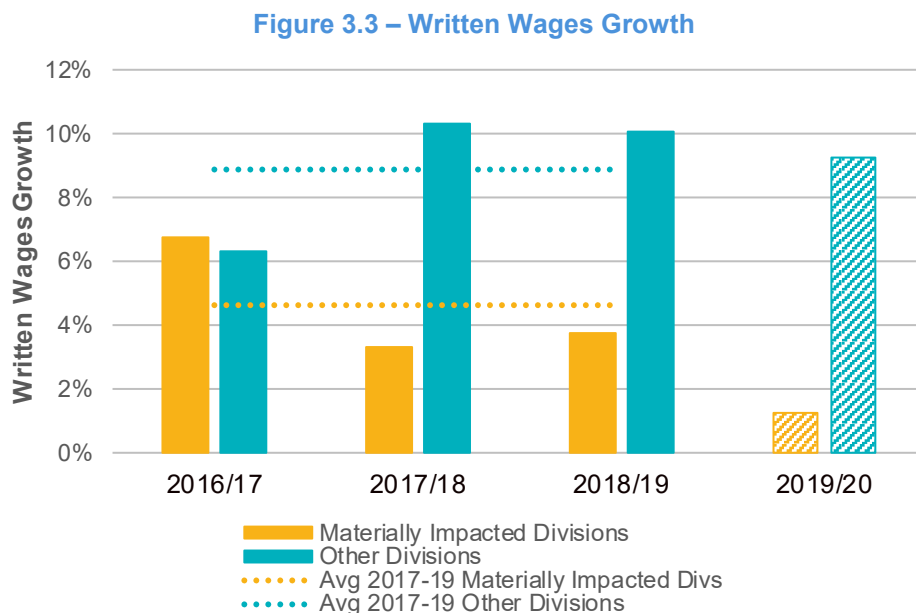
- The impact in the ACT was much lower than other parts of Australia
- However, wages did drop across certain industries in the June 2020 quarter, particularly for hospitality and the arts
- Industries that were not directly impacted continued to grow strongly
- Any JobKeeper payments made in respect of employees who were either ‘stood down without pay’ or in respect of a ‘top up’ to employees’ pre-COVID wages are not included in wage figures.

## Wages by Industry

Based on the feedback provided by insurers, we have split our analysis of written wages into industries that were materially impacted by the shutdowns and other industries. The divisions we identified as being materially impacted are:

- Accommodation and Food Services – this largely covers hospitality, which insurers called out as the most impacted industry
- Arts and Recreation Services – also identified via insurer feedback
- Rental, Hiring and Real Estate Services – identified through ABS information.

These divisions make up around 9% of ACT wages. Figure 3.3 compares the growth in written wages for the three years to 2018/19 with the growth in 2019/20.



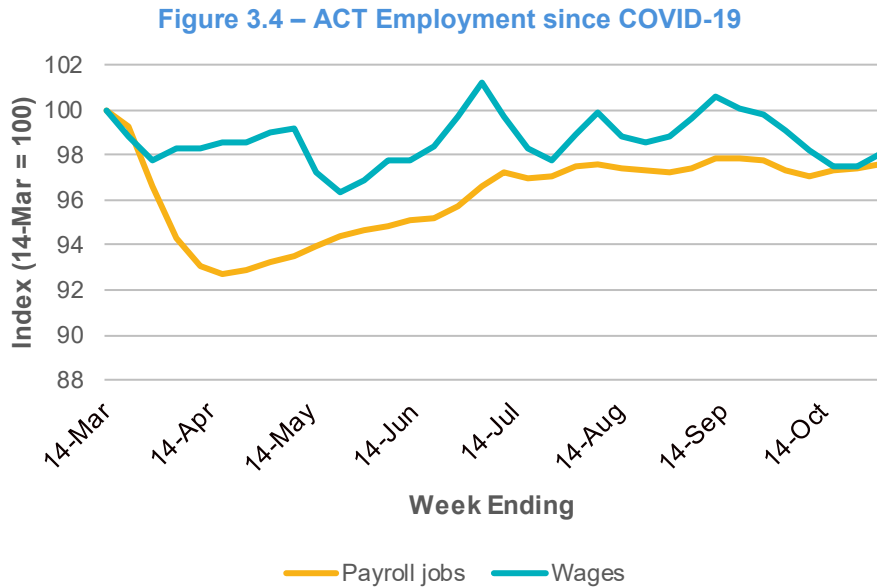
Our key take outs from this analysis are:

- For materially impacted divisions, written wages grew by 1.3% in 2019/20 after averaging 4.6% growth over the three preceding years
  - ▶ Accommodation and Food Services was the most impacted, with wages reducing by 0.9% in 2019/20 after previously growing by 3.5% per annum
- For divisions that were not materially impacted, growth in written wages for 2019/20 is similar to the average of the previous three years, supporting comments from insurers that growth continued to be strong in industries that were not directly impacted.

Had the wages for materially impacted divisions grown in 2019/20 at their average rate over the three years to 2018/19, overall written wages in 2019/20 would have been around 0.3% higher.

### ABS Information – Employment Levels since COVID-19 Began

The ABS has published information on the numbers of ‘payroll jobs’ and wages by state, relative to 14 March 2020 when the 100th COVID-19 case was recorded in Australia. Figure 3.4 shows this information for the ACT.



Our key take outs are:

- The reduction in job numbers was greater than the reduction in wages. This could be due to a combination of (1) jobs lost being more likely to be part-time or lower paid and (2) the inclusion of some JobKeeper payments in wages figures.
- The number of jobs rebounded strongly over the three months to June 2020, and wages also rebounded.
- In late 2020, both job numbers and wages remained lower than at March, implying that wages for the 2020/21 year are also likely to be lower than they would have been but for COVID-19.

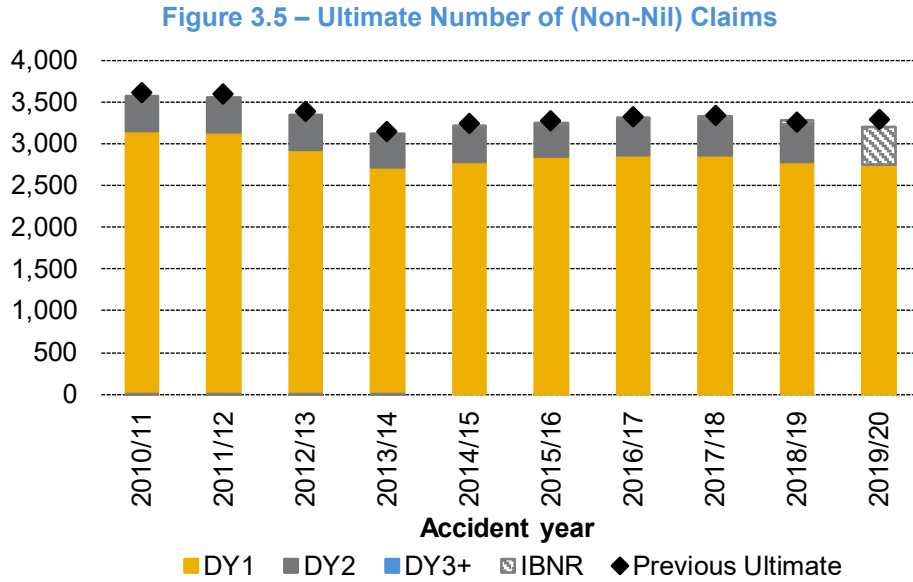
The reduction in wages over the three months to June 2020 translates to wages for the 2019/20 year being around 1% lower than they otherwise would have been; however, it is difficult to know what impact JobKeeper payments had on wages figures for this period.

### Conclusions

Based on the analysis above, it appears that written wages would have been between 0.3% and 1% lower than ‘normal’ due to COVID-19 shutdowns, and some impact will have continued into 2020/21. Assuming that the economy largely returns to normality for 2021/22, this will increase the growth differential between the 2020/21 and 2021/22 years, which we have reflected in our assumptions (discussed later).

### 3.2 Total Claim Numbers and Frequency

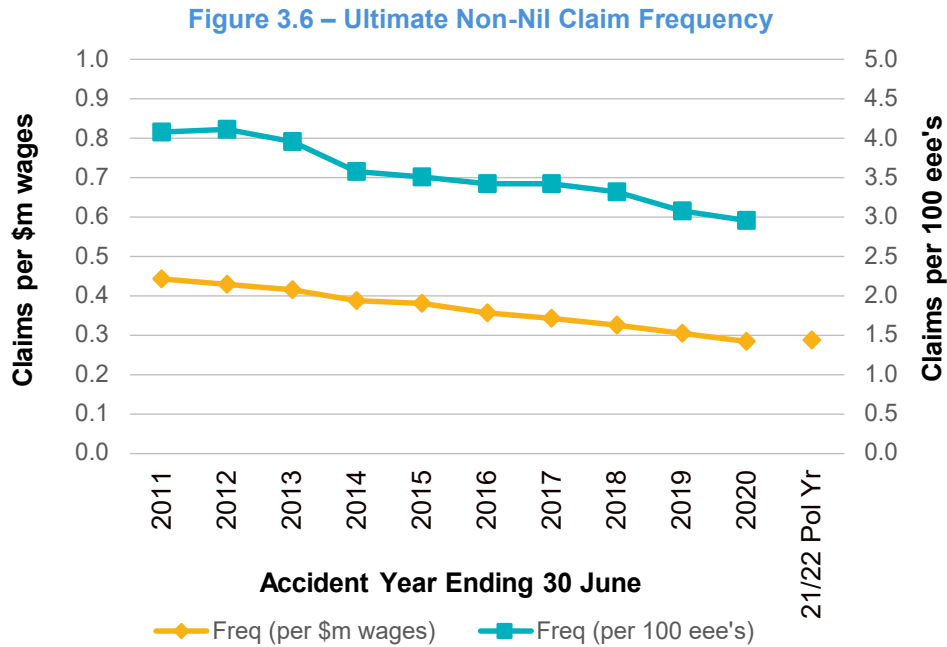
Figure 3.5 shows the numbers of non-nil claims that have been reported to the insurers to 30 June 2020, as well as our estimate of ultimate numbers of claims for each accident year. We have shown claims reported by duration, or “development years” following the accident; “DY1” represents claims reported within one year of the accident, “DY2” represents claims reported between 1 to 2 years after the accident and so on.



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 most recent accident year.

The projected number of non-nil claims for 2019/20 is 3,207 – a decrease of 2.2% from 2018/19.

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 3.6.



The non-nil claim frequency per \$ million wages has steadily reduced since 2010/11, to an estimated 0.28 claims per \$ million wages for the 2019/20 accident year. The initial reduction appears to be related to the safety review of the Construction industry, but subsequent reductions appears to be due to a mix of underlying frequency improvements and a shift to lower risk industries.

The change in claim frequency per employee has also reduced over the period shown, but the reduction has not been as consistent.

We have adopted a claim frequency for the 2021/22 policy year of 0.29 claims per \$ million of wages. This is slightly higher than our estimated frequency for 2019/20, as we estimate the impact of COVID-19 shutdowns on claim numbers (discussed in Section 2.1) was slightly greater than the impact on wages (discussed in Section 3.1), hence the frequency in 2019/20 may be marginally overstated. Our adopted frequency for 2021/22 is 3% lower (after adjusting for actual inflation) than the claim frequency adopted for the 2020/21 policy year in our previous review.

Our adopted claim frequency corresponds to 3,339 claims for the 2021/22 policy year.

Appendix E provides further details of our claim number analysis.

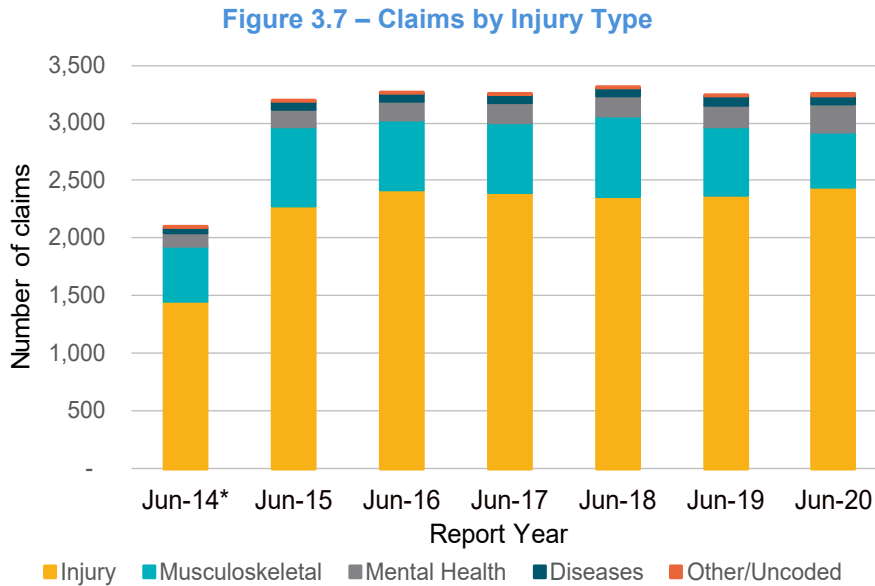
### 3.3 Injury Trends

We have analysed trends in claim numbers by injury type to see whether there are any changes to 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 3.7 shows the number of claims split by injury.



\*June 2014 has only nine months of coding

Injury claims make up around 73% of total claim numbers, with musculoskeletal claims representing 29%. Since 2015 (the first year fully coded), the proportion of Mental Health claims has gradually increased from 4.8% to 5.9%, 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 associated with an increase in average size.

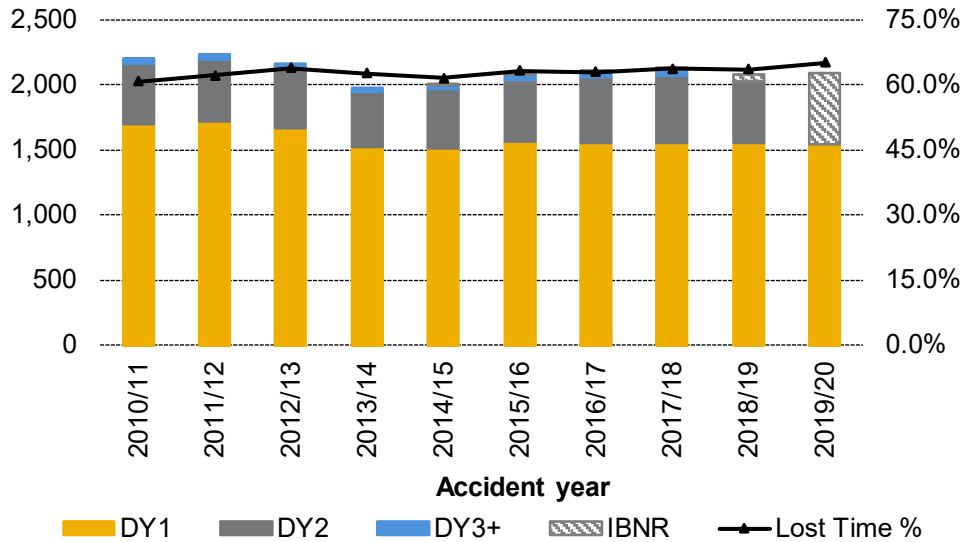
We note that our data includes only the primary injury; a proportion of claimants with non-mental health injuries will develop secondary mental health issues that will increase the claim duration.

### 3.4 Weekly Benefits

#### Lost Time Claims

In order to understand the trends in the numbers of claimants receiving weekly benefit payments, we have estimated the ultimate number of lost time claims. Figure 3.8 shows our estimated ultimate numbers of lost time claims and the estimated proportion of non-nil claims that involve weekly benefits.

Figure 3.8 – Estimated Ultimate Lost Time Claims



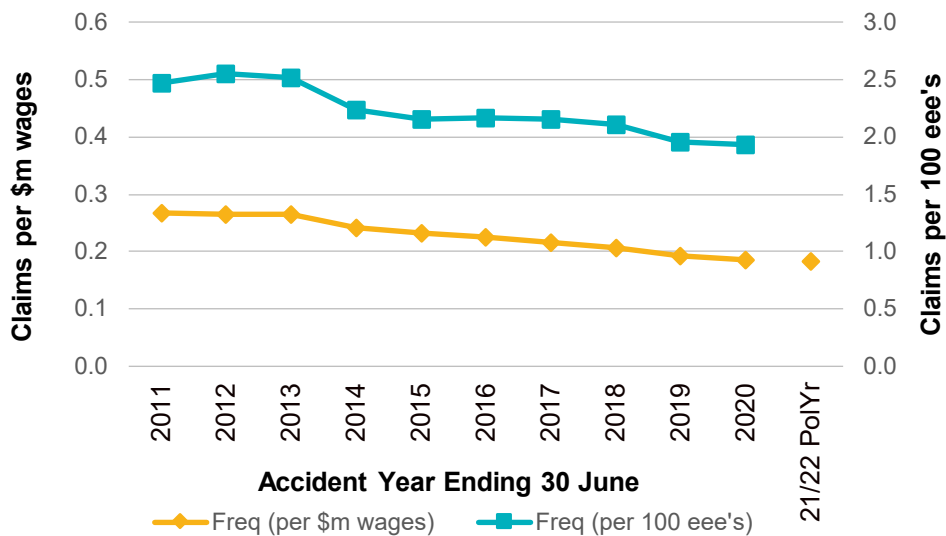
As with non-nil claims, there are very few new lost time claims more than two years after the accident, and therefore the number of IBNR claims is small for all but the most recent accident year.

We project 2,089 lost time claims for 2019/20, an increase of 0.4% from 2018/19.

The ratio of lost time claim numbers to non-nil claims has been gradually increasing since 2014/15, from 61.5% to 65.1%. For the 2021/22 policy year, we have adopted a lost time proportion of 64.1%, which is slightly lower than our estimate for 2019/20; this arises from giving some credibility to the longer term experience, and also reflecting our assessment that COVID-19 shutdowns had a larger impact on overall claims than lost time claims (see Section 3.1). The adopted frequency for 2021/22 represents a slight increase from 64.0% at the previous review.

Figure 3.9 shows the ultimate number of lost time claims expressed as claim frequencies.

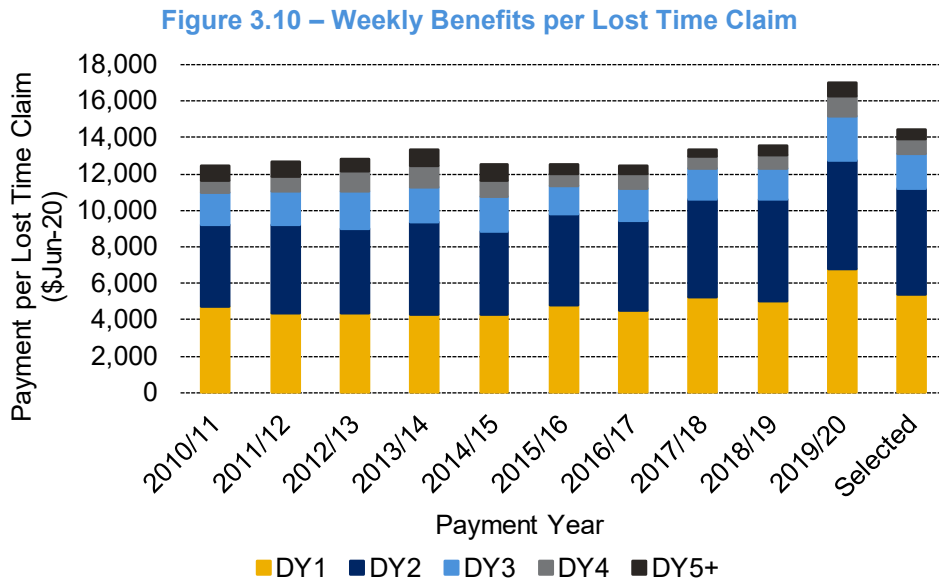
Figure 3.9 – Estimated Ultimate Lost Time Claim Frequency



The lost time claim frequency (per \$ million of wages) is projected to be 0.19 for both 2018/19 and 2019/20. We have adopted a frequency of 0.18 for the 2021/22 policy year.

## Average Weekly Benefit Payments

Figure 3.10 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 2021/22 policy year.



The average payment amount increased materially in 2019/20. While some of this is attributable to a spike in payments in the June 2020 quarter, potentially linked to a reduction in return to work opportunities as a result of COVID-19 lockdowns, there remains an underlying increase in the average size observed over the first three quarters of 2019/20 compared to previous years (as seen in Figure 2.3). 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.

Our selected average claim size for the 2021/22 policy year for weekly benefits is \$14,408 per lost time claim (June 2020 dollars). This is 5.3% higher than the selected average claim size at the previous review (in June 2020 dollars), reflecting the emerging experience. We have not fully responded to the 2019/20 experience, as any COVID-19 related increase will be short term and we have given some credibility to the longer term experience which has been more stable. If the higher level of payments persists, we will adjust our selections at the next review.

The adopted average weekly cost per **non-nil** claim (not just lost time claims) is \$9,200. This is 5.4% higher than selected at our previous review (\$8,800, inflated), driven by growth in average size 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

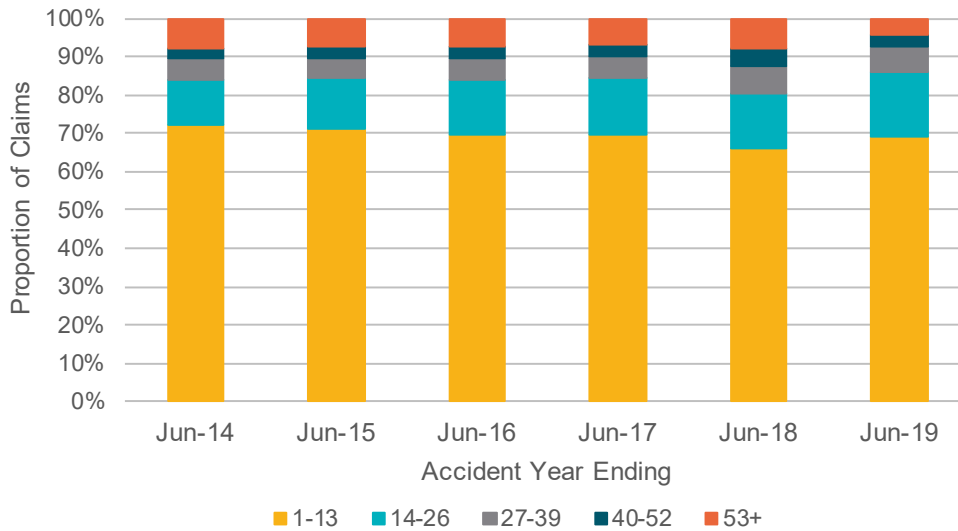
We have performed some high level analysis of the Scheme’s experience in relation to weekly claimants’ time off work and their reasons for ceasing weekly payments.



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.<sup>2</sup>

Figure 3.11 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 3.11 – Weeks off Work: Claimants no Longer Receiving Weeklies**



On average, claimants for accident years 2013/14 to 2017/18 have received weekly payments for 16 weeks. Around 70% of claimants have received between 1 and 13 weeks of entitlements and more than 80% of claimants have received 26 weeks or less of entitlements. For the 2013/14 year (the most mature experience), 10% 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
- Retirement of claimant<sup>3</sup>
- Claimant returns to work (RTW)<sup>4</sup>.

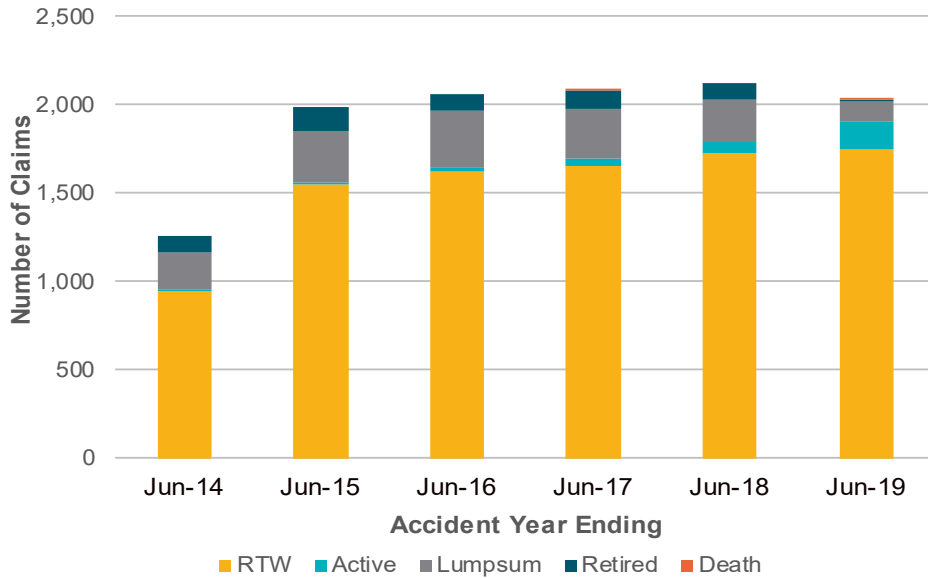
We have identified the current state of each claimant who has received a weekly benefit since 31 October 2013.

<sup>2</sup> 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.

<sup>3</sup> If a worker is injured after two years prior to retirement age, weekly benefits continue for up to 2 years. If a worker is injured before two years prior to retirement age, weekly benefits cease at retirement age.

<sup>4</sup> If weekly benefits have ceased for four or more weeks and the worker has not retired, received a lump sum or died we assume the claimant has returned to work.

**Figure 3.12 – Current Status of Claimants with Weekly Benefits**

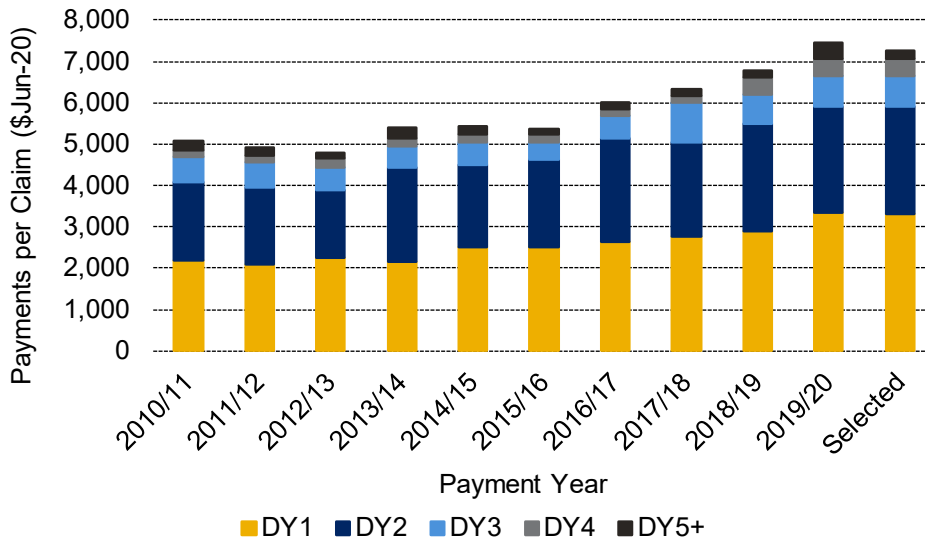


Most of the claimants who received weekly benefits have eventually returned to work. For accident years 2013/14 to 2018/19 combined, around 13% of claimants have ceased weeklies after payment of a commutation or lump sum (to date), and around 5% received weekly benefits until retirement age<sup>5</sup>.

### 3.5 Medical and Related Payments

Figure 3.13 shows the average medical payments per non-nil claim for each past payment year and our selected average medical claim size for the 2021/22 policy year.

**Figure 3.13 – Medical Benefits per Non-Nil Claim**



The last five years have seen sustained above-inflationary growth in the average medical size; over this period the medical size has grown by 9% p.a. above normal inflation.

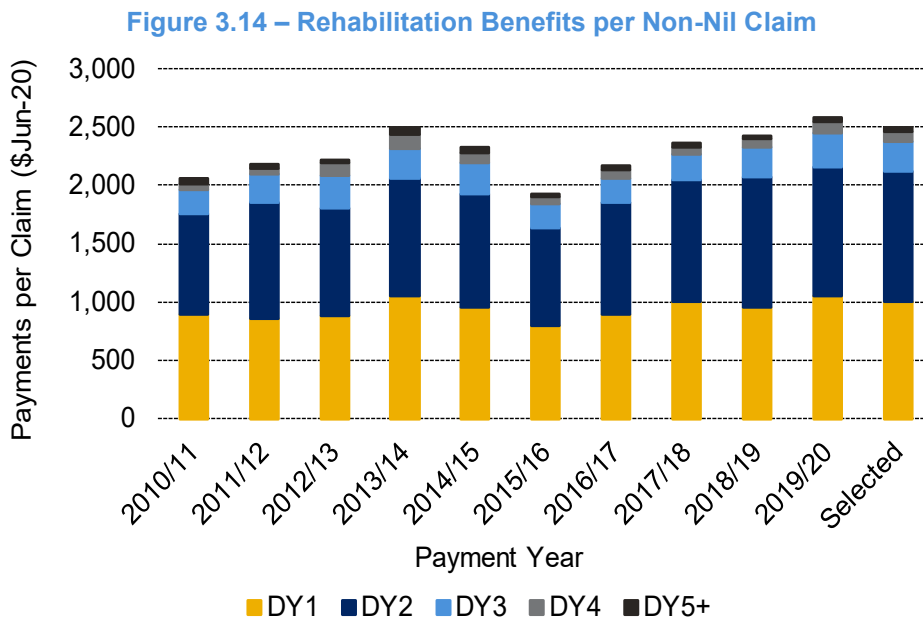
<sup>5</sup> We have observed that some lump sums are paid more than one year after the last weekly payment. This means that some claimants who have not received a weekly for four or more weeks and have a current status 'RTW' may receive a lump sum in future years and therefore be reclassified.

Our selected average medical cost per non-nil claim for the 2021/22 policy year is \$7,300 (June 2020 dollars). This is 4.3% higher than that adopted in our previous review (\$7,000, inflated to June 2020 dollars). The increase reflects the continued above-inflationary trend, as well as a consideration of potential delays to medical services in the June 2020 quarter due to COVID-19 (shown in Figure 2.4). We have set our selections for the first three development years in line with the 2019/20 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 3.14 shows the average rehabilitation cost per non-nil claim, along with our selected average rehabilitation claim size for the 2021/22 policy year.



The average rehabilitation benefit per non-nil claim has increased by 8% p.a. beyond inflation since 2015/16, a level similar to medical benefits.

Our selected average rehabilitation cost per non-nil claim for the 2021/22 policy year is \$2,500 (June 2020 dollars). This is 1.5% higher than adopted at our previous review (\$2,460, inflated), and close to the 2019/20 experience.

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

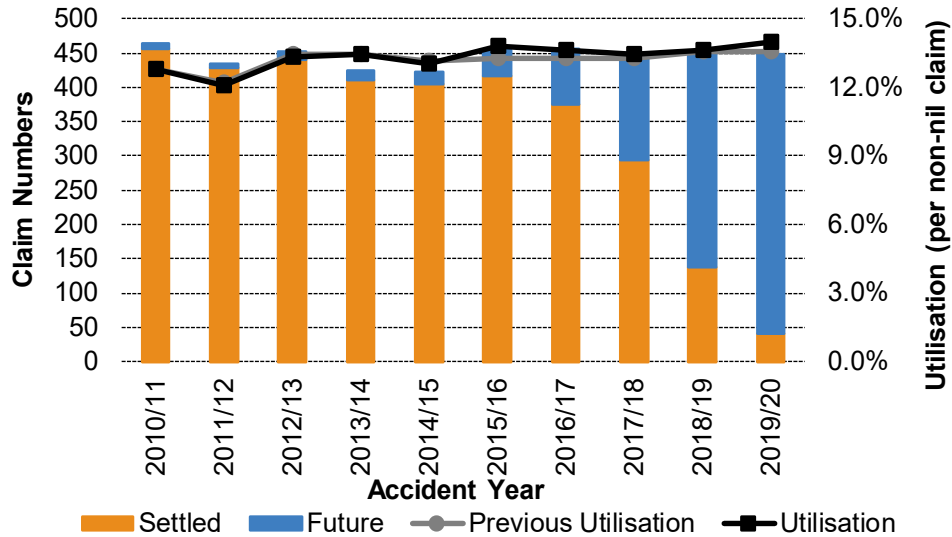
### 3.7 Lump Sums

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

Figure 3.15 – Estimated Ultimate Lump Sum Claim Numbers and Utilisation



Our estimates of ultimate lump sum numbers have increased since the previous review for recent accident years, reflecting the claims experience. Given the 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 13.65% (previously 13.6%); for 2019/20, we increase this to 14.0% (previously 13.6%), reflecting the higher lost time proportion for this year.

We estimate the ultimate number of lump sum claims for 2019/20 to be 449. For the 2021/22 policy year, we are projecting 467 lump sum claims.

We note the considerable level of uncertainty in these projections and the large IBNR component, even for accident years up to four years old.

### Settlement Experience and Adopted Average Size of Lump Sums

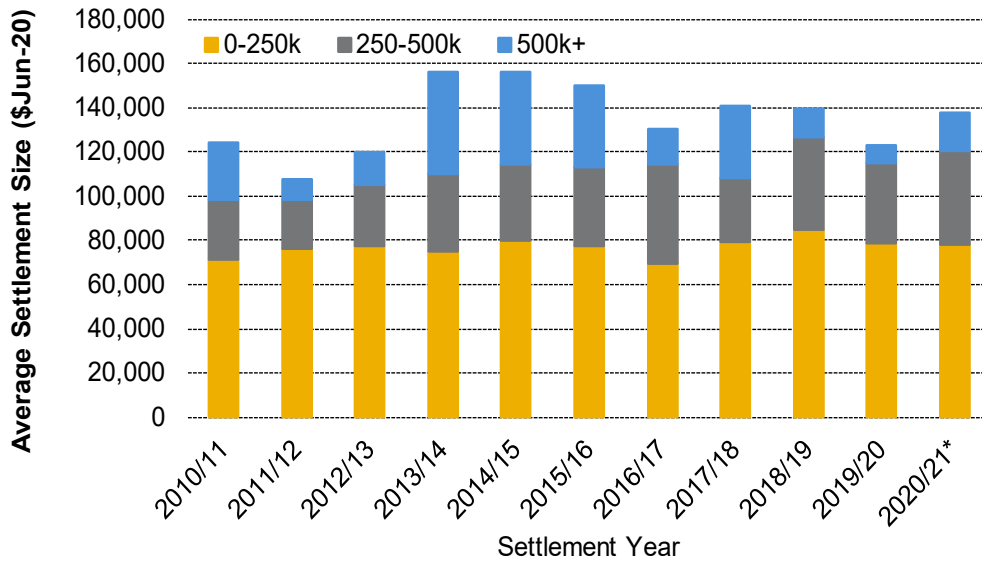
Table 3.1 shows the numbers and average size (in June 2020 dollars) of lump sum claims by year of settlement; it also shows the three months' settlement experience to September 2020. Figure 3.16 shows the information in graphical form, with the sizes broken down into costs attributable to claims less 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		
	Number of Claims	Average size (\$ Jun-20)	Change	Number of Claims	Average size (\$ Jun-20)	Change	Number of Claims	Average size (\$ Jun-20)	Change
2010/11	172	182,674		226	76,505		388	124,272	
2011/12	184	146,532	-20%	249	70,217	-8%	413	107,612	-13%
2012/13	254	158,433	8%	242	66,494	-5%	466	119,767	11%
2013/14	281	212,756	34%	222	78,412	18%	496	157,447	31%
2014/15	289	194,821	-8%	191	84,768	8%	466	156,060	-1%
2015/16	288	177,968	-9%	177	93,706	11%	456	149,877	-4%
2016/17	294	165,541	-7%	215	76,207	-19%	500	130,163	-13%
2017/18	242	164,375	-1%	180	100,992	33%	413	140,694	8%
2018/19	232	175,086	7%	177	83,583	-17%	397	139,813	-1%
2019/20	208	178,348	2%	270	77,270	-8%	470	123,067	-12%
2020/21 *	93	161,868	-9%	136	61,361	-21%	229	102,798	-16%

\* 2020/21 shows settlements in the three months to September 2020 only

**Figure 3.16 – Average Size of Lump Sum Settlements**



\* 2020/21 shows settlements in the three months to September 2020 only

The average size of lump sum settlements was just over \$120,000 in 2019/20, the lowest point in the last seven years. This was driven by fewer very large settlements.

We have adopted an average settlement size of \$138,000 (June 2020 values) for lump sum claims in the 2021/22 policy year. This is below our previous selection of \$143,000 (inflated), reflecting the lower average settlement sizes in the last year. We test the sensitivity to this assumption in Section 6.5.

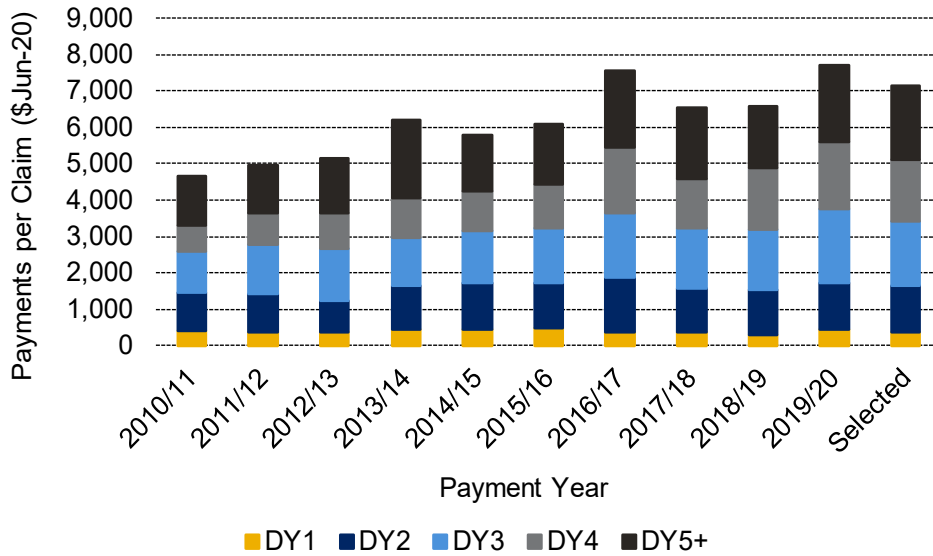
The average lump sum cost for the 2021/22 year for all non-nil claims (not just lump sum claims) is \$19,300. This is marginally lower than in the previous review (\$19,400, inflated).

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

### 3.8 Legal and Investigation

Figure 3.17 shows legal and investigation costs per non-nil claim, along with our adopted average size for the 2021/22 policy year.

**Figure 3.17 – Legal and Investigation Costs per Non-Nil Claim**



Average legal and investigation costs have generally trended upwards since 2010/11, although there are some ups and downs.

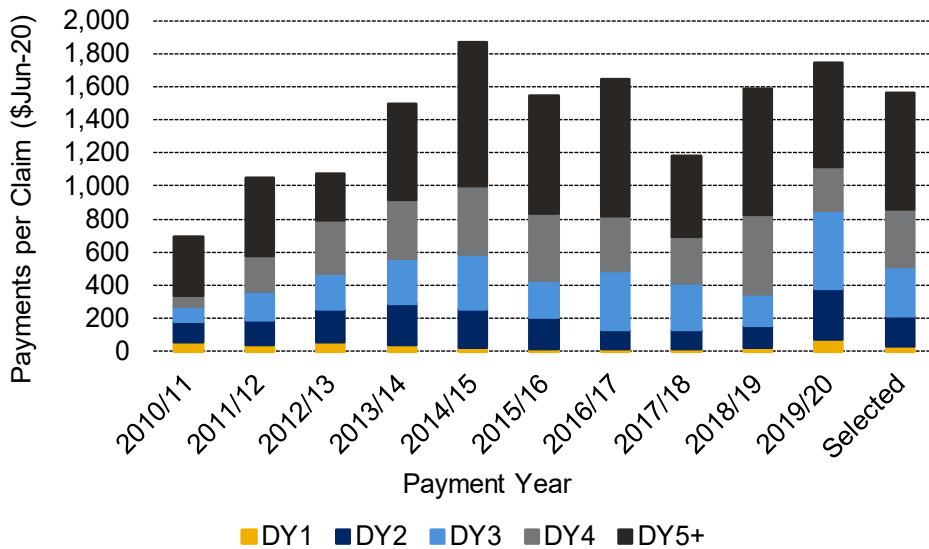
Our selected average claim size for the 2021/22 policy year for legal and investigation costs is \$7,140 per non-nil claim (June 2020 dollars). This is 3.4% higher than the average claim size adopted in the previous review (\$6,900, inflated).

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

### 3.9 Recoveries

Figure 3.18 shows the amount recovered by insurers per non-nil claim, along with our selection for the 2021/22 policy year. Recoveries include recoveries from other insurers (sharing), employers (excess) and other sources.

**Figure 3.18 – Recoveries per Non-Nil Claim**



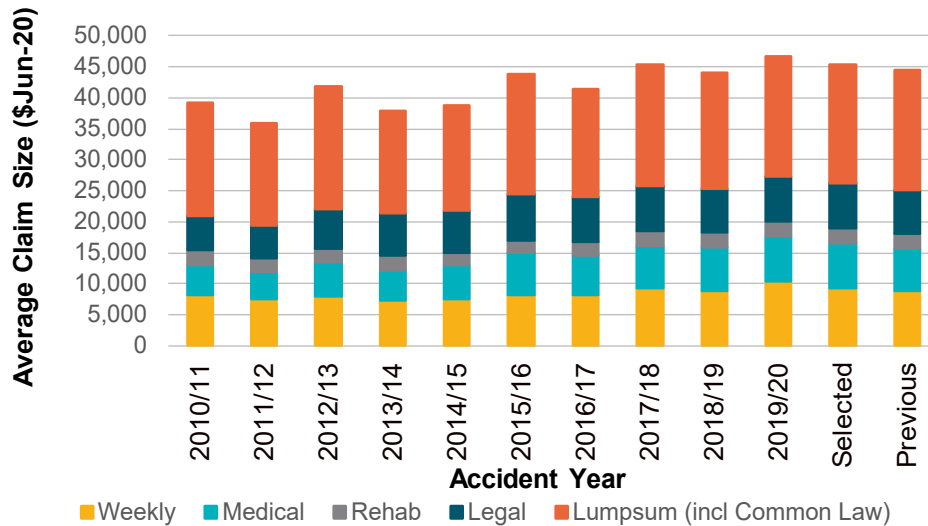
Recovery levels can be variable, but it does appear that there was a step-up in 2013/14 that has largely been sustained. Our selected average size for the 2021/22 policy year is \$1,560 per non-nil claim (June 2020 dollars), which is 5.7% higher than our selection from the previous review (\$1,480, inflated).

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

### 3.10 Overall Average Claim Size

Figure 3.19 summarises the adopted gross average claim sizes for each past accident year, and our selection for the 2021/22 policy year.

Figure 3.19 – Adopted Gross Average Claim Size (per Non-Nil Claim) by Payment Type

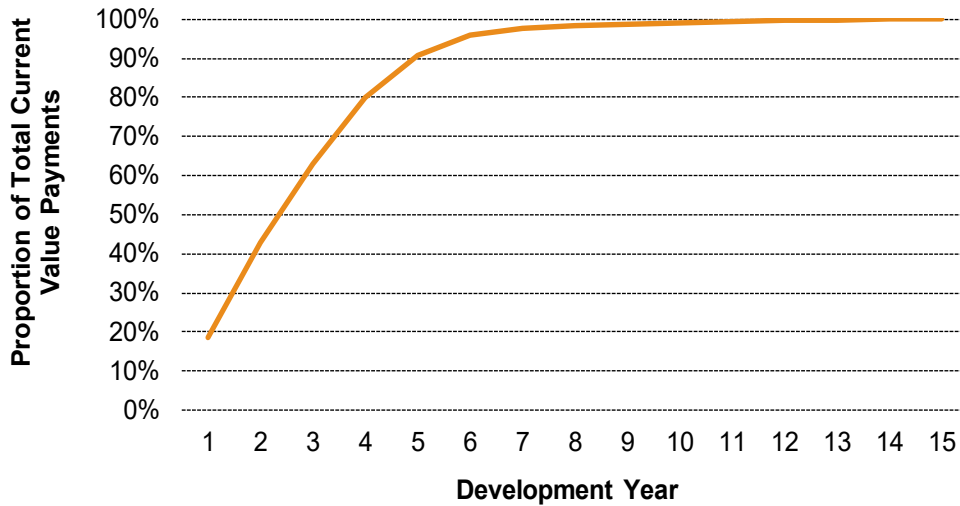


Our selected gross average claim size for the 2021/22 policy year is around \$45,400; after allowing for recoveries, this reduces to about \$43,900. This is 1.9% higher than the selected size in our previous review (\$43,000, inflated), due to the continued above inflationary increases in statutory benefits, partially offset by the benign lump average size experience in recent 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 3.20. Full details of each of the selected payment patterns can be found in Appendix F.

Figure 3.20 – Adopted Net Payment Pattern



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

### 3.12 Summary of Assumptions for 2021/22 Policy Year

Table 3.2 summarises the adopted claim number and average claim size assumptions for estimating reasonable premium rates for the 2021/22 policy year.

Table 3.2 – Claim Assumptions for 2021/22 Policy Year

Payment Type	Number basis	Claim Frequency (per \$m) <sup>1</sup>	Ultimate Non-Nil Claim Numbers	Average Claim Size (\$Jun-20)	Average Cost per Non-Nil Claim (\$Jun-20)
Weekly benefits	Lost time claims	0.18	2,140	14,408	9,233
Medical	Non-nil claims	0.29	3,339	7,270	7,270
Rehabilitation	Non-nil claims	0.29	3,339	2,499	2,499
Lump Sums	Lump Sum claims	0.04	467	137,886	19,304
Legal & Investigation	Non-nil claims	0.29	3,339	7,135	7,135
Recoveries	Non-nil claims	0.29	3,339	(1,564)	(1,564)
<b>Total</b>	<b>Non-nil claims</b>	<b>0.29</b>	<b>3,339</b>		<b>43,878</b>

<sup>1</sup>Per \$ million of wages in \$Jun-20

### 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 2021/22 premium year. We have therefore assumed that our selected average size based on historical payments reflects 25% of the impact this will have on experience for the 2021/22 premium year.



In order to allow for the benefit changes, we have increased our average claim size assumption by 0.76%, from \$43,800 to \$44,200. 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 2021/22 policy year, along with the assumptions adopted in our previous review.

**Table 4.1 – Summary of Economic, Expense and Profit Assumptions**

Assumption	Adopted	Previous
Discount Rate (p.a.) - valuation assumption	0.40%	1.10%
Discount Rate (p.a.) - premium rate assumption	0.75%	0.70%
Wage Inflation (p.a.): 2020/21-2021/22	1.75%	3.00%
Wage Inflation (p.a.): thereafter	2.25%	3.00%
Economic growth (p.a.): 2020/21	-0.25%	1.00%
Economic growth (p.a.): 2021/22	2.75%	1.00%
Superimposed Inflation (p.a.) <sup>1</sup>	4.50%	1.00%
Expenses (% of premium)	24.0%	23.7%
Insurer margin (% of premium)	12.0%	13.5%

<sup>1</sup> 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 at 30 June 2020 (the 'valuation' date) corresponding to the duration of the ACT workers' compensation claim payments.

The discount rate adopted for this review is 0.4% per annum, 0.7% lower than the rate of 1.1% per annum adopted at the previous review.

We also allow for the time value of money when estimating a reasonable premium rate for 2021/22. 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 2020. 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 2021/22 policy year premiums is 0.75% per annum, an increase of 0.7% from the rate used for 2020/2021 premiums. When estimating historical risk premiums, we have used this discount rate so that comparisons made between historical years and the 2021/22 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 (as published by the Reserve Bank of Australia) applicable in each year from 1999 to 2020.

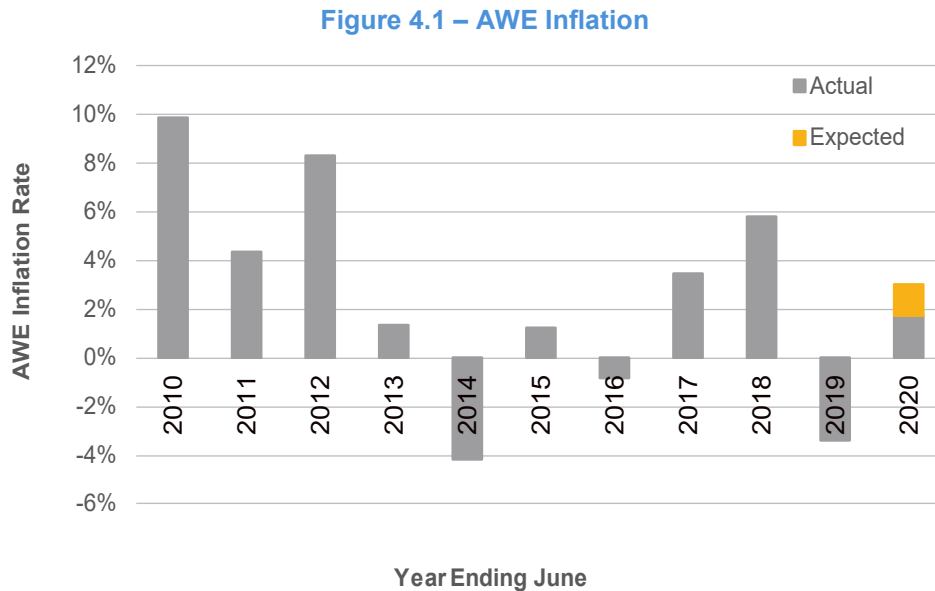
### 4.3 Inflation

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 bar segment shows the wage inflation rate adopted at our previous review.



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 1.0% to 2.25% per annum, with lower rates forecast for shorter durations and higher rates for longer durations. This a reduction from last year, particularly for shorter durations, reflecting the impact of COVID-19 on economic conditions,.

In light of this, we have applied two separate wage inflation assumptions at the current review:

- For wage growth from 2019/20 (the latest point for which we have wages data) to the 2021/22 premium year we have reduced our wage growth assumption from 3.0% to 1.75% per annum
- For claim payment growth beyond this point we have assumed a higher wage inflation of 2.25% per annum, although this is still reduced from our previous assumption of 3.0% per annum.

The implied gap between the discount rate and inflation rate for claim payments of -1.5% per annum (0.75% per annum discount rate less 2.25% per annum inflation rate), compares to -2.3% for our 2020/21 policy year estimates.

### 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:

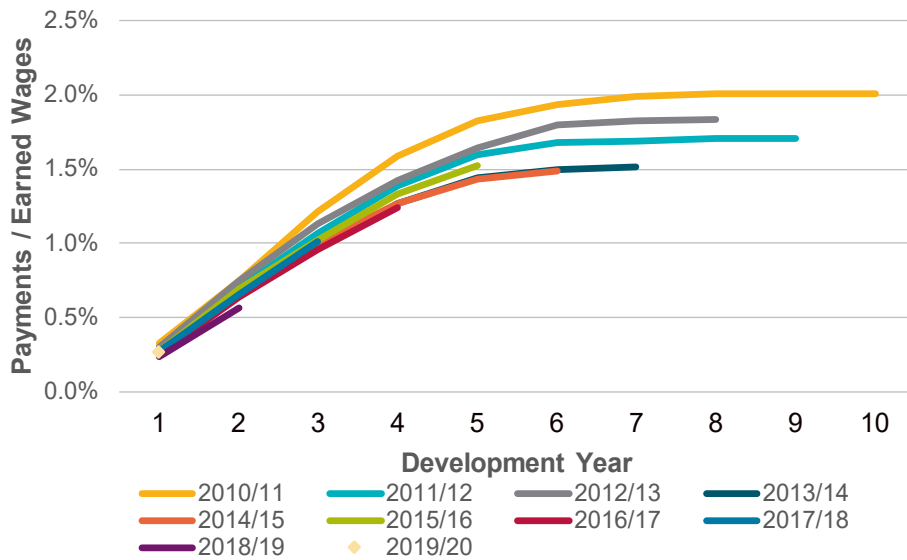
- Changes to the average severity of claims
- Longer periods of payment – for example, in the case of weekly benefits and medical costs
- More claims for particular heads of damage – for example, more claimants seeking lump sum benefits.

We analysed the experience of the ACT workers’ compensation portfolio in order to detect 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 this can be biased towards lower severity claims. As shown in Figure 3.6, the 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. This is shown below in Figure 4.2. If there was no change in average size this would reduce for each accident year in line with the reduction in claim frequency.

**Figure 4.2 – Payments as a Proportion of Earned Wages**



Following the safety review of the Construction industry in 2013/14 there did appear to be a stepwise change in claim payments as a proportion of earned wages. However, between 2013/14 and 2017/18 there has been almost no change in payments as a proportion of earned wages despite sustained reductions in the claim frequency, suggesting that reductions in claim frequency have been matched by average size increases. There is some evidence that for 2018/19 the lower claim frequency is translating to low payments as a proportion of wages.

It is difficult to breakdown the underlying causes for the high growth in average size. Certainly, we expect that some of it is because the reduction in claim frequency may be biased towards lower severity claims; however we would still expect a reduction in the claims cost as a proportion of wages, as some claims are being removed. This suggests that there is an underlying level of superimposed inflation that is not related to the claim frequency reduction.

In light of this analysis, we have made a material increase to our superimposed allowance from 1.0% to 4.5% p.a., which is essentially an offset to the claim frequency reductions observed since 2012/13. However, given the application is a little different from previous years:

- Our claim frequency for the 2021/22 premium year is set close to the 2019/20 accident year. As we do not follow the trend in claim frequency from the 2019/20 accident year to the 2021/22 premium year, we do not apply superimposed inflation to our selected size in June 2020 dollars to the start of the 2021/22 premium year.
- From this point on we apply the superimposed inflation assumption of 4.5% p.a.

This is in contrast to last year where we applied the superimposed inflation assumption of 1.0% p.a. to all future periods. The change in application means the impact on the premium pool of the change in superimposed inflation is not as great as it otherwise would be.

The current application is more tailored to circumstances where most of the average size increase results from a changing injury mix due to frequency reductions; the previous approach was more suitable where there are general above-inflationary size increases.

It is our view that the current approach is the best way to deal with the current situation 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 in the 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 an assumption of -0.25% per annum for 2020/21 and 2.75% for 2021/22, based on market forecasts available to us at the time of this review.

We have previously assumed a single rate of economic growth. However, the expected impact of COVID-19 related shutdowns in 2020/21 have led us to adopt a lower rate of growth in 2020/21; this is followed by a higher rate of economic growth in 2021/22 which assumes a 'bounce back' to normal levels of employment as the economy reopens.

## 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	
	2018/19	2019/20	2019/20	2020/21
AAL	3.3%	3.4%	4.0%	3.5%
IAG	3.3%	3.7%	3.3%	3.3%
QBE	4.0%	3.9%	3.9%	3.8%
SUN	4.5%	4.5%	4.1%	4.1%
ZUR	4.5%	4.6%	4.5%	4.6%
CCI	0.0%	0.0%	0.0%	0.5%
GUI	0.0%	0.0%	0.5%	0.5%
Average <sup>1</sup>	3.6%	3.7%	3.7%	3.6%

<sup>1</sup> Weighted average based on premium volume.

The overall rate of commission/brokerage paid in 2019/20 of 3.7% of premiums is 0.1% higher than the previous year, and a little above the average filed rate of 3.6% for 2020/21. We have allowed for commission/brokerage of 3.60% of premium in our estimated reasonable premium pool for 2021/22, unchanged from our previous assumption.

### 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	2018/19	2019/20	2020/21
AAL	4.8%	4.3%	4.2%
QBE	17.8%	16.4%	18.3%
SUN	13.3%	13.3%	13.3%
IAG	12.4%	16.8%	18.5%
CCI	29.2%	33.1%	31.2%
GUI	25.4%	25.1%	21.9%
ZUR	7.1%	12.5%	13.1%
Average	12.5%	12.9%	13.4%

<sup>1</sup> Weighted average based on premium volume.

Based on the most recent experience, we have adopted an allowance of 13.3% of premium, up from 13.1% at our previous review. This assumption considered the expense rates included in the insurers' filed rates.

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 level of administration expenses.

### Statutory Charges and Levies

Our recommended premium rates also include the following levies for 2021/22:

- **Magistrates Court Levy:** 0.3% of premium, based on the expected collection during 2021/22 as advised by CMTEDD, unchanged from last year
- **Default Insurance Fund (DIF) levy:** 2.8% of premium (decreased from 2.9% last year), as advised by CMTEDD
- **Regulatory Funding Levy (RFL):** 4.00% of premium, up marginally from 3.92% last year.

## Total Expense Loading

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

	Loading (% premium)	Estimated Amount (\$m)
Commission & Brokerage	3.6%	9.5
Administration	13.3%	35.2
<b>Statutory Charges &amp; Levies</b>		
Magistrates Levy	0.3%	0.7
DIF Levy	2.8%	7.4
Regulatory Funding Levy	4.0%	10.6
<b>Total Expense Loading</b>	<b>24.0%</b>	<b>63.4</b>

Our total expense loading is 24.0% of premium, up from 23.7% adopted 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 2021/22 business in each year until the cohort of business 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 0.75% per annum. The duration of these assets is assumed to match the average duration of the technical liabilities (around 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% per annum 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. We have reduced this from 12% at our previous review, reflecting a lower expected return on capital in the current low interest rate environment.

The results of our modelling indicate that, using these assumptions, an appropriate insurer margin for this business is 11% to 13.5% of premium. In determining a reasonable premium pool for the 2021/22 policy year, we have adopted an insurer margin of 12.0% of premium (down from 13.5% at the previous review).

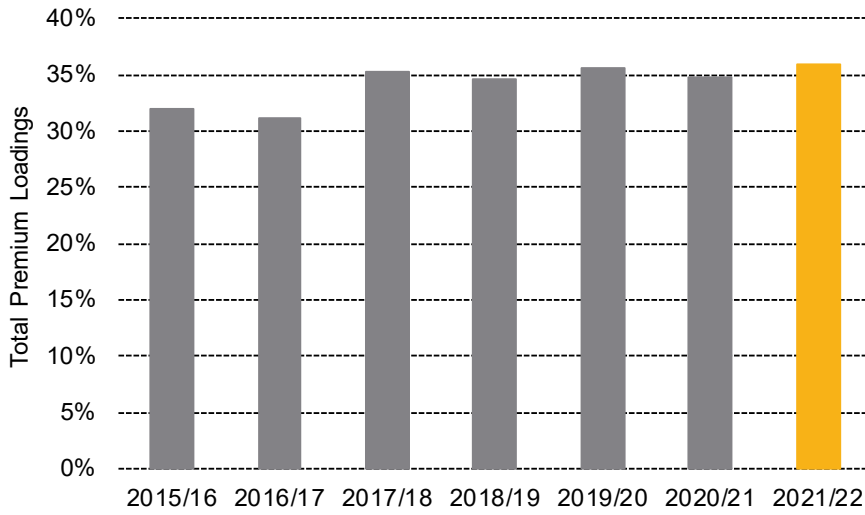
The adopted margin of 12.0% compares to an average margin (weighted by premium volume) of 11.1% of premium adopted in the insurer filed rates for 2020/21.

### 4.7 Overall Loading

We have relied on the insurers' filed rates for deriving our loading assumptions for the 2021/22 premium pool; however (as noted above), the treatment and split of individual expense components is not always

consistent or completely transparent between insurers. In Figure 4.3 we compare the overall loadings implied by insurers' filed rates with what we have assumed for the 2021/22 premium pool.

**Figure 4.3 – Total Premium Loadings**



Our adopted total premium loading of 36.0% compares to an implied loading of 34.8% in insurers' filed rates for 2020/21, with most of difference coming from a higher adopted profit margin in order to achieve the target return on capital.



## 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 2019/20 will be 8% higher than 2018/19. This in line with observed wage growth.
- Insurers as a whole appear to be adequately reserved, given the risk margins they hold.
- The risk premium for the 2019/20 accident year (ultimate claims costs expressed as a proportion of wages) is estimated to be 1.43%.

### 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 2020 and what we estimate to be outstanding at that date.

**Table 5.1 – Estimated Ultimate Cost**

Accident Financial Year	Paid to 30-Jun-20	Estimated Outstanding	Estimated Ultimate Claims Cost <sup>1</sup>	Year-on-Year Change
	\$m	\$m	\$m	%
2007/08	77.0	0.8	77.8	
2008/09	95.9	1.0	96.9	25%
2009/10	115.4	1.3	116.7	20%
2010/11	124.8	1.9	126.7	9%
2011/12	114.8	2.2	117.0	-8%
2012/13	125.7	3.5	129.2	10%
2013/14	105.7	4.2	109.9	-15%
2014/15	109.9	6.4	116.3	6%
2015/16	122.5	13.2	135.8	17%
2016/17	105.7	30.0	135.7	0%
2017/18	94.9	57.2	152.1	12%
2018/19	57.4	92.2	149.7	-2%
2019/20	29.6	132.4	162.1	8%

<sup>1</sup> Net of recoveries, inflated and undiscounted

The ultimate costs shown are inflated to the time of payments 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 5% per annum, which is slightly lower than nominal wage growth over this period. For 2019/20, we estimate that ultimate costs will be 8% higher than 2018/19. This reflects the high level of payments already observed to date for 2019/20 (payments at the end of development year one were 21% higher than for 2018/19) plus exposure growth and inflationary increases beyond this point.

## 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 2020) and the central estimate of insurer reserves (case estimates plus IBNR/ER reserves) at 30 June 2020.

**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)	% Difference
	\$m	\$m	\$m	\$m	\$m	%
Prior	10	3	4	6	-4	-39%
2012/13	3	2	1	3	0	-13%
2013/14	4	2	1	2	-2	-45%
2014/15	6	3	1	4	-2	-30%
2015/16	13	15	2	18	4	34%
2016/17	30	26	6	32	2	6%
2017/18	57	43	14	57	0	1%
2018/19	91	64	34	98	7	7%
2019/20	131	79	60	139	8	6%
<b>Total</b>	<b>347</b>	<b>237</b>	<b>122</b>	<b>360</b>	<b>13</b>	<b>4%</b>

Our central estimate of the outstanding claims liability is \$347 million. Insurer case estimates plus IBNR/ER reserves of \$360 million are \$13 million (4%) higher than our central estimate. We note that we have not attempted to build in any COVID-19 related deterioration in return to work outcomes in our central estimate. To the extent that insurers have done so, this may explain some of the reason for the difference in reserves.

The insurer estimates are considerably lower (in percentage terms) than the Finity estimates for 2014/15 and earlier accident years, although the amounts involved are small.

Insurers are required by APRA to hold a risk margin in addition to their reserves, which we expect would be of the order of around 10% to 15% of the insurer central estimates (around \$30 million to \$40 million overall). On this assumption, the insurer group is adequately reserved.

The above estimate 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

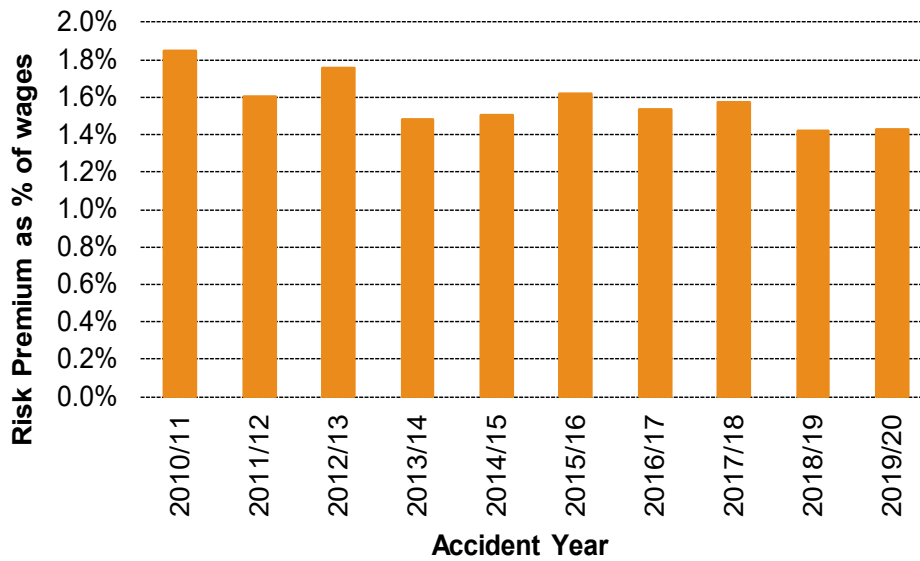
Table 5.3 and Figure 5.1 show our estimates of the historical risk premium rates. Historical risk premiums are calculated from actual past payments plus our latest estimates of outstanding claims. Claims costs are then discounted to the beginning of the accident year and expressed as a proportion of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

**Table 5.3 – Risk Premiums**

Accident Financial Year	Estimated Ultimate Claims Cost <sup>1</sup>	Earned Ultimate Wages	Cost as % of Earned Wages
	\$m	\$m	%
2010/11	114.6	6,213	1.84%
2011/12	107.5	6,717	1.60%
2012/13	120.3	6,867	1.75%
2013/14	103.6	6,997	1.48%
2014/15	110.6	7,378	1.50%
2015/16	129.9	8,025	1.62%
2016/17	130.6	8,520	1.53%
2017/18	147.2	9,371	1.57%
2018/19	145.6	10,260	1.42%
2019/20	158.5	11,086	1.43%

<sup>1</sup> Net of recoveries, inflated and discounted to beginning of accident year

**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 1.42% for that year. Our risk premium estimate of 1.43% for 2019/20 is close to that of 2018/19; although there has been a reduction in claim frequency for 2019/20, we have at this stage not translated that to a reduction in risk premium, as this has not been the case in recent years.

## 6 Premium Pool for 2021/22

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

### Key Findings

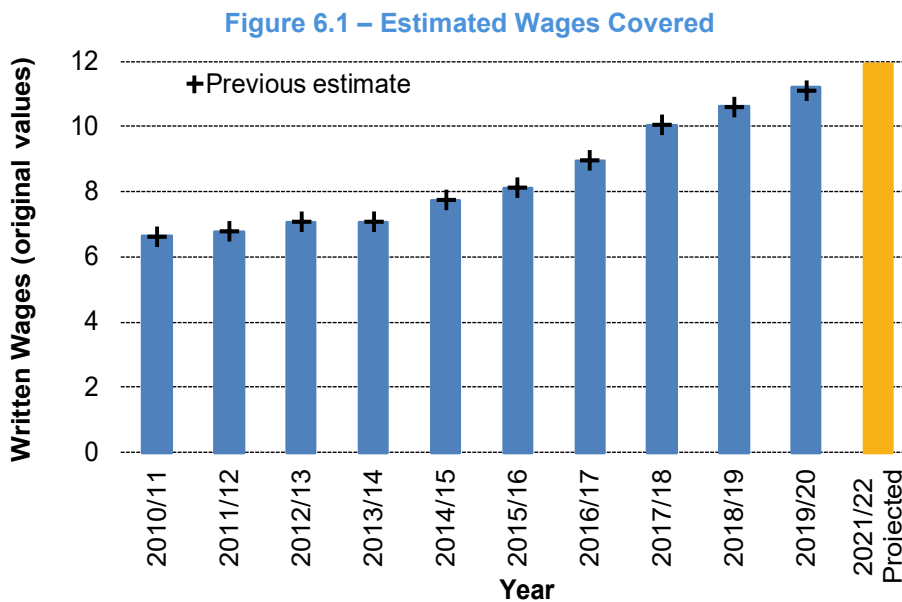
We estimate a reasonable premium rate for the 2021/22 policy year of 2.22% of wages. This is 0.11% lower than last year’s estimate of 2.33% for the 2020/21 policy year (a proportionate decrease of 5%). The 0.11% reduction is made up of a range of offsetting movements:

- Allowance for one year’s superimposed inflation (to 2021/22) – increase of 0.02%
- Claims cost changes – decrease of 0.09%, comprising:
  - ▶ A shift to lower risk/higher wage industries – decrease of 0.02%
  - ▶ Continued reductions in underlying claim frequency – decrease of 0.05%
  - ▶ Changes in claim size – decrease of 0.01%
- Economic assumptions (including superimposed inflation) – increase of 0.01%
- Changes in expenses and levies – decrease of 0.04%.

### 6.1 Wages

We have adopted wage inflation of 1.75% per annum between 2019/20 and 2021/22 and employment growth of -0.25% per annum in 2020/21 and 2.75% per annum in 2021/22. The assumptions are discussed in Section 4.

We project written wages of around \$11.9 billion in the 2021/22 policy year, as shown in Figure 6.1.



Written wages in 2019/20 were a little higher than estimated at our previous review.

## 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 2021/22 policy year are:

- 15 September 2021 – average renewal date, and average premium receipt date
- 15 March 2022 – average accident date, and average date of first year's claim payments
- 15 March 2023 – average date of second year's claim payments, etc.

As we have selected our average claim size in June 2020 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 2021.

## 6.3 Reasonable Premium Pool

The total Scheme risk premium for 2021/22 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 results in a risk premium of \$169.4 million, or 1.42% of wages, close to the risk premium for 2019/20 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 2021/22 is \$264.6 million. Table 6.1 shows the breakdown into its components.

**Table 6.1 – Total Premium Pool**

Premium Rate Component	\$m
Risk Premium Pool	169.4
Expense Loading	63.4
Profit Loading	31.7
Total Premium Pool	264.6
Wages Estimate	11,903.4
Average Risk Premium (% wages)	1.42%
Average Premium Rate (% wages)	2.22%

The estimated reasonable average premium rate for the 2021/22 policy year is 2.22% of wages. This compares to last year's estimate for 2020/21 of 2.33%.

## 6.4 Comparison with 2020/21 Premium Rate

The reasonable premium rate has decreased by 0.11% of wages. Table 6.2 breaks the movement down.

**Table 6.2 – Movement in Reasonable Premium Rate**

	Average Premium Rate	Increase/ Decrease (% wages)
Last year's suggested rate for 2020/21	2.33%	
Project to 2021/22 - 1 yr of superimposed inflation	2.35%	0.02%
Industry mix impact	2.33%	-0.02%
Change in underlying frequency	2.27%	-0.05%
Change in average size assumption	2.26%	-0.01%
Change in wage inflation assumption	2.20%	-0.06%
Change in superimposed inflation assumption	2.27%	0.07%
Change in other economic assumptions	2.27%	0.00%
Change in levies, loadings and margin	2.22%	-0.04%
<b>Total Change - this year's suggestion for 2021/22</b>	<b>2.22%</b>	<b>-0.11%</b>

Allowing for one year's superimposed inflation (to 2021/22) increases the reasonable rate from 2.33% to 2.35%. Other changes in the reasonable rate are:

- **Claims cost assumptions – decrease of 0.09%**
  - ▶ There has been a shift towards lower risk industries, reducing the reasonable rate by 0.02%
  - ▶ The underlying claim frequency continued to reduce in 2019/20, and future claim frequency assumptions have been revised accordingly, reducing the reasonable rate by 0.05%
  - ▶ Average size assumptions have reduced, reducing the reasonable premium rate by 0.01%. We note that this average size reduction is based on expected inflation over the year, while in Section 3.10 we compare our current average size to the average size from the previous review adjusted for actual inflation.
- **Economic assumptions – increase of 0.01%**
  - ▶ We have reduced our wage inflation assumption from 3.0% per annum to 2.25% per annum, reflecting low inflation forecasts due to COVID-19, reducing the reasonable rate by 0.06%
  - ▶ We have increased our superimposed assumption from 1.0% per annum to 4.5% per annum, increasing the reasonable rate by 0.07%. We note that for a number of years there has been a shift towards lower risk industries and an underlying frequency improvement that has to date had little impact of the risk premium. We therefore view this increase as an offset to the industry mix and underlying frequency reductions.
- **Expenses and levies – decrease of 0.04%**
  - ▶ We have marginally increased administration expenses, increasing the reasonable rate by 0.01%
  - ▶ In the current low interest environment, we have reduced the target return on capital from 12% to 10%, leading to a reduction in the profit margin from 13.5% to 12.0%, which reduces the reasonable rate by 0.05%.

Other changes had minor impacts on the premium rate.

## 6.5 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 below. Note that the scenarios tested do not indicate the full range of possible outcomes. Each scenario is independent of the others shown.

**Table 6.3 – Sensitivity Analysis**

Scenario	Best		Premium Rate	Difference	Difference as Proportion
	Estimate Value	Sensitivity Assumption			
Base Case			2.22%		
Claim frequency up 10%	0.285	0.314	2.44%	0.22%	10%
Average claim size up 10%	43,878	48,266	2.44%	0.22%	10%
Lump sum numbers up 10%	467	514	2.33%	0.10%	5%
Lump sum average size up 10%	137,886	151,674	2.33%	0.10%	5%
Discount rate up 1% p.a.	0.75%	1.75%	2.16%	-0.06%	-3%
Superimposed inflation at 5.5% p.a.	4.5%	2.0%	2.26%	0.04%	2%
Expense loadings up 1%	24.0%	25.0%	2.26%	0.04%	2%
Insurer margins up 1%	12.0%	13.0%	2.26%	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% per annum increase in the risk-free discount rate would result in a 3% reduction in our estimate of the average premium rate
- An increase in the superimposed inflation rate to 5.5% per annum (applied from 2021/22, 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 the range of ANZSIC Classes shows considerable variation, with our reasonable rates falling in the range 0.27% to 16.64% of wages
- We typically cap relativity movements at 15% (prior to mix changes) to minimise volatility in rates. However, at the current review, we have relaxed this capping for Division B (Mining) as the technical, insurer and observed relativity were all in close alignment and materially lower than the previous relativity (which itself was restricted due to capping of movements).

### 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 relativities – average for latest three years
- Observed capped claims cost relativities – average for latest 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 shown above to determine the ANZSIC premium rates:

1. Average risk premium for Scheme = 1.42% of wages (see Section 6.3)
2. Suggested relativity for ANZSIC 7000 = 14 (see Appendix H)
3. Average risk premium for ANZSIC 7000 = 0.2%  
 $[1.42\% * 14/100]$
4. Average premium rate for ANZSIC 7000 = 0.31% of wages  
 $[(0.2\%)/(1 - 24.0\% - 12\%) * 1 \text{ which is } (avg \text{ risk premium for } 7000)/(1 - expenses \text{ as } \% \text{ of premium} - insurer \text{ margin}) * scaling \text{ factor}]$

The scaling factor (1.00 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 16.64% of wages.



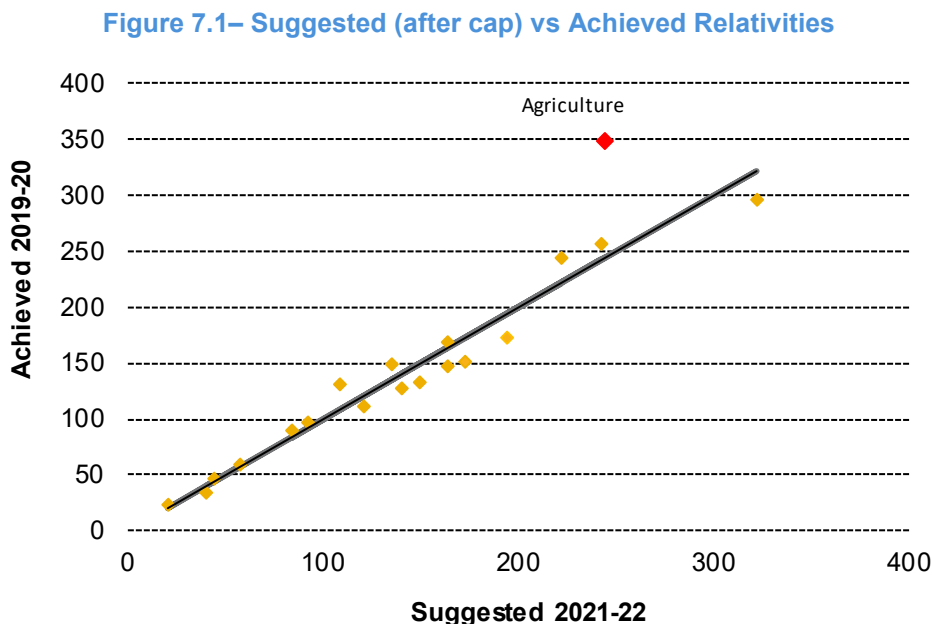
The rates shown in Appendix H are indicative of the average rates that we consider to be appropriate for the employers at ANZSIC Class level, consistent with a target average rate of 2.22% of wages overall. The actual rates charged by insurers to individual employers would be expected to differ from 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 the 15% cap on movement is applied) of the 2021/22 reasonable rates with the relativities of licensed insurers’ achieved rates for 2019/20. Each point on the graph represents one of the 19 ANZSIC Divisions.

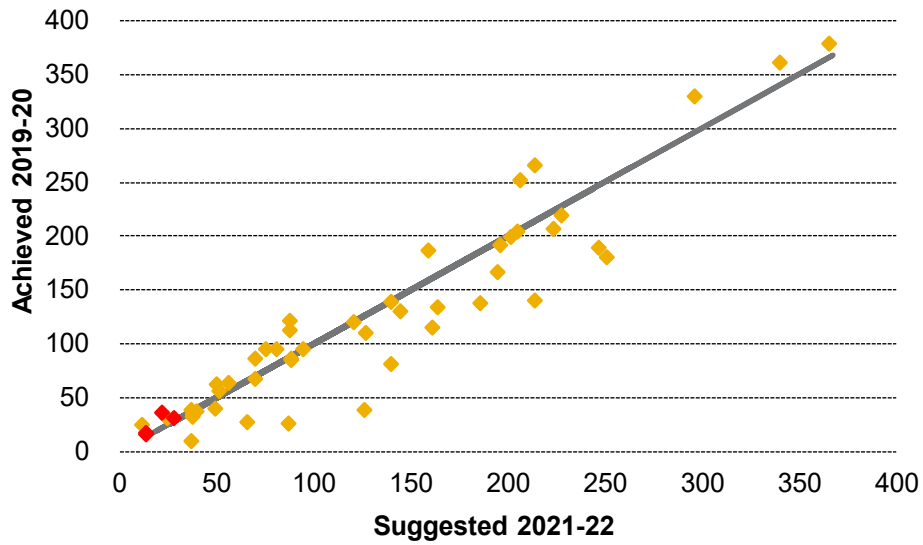
The 45-degree line indicates where suggested relativities are equal to the achieved relativities. A point above the 45-degree line indicates our suggested relativity is lower than the achieved relativity, and for points below the line our suggested relativity is higher than the achieved relativity.



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 2019/20 and can be subject to year on year volatility in their achieved rates. In addition, it is possible insurers use experience from other states that have more exposure to set their rates for this industry, while we are limited by 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 2019/20).

**Figure 7.2 – Suggested (after cap) vs Achieved Relativities – Top 50 ANZSIC Classes**



The largest four ANZSIC Classes (shown in red) make up 33% of ACT private sector wages, and each of these has a suggested relativity that is slightly lower than the achieved relativity. This suggests that these classes are generally cross-subsidising higher risk ANZSICs.

## Part III Further Information

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### 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 2020
- Claim payment transaction file with payments made (by type and month) between 1 July 1999 and October 2020
- Individual policy files, with the ANZSIC Division and insurer codes for each policy written or renewed between 1 July 1999 and October 2020.

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 2020
- Case estimates and IBNR/ER allowances as at 30 June 2020.

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 17% lower 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 post-2014 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 post-2014 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.

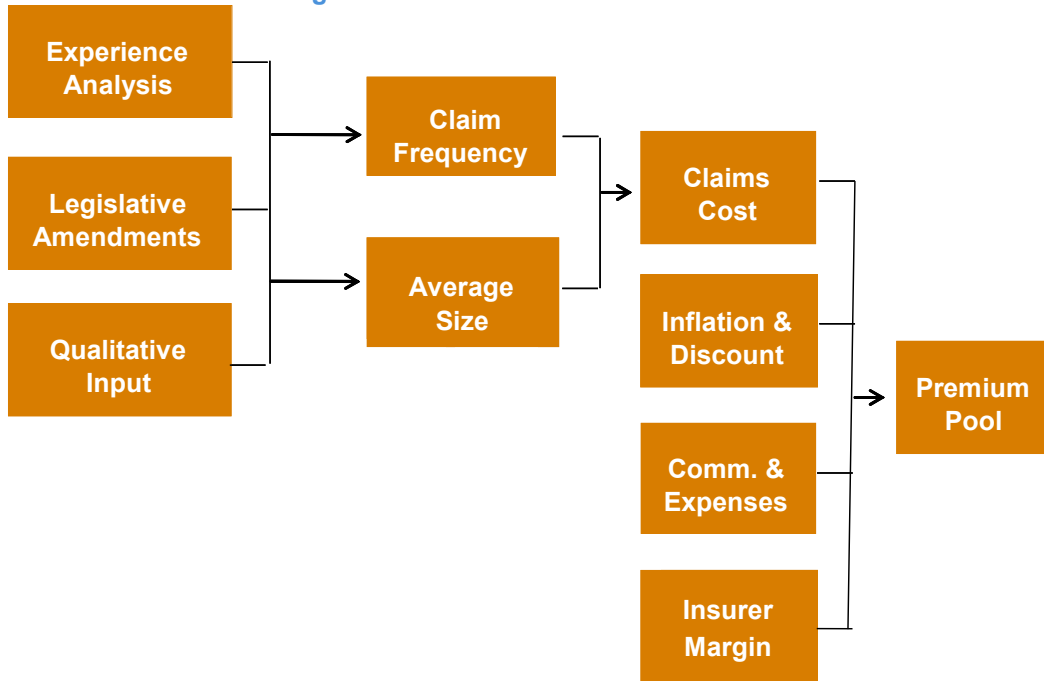
From each of the above models we estimate the average payment, by payment type and development year. The overall average claim size for each accident year is the result of adding our estimated payments for each payment type and dividing by the projected ultimate number of claims.

## 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; claim frequency predictions are provided at the ANZSIC Class level, while average size is only modelled to the ANZSIC Group level due to the greater volatility in size observations. 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 two 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. We have maintained this cap for movements greater than 15% except for ANZSIC classes in Division B Mining, where the estimated relativities and experience is consistently below our relativities adopted under the previous 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 B.

### 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 by the known and potential future impacts of COVID-19. With Australia set to begin vaccinations soon, the likelihood of additional waves of infection and subsequent shutdowns (potentially affecting wages and exposure for 2021/22) is reduced, although many uncertainties remain. However, even if further shutdowns are avoided it is likely that economic conditions will remain subdued. The actual impacts of COVID-19 on claim outcomes and future wages may be materially different from what we have assumed.

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 1.1 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 +	* 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); <b>or</b> * Maximum of either 65% of average pre-incapacity weekly earnings and the statutory floor.	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.

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 2019, CPI indexed to approximately \$766).

### 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 \$575,000. In addition, dependants may be entitled to receive weekly payments of approximately \$158 per week and funeral expenses of around \$12,500.

### 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 \$153,000 as of July 2020) for a single injury or \$150,000 (CPI indexed to approximately \$230,000 as of July 2020) 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 November 2020, 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 November 2020, 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 November 2020, 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 November 2020, 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 2020, 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 2020. 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 2020. 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 2020, and by ANZSIC Division. Insurers provided adjusted earned wages
- Earned premium for accident years ending 30 June 2004 to 30 June 2020, 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 2020, 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 two 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 2019 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
2009/10	3,439	3,438	1	0%	115.3	115.3	0.0	0%
2010/11	3,624	3,626	-2	0%	124.7	124.7	0.0	0%
2011/12	3,597	3,601	-4	0%	114.6	114.6	0.0	0%
2012/13	3,390	3,392	-2	0%	125.3	125.3	0.0	0%
2013/14	3,156	3,160	-4	0%	104.4	104.4	0.0	0%
2014/15	3,241	3,242	-1	0%	105.7	105.7	0.0	0%
2015/16	3,284	3,284	0	0%	106.5	106.4	0.0	0%
2016/17	3,323	3,322	1	0%	81.6	81.6	0.0	0%
2017/18	3,313	3,308	5	0%	61.1	61.1	0.0	0%
2018/19	3,013	3,004	9	0%	24.4	24.4	0.0	0%
<b>Total</b>	<b>33,380</b>	<b>33,377</b>	<b>3</b>	<b>0%</b>	<b>963.6</b>	<b>963.5</b>	<b>0.0</b>	<b>0%</b>

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
2009/10	3,439	3,426	13	0%
2010/11	3,625	3,601	24	1%
2011/12	3,599	3,576	23	1%
2012/13	3,392	3,362	30	1%
2013/14	3,157	3,137	20	1%
2014/15	3,242	3,250	-8	0%
2015/16	3,291	3,275	16	0%
2016/17	3,340	3,312	28	1%
2017/18	3,324	3,339	-15	0%
2018/19	3,241	3,243	-2	0%
2019/20	2,929	2,972	-43	-1%

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 Data	Insurer Data	Difference	Difference
	\$000	\$000	\$000	%
2009/10	89,665	89,173	492	1%
2010/11	97,130	96,086	1,045	1%
2011/12	101,714	99,595	2,119	2%
2012/13	122,348	118,853	3,495	3%
2013/14	139,534	136,318	3,217	2%
2014/15	126,240	126,916	-676	-1%
2015/16	119,691	123,505	-3,814	-3%
2016/17	129,273	131,192	-1,920	-1%
2017/18	129,662	131,369	-1,707	-1%
2018/19	131,747	134,974	-3,227	-2%
2019/20	143,289	145,267	-1,978	-1%

Differences in payments between the insurer data and WCMS database between 2005/06 to 2019/20 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 Data	Insurer Data	Difference	Difference
	\$000	\$000	\$000	%
Prior	40,221	2,182	38,039	1743%
2010/11	15,422	142	15,280	10760%
2011/12	19,012	347	18,665	5371%
2012/13	24,347	1,243	23,104	1859%
2013/14	4,735	2,169	2,566	118%
2014/15	9,277	2,227	7,050	317%
2015/16	16,685	4,609	12,076	262%
2016/17	18,427	25,396	-6,969	-27%
2017/18	32,437	29,028	3,410	12%
2018/19	53,301	61,646	-8,346	-14%
2019/20	76,657	85,009	-8,352	-10%

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 Data	Insurer Data	Difference	Difference
	\$000	\$000	\$000	%
Prior	1,809	2,182	-373	-17%
2010/11	434	142	292	206%
2011/12	492	347	144	42%
2012/13	2,297	1,243	1,054	85%
2013/14	1,830	2,169	-339	-16%
2014/15	5,678	2,227	3,451	155%
2015/16	12,954	4,609	8,344	181%
2016/17	14,526	25,396	-10,870	-43%
2017/18	30,116	29,028	1,088	4%
2018/19	52,122	61,646	-9,524	-15%
2019/20	76,506	85,009	-8,503	-10%

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 claims 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 post-2015 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	Insurer	Difference	Difference	WCMS	Insurer	Difference	Difference	WCMS	Insurer	Difference	Difference
	Data	Data			Data	Data			Data	Data		
	\$m	\$m	\$m	%	\$m	\$m	\$m	%	%	%	%	%
2008/09	5,596	5,751	-155	-3%	146	145	1	1%				
2009/10	5,751	5,902	-151	-3%	150	143	8	5%	2.62%	2.42%	0.20%	8%
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	8,239	8,110	128	2%	168	164	3	2%	2.04%	2.03%	0.01%	1%
2016/17	8,944	8,944	0	0%	179	177	2	1%	2.00%	1.97%	0.02%	1%
2017/18	9,369	10,020	-651	-6%	183	190	-7	-3%	1.96%	1.89%	0.06%	3%
2018/19	10,505	10,622	-117	-1%	200	206	-6	-3%	1.91%	1.94%	-0.03%	-2%
2019/20	10,955	11,132	-177	-2%	213	217	-4	-2%	1.95%	1.95%	-0.01%	0%

There 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:

- (i) Estimate the ultimate number of claims incurred in each accident year by using the Chain Ladder method.
- (ii) 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.
- (iii) 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.
- (iv) 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.
- (v) 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:

- (i) 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.
- (ii) 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.
- (iii) 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.
- (iv) 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.
- (v) 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

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	
2012/13	1,667	2,121	2,154	2,160	2,161	2,163	2,163	2,163	2,163
2013/14	1,521	1,944	1,968	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
2015/16	1,561	2,040	2,065	2,073	2,077				2,077
2016/17	1,554	2,053	2,087	2,101					2,101
2017/18	1,551	2,070	2,120						2,120
2018/19	1,549	2,032							2,032
2019/20	1,545								1,545

## 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
2012/13	1.2723	1.0156	1.0028	1.0005	1.0009	1.0000	1.0000
2013/14	1.2781	1.0123	1.0025	1.0000	1.0000	1.0000	
2014/15	1.2963	1.0117	1.0035	1.0010	1.0000		
2015/16	1.3069	1.0123	1.0039	1.0019			
2016/17	1.3211	1.0166	1.0067				
2017/18	1.3346	1.0242					
2018/19	1.3118						
2019/20							

## E2.3 Selected Chain Ladder Factors

Development Year (of first Weekly Benefit Payment)	Selected Chain Ladder Factors						
	1:2	2:3	3:4	4:5	5:6	6:7	Tail
Jun-20 Selected	1.3200	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		
2012/13	1,667	454	33	6	1	2	0	0	0	2,163
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	1	0	0	0	2,078
2016/17	1,554	499	34	14	2	1	0	0	0	2,104
2017/18	1,551	519	50	10	2	1	0	0	0	2,133
2018/19	1,549	483	37	9	2	1	0	0	0	2,081
2019/20	1,545	494	37	9	2	1	0	0	0	2,089

# 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
2012/13	3,392	0	3,392	2,163	0	2,163
2013/14	3,154	2	3,156	1,973	0	1,973
2014/15	3,237	4	3,241	1,992	0	1,992
2015/16	3,284	8	3,292	2,077	1	2,078
2016/17	3,331	13	3,344	2,103	1	2,104
2017/18	3,325	25	3,350	2,124	9	2,133
2018/19	3,238	42	3,280	2,047	34	2,081
2019/20	3,073	134	3,207	1,860	229	2,089

## 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	
2012/13	9	119	261	343	409	433	436	440
2013/14	11	106	228	335	385	398	408	408
2014/15	9	99	237	329	380	400		400
2015/16	11	122	243	335	407			407
2016/17	10	105	242	352				352
2017/18	10	102	247					247
2018/19	10	97						97
2019/20	23							23

### 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
2012/13	13.2222	2.1933	1.3142	1.1924	1.0587	1.0069	1.0092
2013/14	9.6364	2.1509	1.4693	1.1493	1.0338	1.0251	
2014/15	11.0000	2.3939	1.3882	1.1550	1.0526		
2015/16	11.0909	1.9918	1.3786	1.2149			
2016/17	10.5000	2.3048	1.4545				
2017/18	10.2000	2.4216					
2018/19	9.7000						
2019/20							

### E4.3 Selected Chain Ladder Factors

Development Year (of first Common Law Payment)	Selected Chain Ladder Factors						
	1:2	2:3	3:4	4:5	5:6	6:7	Tail
Jun-20 Selected	10.3000	2.3000	1.4100	1.1600	1.0550	1.0180	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		
2012/13	9	110	142	82	66	24	3	4	12	452
2013/14	11	95	122	107	50	13	10	5	11	424
2014/15	9	90	138	92	51	20	7	5	11	423
2015/16	11	111	121	92	72	22	8	5	12	454
2016/17	10	95	137	110	56	22	8	5	12	455
2017/18	10	92	145	101	56	22	8	5	12	451
2018/19	10	87	143	103	57	23	8	5	12	448
2019/20	23	94	135	98	54	22	7	5	11	449

## **F Claim Size Analysis**

# ACT Workers' Compensation Scheme Review

Weekly Benefits  
PPCI Model

## F1.1 Incremental Inflated Payments (\$000 Jun-20)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2012/13	9,429	10,935	4,058	1,347	626	229	182	311	27,117	9,429
2013/14	8,510	8,970	3,066	1,502	410	333	93		22,884	19,446
2014/15	8,605	9,931	3,577	1,323	414	160			24,010	21,633
2015/16	10,051	10,187	3,511	1,603	922				26,274	23,872
2016/17	9,528	11,260	3,562	2,330					26,680	26,493
2017/18	11,230	11,928	5,150						28,308	28,015
2018/19	10,378	12,393							22,771	29,127
2019/20	14,215								14,215	34,651

## F1.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2012/13	4,359	5,056	1,876	623	289	106	84	144
2013/14	4,313	4,546	1,554	761	208	169	47	
2014/15	4,319	4,985	1,795	664	208	80		
2015/16	4,836	4,902	1,689	771	444			
2016/17	4,528	5,351	1,693	1,107				
2017/18	5,265	5,592	2,415					
2018/19	4,986	5,955						
2019/20	6,805							

## F1.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-20 Selected	5,400	5,800	1,900	830	260	97	43	32	45

## 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
2012/13	9,220	10,176	3,786	1,266	587	227	184	307	108	25,861	108
2013/14	7,848	8,367	2,882	1,409	401	338	91	66	105	21,507	171
2014/15	8,039	9,338	3,359	1,302	420	157	89	71	113	22,888	274
2015/16	9,409	9,557	3,451	1,624	903	209	99	79	126	25,458	514
2016/17	9,028	11,055	3,614	2,283	565	226	107	86	136	27,102	1,121
2017/18	11,185	12,128	5,044	1,829	612	244	116	93	148	31,399	3,042
2018/19	10,437	12,129	4,086	1,905	637	255	121	97	154	29,819	7,254
2019/20	14,001	12,517	4,377	2,041	683	273	129	104	165	34,290	20,289

## ACT Workers' Compensation Scheme Review

Medical & Related Costs (excl. rehab)  
PPCI Model

### F2.1 Incremental Inflated Payments (\$000 Jun-20)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2012/13	7,631	7,705	1,897	592	397	161	100	32	18,516	7,631
2013/14	6,847	6,232	1,319	496	285	93	32		15,305	14,552
2014/15	8,147	6,893	1,779	591	256	45			17,712	16,277
2015/16	8,270	8,238	3,115	1,394	1,139				22,155	17,609
2016/17	8,805	7,636	2,307	1,397					20,145	19,112
2017/18	9,267	8,770	2,475						20,512	20,247
2018/19	9,470	8,406							17,876	22,394
2019/20	10,683								10,683	23,071

### F2.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2012/13	2,250	2,271	559	175	117	47	30	10
2013/14	2,170	1,975	418	157	90	30	10	
2014/15	2,514	2,127	549	182	79	14		
2015/16	2,512	2,502	946	423	346			
2016/17	2,633	2,283	690	418				
2017/18	2,767	2,618	739					
2018/19	2,887	2,563						
2019/20	3,331							

### F2.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-20 Selected	3,300	2,600	750	400	160	34	11	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
2012/13	7,454	7,181	1,769	557	374	157	101	32	29	17,655	29
2013/14	6,319	5,811	1,241	466	280	95	31	47	29	14,319	76
2014/15	7,611	6,484	1,669	581	260	44	37	28	32	16,746	97
2015/16	7,745	7,725	3,052	1,411	1,117	198	41	30	34	21,353	303
2016/17	8,332	7,477	2,342	1,368	553	124	44	33	37	20,309	791
2017/18	9,216	8,917	2,422	1,384	591	132	47	35	40	22,785	2,230
2018/19	9,544	8,219	2,542	1,447	618	138	49	37	42	22,635	4,872
2019/20	10,503	8,615	2,653	1,510	645	144	51	38	44	24,203	13,701

# ACT Workers' Compensation Scheme Review

Rehabilitation  
PPCI Model

## F3.1 Incremental Inflated Payments (\$000 Jun-20)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2012/13	2,983	3,398	876	207	80	28	20	12	7,603	2,983
2013/14	3,331	3,091	637	229	69	22	0		7,378	6,729
2014/15	3,082	2,714	692	180	57	7			6,732	7,048
2015/16	2,629	3,157	711	236	78				6,812	6,537
2016/17	2,978	3,527	841	346					7,692	7,506
2017/18	3,341	3,758	978						8,078	7,985
2018/19	3,111	3,590							6,701	8,155
2019/20	3,386								3,386	8,319

## F3.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2012/13	879	1,002	258	61	23	8	6	3
2013/14	1,056	979	202	72	22	7	0	
2014/15	951	837	213	55	18	2		
2015/16	799	959	216	72	24			
2016/17	891	1,055	251	103				
2017/18	997	1,122	292					
2018/19	949	1,095						
2019/20	1,056							

## F3.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-20 Selected	1,000	1,120	260	75	25	8	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
2012/13	2,916	3,167	817	195	75	27	20	11	13	7,241	13
2013/14	3,071	2,882	599	215	67	22	0	10	13	6,880	23
2014/15	2,880	2,553	649	176	58	7	13	11	14	6,361	38
2015/16	2,461	2,957	697	239	77	27	15	12	16	6,501	69
2016/17	2,821	3,453	855	339	86	30	16	13	17	7,630	161
2017/18	3,328	3,826	958	260	92	32	17	13	18	8,544	432
2018/19	3,129	3,510	881	272	97	33	18	14	19	7,972	1,333
2019/20	3,331	3,711	920	284	101	34	18	15	20	8,434	5,102

# ACT Workers' Compensation Scheme Review

Legal & Investigation Costs  
PPCI Model

## F4.1 Incremental Inflated Payments (\$000 Jun-20)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2012/13	1,251	4,084	4,853	4,062	3,944	2,113	478	135	20,920	1,251
2013/14	1,450	3,945	4,772	5,682	3,243	1,362	587		21,041	5,535
2014/15	1,487	4,004	5,705	4,453	3,181	1,699			20,529	10,285
2015/16	1,589	5,018	5,352	5,557	4,313				21,829	14,032
2016/17	1,194	4,077	5,577	6,077					16,924	20,602
2017/18	1,224	4,116	6,814						12,155	20,687
2018/19	969	4,187							5,157	21,759
2019/20	1,483								1,483	20,983

## F4.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2012/13	369	1,204	1,431	1,198	1,163	623	141	40
2013/14	460	1,250	1,512	1,801	1,028	431	186	
2014/15	459	1,235	1,760	1,374	981	524		
2015/16	483	1,524	1,626	1,688	1,310			
2016/17	357	1,219	1,668	1,817				
2017/18	366	1,229	2,034					
2018/19	295	1,277						
2019/20	463							

## F4.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-20 Selected	387	1,270	1,770	1,700	1,150	520	155	55	128

## 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
2012/13	1,224	3,786	4,530	3,812	3,704	2,065	484	133	541	20,278	541
2013/14	1,338	3,683	4,479	5,354	3,185	1,387	573	189	537	20,725	726
2014/15	1,389	3,758	5,366	4,384	3,225	1,668	518	197	589	21,093	1,304
2015/16	1,486	4,730	5,286	5,618	4,223	1,769	562	213	639	24,525	3,183
2016/17	1,132	4,025	5,641	5,966	3,974	1,918	610	231	693	24,189	7,425
2017/18	1,225	4,152	6,680	5,884	4,249	2,051	652	247	741	25,880	13,823
2018/19	974	4,113	5,998	6,150	4,441	2,144	681	258	774	25,533	20,447
2019/20	1,465	4,208	6,261	6,419	4,635	2,238	711	270	808	27,015	25,550



# ACT Workers' Compensation Scheme Review

Recoveries  
PPCI Model

## F5.1 Incremental Inflated Payments (\$000 Jun-20)

Accident Year	Development Year (of Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2012/13	-204	-832	-1,135	-1,377	-960	-579	-203	-137	-5,426	-204
2013/14	-126	-737	-712	-1,026	-428	-505	-291		-3,826	-958
2014/15	-70	-618	-1,168	-918	-1,565	-225			-4,563	-1,942
2015/16	-41	-392	-919	-1,560	-1,413				-4,325	-2,744
2016/17	-38	-378	-636	-887					-1,939	-3,570
2017/18	-58	-463	-1,566						-2,087	-2,997
2018/19	-67	-999							-1,066	-4,326
2019/20	-243								-243	-4,348

## F5.2 Inflated Payment Per Claim Incurred

Accident Year	Development Year (of Payment)							
	1	2	3	4	5	6	7	8
2012/13	-60	-245	-335	-406	-283	-171	-60	-40
2013/14	-40	-234	-226	-325	-136	-160	-92	
2014/15	-21	-191	-360	-283	-483	-70		
2015/16	-12	-119	-279	-474	-429			
2016/17	-11	-113	-190	-265				
2017/18	-17	-138	-467					
2018/19	-21	-305						
2019/20	-76							

## F5.3 Selected Payments per Claim Incurred

	Development Year (of Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-20 Selected	-35	-175	-300	-350	-270	-181	-103	-62	-88

## F5.4 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
2012/13	-200	-768	-1,060	-1,286	-905	-577	-205	-133	-332	-5,465	-332
2013/14	-116	-688	-670	-964	-416	-511	-286	-202	-330	-4,182	-531
2014/15	-65	-579	-1,098	-903	-1,596	-220	-346	-221	-361	-5,389	-928
2015/16	-38	-369	-899	-1,588	-1,386	-614	-375	-240	-392	-5,900	-1,621
2016/17	-36	-375	-646	-872	-933	-666	-406	-260	-425	-4,619	-2,691
2017/18	-58	-468	-1,541	-1,211	-998	-712	-435	-278	-454	-6,156	-4,088
2018/19	-68	-982	-1,017	-1,266	-1,043	-745	-454	-291	-475	-6,340	-5,290
2019/20	-240	-580	-1,061	-1,322	-1,088	-777	-474	-304	-496	-6,342	-6,101

## 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	
2012/13	4	85	134	104	78	24	7	2	438
2013/14	7	76	134	111	51	18	11		408
2014/15	8	78	133	102	55	23			399
2015/16	9	102	117	97	80				405
2016/17	6	85	131	119					341
2017/18	6	70	145						221
2018/19	7	70							77
2019/20	9								9

### 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
2012/13	0.9%	18.8%	29.7%	23.0%	17.3%	5.3%	1.6%	0.4%
2013/14	1.7%	17.9%	31.6%	26.2%	12.0%	4.2%	2.6%	
2014/15	1.9%	18.4%	31.4%	24.1%	13.0%	5.4%		
2015/16	2.0%	22.5%	25.8%	21.4%	17.6%			
2016/17	1.3%	18.7%	28.8%	26.1%				
2017/18	1.3%	15.5%	32.2%					
2018/19	1.6%	15.6%						
2019/20	2.0%							

### F6.3 Selected Proportion Settled

	Development Year (of Last LS_CL Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-20 Selected	1.48%	16.97%	30.95%	23.96%	14.98%	5.11%	2.55%	1.11%	2.88%

### 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		
2012/13	4	85	134	104	78	24	7	2	14	452
2013/14	7	76	134	111	51	18	11	4	11	424
2014/15	8	78	133	102	55	23	9	4	11	423
2015/16	9	102	117	97	80	21	11	5	12	454
2016/17	6	85	131	119	64	22	11	5	12	455
2017/18	6	70	145	109	68	23	12	5	13	451
2018/19	7	70	141	109	68	23	12	5	13	448
2019/20	9	76	138	107	67	23	11	5	13	449

## ACT Workers' Compensation Scheme Review

Common Law & Lump Sum  
Excludes Nil Claims  
PPCS Model

### F6.5 Incremental Inflated Payments (\$000 Jun-20)

Accident Year	Development Year (of Last LS_CL Payment)								Acc Yr Total	Pay Yr Total
	1	2	3	4	5	6	7	8		
2012/13	190	6,450	16,264	17,851	13,314	8,397	1,632	88	64,185	190
2013/14	278	5,731	15,754	14,894	8,992	2,691	861		49,202	6,727
2014/15	419	6,459	15,546	14,831	10,443	2,859			50,557	22,414
2016/17	376	8,956	15,057	17,328	11,737				53,453	40,439
2016/17	431	6,948	14,944	15,419					37,742	53,141
2017/18	234	6,970	19,534						26,738	54,460
2018/19	333	5,940							6,273	54,340
2019/20	419								419	56,858

### F6.6 Inflated Payments per Claim Settled in \$Jun-20 (\$000)

Accident Year	Development Year (of Last LS_CL Payment)							
	1	2	3	4	5	6	7	8
2012/13	47	76	121	172	171	350	233	44
2013/14	40	75	118	134	176	150	78	
2014/15	52	83	117	145	190	124		
2015/16	42	88	129	179	147			
2016/17	72	82	114	130				
2017/18	39	100	135					
2018/19	48	85						
2019/20	47							

### F6.7 Selected Payments per Claim Settled in \$Jun-20 (\$000)

	Development Year (of Last LS_CL Payment)								Tail
	1	2	3	4	5	6	7	8	
Jun-20 Selected	50.8	90.0	120.0	150.0	170.0	200.0	200.0	200.0	200.0

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

Accident Year	Development Year (of Payment)								Tail	Ultimate Costs	Outstanding
	1	2	3	4	5	6	7	8			
2012/13	213	6,777	16,405	15,803	11,498	8,170	1,535	139	3,141	63,681	3,141
2013/14	294	6,369	14,143	14,059	9,112	2,075	817	976	2,777	50,622	3,754
2014/15	411	6,384	16,102	13,445	10,087	2,592	2,031	929	2,643	54,624	5,603
2015/16	512	9,037	14,955	17,418	11,136	5,014	2,082	952	2,709	63,815	10,756
2016/17	537	7,038	15,284	15,023	10,958	5,691	2,362	1,081	3,074	61,048	23,166
2017/18	303	7,349	20,196	16,039	12,183	6,327	2,627	1,202	3,418	69,643	41,795
2018/19	385	6,052	17,062	17,870	13,574	7,049	2,926	1,339	3,808	70,067	63,629
2019/20	574	6,977	17,944	18,794	14,275	7,413	3,078	1,408	4,005	74,467	73,894

**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		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	16	17	18	19	20	21	22	23	24	25	26	27	28	29	Tail	Ultimate
2012/13	20,826	30,318	26,247	20,347	15,333	10,069	2,120	489	805	716	596	475	339	271	172	46	28	12	9	7	5	4	3	3	2	2	1	1	1	1	1	129,249
2013/14	18,754	26,424	22,674	20,539	12,629	3,406	1,227	1,087	713	638	533	425	303	245	158	44	27	10	8	6	5	4	3	2	2	2	1	1	1	1	1	109,871
2014/15	20,264	27,937	26,047	18,986	12,454	4,247	2,344	1,014	681	613	516	411	293	241	159	46	28	10	8	6	5	4	3	2	2	2	1	1	1	1	1	116,323
2015/16	21,575	33,638	26,540	24,723	16,070	6,602	2,423	1,047	700	632	533	424	303	250	166	49	30	11	8	6	5	4	3	2	2	2	1	1	1	1	1	135,751
2016/17	21,814	32,673	27,091	24,107	15,203	7,322	2,733	1,183	793	714	601	479	342	281	185	54	33	12	9	7	5	4	3	3	2	2	2	1	1	1	1	135,658
2017/18	25,199	35,904	33,758	24,185	16,729	8,074	3,024	1,312	882	792	666	530	378	309	203	58	35	13	10	8	6	5	4	3	2	2	2	1	1	1	1	152,094
2018/19	24,401	33,042	29,552	26,378	18,324	8,874	3,341	1,454	980	878	736	586	418	340	221	62	38	14	11	8	7	5	4	3	3	2	2	2	1	1	1	149,687
2019/20	29,633	35,449	31,093	27,726	19,250	9,325	3,514	1,531	1,032	924	774	617	440	357	232	65	40	15	12	9	7	5	4	3	3	2	2	2	1	1	1	162,067

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

Accident Year	Development Year (of Payment)																													Acc Yr		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	16	17	18	19	20	21	22	23	24	25	26	27	28	29	Tail	Ultimate
2012/13	20,826	29,484	24,916	18,907	14,004	9,059	1,879	429	703	622	516	410	291	231	147	39	24	10	7	6	5	4	3	2	2	2	1	1	1	1	1	122,529
2013/14	18,754	25,793	21,665	19,290	11,684	3,105	1,106	975	637	567	473	375	267	215	138	38	23	9	7	5	4	3	3	2	2	2	1	1	1	1	1	105,144
2014/15	20,264	27,346	25,060	17,994	11,630	3,924	2,154	929	621	556	467	370	263	215	141	41	25	9	7	5	4	3	2	2	2	2	1	1	1	1	0	112,038
2015/16	21,575	33,062	25,698	23,587	15,169	6,199	2,266	975	649	584	490	389	276	227	151	44	27	9	7	5	4	3	3	2	2	2	2	1	1	1	1	131,409
2016/17	21,814	32,187	26,295	23,151	14,523	6,966	2,590	1,117	746	669	561	445	316	259	170	49	30	11	8	6	5	4	3	2	2	2	2	1	1	1	1	131,932
2017/18	25,199	35,376	32,909	23,452	16,158	7,767	2,897	1,252	838	750	628	498	354	288	189	54	33	12	9	7	5	4	3	3	2	2	2	1	1	1	1	148,692
2018/19	24,401	32,691	29,084	25,857	17,890	8,630	3,236	1,403	942	840	701	557	395	320	207	58	35	13	10	8	6	5	4	3	2	2	2	1	1	1	1	147,305
2019/20	29,633	35,262	30,806	27,361	18,921	9,129	3,426	1,487	999	890	743	589	418	338	219	61	37	14	11	8	6	5	4	3	2	2	2	2	1	1	1	160,379

## 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	
2010/11	156,819	53,594	14,317	88,908
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	169,312	43,710	17,823	107,778
2019/20	171,744	45,292	17,666	108,786

### 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 <sup>1</sup>
	\$m		\$m	\$m
2010/11	6,213.1	1.000	6,213.1	8,202.8
2011/12	6,717.3	1.000	6,717.3	8,406.3
2012/13	6,867.4	1.000	6,867.4	8,149.5
2013/14	6,996.8	1.000	6,996.8	8,132.7
2014/15	7,378.2	1.000	7,378.2	8,543.8
2015/16	8,024.9	1.000	8,024.9	9,257.9
2016/17	8,520.3	1.000	8,520.3	9,756.4
2017/18	9,361.5	1.001	9,370.9	10,302.1
2018/19	10,229.8	1.003	10,259.9	10,809.4
2019/20	11,030.3	1.005	11,085.6	11,270.0

<sup>1</sup> In 30 June 2020 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 <sup>1</sup>
	\$m		\$m	\$m
2010/11	150.5	1.000	150.5	198.7
2011/12	159.2	1.000	159.2	199.2
2012/13	166.4	1.000	166.4	197.5
2013/14	166.4	1.000	166.4	193.5
2014/15	165.0	1.000	165.0	191.0
2015/16	165.4	1.000	165.4	190.9
2016/17	172.5	1.005	173.4	198.6
2017/18	185.2	1.012	187.4	206.1
2018/19	198.1	1.019	201.8	212.6
2019/20	213.3	1.027	219.1	222.8

<sup>1</sup> In 30 June 2020 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 June 2020 values.

**Table G.4 – Calculation of Premium Rate**

Accident Year	Gross Earned Premium	Gross Earned Wages	Premium to Wages
	\$m	\$m	
2009/10	145.4	5,755.4	2.53%
2010/11	150.5	6,213.1	2.42%
2011/12	159.2	6,717.3	2.37%
2012/13	166.4	6,867.4	2.42%
2013/14	166.4	6,996.8	2.38%
2014/15	165.0	7,378.2	2.24%
2015/16	165.4	8,024.9	2.06%
2016/17	173.4	8,520.3	2.04%
2017/18	187.4	9,370.9	2.00%
2018/19	201.8	10,259.9	1.97%
2019/20	219.1	11,085.6	1.98%

## H Recommended Rates by ANZSIC Division

## ACT Workers' Compensation Scheme Review

### H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated Wages for 2021/22	Claim Freq Rel - last 3 years	Capped Claim Cost Rel - last 5 years	2021/22 Selected Relativity	2021/22 Suggested Premium Rate
0112	Nursery Production (Outdoors)	1.2	93	722	252	5.59%
0113	Turf Growing	1.3	176	18	188	4.17%
0144	Sheep-Beef Cattle Farming	0.5	0	335	279	6.20%
0172	Poultry Farming (Eggs)	4.5	55	196	198	4.39%
0191	Horse Farming	0.2	516	579	237	5.27%
0199	Other Livestock Farming n.e.c.	0.8	0	0	237	5.27%
0301	Forestry	0.2	0	0	514	11.42%
0302	Logging	0.4	310	2,783	667	14.83%
0510	Forestry Support Services	0.5	457	66	292	6.50%
0522	Shearing Services	0.1	761	382	356	7.91%
0529	Other Agriculture and Fishing Support Services	0.5	240	1,222	253	5.63%
0911	Gravel and Sand Quarrying	1.1	98	100	125	2.79%
0919	Other Construction Material Mining	8.6	350	147	226	5.02%
1090	Other Mining Support Services	1.5	0	0	67	1.49%
1133	Cheese and Other Dairy Product Manufacturing	6.5	55	34	168	3.73%
1171	Bread Manufacturing (Factory based)	5.7	325	701	315	6.99%
1172	Cake and Pastry Manufacturing (Factory based)	0.4	0	0	304	6.76%
1174	Bakery Product Manufacturing (Non-factory based)	16.0	69	103	110	2.45%
1199	Other Food Product Manufacturing n.e.c.	1.6	331	691	300	6.66%
1211	Soft Drink, Cordial and Syrup Manufacturing	0.1	0	2	242	5.37%
1212	Beer Manufacturing	0.6	261	69	185	4.10%
1213	Spirit Manufacturing	0.1	0	0	168	3.73%
1214	Wine and Other Alcoholic Beverage Manufacturing	1.2	0	0	168	3.73%
1333	Cut and Sewn Textile Product Manufacturing	1.0	0	0	171	3.80%
1351	Clothing Manufacturing	0.1	0	0	167	3.72%
1492	Wooden Structural Fitting and Component Manufacturing	34.1	293	460	302	6.71%
1499	Other Wood Product Manufacturing n.e.c.	0.4	0	0	225	5.00%
1611	Printing	16.7	153	166	113	2.52%
1612	Printing Support Services	0.1	0	0	130	2.89%
1620	Reproduction of Recorded Media	0.2	0	0	119	2.65%
1709	Other Petroleum and Coal Product Manufacturing	1.4	0	0	181	4.03%
1811	Industrial Gas Manufacturing	0.1	0	0	181	4.02%
1812	Basic Organic Chemical Manufacturing	0.3	0	0	188	4.18%
1841	Human Pharmaceutical and Medicinal Product Manufacturing	2.1	0	5	75	1.68%
1911	Polymer Film and Sheet Packaging Material Manufacturing	0.1	0	0	190	4.22%
1912	Rigid and Semi-Rigid Polymer Product Manufacturing	0.7	616	104	190	4.22%
2010	Glass and Glass Product Manufacturing	1.7	472	413	465	10.33%
2032	Plaster Product Manufacturing	0.9	428	35	233	5.18%
2033	Ready-Mixed Concrete Manufacturing	0.9	375	89	332	7.37%
2034	Concrete Product Manufacturing	4.0	521	1,416	338	7.52%
2090	Other Non-Metallic Mineral Product Manufacturing	6.7	115	50	182	4.04%
2142	Aluminium Rolling, Drawing, Extruding	0.4	0	0	176	3.91%
2221	Structural Steel Fabricating	10.5	396	195	326	7.25%
2222	Prefabricated Metal Building Manufacturing	1.9	135	53	418	9.30%
2223	Architectural Aluminium Product Manufacturing	10.7	309	271	251	5.58%
2224	Metal Roof and Guttering Manufacturing (except Aluminium)	0.3	888	12	262	5.83%
2229	Other Structural Metal Product Manufacturing	9.3	651	837	340	7.55%
2239	Other Metal Container Manufacturing	0.1	1,043	97	252	5.59%
2240	Sheet Metal Product Manufacturing (except Metal Structural and Container Products)	4.3	341	544	279	6.20%
2291	Spring and Wire Product Manufacturing	0.1	0	10	391	8.68%
2293	Metal Coating and Finishing	0.4	267	532	340	7.55%
2299	Other Fabricated Metal Product Manufacturing n.e.c.	3.2	400	778	340	7.55%
2312	Motor Vehicle Body and Trailer Manufacturing	0.2	0	0	186	4.14%
2393	Railway Rolling Stock Manufacturing and Repair Services	1.9	287	29	186	4.12%
2394	Aircraft Manufacturing and Repair Services	7.9	226	146	189	4.19%
2411	Photographic, Optical and Ophthalmic Equipment Manufacturing	0.2	0	0	75	1.68%
2412	Medical and Surgical Equipment Manufacturing	1.2	0	0	70	1.55%
2419	Other Professional and Scientific Equipment Manufacturing	3.3	70	57	75	1.68%
2421	Computer and Electronic Office Equipment Manufacturing	2.3	61	202	87	1.93%
2422	Communications Equipment Manufacturing	6.5	0	0	75	1.68%
2429	Other Electronic Equipment Manufacturing	1.2	0	0	75	1.68%
2432	Electric Lighting Equipment Manufacturing	1.8	68	46	134	2.99%
2439	Other Electrical Equipment Manufacturing	3.1	41	64	134	2.99%
2452	Fixed Space Heating, Cooling and Ventilation Equipment Manufacturing	1.9	285	140	150	3.34%
2462	Mining and Construction Machinery Manufacturing	0.2	0	0	131	2.91%
2469	Other Specialised Machinery and Equipment Manufacturing	0.2	0	16	150	3.34%
2491	Lifting and Material Handling Equipment Manufacturing	17.9	194	125	214	4.75%
2499	Other Machinery and Equipment Manufacturing n.e.c.	0.4	270	13	176	3.91%
2511	Wooden Furniture and Upholstered Seat Manufacturing	10.5	333	266	252	5.59%
2512	Metal Furniture Manufacturing	1.2	204	38	302	6.72%
2513	Mattress Manufacturing	1.3	277	448	176	3.91%
2519	Other Furniture Manufacturing	0.9	262	423	176	3.91%
2591	Jewellery and Silverware Manufacturing	0.9	0	0	75	1.68%
2592	Toy, Sporting and Recreational Product Manufacturing	0.1	0	0	155	3.45%
2599	Other Manufacturing n.e.c.	2.1	67	10	161	3.58%
2619	Other Electricity Generation	0.1	0	0	164	3.63%
2630	Electricity Distribution	107.6	89	175	161	3.58%
2811	Water Supply	58.8	118	100	87	1.93%



## H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated	Claim	Capped	2021/22 Selected Relativity	2021/22 Suggested Premium Rate
		Wages for 2021/22	Freq Rel - last 3 years	Claim Cost Rel - last 5 years		
2812	Sewerage and Drainage Services	4.9	423	254	100	2.22%
2911	Solid Waste Collection Services	10.0	440	640	503	11.18%
2919	Other Waste Collection Services	0.7	572	102	502	11.16%
2921	Waste Treatment and Disposal Services	10.8	517	462	372	8.27%
2922	Waste Remediation and Materials Recovery Services	6.3	594	164	340	7.55%
3011	House Construction	85.5	221	224	214	4.75%
3019	Other Residential Building Construction	69.4	155	162	214	4.75%
3020	Non-Residential Building Construction	140.7	167	143	159	3.52%
3101	Road and Bridge Construction	23.3	466	212	363	8.06%
3109	Other Heavy and Civil Engineering Construction	42.4	244	314	197	4.38%
3211	Land Development and Subdivision	2.7	21	182	58	1.29%
3212	Site Preparation Services	66.7	238	350	340	7.55%
3221	Concreting Services	42.2	174	346	443	9.85%
3222	Bricklaying Services	10.8	316	561	629	13.98%
3223	Roofing Services	12.0	303	425	629	13.98%
3224	Structural Steel Erection Services	24.9	272	498	534	11.87%
3231	Plumbing Services	96.2	214	174	202	4.48%
3232	Electrical Services	197.3	170	108	164	3.63%
3233	Air Conditioning and Heating Services	72.6	176	210	206	4.58%
3234	Fire and Security Alarm Installation Services	57.9	69	54	87	1.94%
3239	Other Building Installation Services	41.2	208	205	130	2.89%
3241	Plastering and Ceiling Services	20.6	202	499	337	7.50%
3242	Carpentry Services	58.0	275	355	365	8.11%
3243	Tiling and Carpeting Services	19.4	104	265	270	5.99%
3244	Painting and Decorating Services	40.3	133	263	270	5.99%
3245	Glazing Services	10.7	290	86	358	7.96%
3291	Landscape Construction Services	27.7	247	183	365	8.11%
3292	Hire of Construction Machinery with Operator	6.5	209	287	340	7.55%
3299	Other Construction Services n.e.c.	74.6	204	433	296	6.58%
3312	Cereal Grain Wholesaling	0.1	0	0	145	3.22%
3319	Other Agricultural Product Wholesaling	0.8	0	98	145	3.22%
3321	Petroleum Product Wholesaling	1.9	127	88	112	2.48%
3322	Metal and Mineral Wholesaling	9.3	255	494	201	4.47%
3323	Industrial and Agricultural Chemical Product Wholesaling	3.1	84	38	96	2.14%
3331	Timber Wholesaling	2.4	215	436	232	5.16%
3332	Plumbing Goods Wholesaling	12.3	333	180	231	5.14%
3339	Other Hardware Goods Wholesaling	20.4	154	228	195	4.34%
3411	Agricultural and Construction Machinery Wholesaling	0.1	0	471	106	2.35%
3419	Other Specialised Industrial Machinery and Equipment Wholesaling	4.8	193	27	128	2.85%
3491	Professional and Scientific Goods Wholesaling	11.7	113	42	65	1.43%
3492	Computer and Computer Peripheral Wholesaling	38.3	39	5	22	0.48%
3493	Telecommunication Goods Wholesaling	5.7	46	112	75	1.68%
3494	Other Electrical and Electronic Good Wholesaling	56.3	59	54	70	1.55%
3499	Other Machinery and Equipment Wholesaling n.e.c.	8.1	54	29	104	2.31%
3501	Car Wholesaling	0.3	0	122	129	2.88%
3504	Motor Vehicle New Parts Wholesaling	7.3	178	39	126	2.79%
3505	Motor Vehicle Dismantling and Used Parts Wholesaling	2.3	0	0	107	2.37%
3601	General Line Grocery Wholesaling	31.3	271	339	315	6.99%
3602	Meat, Poultry and Smallgoods Wholesaling	2.7	328	266	232	5.17%
3604	Fish and Seafood Wholesaling	0.1	0	0	223	4.96%
3605	Fruit and Vegetable Wholesaling	2.6	153	302	232	5.17%
3606	Liquor and Tobacco Product Wholesaling	8.1	65	194	170	3.77%
3609	Other Grocery Wholesaling	12.2	107	141	126	2.79%
3711	Textile Product Wholesaling	0.3	0	0	107	2.37%
3712	Clothing and Footwear Wholesaling	3.5	36	5	91	2.02%
3720	Pharmaceutical and Toiletry Goods Wholesaling	13.1	90	195	170	3.77%
3731	Furniture and Floor Covering Wholesaling	6.4	125	37	170	3.77%
3733	Kitchen and Diningware Wholesaling	0.4	541	683	195	4.34%
3734	Toy and Sporting Goods Wholesaling	0.2	0	0	195	4.34%
3735	Book and Magazine Wholesaling	0.7	0	88	174	3.86%
3736	Paper Product Wholesaling	2.5	46	5	201	4.47%
3739	Other Goods Wholesaling n.e.c.	1.2	101	759	201	4.47%
3800	Commission-Based Wholesaling	9.2	30	36	61	1.35%
3911	Car Retailing	122.2	143	99	139	3.10%
3912	Motor Cycle Retailing	4.0	70	284	119	2.64%
3913	Trailer and Other Motor Vehicle Retailing	0.7	0	0	119	2.64%
3921	Motor Vehicle Parts Retailing	10.9	139	201	226	5.03%
3922	Tyre Retailing	9.0	285	361	217	4.82%
4000	Fuel Retailing	16.5	56	54	121	2.69%
4110	Supermarket and Grocery Stores	162.5	221	209	247	5.49%
4121	Fresh Meat, Fish and Poultry Retailing	10.2	234	451	189	4.19%
4122	Fruit and Vegetable Retailing	6.9	52	175	126	2.80%
4123	Liquor Retailing	4.6	129	14	126	2.80%
4129	Other Specialised Food Retailing	9.4	131	117	126	2.80%
4211	Furniture Retailing	37.6	369	273	226	5.03%
4212	Floor Coverings Retailing	8.9	166	378	226	5.03%
4213	Houseware Retailing	39.2	147	139	193	4.28%
4214	Manchester and Other Textile Goods Retailing	4.7	82	187	186	4.13%
4221	Electrical, Electronic and Gas Appliance Retailing	31.9	93	30	60	1.33%
4222	Computer and Computer Peripheral Retailing	8.3	0	0	56	1.24%
4229	Other Electrical and Electronic Goods Retailing	4.3	106	244	75	1.68%

## H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated	Claim	Capped	2021/22	2021/22
		Wages for 2021/22	Freq Rel - last 3 years	Claim Cost Rel - last 5 years	Selected Relativity	Suggested Premium Rate
4231	Hardware and Building Supplies Retailing	15.8	242	269	252	5.59%
4232	Garden Supplies Retailing	7.1	111	194	215	4.78%
4241	Sport and Camping Equipment Retailing	24.4	123	101	87	1.93%
4242	Entertainment Media Retailing	1.5	0	0	73	1.63%
4243	Toy and Game Retailing	4.4	93	116	75	1.68%
4244	Newspaper and Book Retailing	11.8	36	94	75	1.68%
4251	Clothing Retailing	51.6	168	152	139	3.09%
4252	Footwear Retailing	12.0	91	187	121	2.69%
4253	Watch and Jewellery Retailing	10.5	30	44	75	1.68%
4259	Other Personal Accessory Retailing	4.5	438	418	252	5.59%
4260	Department Stores	20.3	200	125	164	3.63%
4271	Pharmaceutical, Cosmetic and Toiletry Goods Retailing	62.2	90	105	75	1.68%
4272	Stationery Goods Retailing	1.5	0	7	75	1.68%
4273	Antique and Used Goods Retailing	7.5	284	143	90	2.00%
4274	Flower Retailing	3.0	171	268	198	4.41%
4279	Other Store-Based Retailing n.e.c.	29.9	117	127	186	4.13%
4310	Non-Store Retailing	9.7	86	135	75	1.68%
4320	Retail Commission-Based Buying and/or Selling	0.8	79	173	97	2.16%
4400	Accommodation	133.8	231	133	139	3.10%
4511	Cafes and Restaurants	238.0	139	123	127	2.82%
4512	Takeaway Food Services	90.1	151	103	144	3.21%
4513	Catering Services	15.3	151	232	145	3.23%
4520	Pubs, Taverns and Bars	28.4	86	94	121	2.69%
4530	Clubs (Hospitality)	67.2	206	223	186	4.13%
4610	Road Freight Transport	35.6	330	660	579	12.86%
4621	Interurban and Rural Bus Transport	10.2	260	621	560	12.45%
4622	Urban Bus Transport (Including Tramway)	5.4	523	213	286	6.36%
4623	Taxi and Other Road Transport	1.4	210	488	245	5.45%
4720	Rail Passenger Transport	1.4	0	0	184	4.10%
4900	Air and Space Transport	10.4	149	235	163	3.63%
5010	Scenic and Sightseeing Transport	0.1	156	260	176	3.90%
5021	Pipeline Transport	2.9	0	0	141	3.14%
5029	Other Transport n.e.c.	10.0	145	152	189	4.19%
5101	Postal Services	16.0	63	30	75	1.68%
5102	Courier Pick-up and Delivery Services	7.1	65	355	353	7.84%
5220	Airport Operations and Other Air Transport Support Services	11.1	124	97	172	3.82%
5292	Freight Forwarding Services	3.5	151	126	206	4.57%
5299	Other Transport Support Services n.e.c.	4.3	395	467	264	5.87%
5309	Other Warehousing and Storage Services	7.5	106	56	121	2.69%
5411	Newspaper Publishing	27.1	33	26	60	1.34%
5412	Magazine and Other Periodical Publishing	2.3	0	0	60	1.34%
5413	Book Publishing	0.5	0	0	60	1.34%
5419	Other Publishing (except Software, Music and Internet)	1.5	0	0	60	1.34%
5420	Software Publishing	32.5	7	14	14	0.31%
5511	Motion Picture and Video Production	5.5	135	19	63	1.40%
5512	Motion Picture and Video Distribution	0.3	0	0	57	1.27%
5513	Motion Picture Exhibition	7.2	69	41	59	1.30%
5514	Post-production Services and Other Motion Picture and Video Activities	0.9	0	0	58	1.28%
5522	Music and Other Sound Recording Activities	2.5	58	3	57	1.27%
5610	Radio Broadcasting	14.4	35	74	46	1.03%
5621	Free-to-Air Television Broadcasting	14.3	24	40	53	1.19%
5622	Cable and Other Subscription Broadcasting	0.1	0	0	46	1.02%
5700	Internet Publishing and Broadcasting	3.1	92	5	50	1.12%
5801	Wired Telecommunications Network Operation	1.1	0	137	58	1.29%
5802	Other Telecommunications Network Operation	11.0	16	9	32	0.70%
5809	Other Telecommunications Services	19.0	33	71	50	1.12%
5910	Internet Service Providers and Web Search Portals	0.7	0	0	67	1.49%
5921	Data Processing and Web Hosting Services	8.8	19	46	56	1.24%
5922	Electronic Information Storage Services	6.0	51	38	37	0.83%
6020	Other Information Services	0.2	0	8	52	1.16%
6221	Banking	11.3	44	23	50	1.12%
6222	Building Society Operation	2.4	49	7	58	1.29%
6223	Credit Union Operation	1.6	0	19	126	2.80%
6229	Other Depository Financial Intermediation	0.2	0	0	58	1.29%
6230	Non-Depository Financing	0.1	0	0	50	1.12%
6240	Financial Asset Investing	2.4	0	0	46	1.02%
6310	Life Insurance	0.3	0	0	50	1.12%
6321	Health Insurance	4.2	80	8	53	1.17%
6322	General Insurance	18.5	79	89	118	2.63%
6330	Superannuation Funds	9.9	24	12	41	0.92%
6411	Financial Asset Broking Services	17.1	19	15	22	0.48%
6419	Other Auxiliary Finance and Investment Services	78.4	31	42	25	0.55%
6420	Auxiliary Insurance Services	97.1	21	36	37	0.83%
6611	Passenger Car Rental and Hiring	5.3	118	166	168	3.74%
6619	Other Motor Vehicle and Transport Equipment Rental and Hiring	4.3	40	129	186	4.13%
6631	Heavy Machinery and Scaffolding Rental and Hiring	11.1	245	158	226	5.02%
6639	Other Goods and Equipment Rental and Hiring n.e.c.	7.1	211	173	168	3.74%
6711	Residential Property Operators	11.5	45	146	57	1.26%
6712	Non-Residential Property Operators	62.2	52	61	50	1.12%
6720	Real Estate Services	174.5	30	30	38	0.84%
6910	Scientific Research Services	81.0	80	36	37	0.83%

## H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated Wages for 2021/22	Claim Freq Rel - last 3 years	Capped Claim Cost Rel - last 5 years	2021/22 Selected Relativity	2021/22 Suggested Premium Rate
6921	Architectural Services	55.4	13	16	12	0.27%
6922	Surveying and Mapping Services	18.6	57	30	37	0.83%
6923	Engineering Design and Engineering Consulting Services	318.5	26	23	22	0.48%
6924	Other Specialised Design Services	17.5	48	68	62	1.38%
6925	Scientific Testing and Analysis Services	11.8	39	9	46	1.03%
6931	Legal Services	177.1	40	33	50	1.10%
6932	Accounting Services	344.1	10	11	14	0.31%
6940	Advertising Services	17.3	56	47	28	0.62%
6950	Market Research and Statistical Services	25.3	9	19	24	0.53%
6961	Corporate Head Office Management Services	193.3	33	43	40	0.88%
6962	Management Advice and Related Consulting Services	626.7	15	16	28	0.62%
6970	Veterinary Services	38.7	463	69	93	2.07%
6991	Professional Photographic Services	1.7	142	23	94	2.09%
6999	Other Professional, Scientific and Technical Services n.e.c.	15.7	42	155	75	1.68%
7000	Computer System Design and Related Services	2,645.6	9	10	14	0.31%
7211	Employment Placement and Recruitment Services	220.6	103	69	66	1.46%
7212	Labour Supply Services	22.8	303	355	219	4.87%
7220	Travel Agency and Tour Arrangement Services	20.2	10	13	40	0.90%
7291	Office Administrative Services	137.4	54	66	70	1.56%
7292	Document Preparation Services	0.8	110	324	74	1.65%
7293	Credit Reporting and Debt Collection Services	0.5	179	9	56	1.24%
7294	Call Centre Operation	0.2	25	19	47	1.05%
7299	Other Administrative Services n.e.c.	25.1	45	14	52	1.15%
7311	Building and Other Industrial Cleaning Services	142.7	237	230	227	5.05%
7312	Building Pest Control Services	7.3	398	170	297	6.60%
7313	Gardening Services	19.6	416	419	325	7.23%
7320	Packaging Services	0.2	718	35	297	6.60%
7510	Central Government Administration	5.7	0	0	93	2.07%
7520	State Government Administration	3.9	0	0	93	2.07%
7530	Local Government Administration	0.3	0	8	69	1.53%
7552	Foreign Government Representation	44.2	85	137	119	2.65%
7600	Defence	3.9	0	0	104	2.31%
7712	Investigation and Security Services	86.2	120	202	195	4.33%
7714	Correctional and Detention Services	1.7	234	371	302	6.71%
7719	Other Public Order and Safety Services	10.4	116	263	166	3.70%
7720	Regulatory Services	0.1	0	0	126	2.80%
8010	Preschool Education	5.6	333	120	125	2.78%
8021	Primary Education	82.2	85	69	81	1.79%
8022	Secondary Education	112.9	120	64	88	1.96%
8023	Combined Primary and Secondary Education	155.3	143	102	88	1.96%
8101	Technical and Vocational Education and Training	43.8	159	77	103	2.29%
8102	Higher Education	48.8	68	92	48	1.07%
8211	Sports and Physical Recreation Instruction	11.7	208	158	83	1.85%
8212	Arts Education	7.9	100	193	101	2.25%
8219	Adult, Community and Other Education n.e.c.	21.7	65	82	84	1.87%
8220	Educational Support Services	10.7	130	58	42	0.94%
8401	Hospitals (Except Psychiatric Hospitals)	121.7	171	126	126	2.80%
8511	General Practice Medical Services	114.7	26	31	56	1.25%
8512	Specialist Medical Services	95.1	42	32	51	1.14%
8520	Pathology and Diagnostic Imaging Services	46.9	155	115	102	2.27%
8531	Dental Services	42.4	95	68	72	1.61%
8532	Optometry and Optical Dispensing	20.9	38	73	25	0.56%
8533	Physiotherapy Services	36.0	10	54	34	0.75%
8534	Chiropractic and Osteopathic Services	8.7	30	57	46	1.03%
8539	Other Allied Health Services	37.0	151	114	115	2.56%
8599	Other Health Care Services n.e.c.	66.7	95	99	88	1.95%
8601	Aged Care Residential Services	155.4	258	207	251	5.57%
8609	Other Residential Care Services	84.8	221	257	223	4.96%
8710	Child Care Services	194.8	346	217	196	4.36%
8790	Other Social Assistance Services	191.3	211	206	205	4.55%
8910	Museum Operation	3.3	0	0	33	0.74%
8921	Zoological and Botanical Gardens Operation	3.2	334	451	252	5.59%
8922	Nature Reserves and Conservation Parks Operation	0.4	352	8	252	5.59%
9001	Performing Arts Operation	2.7	184	23	116	2.58%
9002	Creative Artists, Musicians, Writers and Performers	2.8	41	101	113	2.50%
9003	Performing Arts Venue Operation	7.4	82	65	160	3.57%
9111	Health and Fitness Centres and Gymnasia Operation	30.1	106	155	102	2.27%
9112	Sports and Physical Recreation Clubs and Sports Professionals	26.7	83	58	46	1.03%
9113	Sports and Physical Recreation Venues, Grounds and Facilities Operation	19.2	233	92	135	3.01%
9114	Sports and Physical Recreation Administrative Service	15.3	47	9	46	1.03%
9129	Other Horse and Dog Racing Activities	1.9	1,543	2,452	749	16.64%
9131	Amusement Parks and Centres Operation	2.2	94	35	186	4.13%
9139	Amusement and Other Recreational Activities n.e.c.	2.8	185	223	162	3.60%
9201	Casino Operation	12.7	89	79	111	2.47%
9202	Lottery Operation	0.1	0	0	65	1.45%
9209	Other Gambling Activities	3.4	31	32	112	2.49%
9411	Automotive Electrical Services	3.7	29	5	119	2.64%
9412	Automotive Body, Paint and Interior Repair	37.3	119	239	189	4.19%
9419	Other Automotive Repair and Maintenance	47.8	184	227	189	4.19%
9421	Domestic Appliance Repair and Maintenance	4.7	185	289	146	3.23%
9422	Electronic (except Domestic Appliance) and Precision Equipment Repair and Maintenance	31.5	44	99	42	0.94%
9429	Other Machinery and Equipment Repair and Maintenance	6.5	87	7	158	3.51%
9491	Clothing and Footwear Repair	1.0	0	5	119	2.64%
9499	Other Repair and Maintenance n.e.c.	5.4	163	41	77	1.72%
9511	Hairdressing and Beauty Services	51.9	88	117	113	2.52%
9512	Diet and Weight Reduction Centre Operation	0.4	0	0	139	3.10%

## H.1 Premium Rates by ANZSIC Class

ANZSIC	Description	Estimated	Claim	Capped		2021/22 Suggested Premium Rate
		Wages for 2021/22	Freq Rel - last 3 years	Claim Cost Rel - last 5 years	2021/22 Selected Relativity	
9520	Funeral, Crematorium and Cemetery Services	4.6	323	155	130	2.89%
9531	Laundry and Dry-Cleaning Services	6.1	173	380	289	6.43%
9532	Photographic Film Processing	0.2	0	0	160	3.56%
9533	Parking Services	2.3	0	6	164	3.63%
9534	Brothel Keeping and Prostitution Services	0.5	366	429	189	4.19%
9539	Other Personal Services n.e.c.	6.1	326	275	189	4.19%
9540	Religious Services	79.9	101	91	94	2.10%
9551	Business and Professional Association Services	232.2	32	39	38	0.84%
9552	Labour Association Services	13.4	107	72	50	1.11%
9559	Other Interest Group Services n.e.c.	67.6	99	122	121	2.69%
9601	Private Households Employing Staff	1.4	167	143	147	3.26%

# 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/osteoarthritis
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	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