

NT WorkSafe

Actuarial review of Northern Territory workers compensation scheme as at 30 June 2021

May 2022

Disclaimer

This report is not intended to be used by anyone other than NT WorkSafe.

We prepared this report solely for NT WorkSafe's use and benefit in accordance with and for the purpose set out in our contract with NT WorkSafe dated 1 October 2019 and section 1.1 of the report. In doing so, we acted exclusively for NT WorkSafe and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than NT WorkSafe in connection with this report
- to NT WorkSafe for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this report for anyone other than NT WorkSafe. If anyone other than NT WorkSafe chooses to use or rely on it, they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than NT WorkSafe receiving or using this report.

Liability limited by a scheme approved under Professional Standards legislation



Bill Steves
Executive Director
NT WorkSafe
Department of Attorney-General and Justice
Northern Territory Government
Ground Floor, Building 3, Darwin Corporate Park
631 Stuart Highway
BERRIMAH NT 0828

9 May 2022

Dear Bill

Please find our report attached which details our findings from the following analyses for NT WorkSafe:

- Calculation of the funding ratio based on 30 June 2021 outstanding claims liability valuations for insurers and self-insurers
- Calculations of the break-even premium rate for each prior accident year using data to 30 June 2021, including a review of the trends in the required premium and a comparison to the premium rates actually charged by insurers
- An estimate of the break-even premium rate for the 2021/22 underwriting year.

Yours sincerely

A handwritten signature in black ink that reads 'Lisa Simpson'.

Lisa Simpson

A handwritten signature in black ink that reads 'Kathryn Cannon'.

Kathryn Cannon

Fellows of the Institute of Actuaries of Australia

PricewaterhouseCoopers Consulting (Australia) Pty Limited ABN 20 607 773 295
Brookfield Place, 125 St Georges Terrace, PERTH WA 6000, GPO Box D198, PERTH WA 6840
T: +61 8 9238 3000, www.pwc.com.au

Liability limited by a scheme approved under Professional Standards Legislation.

Executive summary

Key findings

The review indicates that the scheme is fairly stable on a financial basis with the break-even premium rate similar to the actual premium rate charged. However, the profitability on a financial year or 'Form A' basis is variable with the most recent three out of five financial years incurring a loss. The insurer funding ratio is 111% this year (108% at the previous valuation), so in aggregate the insurers' reserves may be sufficient.

Funding ratio

The funding ratio measures the liabilities held by the insurers (the notional assets) compared to the aggregate outstanding claims liability calculated by the scheme actuary. This is used to represent the ability of the scheme in aggregate to meet its liabilities.

The following table shows the funding ratio as at 30 June 2021 for insurers, self-insurers and for the whole scheme. The PwC central estimate excludes any risk margin. By comparison, the insurers' provisions include a risk margin, and the self-insurers' provisions include the 50% loading for the bank guarantee with a minimum of \$1 million per self-insurer.

Funding ratio (\$000s)				
	Actual provisions (a)	PwC central estimate (b)	Difference (\$000) (b) - (a)	Funding ratio (a) / (b)
Insurers	361,580	327,138	-34,442	111%
Self-insurers	10,392	6,003	-4,390	173%
Total	371,972	333,141	-38,832	112%

Notes: see section 2 of this report

As at 30 June 2021 the insurers' funding ratio was 111% while the self-insurers' funding ratio was 173%. The insurers' funding ratio increased from 108% as at 30 June 2020 and the self-insurers' funding ratio increased from 154%.

The increase in the insurers' funding ratio was due to our provision decreasing by more than the decrease in the insurers' provisions compared to 30 June 2020. We are not provided with a reconciliation for the insurers' provisions, so cannot identify the drivers of the insurers' decrease.

The increase in the self-insurer funding ratio is due to the self-insurers' provisions having increased by more than the increase in our central estimate compared to 30 June 2020. The increase in the self-insurer provision is partially due to the new minimum requirement of \$1 million bank guarantee per self-insurer. We are not provided with a reconciliation for the self-insurers' provisions, so cannot identify the drivers of the self-insurers' increase.

A ratio above 100% implies that, in aggregate, insurers are holding sufficient reserves to be likely to meet our central estimate of future claims costs. This year, the funding ratio has remained above 100%. We make the following comments which should be borne in mind when considering the funding ratio:

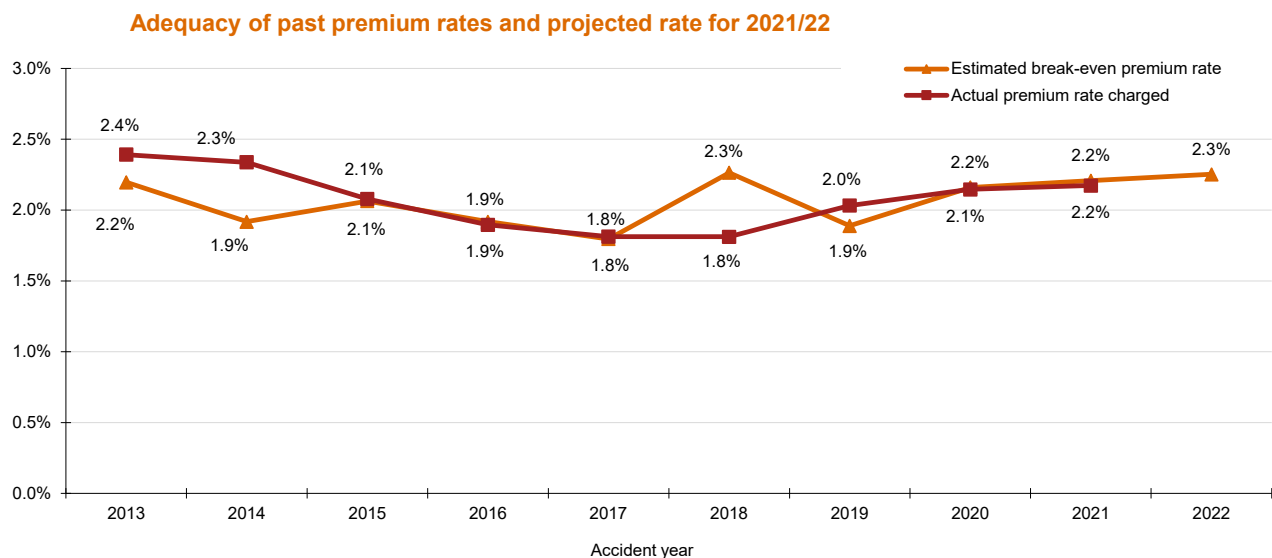
- The insurers' actuaries have access to more detailed claims data than we have to estimate the liabilities
- Insurers hold assets in excess of liabilities due to APRA capital requirements and their own risk appetite

- Some insurers may be holding greater than 100% of our notional allocation to them, while others may be holding less. Of concern would be any insurers who are well below 100%.

The above projections involve assumptions about future uncertain claim events and economic, social and legislative conditions and hence the actual outcome may well be different from the results shown above. This should be borne in mind whenever using the results. In particular, the 2020 and 2021 accident year costs are more uncertain than those for earlier accident years, and hence could ultimately be notably different to those estimated.

Insurer premium adequacy

The following graph shows the estimated break-even premium rates, using all experience to date, and compares this to the actual premium rates charged by insurers. The graph also shows our projected break-even premium rate for 2021/22.



The break-even premium rate is calculated on an inflated and discounted basis, gross of reinsurance, and does not allow for a profit margin.

There has been mixed experience in the sufficiency of actual premium rates charged by insurers over 2013 to 2021 shown in the graph above. Actual premium rates charged by insurers are estimated to have been more than sufficient in 2013 and 2014. Subsequently, we estimate that actual premium rates were similar or slightly higher compared to estimates of break-even rates in 2015 to 2017 and 2019 to 2021. The actual premium rate for 2018 were not sufficient to cover the estimated break-even cost.

We estimate that the 2021 developed premiums charged of \$132.3 million were \$2.1 million (1.5%) lower than the estimated break-even premiums of \$134.4 million. The 2021 developed premiums charged are lower than the estimated break-even premium rate in last year's report of \$140.2 million, which reflects the lower wages than projected, partially offset by the slightly higher premium rate. Overall, insurers increased their premium rates between 2019 and 2021 and are responding to the increasing costs in the scheme, indicating that competitive pressures in the market are active to curb large annual premium increases in aggregate.

The pattern demonstrated in the actual premium rate charged could be driven by changes in the underwriting or economic cycle. The start of a new upwards trend in a cycle could potentially drive an increase in the actual premium charged in 2022.

Our projected break-even premium rate for 2022 is 2.3%, which is slightly higher than the estimated break-even premium rates and actual premium rates charged over the most recent two years. We estimated the 2021/22 break-even premium rate to be similar to the most recent year after considering the economic indicators in the 2021/22 Northern Territory budget report.

The estimated break-even premium rates for accident years 2016 to 2021 include an allowance for the 2015 legislative changes. See Appendix B6 for a summary of the changes.

The change in the break-even premium is the average change across all policies. Actual premiums charged to an employer could have greater volatility each year, particularly for small employers, and their change will depend on their experience and size.

Key scheme trends

Claim statistic	Insurer	Self-insurers
Number of claims incurred	<p>Decreasing trend in claim numbers since peak in 2013 to 2020, with 2021 claim numbers (1,869) slightly higher than 2020 (1,850).</p> <p>Similar to claim numbers, the claim frequency demonstrated a general decreasing trend from 2013 to 2020. Frequency is estimated to be 2.7% in 2021, on par with 2020.</p>	<p>General decreasing trend from high 2013 to 2021. In 2021, there are estimated to be 66 claims incurred which is 24% lower than 2020 and lower than all prior years.</p> <p>The low in 2021 is due to claims incurred for Catholic Church only being included as a self-insurer until 1 December 2020, after which claims incurred are classified as an insurer.</p>
Average claim size (in 30 June 2021 values)	<p>2021 average claim size is just under \$54,000, which is slightly lower than 2020 but higher than all prior years (except 2018), driven by high payments and case estimates to 30 June 2021.</p>	<p>Lower than insurers, at \$46,800 for the 2021 accident year, which is higher than all prior years.</p>
Incurred cost (in 30 June 2021 values)	<p>2021 incurred cost is \$100.9 million, which is similar to 2020 but lower than all prior years, due to low number of claims partially offset by the high average claim size.</p>	<p>The incurred cost for 2021 of \$3.1 million, which is lower than the incurred cost for 2020 but higher than most prior years.</p>
Gross loss ratio	<p>2021 is 76.4%, which is lower than loss ratio for all accident years since 2013, except for 2014 and 2019.</p>	n/a
Distribution by payment type	<p>Redemption and non-economic lump sums and weekly benefits combined account for just under two thirds of the total incurred cost and payments each financial year.</p> <p>The distribution of payments for the last eight accident years has remained stable.</p>	n/a

Risks and uncertainties

The key risks and uncertainties to the Northern Territory (NT) scheme are:

- **COVID-19**

There is also a degree of uncertainty given the current economic environment and COVID-19.

To control the outbreak prior to the reopening of the NT interstate border, the ways of working for a number of businesses with large numbers of employees changed. Employees were asked to work from home to limit the risk of transmitting the virus, where possible. A number of workplaces were also closed for a period of time as part of lockdown measures. Also, some businesses have not fully recovered due to national and international travel restrictions. The lower number of claims for insurers for the 2020 and 2021 injury years could be partially due to COVID-19, though the mix of claims may have changed.

Up until 30 June 2021, we were advised of three COVID-19 related claims (that are not government self-insurer claims), and an additional claim reported on 06 July 2021. Out of the four claims, one of these claims has not had any payments made to date with the other claim having had several payments (total paid to date on COVID-19 related claims less than of \$260,000).

In December 2021, NT has reopened its borders to interstate. This reopening of border as well as the presence of the new Omicron strain of COVID-19 has caused a spike in the number of COVID-19 cases. The increases in the number of positive cases since December 2021 will likely increase the number of COVID-19 related claims for the projection of the 2021/22 underwriting year

The impact will depend upon the percentage of people who are infected with COVID and can prove they obtained it through work. Given sick leave available to many employees along with State and Federal government support for workers who do not have access to sick leave and have minimal liquid assets it is unlikely that people will claim for short term claims. There may be an increase in claims reported for long term illness, either long COVID or mental stress. There could also be additional mental stress claims from employees who are taking on additional workload while other staff are absent.

Other potential impacts due to COVID-19 include lengthening claims durations if there are delays in accessing services or delays in the ability for people to return to work. Over time, other impacts may also emerge.

The overall impact of COVID-19 is still unknown for the projection of 2021/22. At this time, we have not made any other adjustments to the valuation parameters or risk margin assumptions.

We note that a separate calculate of a COVID-19 related claims provision may be required going forward.

- **Inpex project**

Significant increases in wages up to 2018 have been driven by the Inpex project and the associated contracts. Since then, wages have decreased by 13% for 2019 and a further 11% decrease for 2020. Up to and including 2017, the number of claims incurred and claims cost have not reflected the increase in wages, causing the claim frequency and premium rate to reduce. In 2018, the average claim size and incurred cost increased. We understand that over the 2018 financial year the construction phase wound down with production starting in October 2018. Therefore, the number of workers reduced significantly in the 2019 financial year. The premium pool also decreased as the project moved into production phase. This is observed from the decrease of 3% in premium pool for 2019.

As per the previous valuation, we had continued to estimate that the 2018 accident year would be significantly higher than prior years. Although the payments over the 2021 financial year were less than expected, the case estimates development continues to be more than expected.

- **Changing economic environment**

There is considerable uncertainty associated with the current economic environment especially under COVID-19 environment and what it will mean for Australia over the near future. The 2021/22 Northern Territory budget report has observed an improvement in outlook for the economy compared to last year. NT Government continues to focus its investment on initiatives aimed at protecting Territorians against COVID-19, bringing more investment to the Territory and backing the best opportunities for growth and thus, creating more job opportunities across the state, which we have reflected in the estimates for the 2021/22 premium rate.

Over the last five financial years, there has been a reduction in the number of small claims lodged with other schemes. At the same time, there has not been a reduction in the number of medium to large claims. This has impacted the overall average claim size and incurred cost for other schemes. We will continue to monitor the mix by size of claims lodged in NT to ensure that we adequately allow for any change in claiming behaviour.

- **Large claims**

The incurred cost and break-even premium for each accident year are heavily influenced by the presence or absence of any large claims. This is particularly prevalent in the NT due to the small scheme size and the prevalence of very large settlements. Future claims costs will continue to be impacted by very large settlements, with net costs to insurers impacted by the nature and adequacy of any reinsurance arrangements in place.

Large claims can also have an impact on superimposed inflation. While superimposed decreased this year, it can be volatile due to the impact of large settlements and the relatively small scheme size. Superimposed inflation should be monitored to make sure increases in costs are understood and ensure that a payment type is not unexpectedly driving an increase in costs.

- **2015 legislative amendments**

The 2015 legislative amendments impacted prospective claims only and were introduced in two stages. The main changes are effective from 1 July 2015, with additional changes effective from 1 October 2015. This creates additional uncertainty in the outstanding claims liabilities for the 2016 to 2021 accident years and the future costs for the 2022 accident year. We have modified the explicit allowance included this year to account for some of the actual experience being incorporated in the periods used for assumption setting. See 6.5.1 for more details.

The 2020/21 financial year was the first year where weekly benefits for claims with less than 15% whole person impairment (WPI) will cease for those who have reached 260 weeks of wages and had an accident date after 1 July 2015. We have performed a high-level review to see what impact this has had. For further detail see B6.1.

For the 2016 and 2017 accident years around 23% of claims have a weekly benefit payment in development year one which is higher than 19% to 22% of claims for 2015 and earlier accident years. However, the percentage of claims with a weekly benefit payment in development years three to five for the 2016 and 2017 accident years is lower than prior years. The lower percentage of claims with weekly benefit payments in development year three to five for 2016 and 2017 may reflect some of the high settlement activity seen for these years.

The percentage of claims with a redemption commutation lump sum payment has a general increasing trend, with each year from 2016 to 2021 higher than the previous years. This could be influenced by a number of aspects including the 2015 legislation changes, the economic circumstances and the general mix in claim numbers. The average redemption payment in development year 3 onwards is noticeably lower in 2016 onwards compared to 2015 and earlier.

There is no clear change in the number of impairment lump sum payments or average amount.

We recommend NT WorkSafe and insurers closely monitor the experience to ensure that there are no unintended consequences.

- **2020 legislative amendments**

Most of the 2020 legislative amendments are not retrospective. They are effective from 29 July 2020 so will only impact the 2021 accident year for the 30 June 2021 outstanding claims liability and the 2021/22 projections. Some of these changes are a reversal of the 2015 legislative amendments. For the changes that are a reversal, none of them were included in our original costing as their impact was considered to be minimal. The more material changes will mainly affect the government self-insurance claims which are out of scope for the report. The changes to catastrophic injuries may have an impact if the settlements were previously significantly less than the actual lifetime cost.

We have not made any specific allowance for the 2020 legislative amendments for the 2020/21 outstanding claims valuation and 2021/22 projections.

We recommend NT WorkSafe and insurers closely monitor the experience to ensure that there are no unintended consequences. See Appendix B6 for more information.

- **Silicosis claims**

There have been a significant number of silicosis claims in other Australia states that have been reported over the past year. In the NT, there have been no new silicosis claims over the year to 30 June 2021. Therefore, there are three silicosis claims (that are not government self-insurer claims) reported in the NT to date, of which the total paid on these claims were around \$32,000.

Therefore, due to the lack of historical claims and small percentage of business with potential exposure, we have not made a special allowance for these claims in our valuation, as they are unlikely to have a material impact on the total scheme outstanding claims liability or scheme break-even premium rate. Any silicosis claims could impact the premium rates for industry classes and individual employers.

- **Psychological injury**

Primary psychological injuries are increasing in number and as a proportion of total claims in other state workers compensation schemes and their costs are often higher than for other injury types. The Safe Work Australia Comparative Performance Monitoring Report shows that NT has lower rates of primary psychological injury than most other states.

Sequela psychological injuries are also increasing nationally, though it can be difficult to accurately identify claims with sequela psychological injuries as the data doesn't clearly capture this.

We do not separate our analysis by nature of injury, but we monitor the proportion of claims by nature of injury to understand any changes in the claims experience. We will continue to monitor the claims experience to understand if there are any changes in the percentage of claims with primary psychological injuries.

We recommend NT WorkSafe and insurers also closely monitor the psychological injury experience and explore ways to better capture data on sequela psychological injuries.

Contents

Executive summary	i
1 About this report	1
1.1 Context for our review	1
1.2 Compliance with standards	2
2 Insurer outstanding claims liabilities	3
2.1 Outstanding claims liability	3
2.2 Claims statistics	6
2.3 Actual vs expected claims experience over 2020/21	8
2.4 Reconciliation of estimates	9
3 Self-insurer outstanding claims liabilities	10
3.1 Outstanding claims liability	10
3.2 Claims statistics	11
3.3 Actual vs expected claims experience over 2020/21	12
3.4 Reconciliation of central estimates	13
4 Break-even premium rates	14
4.1 Adequacy of past premiums	14
4.2 Forecast break-even premium rate	17
5 Data and methods	18
5.1 Data provided	18
5.2 Data quality and reconciliation	20
5.3 Data enhancements and additional data	20
5.4 Projection methods for outstanding claims	20
5.5 Approach to estimate break-even premium rates	22
6 Assumptions	23
6.1 Financial assumptions	23

6.2	Superimposed inflation	24
6.3	Expenses	24
6.4	Reinsurance	25
6.5	Legislation changes	25
7	Uncertainty	27
7.1	Uncertainty in the estimates	27
7.2	Determination of provisions	27
7.3	Key risks for NT WorkSafe scheme	30
Appendix A	Detailed data description	35
Appendix B	Assumptions	41
Appendix C	Insurer outstanding claim valuation	55
Appendix D	Insurer claims statistics	72
Appendix E	Insurer financial year claims experience	79
Appendix F	Self-insurer outstanding claims valuation	86
Appendix G	Self-insurer claims statistics	93
Appendix H	Insurer break-even premium rate	97
Appendix I	Glossary	103

1 About this report

1.1 Context for our review

This report has been prepared for NT WorkSafe and the Scheme Monitoring Committee in accordance with contract number D19-0182, dated 1 October 2019. Under this contract we have conducted the following analyses which are detailed in this report:

- Calculation of the funding ratio based on 30 June 2021 outstanding claims liability valuations for insurers and self-insurers
- Calculations of the break-even premium rate for each prior accident year using data to 30 June 2021, including a review of the trends in the required premium and a comparison to the actual premium rates charged by insurers
- An estimate of the break-even premium rate for 2021/22 based on historic data and future inflation assumptions.

This is the ninth time we have prepared this report for the NT workers compensation scheme. Our previous valuation was conducted using data as at 30 June 2020, the findings of which are detailed in our 17 February 2021 report titled *Actuarial review of Northern Territory workers compensation scheme as at 30 June 2020*.

Our review is for the following five insurers:

- Allianz Australia Insurance Limited (including Territory Insurance Office (TIO))
- CGU Insurance Australia (Part of Insurance Australia Limited)
- GIO Insurance Australia (also known as AAI)
- QBE Insurance Australia
- Catholic Church Insurance (for claims incurred from 1 December 2020)

and the following five self-insurers:

- Coles Supermarkets Australia Pty Ltd
- Wesfarmers Retail Holdings Pty Ltd
- Westpac Banking Corporation
- Woolworths Supermarkets.
- Catholic Church of the NT (Darwin Diocese) (for claims incurred up to 30 November 2020)

The analysis excludes Government Self Insurance and uninsured claims.

At 30 June 2014, TIO was a separate insurer. However, over the 2015 financial year it was purchased by Allianz. Over the 2019 financial year, Wesfarmers Retail Holdings Pty Ltd has been separated from Coles Supermarkets Australia Pty Ltd as a result of its demerger.

We were advised that from 1 December 2020, Catholic Church changed from a self-insurer to an insurer in the NT. This change meant that claims incurred up to 30 November 2020 will continue to be categorised under Catholic Church of the NT (Darwin Diocese) (self-insurer), while claims incurred from 1 December 2020 onwards will be categorised under Catholic Church Insurance Limited (Insurer).

The report is structured as follows:

- Sections 2 and 3 of this report present the outstanding claims liability valuations for insurers and self-insurers respectively
- Section 4 analyses the break-even premium rates for past underwriting years and the adequacy of the rates actually charged by insurers
- Section 5 details the data and methodology we have used
- Section 6 and section 7 outline the assumptions adopted in this review and considers the uncertainty in the work we have carried out, including some key risks faced.

1.2 Compliance with standards

1.2.1 Outstanding claims liabilities

The approach for calculating the outstanding claims liabilities is consistent with that required by the Accounting Standards for private and State Government general insurers (AASB1023), and APRA's prudential standard CPS320 Actuarial and Related Matters and GPS340 Insurance Liability Valuation where applicable. It also complies with the Institute of Actuaries of Australia's Professional Standard PS302 to the extent possible given the data available.

We have not performed a full review of asbestos liabilities due to lack of available data.

1.2.2 Premium rates

Our advice to you complies with the Institute of Actuaries of Australia Code of Conduct.

2 Insurer outstanding claims liabilities

2.1 Outstanding claims liability

2.1.1 Our estimates

The table below shows our central estimate results by payment type group in current values, including 2015 legislative amendments and excluding claims handling expenses:

Estimates of outstanding claims at 30 June 2021 (\$000s) (a) (b)											
Accident year	By payment type method							All payments		Allowance for active large claims	Total (e)
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	Sum of individual payment methods (c)	Combined PCE method (d)			
2021	21,879	7,072	9,085	3,095	5,278	31,241	77,650	72,190	2,225	79,875	
2020	10,103	2,470	3,548	1,564	3,734	25,062	46,481	40,486	5,974	52,454	
2019	6,066	1,427	1,977	1,200	3,020	22,195	35,885	23,418	0	35,885	
2018	6,332	1,578	1,991	1,359	4,166	25,825	41,251	36,085	0	41,251	
2017	1,623	522	575	691	1,155	9,326	13,891	9,799	0	13,891	
2016	1,475	383	491	706	1,101	9,540	13,696	12,018	4,818	17,675	
2015	3,503	763	955	1,858	1,076	8,702	16,857	11,525	2,187	15,045	
2014	2,708	594	732	1,628	785	6,651	13,098	4,043	0	6,306	
2013	1,889	429	516	1,304	523	4,802	9,464	4,791	2,030	7,989	
2012 & earlier	12,679	3,125	3,509	9,829	3,317	32,545	65,004	39,292	5,103	50,823	
Total	68,258	18,363	23,378	23,234	24,153	175,889	333,275	253,645	22,337	321,194	

Notes: (a) to (e) from appendix C4

The table shows that the largest component of the outstanding claims liability relates to the redemptions and non-economic lump sum payment group (55% of the total for individual payments), followed by weekly benefits (21% of the total for individual payments).

Further detail on the parameters adopted to calculate the outstanding claims can be found in Appendix C. For further analysis on the composition of the incurred cost of claims by payment group see Appendix E2.

To generate the gross central estimates, the current value estimates are inflated and discounted, as follows:

Gross estimates at 30 June 2021 excluding expenses (\$000s)			
Accident year ending 30 June	30 June 2021 values	Inflated values	Infl/disc values
2021	79,875	83,900	81,296
2020	52,454	55,611	53,334
2019	35,885	38,247	36,386
2018	41,251	44,251	41,782
2017	13,891	15,228	14,041
2016	17,675	18,924	17,943
2015	15,045	16,197	15,268
2014	6,306	6,898	6,387
2013	7,989	8,616	8,126
2012 & earlier	50,823	55,141	51,651
Total	321,194	343,013	326,215

An allowance for reinsurance recoveries, claims handling expenses and a risk margin are included in the gross inflated/discounted estimates to arrive at the net outstanding claims provision:

Estimates at 30 June 2021 (\$000s)							
	Gross o/s liability (a)	Reinsurance recoveries (b)	Net o/s liability (c)	Claims handling expenses (d)	Net central estimate (e)	Risk margin (f)	Net Provision (g)
Total	326,215	17,594	308,621	18,517	327,138	39,491	366,629

Notes: (a) from table above

(b) based on the reinsurance information provided by insurers on large claims

(c) = (a) – (b)

(d) = (c) x 6%, see section 6.3 for details of the claims handling expenses

(e) = (c) + (d)

(f) = (e) x 12.07%, see section 7.2.2 for details on the risk margin

(g) = (e) + (f)

The inflated and discounted gross central estimate of \$326.2 million is \$28.7 million (8.1%) lower than the equivalent estimate as at 30 June 2020. This decrease is mostly driven by a decrease in the allowance for additional large claims development on older accident years, i.e., 2012 and earlier years. We reduced the allowance after reviewing the historical case estimate development, and observed that there had been lower development on large claims in the older years, compared to expected.

Net results have only been provided in total, as reinsurance recoveries depend on the large claims experience in each accident year and individual insurers' reinsurance treaties. The net provision at 30 June 2021 is \$366.6 million, which is \$29.3 million (7.4%) lower than 30 June 2020.

Since the 2016 financial year, insurers have provided us with more information about which claims are likely to receive a reinsurance recovery, to better allow for the estimate of reinsurance recoveries. However, we are not providing this information on an accident year basis in the report for commerciality reasons.

2.1.2 Comparison with insurers

We have compared our gross and net outstanding claim estimates to the insurers' estimates in total. As mentioned above, we have not compared the results by accident year, for insurer commerciality reasons.

Gross estimates at 30 June 2021 excluding expenses (\$000s)				
	Insurers' estimate (a)	PwC estimate (b)	PwC Difference (\$000) (b) - (a)	Difference (%) (b) / (a) - 1
Total	333,810	326,215	-7,595	-2.3%

Notes:(a), (b) = gross inflated and discounted values excluding claims handling expenses

As at 30 June 2021, our gross estimate is \$7.6 million (2.3%) lower than that of the insurers. This compares to our estimate being \$0.27 million (0.1%) higher than that of the insurers at 30 June 2020. The difference is due to different underlying methods and assumptions used by the insurers compared to us in the valuation. A key driver of this difference may relate to the uncertainty associated with large claims and future development on these.

Our net provision is higher than that of the insurers due to different reinsurance recoveries and risk margin assumptions. Individual insurers would be expected to have a lower risk margin than the scheme, due to diversification benefits from writing other classes of business.

Funding ratio

The funding ratio measures the liabilities held by the insurers (the notional assets) compared to the aggregate outstanding claims liability calculated by the scheme actuary. This is used to represent the ability of the scheme in aggregate to meet its liabilities.

For insurers, the funding ratio compares the insurers' net provision (i.e. including risk margin) with our central estimate (i.e. excluding risk margin). This is shown in the table below:

Funding ratio (\$000s)				
	Actual provisions (a)	PwC central estimate (b)	Difference (\$000) (b) - (a)	Funding ratio (a) / (b)
Insurers	361,580	327,138	-34,442	111%

Notes: (a) as per table above, net provision including risk margin
 (b) net central estimate, excluding risk margin

The aggregate funding ratio is 111%, which is an increase from 108% last year. The increase in the insurers' funding ratio was due to our provision decreasing by more than the decrease in the insurers' provisions compared to 30 June 2020. We are not provided with a reconciliation for the insurers' provision so we cannot identify the drivers of the insurers' decrease. Part of this may be due to differences in allowances for the valuations by payment type and future large claims development.

A ratio above 100% implies that, in aggregate, insurers are holding sufficient reserves to be likely to meet our central estimate of future claims costs. We make the following comments which should be borne in mind when considering the funding ratio:

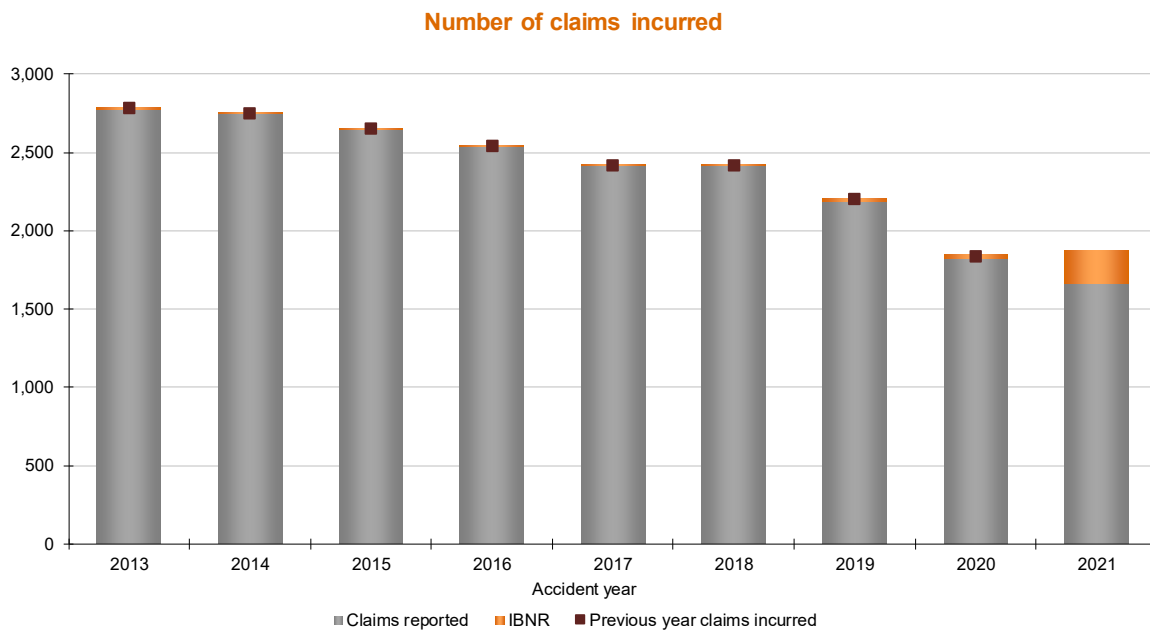
- The insurers' actuaries have access to more detailed claims data than we have to estimate the liabilities
- Insurers hold assets in excess of their liabilities due to APRA capital requirements and their own risk appetite
- Some insurers may be holding greater than 100% of our notional allocation to them, while others may be holding less. Of concern would be any insurers who are well below 100%.

2.2 Claims statistics

The following sub-sections show the claims experience by accident year. For more graphs of claims statistics, including by financial year, see appendices D and E.

2.2.1 Number of claims incurred

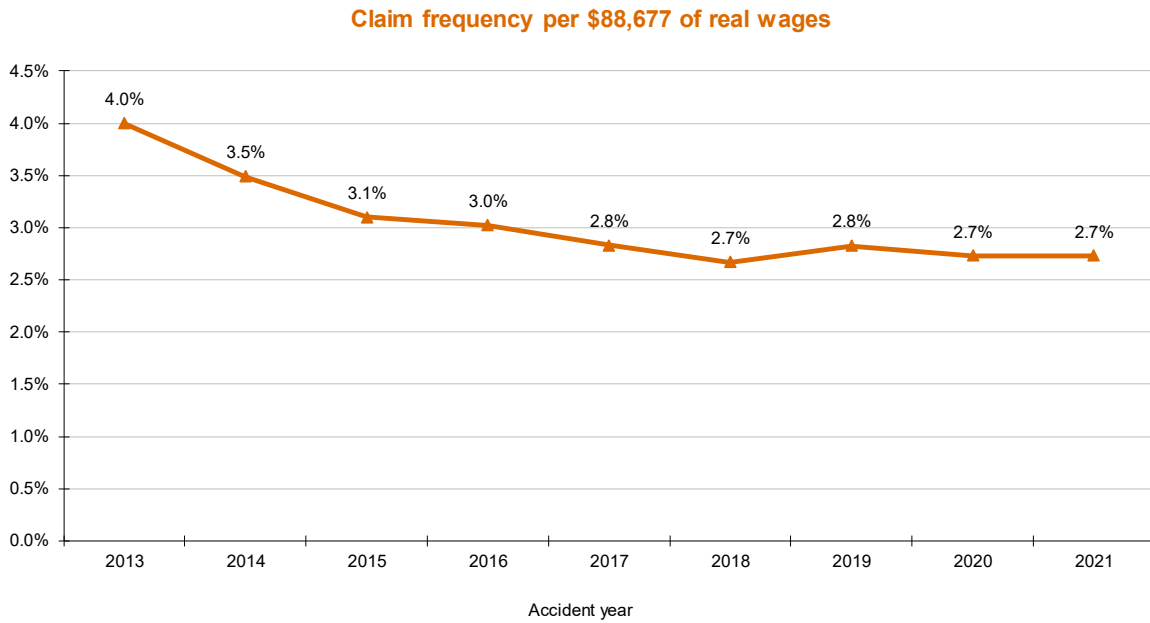
Decreasing trend from 2013 peak to 2020. 2021 is estimated to be slightly higher than 2020



The main points to highlight from this chart are:

- The number of claims incurred for the 2013 accident year was just under 2,800
- From the 2013 to 2020 accident years, there has been a decreasing trend in the number of claims incurred to 1,850 for the 2020 accident year
- For the 2021 accident year, the number of incurred claims at 1,869 claims is estimated to be slightly higher than the 2020 accident year but lower than 2019 and all prior years. The increase between 2020 and 2021 is partially due to Catholic Church claims being included in the insurer category from 1 December 2020
- The numbers of claims are similar to those estimated at the previous valuation.

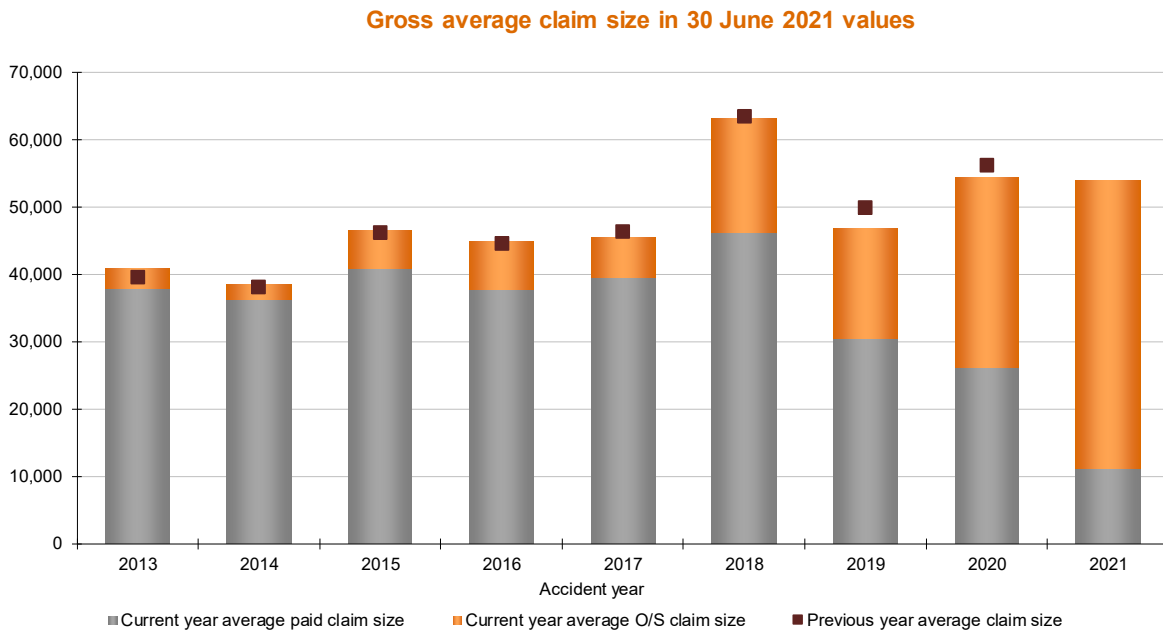
Declining claim frequency due to significant increases in wages up to 2015 and more recently reducing number of claims incurred. 2021 is similar to 2020 as the number of claims increased by a similar proportion to the increase in wages



See Appendix D1 for the formula to calculate the claim frequency.

2.2.2 Gross average claim size

2021 is estimated to be slightly lower than 2020 but higher than most prior years



Since 2013 the gross average claim size (in 2021 values):

- Exhibited volatility due in part to large claims

- Exhibited a broadly increasing trend from around \$40,885 in 2013 to around \$45,437 in 2017
- Increased significantly to \$63,233 in 2018 due to high payments and case estimates to date
- Decreased to \$46,854 in 2019 given lower total estimates reported to date, relative to 2018 but higher than prior years
- For the 2021 accident year, the gross average claim size is estimated to be \$53,963, which is slightly lower than the 2020 accident year of \$54,492 but higher than most prior years.

The uncertainty about the future development means that the ultimate level and our estimates may differ from those projected for recent accident years. This is especially true for the 2021 accident year, where a high proportion (79%) of the average claim size relates to uncertain future claims development.

Compared to the previous valuation, the gross average claim size is similar for all years, except for 2019 and 2020 where the current estimate is lower than the previous valuation. This reflects changes in total estimates over the year.

Appendix E contains the average claim size split by payment type. The mix of payment types across the accident years has remained stable. Redemptions and non-economic lump sums are the largest payment type, closely followed by weekly benefits. These two payment types account for just under two thirds of total incurred costs.

2.3 Actual vs expected claims experience over 2020/21

2.3.1 Claims incurred up to 30 June 2020

Actual experience compared to the expected experience over 2020/21 for claims incurred up to 30 June 2020 showed:

- Claim reports were 8% higher than expected (226 actual compared to 209 expected)
- The proportion of claims finalised was slower than expected (59.1% compared to 63.1%)
- Claim payments were 5% lower than expected (\$86.2 million actual compared to \$90.3 million expected)
- Case estimate development was higher than expected (27% actual compared to 18% expected).

Expected experience is taken from the previous scheme report dated 17 February 2021. See appendix C2 for full details.

The impact of this experience is quantified in the reconciliation in section 2.4.

2.3.2 Claims incurred over 2020/21

The actual experience for claims incurred over 2020/21 compared to expected showed:

- The number of incurred claims was 5.1% less than projected for the 2021 accident year in the previous valuation
- There were 738 claims active as at 30 June 2021, which is 3.7% higher than the 712 expected
- The average payment per claim was \$11,235, which is 11.4% lower than the \$12,674 expected.

The expected experience is based on the adopted parameters used for our 30 June 2020 valuation.

2.4 Reconciliation of estimates

The table below reconciles the gross outstanding claims central estimate, excluding expenses, with the equivalent result as at 30 June 2020.

Reconciliation of gross actuarial estimates, excluding expenses (\$000s)										
Accident year ending 30 June		2020	2019	2018	2017	2016	2015	2014	2013 & earlier	Total
A.	Gross estimates at 30 June 2020 (a)	83,142	60,380	59,424	22,133	21,186	22,454	6,577	79,605	354,901
B.	Gross payments 1 July 2020 to 30 June 2021	25,773	15,748	16,078	5,264	3,665	7,436	1,067	11,138	86,170
C.	Assumed investment return (b)	155	116	113	43	43	41	13	163	687
D.	= A - B + C	57,524	44,748	43,459	16,912	17,564	15,059	5,523	68,630	269,418
	Updated gross estimates at 30 June 2021									
E.	Revised gross estimates at 30 June 2021 (c)	53,334	36,386	41,782	14,041	17,943	15,268	6,387	59,778	244,919
F.	= E - D	-4,190	-8,361	-1,677	-2,871	379	209	864	-8,853	-24,499
	Change 01 July 2020 to 30 June 2021									
G.	Proportion of change attributable to									
	Changes in real rates of return	122	34	-26	-78	-32	-61	-49	-410	-499
	Change in experience	-2,754	-6,255	-2,086	-1,907	-77	-816	531	-10,386	-23,749
	Change in actuarial assumptions	-1,558	-2,140	435	-886	488	1,085	382	1,943	-251
H.	Gross amount incurred and outstanding for 2020/21 accident year (e)									81,296
I.	= E + H									326,215
	Total gross outstanding liability, excluding expenses at 30 June 2021									

Notes: (a) from appendix C4 of our previous report dated 17 February 2021

(b) calculated using 0.22% p.a. being the one year forward rate from section 6.1 of our previous report dated 17 February 2021

(c) from appendix C4 of this report.

The table shows that:

- Overall estimates show a release of reserves of \$24.5 million, which is 6.9% of the opening 30 June 2020 estimates. This decrease is made up by:
 - \$23.7 million release (6.7% of opening estimates) due to change in experience
 - \$0.5 million release (0.1%) due to the change in the real rates of return
 - \$0.3 million release (0.1%) due to change in actuarial assumptions
- The decrease in real rates of return is due to changes in inflation rates and discount rates, as described in Section 6.1
- The change in experience is due to releases for all accident years, except the 2014 accident year. Claim development has generally been favourable and better than expected, especially for 2019. By accident year, this is due to:
 - For 2020, the case estimate development was lower than expected. The payments were higher than expected but this was due to higher redemptions and non-economic loss lump sum payments so the expected future payments reduces
 - For 2019, payments and case estimate development was lower than expected
 - For 2018, payments were lower than expected
 - For 2017, finalisation rates were higher than expected and payments were lower than expected
 - For 2013 and prior years, a release of reserve is driven by a favourable development, especially on large claims for the older accident years
- The release due to change in actuarial assumptions for 2017, 2019 and 2020 is due to lower superimposed inflation rates and lower adopted payments per claim finalised to reflect the experience over the year, particularly for redemptions and non-economic lump sums. These releases are mostly offset by the strain for all other years, where we increased the assumptions to reflect the higher claims experience.

3 Self-insurer outstanding claims liabilities

3.1 Outstanding claims liability

3.1.1 Outstanding claims provision

The provision below is based on cumulated claims data across all payment types and self-insurers. Projected payments are inflated and discounted to get to the gross central estimate before application of an allowance for claims handling expenses and a risk margin to calculate the provision.

A breakdown of our results is shown in the table below:

Estimates at 30 June 2021 (\$000s)							
Accident year ending 30 Jun	Gross o/s liability (a)	Reinsurance recoveries (b)	Net o/s liability (c)	Claims handling expenses (d)	Net central estimate (e)	Risk margin (f)	Net Provision (g)
Total	5,663	0	5,663	340	6,003	1,501	7,504

Notes: (a) in inflated and discounted values

(b) (a) x 0%

(c) (a) + (b)

(d) assumed to be 6% of the net outstanding liability

(e) = (c) + (d)

(f) a risk margin to increase the provision to a 75% level of sufficiency, = (d) x 25.0%

(g) = (e) + (f)

The inflated and discounted net provision at 30 June 2021 is \$7.5 million, which is \$2.3 million (44%) higher than the \$5.2 million provision as at 30 June 2020. The increase is mainly due to high case estimates for the 2020 and 2021 accident years.

3.1.2 Comparison with self-insurers' estimates

We have compared our assessment of the net central estimate to self-insurers' estimates. The results are shown in the table below:

Estimates at 30 June 2021 (\$000s)					
Accident year ending 30 Jun	Self-insurers' estimate (a)	PwC estimate (b)	Difference (\$000s) (b) - (a)	Difference (%) (b) / (a) - 1	
2015 & earlier	119	134	15	12.8%	
2016	18	3	-15	-85.4%	
2017	155	144	-11	-7.3%	
2018	146	39	-108	-73.6%	
2019	417	258	-159	-38.2%	
2020	2,805	2,767	-38	-1.4%	
2021	2,038	2,659	621	30.5%	
Total	5,699	6,003	304	5.3%	

Notes: (a), (b) in inflated and discounted values, including claims handling expenses

This comparison shows that our net central estimate is higher than the self-insurers' estimate by \$0.3 million (5.3%). This is largely due to the higher estimates for the 2021 accident year, partially offset by lower estimates for all other years.

Self-insurer funding ratio

For self-insurers, the funding ratio compares the self-insurers' bank guarantee provision (the central estimate times 1.5, with a minimum of \$1 million per self-insurer) with our estimate, which excludes any risk margin.

Funding ratio (\$000s)				
	Self-insurers' provision (a)	PwC central estimate (b)	Difference (\$000s) (b) - (a)	Difference (%) (b) / (a) - 1
Total	10,392	6,003	-4,390	173%

Notes: (a) bank guarantee provision, net central estimate (from table above) x 1.5
 (b) as per table above, net central estimate excluding risk margin

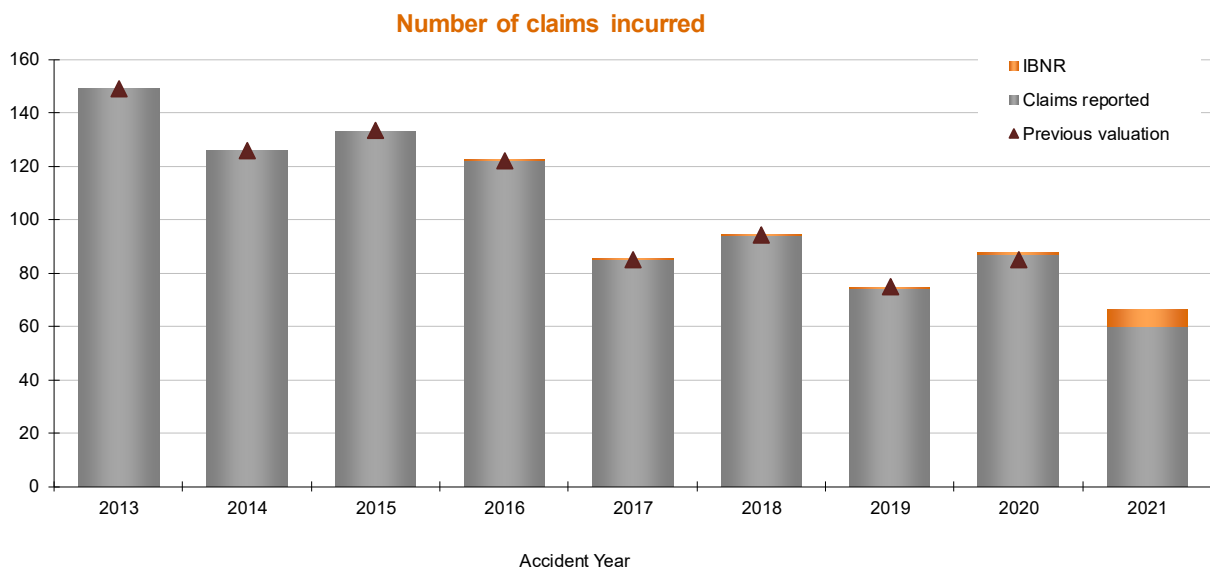
The aggregate funding ratio of 173% is higher than 154% as at 30 June 2020. The increase in the self-insurer provision is partially due to the new minimum requirement of \$1 million bank guarantee per self-insurer. Funding ratio remains well above 100% which indicates that the current bank guarantee provisions held by self-insurers in aggregate are likely to be adequate to cover future claims costs.

3.2 Claims statistics

The following sub-sections show the claims experience by accident year. For more graphs of claims statistics, see Appendix G.

3.2.1 Number of claims incurred

General decreasing trend from 2013 peak to 2021 at 66 claims



The main points to highlight from this chart are:

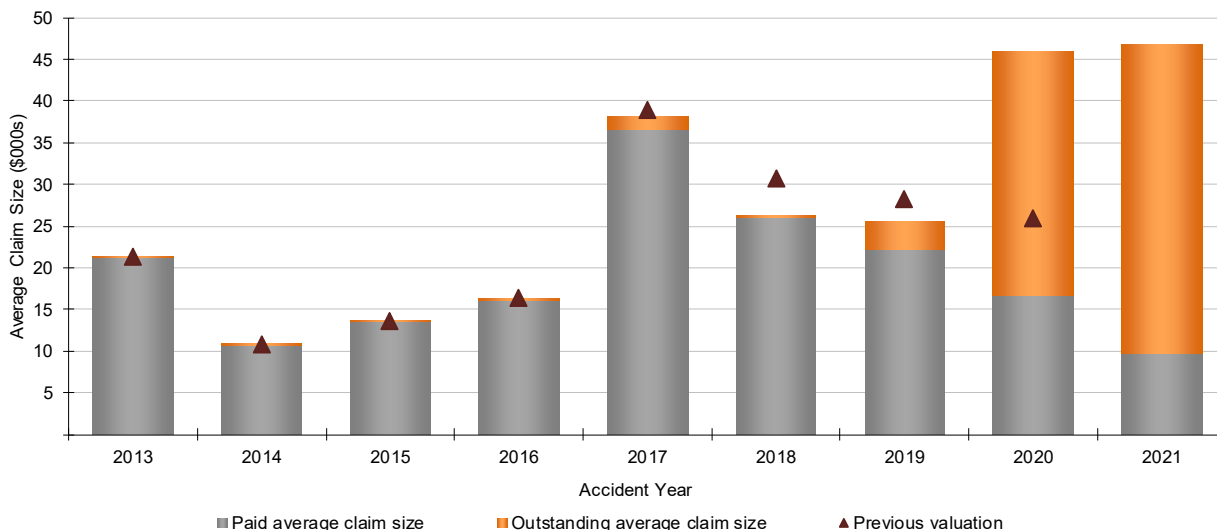
- Since the high of 149 claims in 2013, the number of claims has reduced to a level of 126 claims in 2014. From a review of the self-insurer reports, we understand that one self-insurer has changed its management and recording of small claims, which contributed to the decrease
- The number of claims was fairly stable over 2014 to 2016 at around 120 to 135 claims
- For 2017, the total estimated claims were 85, which is significantly lower than all prior years shown
- From 2017 to 2020 the number of claims incurred has varied between 74 and 94

- For 2021, number of claims incurred decreased to 66, of which 6 are IBNR claims. The significant decrease compared to 2020 and all prior accident years is partly due to Catholic Church becoming an insurer from 1 December 2020 which means 2021 only includes five months of Catholic Church claims
- The numbers of claims are similar to estimates at the previous valuation, however 2020 is slightly higher.

3.2.2 Gross average claims size

2021 average claim size is estimated to be \$46,800, which is higher than all previous years

Average claim size in 30 June 2021 values



The average claim size has been volatile between accident years and there has been no discernible trend. From 2013 to 2016, the average claim size has ranged between \$10,500 and \$21,500.

Our estimated average claim size for the 2017 accident year is higher than its surrounding years due to higher payments and case estimate development to date, driven by multiple large claims.

Our estimated average claim size for the 2020 and 2021 accident years are significantly higher at \$45,922 and \$46,800 which is higher than all prior accident years due to higher total estimates reported to date.

The uncertainty about the future development means that the ultimate level and our estimates may differ from that projected for recent accident years. This is especially true for the 2020 and 2021 accident years, where a high proportion (64% and 79% respectively) of the average claim size consists of the uncertain future estimate.

Compared to the previous valuation, the average claim size for 2013 to 2016 are similar, 2017 to 2019 are lower but 2020 is significantly higher than previously estimated.

3.3 Actual vs expected claims experience over 2020/21

Actual experience compared to the expected experience over 2020/21 for claims incurred up to 30 June 2020 showed:

- Claim reports were higher than expected (12 actual compared to 9.3 expected)
- Claim payments were significantly lower than expected (\$1.8 million actual compared to \$2.2 million expected).
- Case estimate development was higher than expected (90% actual compared to 68% expected)

The expected experience is taken from our previous report dated 17 February 2021. See Appendix F for full details.

The impact of this experience and our adjustments to future development is quantified in the reconciliation below.

3.4 Reconciliation of central estimates

The table below reconciles the gross outstanding claims central estimate, excluding expenses, with the equivalent result as at 30 June 2020.

Reconciliation of gross actuarial estimates, excluding expenses (\$000s)									
Accident year ending 30 June (\$000s)	2020	2019	2018	2017	2016	2015	2014	2013 & earlier	Total
A. Gross estimates at 30 Jun 2020 (a)	1,741	667	919	344	45	6	3	201	3,925
B. Gross payments 1 July 2020 to 30 June 2021	950	187	463	137	0	0	0	55	1,792
C. Assumed investment return (b)	3	1	2	1	0	0	0	0	7
D. = A - B + C Updated gross estimates at 30 June 2021	794	481	458	207	45	6	3	146	2,139
E. Revised gross estimates at 30 June 2021 (c)	2,610	243	36	136	2	1	1	124	3,155
F. = E - D Change 1 July 2020 to 30 June 2021	1,816	-237	-421	-71	-42	-5	-2	-22	1,016
G. Proportion of change attributable to									
Changes in real rates of return	27	2	0	1	0	0	0	0	30
Change in experience	827	-140	-401	-82	-22	-2	-1	-25	154
Change in actuarial assumptions	963	-99	-20	9	-20	-2	-1	4	832
H. Gross amount incurred and outstanding for 2020/21 accident year (c)									2,508
I. = E + H Total gross outstanding liability, excluding expenses at 30 June 2021									5,663

Notes: (a) from appendix F4.4 of our previous report dated 17 February 2021

(b) calculated using 0.22% p.a. being the one year forward rate from section 6.1 of our previous report dated 17 February 2021

(c) from appendix F4.4 of this report.

The table shows that:

- Overall estimates show a strain on reserves of \$1.0 million, which is 25.9% of the opening 30 June 2020 estimates. This strain is made up of:
 - \$0.83 million strain (21.2% of opening estimates) due to changes in actuarial assumptions
 - \$0.15 million strain (3.9%) due to change in experience
 - \$0.03 million strain (0.8%) due to decrease in the real rates of return.
- The biggest cause of the strain is the 2020 accident year, which increased due to significantly higher than expected payments and case estimate development over the year. This is partially offset by releases for 2016 to 2019 due to lower development than expected.

4 Break-even premium rates

4.1 Adequacy of past premiums

The break-even premium rate is calculated on an inflated and discounted basis and is gross of reinsurance, given that each insurer will have a unique reinsurance treaty in place. No allowance for a profit margin has been made, as insurers will set their own margin based on a multitude of factors, and we are interested in the “break-even” premium, which excludes any consideration of profit.

For this analysis, we have allowed for the claims costs and expenses to be discounted to the point that the premium is received. We have used all claims experience available to date to calculate the break-even premium rate.

The following table shows our estimated break-even premium rates and the actual rates charged by insurers:

Accident year	Calculated break even premium						Actual premium				
	Reported earned wages (a) (\$000s)	Developed earned wages (b) (\$000s)	Discounted gross incurred cost (c) (\$000s)	Commission in financial year (d) (\$000s)	Discounted other expenses in the fin year (e) (\$000s)	Premium (f) (\$000s)	Estimated premium rate (g)	Reported earned premium (h) (\$000s)	Developed earned premium (i) (\$000s)	Actual premium rate charged (j)	Difference (break even - actual)
2021	5,944,273	6,090,234	102,327	4,727	27,323	134,387	2.2%	129,504	132,329	2.2%	-2,058
2020	5,963,976	5,999,411	101,584	4,501	23,377	129,533	2.2%	127,912	128,694	2.1%	-839
2019	6,779,085	6,784,187	102,206	4,701	20,885	128,102	1.9%	137,382	137,800	2.0%	9,698
2018	7,850,408	7,850,408	148,741	5,534	22,548	177,652	2.3%	141,950	142,145	1.8%	-35,507
2017	7,261,995	7,261,995	104,738	4,489	20,653	130,407	1.8%	131,558	131,558	1.8%	1,151
2016	6,833,594	6,833,594	106,107	4,163	20,086	130,990	1.9%	129,530	129,530	1.9%	-1,460
2015	6,582,845	6,582,845	110,193	4,558	20,288	135,867	2.1%	136,816	136,816	2.1%	950
2014	5,929,595	5,929,595	91,067	4,775	17,098	113,650	1.9%	138,578	138,578	2.3%	24,928
2013	5,199,017	5,199,017	94,670	3,697	15,016	114,167	2.2%	124,326	124,326	2.4%	10,159

Notes: (a) earned wages provided by insurers

(b) (a) x development factors in Appendix B7

(c) calculated in Appendix H1

(d) actual commission, from the consolidated Form A returns

(e) other expenses, from the consolidated Form A returns, discounted by half a year

(f) = (c) + (d) + (e) x (1+ one year historical interest rate) ^ (3/12) to allow for the fact that premiums are on average received 3 months after the commencement of the underwriting period

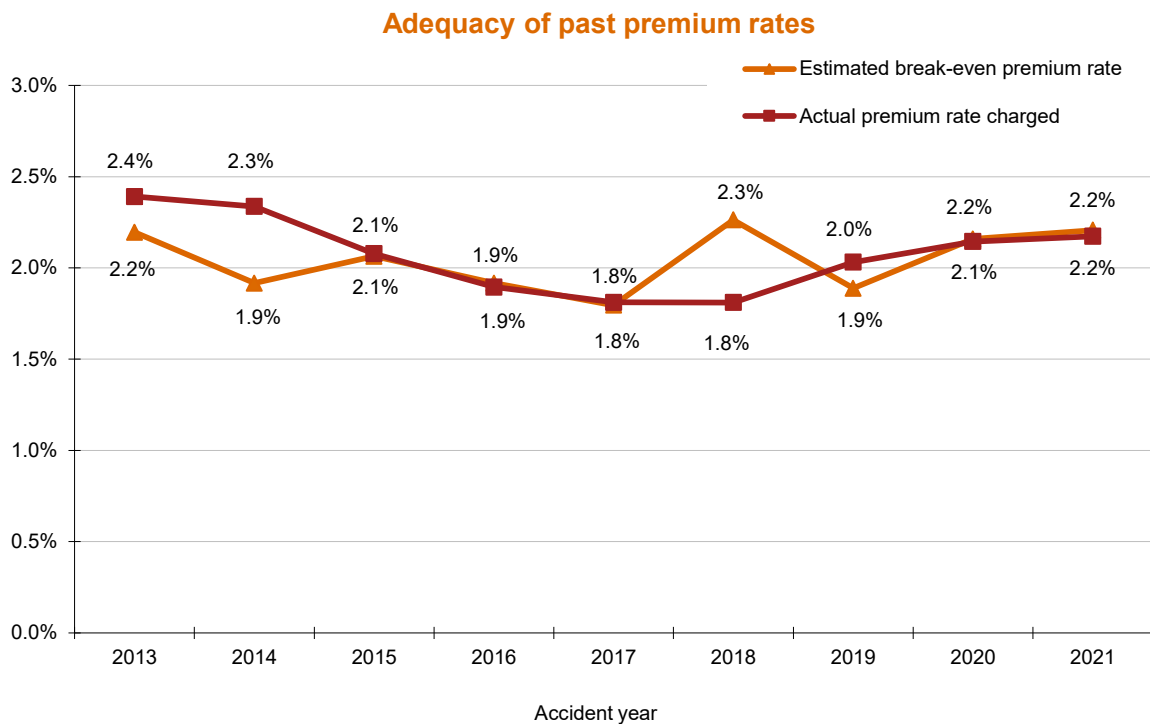
(g) = (f) / (b)

(h) earned premium, including earned but not yet reported premium provided by insurers

(i) (h) x development factors in Appendix B7

(j) = (i) / (b)

We estimate that the 2021 developed premiums charged of \$132.3 million were \$2.1 million (1.5%) lower than the estimated break-even premiums of \$134.4 million.



The key points to highlight from the above chart and table may be summarised as follows:

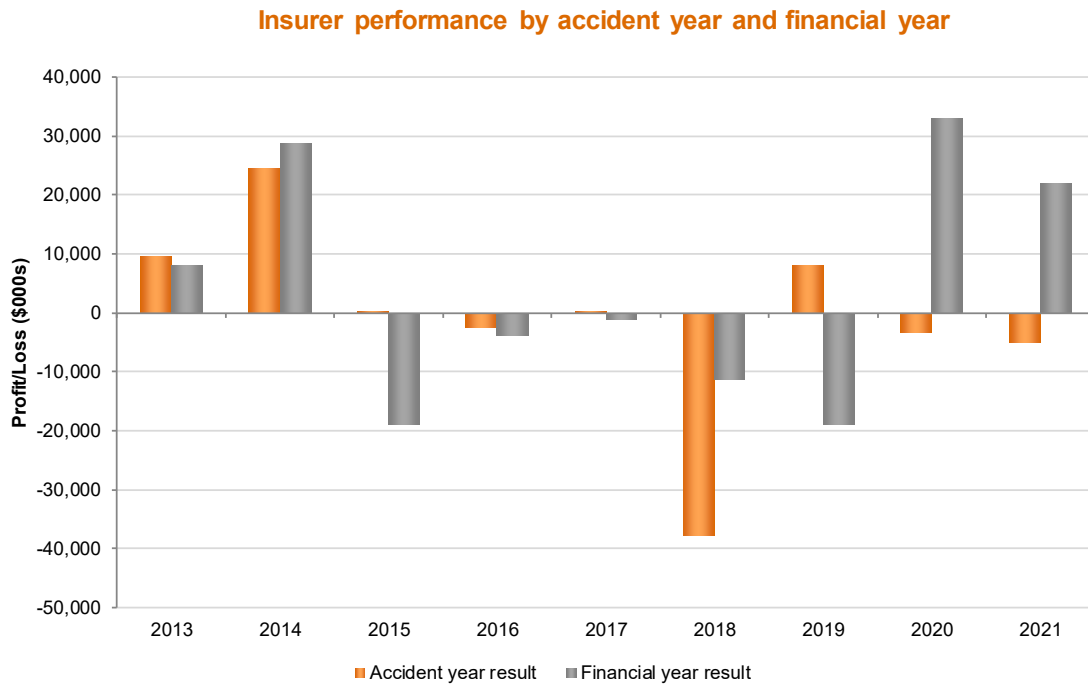
- The actual premium rate charged from 2013 to 2015, decreases from 2.4% and 2.1%
- Following the Act changes in July 2015, both the actual premium rate and the estimated break-even premium rate have fallen. The actual premium rate charged was between 1.8% and 2.1% over 2016 to 2020.
- For 2021, actual premium rate charged had increased to 2.2% and it is slightly lower than the estimated break-even premium rate of 2.3% for the year
- With hindsight, there has been mixed experience in the sufficiency of actual premium rates charged by insurers over 2013 to 2021 shown in the graph above.
 - The actual premium rate charged is estimated to have been more than sufficient to cover the break-even cost for accident years 2013 to 2014.
 - For 2015 to 2017 and 2019 to 2021 the actual premiums were similar to slightly higher than the estimates of the break-even rate
 - In 2018 the actual premium rate was less than sufficient to cover break even cost.

Historically, the actual rate has fluctuated around the estimated break-even premium rate. However, we would expect the premium charged by insurers to be consistently higher than the break-even premium, to incorporate an appropriate profit margin. Insurers will likely use a higher discount rate than Commonwealth yields in their pricing based on a higher expected rate of investment return. This reduces the actual premium rate charged.

Another source of difference between the two rates is reinsurance. We have estimated the break-even rate based on the gross risk cost, whereas the premium rate charged by insurers would factor in reinsurance (both recoveries and cost of a treaty). Assuming that reinsurance is priced to deliver a profit above the expected reinsurance recoveries, then the break-even rate would be expected to increase if an allowance was made for reinsurance.

Break-even premium rates

Using the difference between the actual premium and break-even premium as shown in the table above we have graphed the insurer performance on an accident year basis. The financial year basis comes from the Form A supplied by insurers.



Over the nine years shown in the chart above there is no discernible trend in the insurer profitability. In general, the insurer performance on a financial year basis has been more variable than the performance on an accident year basis, except for the 2018 accident year.

4.2 Forecast break-even premium rate

The following table shows the break-even premium rate projected for the next financial year. For comparative purposes, we have also shown the last five underwriting years.

Underwriting year	Actual wages (a) (\$000s)	Discounted gross incurred cost (b) (\$000s)	Expenses (c) (\$000s)	Premium (d) (\$000s)	Calculated premium rate (e)
2022	6,219,826	108,818	31,222	140,050	2.3%
2021	6,090,234	102,327	32,050	134,387	2.2%
2020	5,999,411	101,584	27,878	129,533	2.2%
2019	6,784,187	102,206	25,586	128,102	1.9%
2018	7,850,408	148,741	28,082	177,652	2.3%
2017	7,261,995	104,738	25,142	130,407	1.8%

Notes: (a) 2022 = developed wageroll for 2021 x (1 + 1.7%). Developed wageroll includes a special adjustment for Catholic Church for being only partly in 2021 but will be included for the full year in 2022
 (b) 2022 = adopted claims incurred x adopted average claim size in 30 June 2021 values x (1 + wage inflation) x (1 + superimposed inflation) x inflation/discounting factor
 $1,914 \times 54,226 \times (1 + 1.7\%) \times (1 + 1.6\%) \times 1.0144$
 (c) = (b) / (1 – commission rate (3.6%) – other expense rate (18.7%)) – (b)
 (d) = (b) / (1 – commission rate (3.6%) – other expense rate (18.7%)) x (1 + interest rate (0.03%)) ^ (3/12) to allow for the fact that premiums are received on average 3 months after the commencement of the underwriting period
 (e) = (d) / (a)

Our projection of the break-even rate for the 2022 underwriting year is reliant on three key items:

- Actual wages are forecast to increase at 1.7%, being the adopted level of future wage inflation
- The future gross incurred cost is the product of the number of incurred claims and an average claim size, allowing for future inflation, superimposed inflation and discounting to reflect the timing of payments
- Expenses are the sum of commission and other expenses, which are both set as a percentage of the total premium.

Superimposed inflation is a measure of the growth in claims cost in excess of wage inflation.

More detailed analysis on the derivation of the four adopted assumptions for the projection (incurred claim numbers, average claim size in 30 June 2021 values, commission rate and other expense rate) are shown in Appendix H.

We considered the economic indicators in the 2021/22 Northern Territory budget report, in adopting the assumptions for the 2022 break-even premium rate.

The adopted average claim size is based on average claim sizes for the 2020 and 2021 accident years, including the allowance for the 2015 legislative changes. Some of the benefit changes were reversed in the 2020 legislative amendments, however none of the changes costed for 2015 were reversed so we have kept the same allowance and made no other adjustments. See Appendix B for more details.

5 Data and methods

5.1 Data provided

NT WorkSafe supplied data to us from two sources:

- The internal WIMS database which records details of all claims lodged under the NT scheme
- Insurers' own systems giving details of claims lodged.

The following list sets out the information we received for our review. All data was supplied in electronic form.

- Report 1 – Reconciliation to Form B. NT WorkSafe's comparison of the payments and reports in the WIMS system and provided from insurers' systems
- Report 2 – Data based on date of accident. Unit claims data for all claims lodged by insurers and self-insurers, with accidents grouped by financial year and presented in separate files. This data contained payment information by payment type and development year
- Report 3 – Number of new claims received
- Report 4 – History of payments based on injury date. Claim triangles for reports and payments for each insurer and in total
- Report 5 – List of claims and insurers. Lists all claims since scheme inception by unique identification number and the insurer the claim was lodged with
- Insurer data templates. This included the following information for each insurer:
 - Form A. A simplified profit and loss account showing only the insurance aspects
 - Form B. The number of claims reported and paid during the most recent financial year, and the number of active claims, the case estimates, and the outstanding provision (split by reported and unreported claims) at the end of the most recent financial year, by accident year. This also includes a summary of payments to date and case estimates by accident year for claims with a total incurred cost higher than \$500,000
 - Outstanding claims. Specifies the gross outstanding estimate, reinsurance recoveries, claims handling expenses and prudential margin as at 30 June 2021
 - ANZSIC data. Policies, employees, premiums, wages for each ANZSIC category. This is provided on the current processing year and for the most recent five underwriting years
 - Earned but not yet raised premium. Earned but not yet raised premium for each of the five most recent earned years.
 - Large claims. Insurers provided information on each open large claim with total estimates over \$2 million and provide information on the claim number, accident date, payments to date, case estimates, total gross estimates, estimated reinsurance recoveries, other information
- For each self-insurer a list of all transactions in the 2021 financial year
- For all insurers, we have also been provided with a list of historical payment transactions for the 2009 to 2021 financial years, by payment type. Three separate files were provided for the 2009-2013, 2013-2017 and 2017-2021 financial years.
- A list of COVID related claims reported in the 2021 financial year
- A list of Dust related (Silicosis) claims reported in the 2021 financial year

We were also provided with copies of valuation reports for some insurers and self-insurers.

We have separated the data to only include the information for the five active insurers, four self-insurers which are active in the scheme and one self-insurer in run-off. These ten companies are:

- Allianz Australia Insurance Limited (including Territory Insurance Office)
- CGU Insurance Australia (Part of Insurance Australia Limited)
- GIO Insurance Australia (also known as AAI)
- QBE Insurance Australia
- Catholic Church Insurance (for claims incurred from 1 December 2020)
- Coles Supermarkets Australia Pty Ltd
- Wesfarmers Retail Holdings Pty Ltd
- Westpac Banking Corporation
- Woolworths Supermarkets.
- Catholic Church of the NT (Darwin Diocese) (for claims incurred up to 30 November 2020)

We have not included Government Self Insurance or uninsured data. The total of nine companies over the 2021 financial year is the same as 2020. Note however that Catholic Church portfolio has been split into two in the data provided to us. We were advised that from 1 December 2020, Catholic Church changed from a self-insurer to an insurer in the NT. All claims incurred before 1 December 2020 will continue to be categorised under Catholic Church of the NT (Darwin Diocese) (self-insurer) while claims incurred from 1 December 2020 onward will be categorised under the Catholic Church Insurance (insurer)

For our analyses we have used the data described in the following way:

- Form B returns have been used to find the number of claims reported, the number of claims active and case estimates
- Report 2 files have been combined to obtain payments by payment type for all accident years back to 2002 and up to development year nine.
- Payment figures for the development year 10+, the following approach has been taken:
 - The list of insurers' historical transaction payments provided for the 2009 to 2021 financial years (new data provided in this year's valuation) were used to obtain the development year 10+ payments figure, split into the different payment types
 - We have compared this to our approach last year where we had used Report 2 files combined with total payments from Report 4 to get the payment figures for development year 10+ split by payment types. The spread across payment types with this approach had to be based on the distribution of payments in development years eight and nine.
 - The change in data source for the development year 10+ (i.e., using actual data), is a better reflection of payments split by type compared to the approximation approach used in previous valuations.
- Outstanding claim estimates have been taken from insurers' data templates and self-insurers' actuarial reports
- Assumptions regarding reinsurance recoveries and claims handling expenses have been set by considering the large claim data, insurers' actuarial reports, the Form A returns provided, and with our knowledge and experience of other similar schemes

- ANZSIC data has been used to find the premiums collected and associated wages for our assessment of the adequacy of historic premium rates.

For further details on the data provided, see Appendix A.

5.2 Data quality and reconciliation

Overall, the data NT WorkSafe provided to us was suitable for our purposes, and we found it was broadly consistent across forms.

NT WorkSafe performs an initial set of data quality checks before the data is sent to us. We also conducted a high-level check of the total payments and number of claims between the Form B returns and the WIMS system and found them to be broadly consistent.

The table of the results from these checks can be found in Appendix A.

5.3 Data enhancements and additional data

All past recommendations on data enhancements have been addressed.

It would be useful to get case estimates by claim included in the data, but we understand this is not available and the costs to implement outweigh the benefits. It would also be useful to include the permanent impairment level assessed for a claim, though understand this may also not be available.

We have no further recommendations to enhance the quality of future reviews. We will continue to monitor and investigate the data provided by NT WorkSafe and suggest any future improvement as and when they are identified.

5.4 Projection methods for outstanding claims

We performed two separate valuations for this review, one for insurers and one for self-insurers. The sections below explain the different methodologies used for each valuation.

5.4.1 Insurers' outstanding claims valuation

We assessed the outstanding claims liability for insurers by projecting cash-flows separately for the following groupings of payment types:

- Weekly benefits
- Medical and hospital expenses
- Allied health, vocational rehabilitation, non-compensation other and death
- Other goods and services
- Non-compensation legal
- Redemptions and non-economic lump sum.

These groups are the same as for our previous review. They were selected based on similarities in the underlying nature of the claims likely to arise under each payment type and the payment patterns across development years.

We used a blend of the payments per active claim (PPAC) and payments per claim incurred (PPCI) methods to project payments for the first four of our groups listed above. For the other two groups we used a blend of the payments per claim finalised (PPCF) and PPCI methods.

Since our valuation as at 30 June 2020 last year, we have added a combined (of all payment types) projected case estimate (PCE) method. This enhancement in methodology was used for the older accident years, placing more reliance on case estimate information that are set by claims managers.

Payments per claim finalised method

All payments were brought to current values and divided by the numbers of claims finalised in their respective accident years and years of payment. Averages of payments per claim finalised were formed from these figures. These averages were then combined with a projection of future numbers of claims finalised to produce projected future payments.

Payments per active claim method

As described for the payments per claim finalised method, but with a denominator of numbers of claims active at the beginning of the period.

Payments per claim incurred method

All claim payments were brought to current values and divided by the numbers of claims incurred in their respective accident years. A pattern of past payments per claim incurred was derived in respect of each accident year. These payment patterns were then extended into future years and used to project future payments.

Projected case estimates method

We used details of case estimates established at the end of each accounting period, subdivided by accident period. We brought each of these estimates to current values and examined them in comparison with payments made in the subsequent accounting period and the case estimates established at the end of the period (also in current values). Using this we derived an average pattern of the extent to which past case estimates had proven to be too high or too low in relation to the claim payments subsequently made. We used this pattern to project the future development of the case estimates held at 30 June 2021, and to project the future claim payments corresponding to these estimates.

The above methods calculate the projected liability in current values, including allowance for superimposed inflation.

The projected liability in current values is used to calculate the present value of the future claim payments by allowing for:

- a Future increases prior to payment, due to claims inflation
- b Discounting to take into account the time value of money
- c Reinsurance recoveries on the gross future payment amounts
- d Expenses associated with administering claims during the run-off period.

To estimate the reinsurance recoveries, we have allowed for the reinsurance recovery information provided by insurers on large claims.

This overall approach is consistent with that required by the Accounting Standards for private and State Government general insurers (AASB1023), and APRA's prudential standard CPS320 and GPS340 for liability valuations for general insurance. It also complies with the Institute of Actuaries of Australia's Professional Standard PS302 to the extent possible given the data available.

The question of uncertainty in the estimates and the determination of provisions are discussed in sections 7.1 and 7.2.

5.4.2 Self-insurers' outstanding claims valuation

All analyses were performed after inflating past payments to current values as at 30 June 2021. We have used the PPCI method for our analysis and compared this to projected case estimates based on past development of case estimates for both insurers and self-insurers. We have adopted a blend of the PPCI and PCE methods for all years.

The PPCI and PCE methods are defined above.

We then used the same method applied to insurers to calculate the future claim payments, allowing for (a) to (d) above.

5.5 Approach to estimate break-even premium rates

We take the following steps to estimate the break-even premium rate for historic years:

- a Using historic one-year forward rates, discount actual claim payments back to the start of each year
- b Using the same set of discount factors, discount the inflated/discounted outstanding claims central estimate (excluding claims handling expenses) from this valuation for each year back to the start of each year
- c Sum (a) and (b) to find the total discounted gross incurred cost for each year
- d Using the Form A returns to find the levels of commission and other expenses for each financial year
- e Sum the discounted gross incurred cost, commission and other expenses, and divide this by the developed earned wages to find the break-even premium rate.

We have allowed for the following timing aspects in the estimated premium:

- Other expenses have been discounted by half a year, to allow for the fact that they are incurred evenly through the year and so on average are paid halfway through the year
- Commission is assumed to be received at the same time as the premium
- Premiums have been inflated by a quarter of a year to allow for a timing delay for when they are actually received by insurers from brokers.

We have used the actual earned premiums from insurers and wages from the ANZSIC data to calculate the actual premium rate charged.

To project the break-even premium rate for 2021/22, we take the following steps:

- a From historical data, estimate the incurred number of claims using average claim frequency and projected wages, average claim size, as well as a commission rate and other expenses rate as a proportion of premium
- b Calculate the discounted gross incurred cost for the next year by multiplying the incurred number of claims by the average claim size, allowing for one year's inflation and superimposed inflation and discounting
- c Calculate the appropriate allowance for expenses using the following formula:
expenses = incurred cost / (1 – commission rate – other expense rate) – incurred cost
- d Sum the estimated incurred cost and expense allowances and divide this by projected wages for the next year, which are estimated as the 2020/21 developed wages inflated by one year and including Catholic Church for a full year. Also, allow for the timing adjustment, as premiums will be received one quarter after policy commencement.

6 Assumptions

6.1 Financial assumptions

Future inflation and interest rates

The financial assumptions of future inflation and market rates of interest are as follows:

Years ahead	Interest rate 30 Jun 2021	Inflation rate 30 Jun 2021	Real rate 30 Jun 2021	30 Jun 2020
1	0.03%	1.70%	-1.67%	-0.51%
2	0.12%	1.40%	-1.28%	-0.18%
3	0.48%	1.30%	-0.82%	-1.32%
4	1.35%	1.40%	-0.05%	-1.11%
5	2.01%	1.48%	0.53%	-0.87%
6	2.28%	1.56%	0.73%	-0.60%
7	2.42%	1.63%	0.79%	-0.29%
8	2.54%	1.71%	0.83%	0.02%
9	2.64%	1.79%	0.85%	0.30%
10	2.71%	1.87%	0.84%	0.51%
11	2.75%	1.94%	0.81%	0.67%
12	2.78%	2.02%	0.76%	0.78%
13	2.78%	2.10%	0.68%	0.83%
14	2.78%	2.18%	0.60%	0.85%
15	2.78%	2.26%	0.53%	0.87%
16	2.78%	2.33%	0.45%	0.90%
17	2.83%	2.41%	0.42%	0.90%
18	2.88%	2.49%	0.39%	0.90%
19	2.93%	2.57%	0.36%	0.90%
20	2.98%	2.64%	0.33%	0.90%

The 30 June 2021 real rates are lower than the 30 June 2020 rates for years 1, 2 and 12 onwards but higher for years 3 to 11. The overall impact is to decrease the liabilities.

The interest rate for one quarter of DY0 $((1 + 0.03\%)^{0.25} - 1) = 0.007\%$ is included in the calculation of the average premium rate. This is because insurers receive premiums on average three months after the policy commencement date.

See Appendix B1 for further information.

Past wage inflation

Payments and case estimates are inflated to current values based on the ABS Cat 6302.0 Average Weekly Earnings for the Northern Territory (persons full-time adult ordinary time earnings). These are detailed in Appendix B1.

6.2 Superimposed inflation

The superimposed assumptions for each payment category are as follows:

Superimposed Inflation							
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	Total
30 Jun 21	1.7%	1.7%	4.3%	0.1%	3.6%	1.1%	1.6%
30 Jun 20	3.1%	5.0%	3.4%	1.6%	5.0%	2.7%	3.1%

In total, our superimposed inflation estimate of 1.6% p.a. is 1.5% less than the 3.1% p.a. adopted for the previous valuation. Our estimate of superimposed inflation is lower compared to the previous valuation for all payments types except Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death.

The decrease is partially due to having previously adopted the same rate of superimposed inflation for PPAC/PPCF methods as the PPCI method for some payment types due to ongoing volatility. This year we have adopted lower superimposed inflation rates for PPAC/PPCF methods as these methods account for the ongoing changes in finalisation rates.

We calculate the total as a weighted average across the payment groups, weighted by the total outstanding claims estimate.

See Appendix B2 for more details.

6.3 Expenses

Claims handling expenses

We have reviewed the allowances made for claims handling expenses in the insurers' and self-insurers' returns provided to us, and used our knowledge and experience of other workers compensation schemes in Australia to set the following claims handling expense assumptions for use in the outstanding claims liability:

- 6% of projected future claim payments for insurers, same as the previous valuation
- 6% of projected future claim payments for self-insurers, same as the previous valuation

Commission and other expenses¹

Insurers have provided data on historic gross written premiums, earned premiums, commission payments and other expenses as part of their Form A returns. We have used an average of the last two years to set the commission rate, as a proportion of earned premium, and a two-year average for the other expense rate, as a proportion of written premium, as follows:

¹ Other expenses include claims handling expenses

(\$000s)	Underwriting year					Adopted
	2021	2020	2019	2018	2017	
Gross written premium (a)	145,986	125,789	142,690	135,842	134,286	
Earned premium (b)	131,769	122,529	144,321	146,280	126,442	
Commission paid (c)	4,727	4,501	4,701	5,534	4,489	
Other expenses (d)	27,327	23,402	20,986	22,760	20,821	
Commission rate (e)	3.6%	3.7%	3.3%	3.8%	3.6%	3.6%
Other expense rate (f)	18.7%	18.6%	14.7%	16.8%	15.5%	18.7%

Notes: (a), (b), (c), (d) actual values taken from *Consolidated Form A*

(e) = (c) / (b)

(f) = (d) / (a)

The adopted rate is used in our calculation of the break-even premium rate for the next financial year. To show the adequacy of past rates we have used the actual dollar values of commission and other expenses paid.

Compared to the previous valuation, the adopted commission rate has not changed from the 3.6% while, the other expense rate has increased from 16.6% to 18.7%. The increase in the other expense rate is due to higher expenses for 2021 compared to 2018 and 2019 which were previously included in the average.

In total, the commission and other expense rate make up 22.3% of the break-even premium rate, which is higher than the 20.2% adopted for the 30 June 2020 valuation.

6.4 Reinsurance

We have used the additional information provided by insurers to allow for reinsurance recoveries on large claims, which are expected to exceed the retention limit. This is equivalent to 7% of all claims. We compared the reinsurance recoveries based on the large claims with insurers' total reinsurance recoveries and they were similar, though slightly higher, so we did not feel it was necessary to allow for any further reinsurance recoveries on the smaller claims. This is similar approach to last year's valuation.

We reviewed the self-insurers' reports and noted that either they have not allowed for any reinsurance recoveries or they note that reinsurance recoveries are minimal. Therefore, we have not allowed for any reinsurance recoveries for self-insurers.

6.5 Legislation changes

6.5.1 2015 legislative amendments

The 2015 legislative amendments were set out in two parts. The first amendment bill, Workers' Rehabilitation and Compensation Legislation Amendment Bill 2015, passed in March 2015 and came into effect 1 July 2015. The second amendment bill, the Return to Work Legislation Amendment Bill 2015, was passed in August 2015 and came into effect on 1 October 2015.

We costed the following changes in our report titled Actuarial costing of Northern Territory workers compensation scheme changes dated 11 September 2014:

- For claimants with less than 15% permanent impairment (PI) capping weekly benefits to five years and all other benefits to six years
- Extending weekly benefits from 26 weeks to 104 weeks for workers within 6 months of pension age or older than it.

We also provided commentary on some other proposed scheme changes.

The estimated cost of the above changes was a 2.8% overall reduction. We have also allowed for a 0.4% increase due to higher death benefits. Therefore, the combined allowance included in this valuation is a 2.4% overall reduction.

This year we have explicitly included a 3.2% reduction. This is change is due to:

- removing the 0.5% allowance for the extension to weekly benefits for older employees
- removing the 0.4% allowance for the higher death benefits

Both of these items no longer require an explicit allowance as this was expected to impact the first few development years so is now present in the data used for the adopting periods.

The capping of weekly benefits and other benefits to five and six years respectively for claimants with less than 15% PI was estimated to reduce the payments by 54% in development year six and seven onwards for the two categories respectively. The reductions have been applied on this basis to the relevant payment types. This has been allowed for in our calculations of the outstanding claims liabilities as at 30 June 2021 for the 2015/16 to 2020/21 accident years and the future costs for the 2021/22 accident year. There is no allowance for the 2015 legislative changes in the outstanding claims liability as at 30 June 2021 for accident years before 2015/16.

We have undertaken a high level review of the impact of the 2015 legislation in Appendix B6.1.

As the scheme changes were broader than covered by our 11 September 2014 report, the actual impact could be different to estimated. We recommend NT WorkSafe and insurers closely monitor the experience to ensure that there are no unintended consequences.

6.5.2 2020 legislative amendments

The Return to Work Legislation Amendment Act 2020 reverses a number of changes made to the legislation in 2015 as well as adding some new changes. See Appendix B6 for a list of the changes.

We were not asked to cost any of the 2020 legislative amendments.

We note that some of these Act changes are a reversal of the 2015 legislative amendments which weren't costed at the time as they were considered minimal. The more material changes will mainly affect the government self-insurance claims which are out of scope for the report. The changes to catastrophic injuries may have an impact if the settlements were previously significantly less than the actual lifetime cost.

As most changes are not retrospective, they will only impact the 2021 accident year for the 30 June 2021 outstanding claims liability and the 2021/22 projections. We have not made any specific allowance for the 2020 legislative amendments for the outstanding claims liability as at 30 June 2021 and 2021/22 projections.

7 Uncertainty

7.1 Uncertainty in the estimates

Actuarial estimates are obtained after analysis of past claims experience. From these analyses, models of the claim payment process can be established and used to project future payments on claims outstanding at the valuation date.

The estimates of outstanding claims obtained in this manner are indeed estimates in the sense that there is a degree of uncertainty as to the difference, which will ultimately arise between the estimates and the final result of the experience. This uncertainty arises from four sources:

- a Because the nature of the claims process is not fully understood, it might be that none of the various models used is an entirely accurate representation of reality
- b Because there are components of randomness in the claims process, it is not possible to estimate the parameters of that process with complete precision even if complete confidence were felt in the nature of the model
- c Any erroneous data will similarly have introduced uncertainties into the estimates of those parameters
- d Even if the parameters could be estimated with precision, it would not be possible to predict outstanding claims with the same precision because of the random component in future experience.

For some portfolios, errors associated with b and d above can be quantified in a formal way (estimation and statistical errors). However, a large part of the uncertainty is associated with a (model specification error), and it is difficult to quantify this component.

The investigation and application of different models to the data is intended to reduce the model specification error, although the extent to which this is achieved is unknown.

The initial estimates obtained from the calculations are "central" estimates in the sense that they incorporate no deliberate bias towards over or under estimation. By definition, the estimates are intended to have about an even chance of ultimately turning out to be sufficient.

7.2 Determination of provisions

7.2.1 Background

This valuation is not required to comply with any accounting standards. However, we have considered the requirements of Accounting Standard AASB 1023 on General Insurance Contracts which insurers are required to comply with for their annual valuation.

AASB1023 requires the determination of a central estimate of the present value of the expected future payments for claims incurred with an additional prudential margin to allow for the inherent uncertainty in the central estimate.

It should be realised that, by definition, any margins over central estimates are intended to have a better than even chance of falling into future surplus, provided that future experience is consistent with that of the recent past. This should be considered in making management decisions.

7.2.2 Levels of sufficiency

The nature of insurance claims is such that the actual value of the liabilities is unknown because claims experience is subject to random fluctuations. The amount of the claim liability cannot be estimated with

certainty. Also, it is very difficult to determine the central estimate with a reasonable degree of precision. For this reason, the inherent uncertainty in the central estimate must also be considered.

Determination of a risk margin allows for some part of the uncertainties in the claim process and also it ensures as far as possible that surplus is not released until it is reasonably certain that the surplus is real.

The adopted method was tested for its sensitivity to changes in the claim rates assumed and a measure of the variation in the results was obtained. This analysis indicated that the distribution of likely results was skewed to the right. This means that the variation upwards in the provision is expected to be greater than the variation downwards.

The dispersion of expected results is added to by:

- The variable nature of the claim experience
- Very large common law claims can sometimes occur.

The variation analysed together with benchmarking against reports published by APRA and the Institute of Actuaries leads to the assumption of a 20% coefficient of variation of the distribution of results for insurers and 50% for self-insurers, which allows for the skew distribution and systemic variation. The lognormal distribution was then assumed to apply when calculating the prudential margin required to increase the level of sufficiency above 50%.

The coefficient of variation for insurers was 20%, on par with our previous valuation. There was no change in the assumed independent risk following an analysis of past payments.

The risk margin applied for self-insurers was 25% for this valuation, as per our previous valuation. We also set the risk margin subject to a minimum of half the co-efficient of variation in line with the 'APRA Risk Margin Analysis' paper.

The coefficient of variation calculated as described above is taken as 20% for insurers and 50% for self-insurers. This leads to the following prudential margins.

Level of sufficiency and risk margins			
Level of sufficiency	75%	80%	85%
Risk margin (insurers)	12.07%	15.84%	20.40%
Risk margin (self-insurers)	25.00%	33.11%	45.94%

7.2.3 Sensitivity

The adopted method was tested for its sensitivity to changes in the assumptions about future interest and inflation rates, adopted reporting rates, and superimposed inflation, and a measure of the variation in the results was obtained. The results of this analysis for insurers are shown below:

NT WorkSafe Insurers - sensitivity analysis		
Assumption varied	Variation	% Change in total provision
Future interest rates	1% increase	-3.90%
	1% decrease	4.30%
Future inflation rates	1% increase	4.18%
	1% decrease	-3.87%
Adopted claim reporting rates	DY0 rate decreased from 10.94% to 5.47%	-1.62%
Superimposed inflation	1% increase	3.21%
	1% decrease	-2.95%
PPCI and PPAC values	10% increase	7.70%
Finalisation rate	10% decrease	10.19%

The increase in PPCI and PPAC factors illustrates a potential impact of an increase in the average claim size either due to claims remaining on benefits for longer or an increase in the frequency of large claims. The decrease in the finalisation rate illustrates a potential impact if claims remain on benefits for longer. Changing these assumptions only impacts some of the valuation methods so the impact should be treated with caution.

The corresponding results for our self-insurer analysis are as follows:

NT WorkSafe self-insurers - sensitivity analysis		
Assumption Varied	Variation	% Change in total provision
Future interest rates	1% increase	-1.57%
	1% decrease	1.64%
Future inflation rates	1% increase	1.59%
	1% decrease	-1.55%
Incurred claims	10% increase in IBNR claims	0.07%
	10% decrease in IBNR claims	-0.07%
Superimposed inflation	1% increase	0.25%
	1% decrease	-0.25%

The percentage change in the outstanding claim provisions as at 30 June 2021 is shown in the table above. The inherent robustness of the various assumptions in the table above means that the variations shown are not necessarily cumulative. Hence care needs to be exercised in developing any best or worst case scenario.

7.3 Key risks for NT WorkSafe scheme

The following paragraphs detail some of the key risks for the NT WorkSafe scheme.

- **COVID-19**

There is also a degree of uncertainty given the current economic environment and COVID-19.

To control the outbreak prior to the reopening of the NT interstate border, the ways of working for a number of businesses with large numbers of employees changed. Employees were asked to work from home to limit the risk of transmitting the virus, where possible. A number of workplaces were also closed for a period of time as part of lockdown measures. Also, some businesses have not fully recovered due to national and international travel restrictions. The lower number of claims for insurers for the 2020 and 2021 injury years could be partially due to COVID-19, though the mix of claims may have changed.

Up until 30 June 2021, we were advised of three COVID-19 related claims (that are not government self-insurer claims), and an additional claim reported on 06 July 2021. Out of the four claims, one of these claims has not had any payments made to date with the other claim having had several payments (total paid to date on COVID-19 related claims less than of \$260,000).

In December 2021, NT has reopened its borders to interstate. This reopening of border as well as the presence of the new Omicron strain of COVID-19 has caused a spike in the number of COVID-19 cases. The increases in the number of positive cases since December 2021 will likely increase the number of COVID-19 related claims for the projection of the 2021/22 underwriting year

The impact will depend upon the percentage of people who are infected with COVID and can prove they obtained it through work. Given sick leave available to many employees along with State and Federal government support for workers who do not have access to sick leave and have minimal liquid assets it is unlikely that people will claim for short term claims. There may be an increase in claims reported for long term illness, either long COVID or mental stress. There could also be additional mental stress claims from employees who are taking on additional workload while other staff are absent.

Other potential impacts due to COVID-19 include lengthening claims durations if there are delays in accessing services or delays in the ability for people to return to work. Over time, other impacts may also emerge.

The overall impact of COVID-19 is still unknown for the projection of 2021/22. At this time, we have not made any other adjustments to the valuation parameters or risk margin assumptions.

We note that a separate calculate of a COVID-19 related claims provision may be required going forward.

- **Inpex project**

Significant increases in wages up to 2018 have been driven by the Inpex project and the associated contracts. Since then, wages have decreased by 13% for 2019 and a further 11% decrease for 2020. Up to and including 2017, the number of claims incurred and claims cost have not reflected the increase in wages, causing the claim frequency and premium rate to reduce. In 2018, the average claim size and incurred cost increased. We understand that over the 2018 financial year the construction phase wound down with production starting in October 2018. Therefore, the number of workers reduced significantly in the 2019 financial year. The premium pool also decreased as the project moved into production phase. This is observed from the decrease of 3% in premium pool for 2019.

As per the previous valuation, we had continued to estimate that the 2018 accident year would be significantly higher than prior years. Although the payments over the 2021 financial year were less than expected, the case estimates development continues to be more than expected.

- **Changing economic environment**

There is considerable uncertainty associated with the current economic environment especially under COVID-19 environment and what it will mean for Australia over the near future. The 2021/22 Northern Territory budget report has observed an improvement in outlook for the economy compared to last year. NT Government continues to focus its investment on initiatives aimed at protecting Territorians against COVID-19, bringing more investment to the Territory and backing the best opportunities for growth and thus, creating more job opportunities across the state, which we have reflected in the estimates for the 2021/22 premium rate.

Over the last five financial years, there has been a reduction in the number of small claims lodged with other schemes. At the same time, there has not been a reduction in the number of medium to large claims. This has impacted the overall average claim size and incurred cost for other schemes. We will continue to monitor the mix by size of claims lodged in NT to ensure that we adequately allow for any change in claiming behaviour.

- **Large claims**

The incurred cost and break-even premium for each accident year are heavily influenced by the presence or absence of any large claims. This is particularly prevalent in the NT due to the small scheme size and the prevalence of very large settlements. Future claims costs will continue to be impacted by very large settlements, with net costs to insurers impacted by the nature and adequacy of any reinsurance arrangements in place.

Large claims can also have an impact on superimposed inflation. While superimposed decreased this year, it can be volatile due to the impact of large settlements and the relatively small scheme size. Superimposed inflation should be monitored to make sure increases in costs are understood and ensure that a payment type is not unexpectedly driving an increase in costs.

- **2015 legislative amendments**

The 2015 legislative amendments impacted prospective claims only and were introduced in two stages. The main changes are effective from 1 July 2015, with additional changes effective from 1 October 2015. This creates additional uncertainty in the outstanding claims liabilities for the 2016 to 2021 accident years and the future costs for the 2022 accident year. We have modified the explicit allowance included this year to account for some of the actual experience being incorporated in the adopting periods used for assumption setting. See 6.5.1 for more details.

The 2020/21 financial year was the first year where weekly benefits for claims with less than 15% whole person impairment (WPI) will cease for those who have reached 260 weeks of wages and had an accident date after 1 July 2015. We have performed a high-level review to see what impact this has had. For further detail see B6.1.

For the 2016 and 2017 accident years around 23% of claims have a weekly benefit payment in development year one which is higher than 19% to 22% of claims for 2015 and earlier accident years. However, the percentage of claims with a weekly benefit payment in development years three to five for the 2016 and 2017 accident years is lower than prior years. The lower percentage of claims with weekly benefit payments in development year three to five for 2016 and 2017 may reflect some of the high settlement activity seen for these years.

The percentage of claims with a redemption commutation lump sum payment has a general increasing trend, with each year from 2016 to 2021 higher than the previous years. This could be influenced by a number of aspects including the 2015 legislation changes, the economic circumstances and the general mix in claim numbers. The average redemption payment in development year 3 onwards is noticeably lower in 2016 onwards compared to 2015 and earlier.

There is no clear change in the number of impairment lump sum payments or average amount.

We recommend NT WorkSafe and insurers closely monitor the experience to ensure that there are no unintended consequences.

- **2020 legislative amendments**

Most of the 2020 legislative amendments are not retrospective. They are effective from 29 July 2020 so will only impact the 2021 accident year for the 30 June 2021 outstanding claims liability and the 2021/22 projections. Some of these changes are a reversal of the 2015 legislative amendments. For the changes that are a reversal, none of them were included in our original costing as their impact was considered to be minimal. The more material changes will mainly affect the government self-insurance claims which are out of scope for the report. The changes to catastrophic injuries may have an impact if the settlements were previously significantly less than the actual lifetime cost.

We have not made any specific allowance for the 2020 legislative amendments for the 2020/21 outstanding claims valuation and 2021/22 projections.

We recommend NT WorkSafe and insurers closely monitor the experience to ensure that there are no unintended consequences. See Appendix B6 for more information.

- **Silicosis claims**

There have been a significant number of silicosis claims in other Australia states that have been reported over the past year. In the NT, there have been no new silicosis claims over the year to 30 June 2021. Therefore, there are three silicosis claims (that are not government self-insurer claims) reported in the NT to date, of which the total paid on these claims were around \$32,000.

Therefore, due to the lack of historical claims and small percentage of business with potential exposure, we have not made a special allowance for these claims in our valuation, as they are unlikely to have a material impact on the total scheme outstanding claims liability or scheme break-even premium rate. Any silicosis claims could impact the premium rates for industry classes and individual employers.

- **Psychological injury**

Primary psychological injuries are increasing in number and as a proportion of total claims in other state workers compensation schemes and their costs are often higher than for other injury types. The Safe Work Australia Comparative Performance Monitoring Report shows that NT has lower rates of primary psychological injury than most other states.

Sequela psychological injuries are also increasing nationally, though it can be difficult to accurately identify claims with sequela psychological injuries as the data doesn't clearly capture this.

We do not separate our analysis by nature of injury, but we monitor the proportion of claims by nature of injury to understand any changes in the claims experience. We will continue to monitor the claims experience to understand if there is any changes in the percentage of claims with primary psychological injuries.

We recommend NT WorkSafe and insurers also closely monitor the psychological injury experience and explore ways to better capture data on sequela psychological injuries.

Appendices

Appendix A	Detailed data description	35
	A 1 Data supplied by NT WorkSafe	35
	A 2 Data quality	40
Appendix B	Assumptions	41
	B 1 Financial assumptions	41
	B 2 Superimposed inflation	42
	B 3 Expenses	46
	B 4 Reinsurance	47
	B 5 GST	48
	B 6 Legislation changes	48
	B 7 Wage and premium development factors	54
Appendix C	Insurer outstanding claim valuation	55
	C 1 Data used in the valuation	55
	C 2 Actual and projected claims experience during 2020/21	56
	C 3 Analysis and projection models	58
	C 4 Adopted estimates of outstanding claims	68
Appendix D	Insurer claims statistics	72
	D 1 Number of claims incurred	72
	D 2 Gross average claim size	74
	D 3 Gross incurred cost	75
	D 4 Gross loss ratios	76
	D 5 Payment per claim incurred	77
Appendix E	Insurer financial year claims experience	79
	E 1 Aggregate claims experience during 2020/21	79
	E 2 Analysis by payment group	83

Appendix F	Self-insurer outstanding claims valuation	86
	F 1 Data used in the valuation	86
	F 2 Actual and projected claims experience during 2020/21	87
	F 3 Analysis and projection models	88
	F 4 Adopted estimates of outstanding claims	90
Appendix G	Self-insurer claims statistics	93
	G 1 Number of claims incurred	93
	G 2 Gross average claim size	94
	G 3 Incurred cost	95
	G 4 Payment per claim incurred	96
Appendix H	Insurer break-even premium rate	97
	H 1 Calculation of discounted gross incurred cost	97
	H 2 Estimated historic break-even premium rate	99
	H 3 Calculation of break-even premium rate for 2021/22	99
	H 4 Historical rates by industry	101
Appendix I	Glossary	103

Appendix A Detailed data description

A 1 Data supplied by NT WorkSafe

NT WorkSafe supplied data to us from two sources:

- The internal WIMS database which records details of all claims lodged under the NT scheme
- Insurers' own systems giving details of claims lodged with them.

All data was provided in electronic format.

NT WorkSafe perform their own initial reconciliations between the data sources, the main of these being the check of the payments in the WIMS system against payments recorded on the insurers' Form B. We have also performed our own checks between data sources, and these are detailed below.

The data descriptions below fall under two sections; Actuarial data, which is the data supplied from the WIMS system, and Template data which is the data received from insurers.

We were also provided with copies of actuarial valuation reports for some insurers and self-insurers. However, this data is not uniformly presented and so we have not commented on it.

A 1.1 Actuarial data

Five different types of report are run and extracted from the WIMS system. These are each supplied as separate data files.

Report 1 – Reconciliation to Form B

This report contains three items of data:

- NT WorkSafe's reconciliation of payments for the current financial year between the WIMS system against payments recorded on each insurers' Form B. This is done by insurer and in total
- A list of the total payments under each benefit code for the most recent financial year
- A list of all claims on which payments have been made, including details of the claim number, claimant name and amount paid.

We understand that the first sheet listed above is used by NT WorkSafe to reconcile the data before it is provided to us. A target of an absolute difference of no more than 1% is set, and if this is exceeded a manual process is followed to adjust the data on the WIMS system for any human error which has crept in upon data entry. For this valuation, the absolute difference was 0.022%.

Report 2 – Data based on date of accident

We were provided with 12 different files of Report 2 from NT WorkSafe, one for each accident year from 2010. Each of the files contain unit claims data with the following information:

- Unique record identifier

Detailed data description

- Claim status (accepted, pending or rejected)
- Dates of report to the employer, lodgement with NT WorkSafe and acceptance or rejection
- Work status of the claimant
- ANZSIC industry classification of the claimant's employer
- Total number of FTE workers for the claimant's employer
- Claimant date of birth
- Claimant sex
- Claimant postcode of residency
- ASCO occupation of claimant
- Duty being performed when injury occurred (for example commuting, on a break)
- Hours normally worked each week
- Normal weekly earnings
- Nature, bodily location, mechanism, agency and breakdown agency of the injury
- Time lost
- Payments for each development year (DY) and grouped for DY10+ for each of the following payment categories:
 - Weekly benefits
 - Lump sum death benefits
 - Lump sum redemptions/commutations
 - Lump sum impairment/non-economic
 - Medical
 - Hospital
 - Allied health services
 - Vocational rehabilitation
 - Other goods and services
 - Non-compensation legal
 - Non-compensation other.
- Name of the insurer or self-insurer who the claim was lodged with.

Several of the above fields (for example claim status, work status) are coded using NT WorkSafe's own coding system. We were provided with the key to this system.

Report 3 – Number of new claims received

This gives a summary of the number of new claims lodged by each insurer in the most recent financial year. The data is summarised in the following three ways:

- Total number of new claims lodged with each insurer
- Number of new claims lodged for each accident year with each insurer

- Number of new claims lodged for each calendar year of injury with each insurer.

Report 4 – History of payments based on injury date

Summarised in this report are the claim payments and reports for insurers. These are shown in the following format:

- Claim triangles of payments for each accident year since 1990 and combined for the pre-1990 accident years, for each insurer and in total
- Claim triangles of reports for each accident year since 1990 and combined for the pre-1990 accident years, for each insurer and in total
- Summary of the number of claim reports and payments made in the current financial year for each insurer for each accident year since 1990 and combined for the pre-1990 accident years.

Report 5 – List of claim and insurers

This report presents a list of all the claims, which have ever been lodged with the scheme, giving the unique claim number and the insurer with which, the claim was lodged.

Self-insurer transaction data

We were provided with a list of the transaction in the 2021 financial year for each self-insurer to enable us to determine the payments made in 2020/21 relating to the 2010 and earlier accident years.

Transaction data

We were provided with a list of historical transaction over 2009 to 2021 financial years, split by the different payment types. This enabled us to accurately split the payments by payment type for development year 10+ used in our valuation.

A 1.2 Template data

Insurer's operating under the NT WorkSafe scheme are required to complete and return two statutory forms on an annual basis, Form A and Form B, and are requested to provide extra information to assist in the monitoring of the scheme.

Insurers were provided with a data template in the form of an Excel workbook. This contained Form A and Form B, and tables to record the current outstanding claims liability, and policies, employees, wages and premium by ANZSIC class on both a processing and underwriting year basis, earned but not yet raised premium and large claims.

NT WorkSafe has provided each of the completed template workbooks to us.

Self-insurers provide a shortened version of Form B.

Form A

Form A is a simplified version of the profit and loss account for the insurance aspects of the entity only. The following data items are given for the current financial year:

- Gross premiums
- Re-insurance premiums paid

Detailed data description

- Unearned premium at start and end of the year
- Claims paid
- Reinsurance recoveries on claims paid
- Outstanding claims at start and end of the year
- Underwriting profit/loss
- Commission paid
- Other expenses
- Investment income
- Profit/loss.

Form B

Form B contains the following data items in relation to the insurers' claims experience:

- Claims reported
- Claims paid
- Number of reported claims outstanding (active claims)
- Provisions for outstanding claims, broken down by:
 - Provisions for claims already reported
 - Provisions for unreported claims
- Case estimates for all claims
- For claims with an incurred cost over \$500,000:
 - Cumulative payments to date
 - Case estimates outstanding.

Claims reported and paid are presented broken down by accident year and give the total amount over the year. Active claims, the outstanding provision, and case estimates are also broken down by accident year but show the position as at the end of the year. The large claim information shows payments made in total to date and the case estimate position at the end of the year.

The case estimates for all claims and cumulative payments and case estimates for claims with an incurred cost over \$500,000 was first provided last year.

Outstanding claims

This contains the following information for the insurers' outstanding claim liability at the end of the year:

- Gross central estimate
- Reinsurance recoveries
- Claims handling expense
- Prudential margin.

ANZSIC data

The file presents a breakdown of the following five data items by each ANZSIC category:

- Policies
- Employees
- Premiums
- Wages.

This information is given for the current processing year, and for the most recent five underwriting years.

Earned but not yet raised premium

The file contains information of earned but not yet raised premium as at 30 June 2021 for each of the five most recent earned years.

Large claims

Insurers provided information on each open large claim with total gross estimates over \$2 million and provide information on:

- Claim number
- Accident date
- Payments to date
- Case estimates
- Total gross estimates
- Estimated reinsurance recoveries
- Other information.

A 2 Data quality

Overall, the data NT WorkSafe provided to us was suitable for our purposes.

NT WorkSafe performed an initial set of data quality checks before sending it to us. We also conducted a high-level check of the total payments and number of claims between the Form B returns and the WIMS system and found them to be broadly consistent.

The following table shows the difference between the cumulative claim payments and reports on Form B and on the WIMS system for insurers only.

Accident year	Payments (\$000)		Reports					
	Form B	WIMS	Diff	Diff (%)	Form B	WIMS	Diff	Diff (%)
2021	20,862	21,061	198	1.0%	1,661	1,635	-26	-1.6%
2020	25,736	25,773	37	0.1%	190	186	-4	-2.1%
2019	15,958	15,748	-210	-1.3%	12	13	1	8.3%
2018	16,310	16,078	-232	-1.4%	13	9	-4	-30.8%
2017	5,375	5,264	-110	-2.1%	3	3	0	0.0%
2016	3,880	3,665	-215	-5.5%	3	3	0	0.0%
2015	7,160	7,436	276	3.9%	0	0	0	0.0%
2014	981	1,067	86	8.7%	0	0	0	0.0%
2013	1,672	1,707	35	2.1%	0	0	0	0.0%
2012	1,362	1,383	21	1.5%	2	1	-1	-50.0%
2011 & prior	7,989	8,078	89	1.1%	3	0	-3	-100.0%
Total	107,284	107,260	-24	0.0%	1,887	1,850	-37	-2.0%

This table shows that in total the two systems reconcile reasonably well, with generally minor discrepancies across all accident years.

The following table shows the difference between the claim payments and reports for this financial year by accident year on Form B and on the WIMS system for self-insurers only.

Accident year	Payments (\$000s)		Reports					
	Form B	WIMS	Diff	Diff (%)	Form B	WIMS	Diff	Diff (%)
2020	652	647	-5	-0.7%	61	60	-1	-1.6%
2019	943	950	7	0.7%	8	12	4	50.0%
2018	188	187	0	-0.2%	0	0	0	0.0%
2017	468	463	-6	-1.2%	0	0	0	0.0%
2016	135	137	2	1.7%	0	0	0	0.0%
2015	0	0	0	0.0%	0	0	0	0.0%
2015 & prior	56	55	-1	-1.0%	0	0	0	0.0%
Total	2,441	2,439	-2	-0.1%	69	72	3	4.3%

The information from Form B for the 2021 financial year reconciles fairly well with the WIMS.

We relied upon the WIMS data for this valuation as per previous valuations.

Appendix B Assumptions

B 1 Financial assumptions

Future inflation and interest rates

Years ahead	Interest rate	Inflation rate	Real rate	
	30 Jun 2021	30 Jun 2021	30 Jun 2021	30 Jun 2020
1	0.03%	1.70%	-1.67%	-0.51%
2	0.12%	1.40%	-1.28%	-0.18%
3	0.48%	1.30%	-0.82%	-1.32%
4	1.35%	1.40%	-0.05%	-1.11%
5	2.01%	1.48%	0.53%	-0.87%
6	2.28%	1.56%	0.73%	-0.60%
7	2.42%	1.63%	0.79%	-0.29%
8	2.54%	1.71%	0.83%	0.02%
9	2.64%	1.79%	0.85%	0.30%
10	2.71%	1.87%	0.84%	0.51%
11	2.75%	1.94%	0.81%	0.67%
12	2.78%	2.02%	0.76%	0.78%
13	2.78%	2.10%	0.68%	0.83%
14	2.78%	2.18%	0.60%	0.85%
15	2.78%	2.26%	0.53%	0.87%
16	2.78%	2.33%	0.45%	0.90%
17	2.83%	2.41%	0.42%	0.90%
18	2.88%	2.49%	0.39%	0.90%
19	2.93%	2.57%	0.36%	0.90%
20	2.98%	2.64%	0.33%	0.90%

The 30 June 2021 real rates are lower than the 30 June 2020 rates for years 1, 2 and 12 onwards but higher for years 3 to 11. The overall impact is to decrease the liabilities.

The real rate is estimated to be negative, i.e. interest earned is less than wage inflation, for all projection years. In our previous valuation, the first eight projection years were negative and positive for all other projection years.

The interest rate for one quarter of DY0 $((1 + 0.03\%)^{0.25} - 1) = 0.007\%$ is included in the calculation of the average premium rate. This is because insurers receive premiums on average three months after the policy commencement date.

Forward interest rates are those estimated to be anticipated over future years by the Commonwealth bond market as it stood at 30 June 2021.

The interest rates are obtained by fitting a curve to the 30 June 2021 Commonwealth Government Bond yield curve, to derive the one year forward rates of interest, which are then independent of the cash flows of a particular portfolio of risks.

Previously, we assumed that the discount rates would be flat from year 16 onwards. We have now extended our projections of the discount rate and assume a long term rate of 4.5% after year 50. We have assumed a smooth progression from the observed market rate at year 16 to the long term rate at year 50.

The wage inflation assumptions we have adopted are lower than those used for the previous valuation. The short term inflation rates for the next four years are based future wage price inflation from NT Treasury's mid-

year report 2021/22 forecasts. We have assumed that Average Weekly Earnings (AWE) forecasts are aligned to the WPI forecasts in the short term and have therefore used these forecasts for the next four years.

We have changed our approach to projecting the long term inflation assumptions. Historically, there has been a positive relationship between discount rates and inflation observable in the market i.e. discount rates are above inflation. Previously to reflect this view, we assumed that that gap between the inflation and discount rates would be 0.9% after 16 years. We have assumed that the long term gap will take longer to achieve and have adopted a long term inflation rate of 3.5% after 30 years. We have assumed a smooth progression of wage inflation increasing from 1.4% in 2025 to a rate of 3.5% in 2051.

Past wage inflation

Past wage inflation for bringing past payments and case estimates into current values is taken from ABS Cat 6302.0 Average Weekly Earnings for Northern Territory (persons full-time adult ordinary time earnings), as shown below:

Year to 30-Jun	Mid	End	Claims escalation factors		
	Quarter AWE	Quarter AWE	% Change p.a.	For payments	For case estimates
2007	1,043.0	1,052.0		1.649	1.612
2008	1,107.4	1,114.0	5.9%	1.563	1.522
2009	1,150.9	1,158.6	4.0%	1.491	1.463
2010	1,224.2	1,235.3	6.6%	1.420	1.373
2011	1,289.3	1,311.1	6.1%	1.334	1.293
2012	1,408.6	1,410.8	7.6%	1.230	1.202
2013	1,449.3	1,449.2	2.7%	1.187	1.170
2014	1,417.2	1,426.3	-1.6%	1.180	1.189
2015	1,513.5	1,523.3	6.8%	1.152	1.113
2016	1,569.7	1,586.6	4.2%	1.091	1.069
2017	1,616.5	1,624.3	2.4%	1.046	1.044
2018	1,668.5	1,662.2	2.3%	1.027	1.020
2019	1,690.3	1,689.0	1.6%	1.019	1.004
2020	1,701.6	1,702.1	0.8%	1.002	0.996
2021	1,695.2	1,695.5	-0.4%	0.997	1.000

B 2 Superimposed inflation

A realistic level of superimposed inflation is allowed for in the outstanding claim reserves and projected break-even premium rate.

We have analysed the superimposed inflation separately for each payment type, and for each valuation method.

The recent trends in real growth, i.e. superimposed inflation, are shown in the charts below.

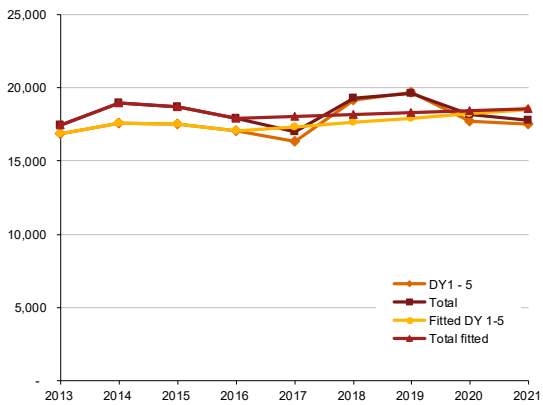
Assumptions

We have used the following averaging periods to analyse the superimposed inflation:

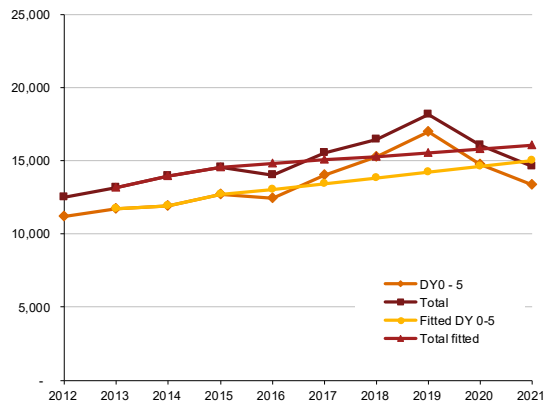
Superimposed Inflation - averaging periods (years)							
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	
PPAC/PPCF	6	5	5	6	6	5	
PPCI	7	7	5	4	6	8	

Weekly benefits

PPAC

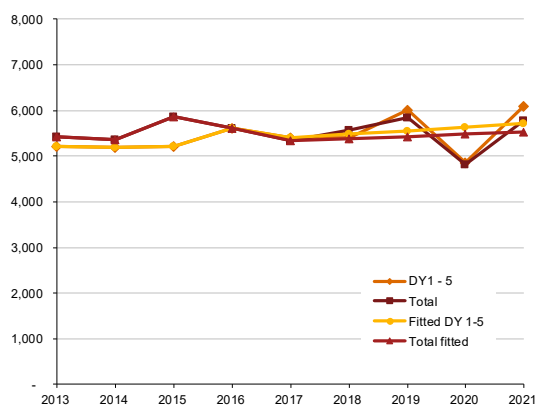


PPCI

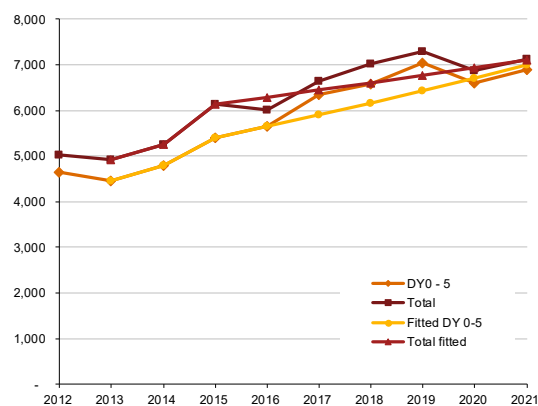


Medical and hospital

PPAC

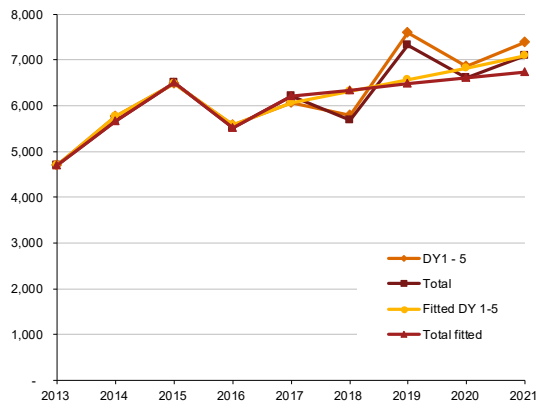


PPCI

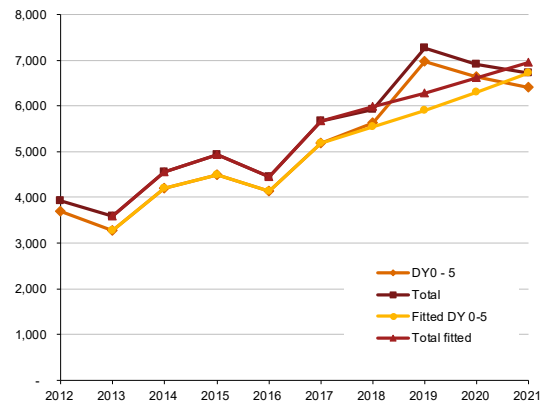


Allied health, vocational rehabilitation, non-compensation other and death

PPAC

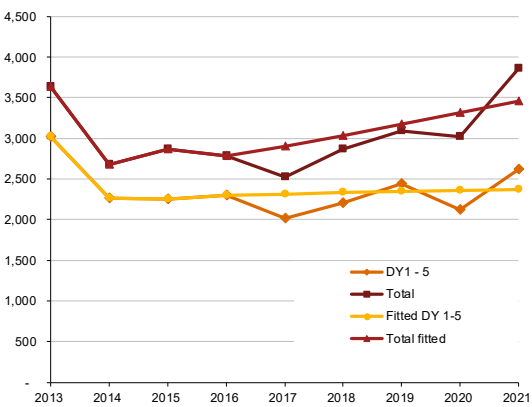


PPCI

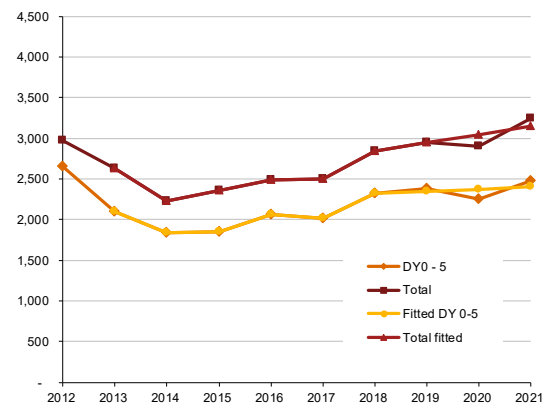


Other goods and services

PPAC

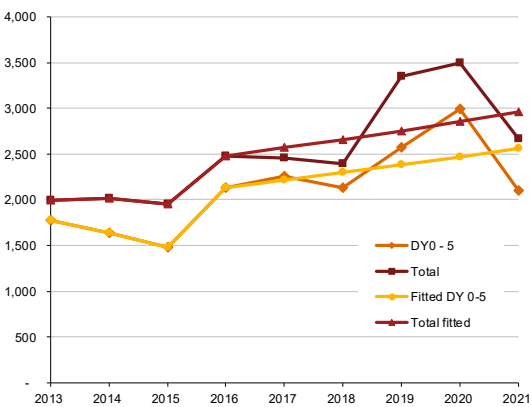


PPCI

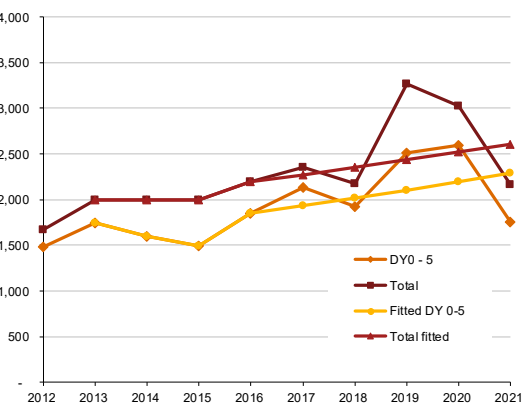


Legal

PPCF

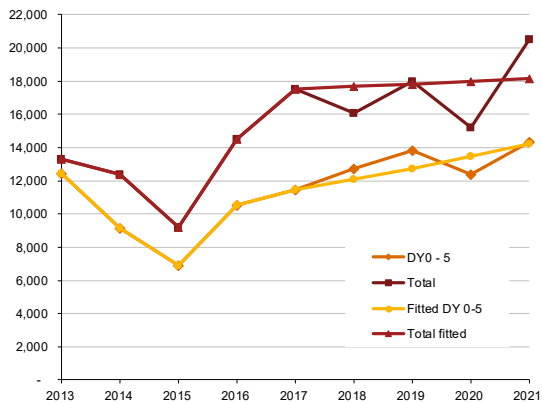


PPCI

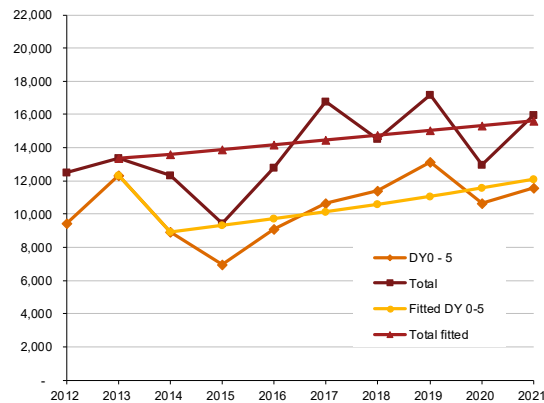


Redemptions and non-economic lump sum

PPCF



PPCI



The above graphs for Redemptions and Non-Economic Lump Sum payment group includes all claims with cumulative claim payments. This is difference to the graph in last year’s report, where we have excluded those claims with cumulative payments over \$1 million. This was done in previous years’ valuation to try to reduce the volatility, and find a true underlying superimposed inflation rate for the payment group.

This year however, allowing for additional payments over the year to 30 June 2021, we have used all data for our analysis as removing the large claims does not significantly reduce the volatility.

This analysis of trends leads to the following assumed rates of superimposed inflation.

Superimposed Inflation							
	Weekly Benefits	Medical And Hospital	Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	Total
PPAC/PPCF	1.5%	1.4%	4.0%	0.0%	3.5%	1.0%	
PPCI	3.0%	4.5%	6.5%	1.0%	4.5%	2.0%	
30 Jun 21	1.7%	1.7%	4.3%	0.1%	3.6%	1.1%	1.6%
30 Jun 20	3.1%	5.0%	3.4%	1.6%	5.0%	2.7%	3.1%

Note a minimum of zero is applied to the superimposed inflation, hence classes with a revealed negative superimposed inflation have had a value of 0% applied.

In total, our superimposed inflation estimate of 1.6% p.a. is a 1.5% decrease on the 3.1% p.a. adopted for the previous valuation. Our estimate of superimposed inflation is lower compared to previous valuation for all payment type except Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death.

The decrease is partially due to having previously adopted the same rate of superimposed inflation for PPAC/PPCF methods as the PPCI method for some payment types due to ongoing volatility. This year we have adopted lower superimposed inflation rates for PPAC/PPCF methods as these methods account for the ongoing changes in finalisation rates.

We calculate the total as a weighted average across the payment groups, weighted by the total outstanding claims estimate.

B 3 Expenses

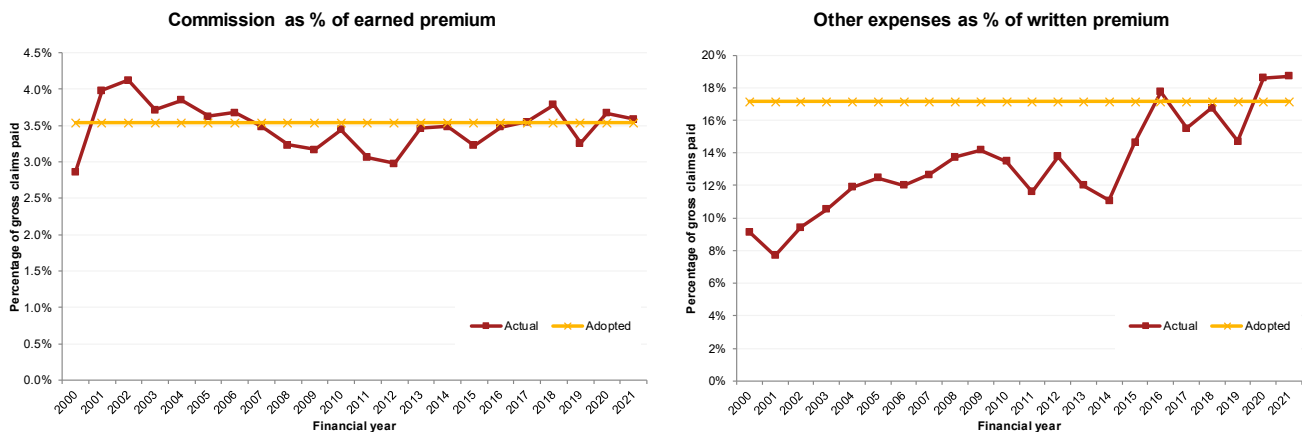
Claims handling expenses

We have reviewed the allowances made for claims handling expenses in the insurers' and self-insurers' returns provided to us, and used our knowledge and experience of other workers compensation schemes in Australia to set the following claims handling expense assumptions for use in the outstanding claims liability:

- 6% of projected future claim payments for insurers, as per previous valuation
- 6% of projected future claim payments for self-insurers, as per previous valuation.

Commission and other expenses (including claims handling expenses)

The historical commission rate as a percentage of earned premium and other expenses as a percentage of written premium are:



The commission as a percentage of earned premium decreased from 2001 to 2012, it increased to 3.5% in 2013 and has been relatively stable since. Over 2001 to 2009, other expenses as a percentage of written premium increased significantly, and have been volatile since then, increasing significantly in 2015 and 2016. We do not know what has driven the increase in other expenses since 2015 but it could be due to increases in IT costs and reallocation of expenses amongst the lines of insurance. Other expenses for 2021 have increased, which combined with a lower rate of increase in premium, has caused the other expense ratio to increase slightly for 2021.

For the break-even premium we have used an average of the last two years to set the commission rate, as a proportion of earned premium, and average of two years for the other expense rate, as a proportion of written premium, as follows:

(\$000s)	Underwriting year					
	2021	2020	2019	2018	2017	Adopted
Gross written premium (a)	145,986	125,789	142,690	135,842	134,286	
Earned premium (b)	131,769	122,529	144,321	146,280	126,442	
Commission paid (c)	4,727	4,501	4,701	5,534	4,489	
Other expenses (d)	27,327	23,402	20,986	22,760	20,821	
Commission rate (e)	3.6%	3.7%	3.3%	3.8%	3.6%	3.6%
Other expense rate (f)	18.7%	18.6%	14.7%	16.8%	15.5%	18.7%

Notes: (a), (b), (c), (d) actual values taken from *Consolidated Form A*

(e) = (c) / (b)

(f) = (d) / (a)

Assumptions

The adopted rate is used in our calculation of the break-even premium rate for the next financial year. To determine the adequacy of past rates we have used the actual dollar values of commission and other expenses paid.

Compared to the previous valuation, the adopted commission rate remained the same at 3.6%, and the adopted other expense rate has increased from 16.6% to 18.7%. The increase in the other expense rate is due to higher expenses for 2021 compared to 2018 and 2019 which were previously included in the average.

The actual 2021 financial year commission is on par with, while other expenses rates are higher than the level that we had adopted in our projections last year.

In total, the commission and other expense rate make up 22.3% of the break-even premium rate, which is higher than the 20.2% adopted for the 30 June 2020 valuation.

B 4 Reinsurance

We have used the additional information provided by insurers to allow for reinsurance recoveries on large claims, which are expected to exceed the retention limit. This is equivalent to 7% of all claims, which is the same as our previous valuation. We compared the reinsurance recoveries based on the large claims with insurers' total reinsurance recoveries and they were similar, though slightly higher, so we did not feel it was necessary to allow for any further reinsurance recoveries on the smaller claims.

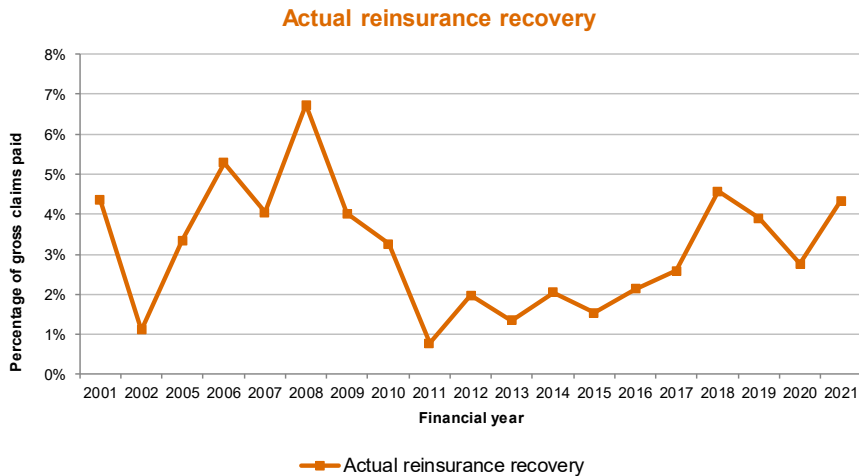
We reviewed the self-insurers' reports and noted that either they have not allowed for any reinsurance recoveries or they note that reinsurance recoveries are minimal. Therefore, we have not allowed for any reinsurance recoveries for self-insurers.

The following table and chart show the historical reinsurance recoveries received by approved insurers. The reinsurance recovery rate is defined as a proportion of the gross claims paid. This is provided for information purposes and was not used for this valuation.

Financial year	Gross claims paid (a) (\$000s)	Reinsurance recoveries (b) (\$000s)	Reinsurance recovery (c) (%)
2000	40,469	3,650	9.0%
2001	44,638	1,941	4.3%
2002	38,683	432	1.1%
2003	40,584	429	1.1%
2004	47,842	1,457	3.0%
2005	49,586	1,658	3.3%
2006	45,946	2,431	5.3%
2007	52,003	2,106	4.0%
2008	57,010	3,837	6.7%
2009	71,840	2,886	4.0%
2010	77,791	2,537	3.3%
2011	83,908	649	0.8%
2012	82,569	1,630	2.0%
2013	89,191	1,199	1.3%
2014	91,942	1,876	2.0%
2015	91,120	1,398	1.5%
2016	102,891	2,189	2.1%
2017	122,608	3,178	2.6%
2018	121,156	5,542	4.6%
2019	134,064	5,223	3.9%
2020	109,825	3,024	2.8%
2021	107,284	4,647	4.3%

Notes: (a), (b) actual values taken from *Consolidated Form A*
(c) = (b) / (a)

Assumptions



B 5 GST

No explicit allowance has been made for GST net of ITC and/or DAM as our adopted bases rely on data, which includes GST net of ITC and/or DAM. The 10% GST on the workers' compensation premium itself (which employers will generally be able to recover via an input tax credit) is not included in our analysis or the recommended premium rates.

B 6 Legislation changes

B 6.1 2015 legislative amendments

The 2015 legislative amendments were set out in two parts.

The first amendment bill, Workers' Rehabilitation and Compensation Legislation Amendment Bill 2015, passed in March 2015 and came into effect 1 July 2015. The benefit changes that were part of this bill include:

- Presumptive legislation for firefighters and volunteers to make it easier for firefighters and volunteer firefighters to claim workers' compensation if they are diagnosed with one of the 12 cancers listed in the legislation schedule
- A change in the definition of work to align with the PAYG definition used by the Australian Taxation Office (ATO)
- Increased period of compensation for older workers by extending weekly benefits from 26 weeks to 104 weeks for workers aged 67 years and older
- Five year cap on weekly benefits for claimants with a permanent impairment of less than 15% and all medical and other costs are limited to one additional year
- Increase in death and funeral benefits to 364 times the average weekly earnings
- Compensation will not be provided for stroke or heart attacks that are not caused by work
- Capping the calculation for normal weekly earnings. During the first 26 weeks when a worker is unable to work, their compensation payments are paid at their normal weekly earnings. After 26 weeks, compensation payments are paid at 75% of their normal weekly earnings. There is now a cap on the calculation of a worker's normal weekly earnings after 26 weeks to 250% of the ABS average weekly earnings.

The second amendment bill, the Return to Work Legislation Amendment Bill 2015, was passed in August 2015 and came into effect on 1 October 2015. This bill included:

- Payment of up to 1.5 times Average Weekly Earnings for counselling and support
- While a claim is deferred, the employer is required to make weekly payments of compensation and, in the case of claims for mental stress, engage in rehabilitation
- Formal notice be provided to the worker of any pending step down or cancellation 14 days prior to it taking effect
- A mediator may recommend workers receive legal advice paid for by the employer.
- Negotiated settlements. There will be provision for the finalisation of the claim by the payment of a lump sum through negotiated settlement. The legislation requires a qualifying period of 104 weeks before a negotiated settlement
- Settlement of disputed claims. There is provision to allow for the settlement of disputed claims for compensation (whether disputed on a question of fact or law or both) and settlement of contested applications to the Work Health Court
- Exclusion of journey claims to and from work. Journeys that are considered to be in the course of employment are not excluded.

We costed the following changes in our report titled Actuarial costing of Northern Territory workers compensation scheme changes dated 11 September 2014:

- Increased period of compensation for older workers by extending weekly benefits from 26 weeks to 104 weeks for workers aged 67 years and older
- Five year cap on weekly benefits for claimants with a permanent impairment of less than 15% and all medical and other costs are limited to one additional year.

We also provided commentary on some other proposed scheme changes including:

- Increase in death and funeral benefits
- New settlement regime
- Exclusion of journey claims
- Weekly benefit cap of 250% of normal weekly earnings.

In our 2014 report, we estimated the cost of the two first changes above as a 2.8% reduction. In this valuation, we have also allowed for the increase in death and funeral benefits, so the net reduction is 2.4%.

This year we have explicitly included a 3.2% reduction. This is change is due to:

- removing the 0.5% allowance for the extension to weekly benefits for older employees
- removing the 0.4% allowance for the higher death benefits

Both of these items no longer require an explicit allowance as this was expected to impact the first few development years so is now present in the data used for the adopting periods.

The capping of weekly benefits and other benefits to five and six years respectively for claimants with less than 15% PI was estimated to reduce the payments by 54% in development year six and seven onwards for the two categories respectively. The reductions have been applied on this basis to the relevant payment types. This has been allowed for in our calculations of the outstanding claims liabilities as at 30 June 2021 for the 2015/16

Assumptions

to 2020/21 accident years and the future costs for the 2021/22 accident year. There is no allowance for the 2015 legislative changes in the outstanding claims liability as at 30 June 2021 for accident years before 2015/16.

The 2020/21 financial year was the first year where weekly benefits for claims with less than 15% whole person impairment (WPI) will cease for those who have reached 260 weeks of wages and had an accident date after 1 July 2015. We have undertaken some high level analysis of the payments data to understand what impact the 2015 legislation amendment has had.

The tables below show the number of claims that have had weekly benefit payments by accident year and development year and as a percentage of all claims.

Claims with a Weekly benefit payment											
Accident Year	DY0	DY1	DY2	DY3	DY4	DY5	DY6	DY7	DY8	DY9	DY10+
2010	1,117	545	145	70	50	32	22	14	11	6	3
2011	1,163	530	126	66	42	18	15	8	9	6	7
2012	1,073	551	135	67	29	23	16	11	10	11	
2013	1,099	571	170	77	45	25	15	10	10		
2014	992	612	151	78	34	22	13	8			
2015	969	540	159	73	35	24	17				
2016	933	577	151	62	27	15					
2017	946	550	165	62	27						
2018	883	634	183	82							
2019	889	448	132								
2020	748	422									
2021	717										

Claims with Weekly Benefit payment as a percentage of total claims											
Accident Year	DY0	DY1	DY2	DY3	DY4	DY5	DY6	DY7	DY8	DY9	DY10+
2010	44.3%	21.6%	5.8%	2.8%	2.0%	1.3%	0.9%	0.6%	0.4%	0.2%	0.1%
2011	42.9%	19.6%	4.7%	2.4%	1.6%	0.7%	0.6%	0.3%	0.3%	0.2%	0.3%
2012	40.6%	20.8%	5.1%	2.5%	1.1%	0.9%	0.6%	0.4%	0.4%	0.4%	
2013	39.2%	20.3%	6.1%	2.7%	1.6%	0.9%	0.5%	0.4%	0.4%		
2014	35.7%	22.0%	5.4%	2.8%	1.2%	0.8%	0.5%	0.3%			
2015	36.7%	20.5%	6.0%	2.8%	1.3%	0.9%	0.6%				
2016	37.3%	23.0%	6.0%	2.5%	1.1%	0.6%					
2017	39.8%	23.1%	6.9%	2.6%	1.1%						
2018	37.1%	26.6%	7.7%	3.4%							
2019	41.7%	21.0%	6.2%								
2020	41.7%	23.5%									
2021	39.2%										

For the 2016 and 2017 accident years around 23% of claims have a weekly benefit payment in development year one which is higher than 19% to 22% of claims for 2015 and earlier accident years. However, the percentage of claims with a weekly benefit payment in development years three to five for the 2016 and 2017 accident years is lower than prior years. The lower percentage of claims in development year three to five may reflect some of the high settlement activity seen for 2016 and 2017 (see below). 2018 has a higher percentage of claims with weekly benefit payments than all other years, except for development year zero. While 2019 and 2020 have a higher percentage of claims with weekly benefit payments in development year zero they are similar to 2016 and 2017 in development year one and two.

Assumptions

The tables below show the number of claims that have had redemption commutation lump sum payments by accident year and development year and as a percentage of all claims.

Claims with an Redemption Commutation Lumpsum payment												
Accident Year	DY0	DY1	DY2	DY3	DY4	DY5	DY6	DY7	DY8	DY9	DY10+	Total
2010	7	29	32	22	18	9	10	4	5	3	4	143
2011	13	48	43	34	4	10	15	1	3	0	2	173
2012	16	76	31	20	11	11	5	2	3	5		180
2013	34	73	42	34	17	9	14	7	5			235
2014	16	55	46	43	19	15	11	1				206
2015	20	62	61	32	26	6	7					214
2016	20	62	59	37	19	10						207
2017	18	67	67	43	18							213
2018	28	99	75	48								250
2019	24	71	55									150
2020	19	72										91
2021	26											26

Claims with an Redemption Commutation Lumpsum payment as a percentage of total claims												
Accident Year	DY0	DY1	DY2	DY3	DY4	DY5	DY6	DY7	DY8	DY9	DY10+	Total
2010	0.3%	1.2%	1.3%	0.9%	0.7%	0.4%	0.4%	0.2%	0.2%	0.1%	0.2%	5.7%
2011	0.5%	1.8%	1.6%	1.3%	0.1%	0.4%	0.6%	0.0%	0.1%	0.0%	0.1%	6.4%
2012	0.6%	2.9%	1.2%	0.8%	0.4%	0.4%	0.2%	0.1%	0.1%	0.2%		6.8%
2013	1.2%	2.6%	1.5%	1.2%	0.6%	0.3%	0.5%	0.2%	0.2%			8.4%
2014	0.6%	2.0%	1.7%	1.5%	0.7%	0.5%	0.4%	0.0%				7.4%
2015	0.8%	2.3%	2.3%	1.2%	1.0%	0.2%	0.3%					8.1%
2016	0.8%	2.5%	2.4%	1.5%	0.8%	0.4%						8.3%
2017	0.8%	2.8%	2.8%	1.8%	0.8%							9.0%
2018	1.2%	4.2%	3.1%	2.0%								10.5%
2019	1.1%	3.3%	2.6%									7.0%
2020	1.1%	4.0%										5.1%
2021	1.4%											1.4%

The percentage of claims with a redemption commutation lump sum payment has a general increasing trend, with each year from 2016 to 2021 higher than the previous years, except 2019 and 2020 are lower than 2018 but higher than all prior years. This could be influenced by a number of aspects though including the 2015 legislation changes, the economic circumstances and the general mix in claim numbers.

The average redemption payments in 30 June 2021 values is shown in the table below.

Average Redemption Commutation Lumpsum payment in 30 June 2021 values (\$000)												
Accident Year	DY0	DY1	DY2	DY3	DY4	DY5	DY6	DY7	DY8	DY9	DY10+	Total
2010	43	130	182	165	205	228	189	458	330	321	277	187
2011	51	85	105	188	131	340	292	477	198	0	253	148
2012	21	74	80	250	264	332	234	504	115	116		128
2013	28	66	130	256	231	145	290	198	173			134
2014	34	56	116	162	234	253	158	581				129
2015	25	35	133	275	237	207	787					152
2016	29	50	128	170	165	178						108
2017	48	65	99	163	124							99
2018	40	66	94	157								89
2019	30	49	115									70
2020	29	63										56
2021	30											30

The average redemption payments in development year 0 to 2 are similar for 2016 to 2021 to 2015 and earlier, however the average payment for development year 3 onwards is noticeably lower in 2016 onwards compared

Assumptions

to 2015 and earlier. Therefore, the 2015 legislation may be reducing the average redemption payment as some of these settlements may relate to claimants with a whole person impairment of less than 15%.

The tables below show the number of claims that have had impairment non-economic lump sum payments (i.e. permanent impairment payments) by accident year and development year and as a percentage of all claims.

Claims with an Impairment Non-Economic Lumpsum payment												
Accident Year	DY0	DY1	DY2	DY3	DY4	DY5	DY6	DY7	DY8	DY9	DY10+	Total
2010	3	23	30	7	10	4	2	3	0	1	1	84
2011	3	11	25	12	7	4	2	1	1	0	1	67
2012	2	16	29	18	4	1	2	3	1	0		76
2013	1	12	31	17	5	3	2	2	2			75
2014	2	21	16	20	13	5	1	0				78
2015	7	11	24	19	8	5	1					75
2016	2	20	27	23	4	4						80
2017	1	14	25	17	7							64
2018	0	11	40	23								74
2019	0	16	23									39
2020	0	10										10
2021	0											0

Claims with an Impairment Non-Economic Lumpsum payment as a percentage of total claims												
Accident Year	DY0	DY1	DY2	DY3	DY4	DY5	DY6	DY7	DY8	DY9	DY10+	Total
2010	0.1%	0.9%	1.2%	0.3%	0.4%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	3.3%
2011	0.1%	0.4%	0.9%	0.4%	0.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	2.5%
2012	0.1%	0.6%	1.1%	0.7%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%		2.9%
2013	0.0%	0.4%	1.1%	0.6%	0.2%	0.1%	0.1%	0.1%	0.1%			2.7%
2014	0.1%	0.8%	0.6%	0.7%	0.5%	0.2%	0.0%	0.0%				2.8%
2015	0.3%	0.4%	0.9%	0.7%	0.3%	0.2%	0.0%					2.8%
2016	0.1%	0.8%	1.1%	0.9%	0.2%	0.2%						3.2%
2017	0.0%	0.6%	1.1%	0.7%	0.3%							2.7%
2018	0.0%	0.5%	1.7%	1.0%								3.1%
2019	0.0%	0.8%	1.1%									1.8%
2020	0.0%	0.6%										0.6%
2021	0.0%											0.0%

Overall, there's no clear trend that the number of claims with PI payments have changed following the introduction of 2015 legislation amendments. The 2018 accident year is higher than all prior years but that is an exceptional year in the scheme data. 2016 has a higher percentage of claims with PI payments than 2015, though not markedly different compared to the variability experience prior to 2015. 2017 is similar to 2012 to the same point in time. We do not have data on the number of claims that apply for a PI assessment and are rejected.

The average impairment non-economic lump sum payments in 30 June 2021 values is shown in the table below.

Average Impairment Non-Economic Lumpsum payments in 30 June 2021 values (\$000)												
Accident Year	DY0	DY1	DY2	DY3	DY4	DY5	DY6	DY7	DY8	DY9	DY10+	Total
2010	33	14	26	16	28	28	27	37	0	103	21	24
2011	59	17	24	32	46	10	44	55	154	0	53	31
2012	7	23	29	31	58	76	57	46	14	0		31
2013	3	22	23	42	39	27	45	286	74			37
2014	4	16	23	40	43	47	59	0				30
2015	15	23	15	27	79	76	7					30
2016	7	19	27	45	37	78						33
2017	7	9	32	33	66							30
2018	0	29	38	42								38
2019	0	26	19									22
2020	0	36										36
2021	0											0

The average impairment non-economic lump sum payments are similar for 2016 to 2021 to 2015 and earlier, except for 2018 which is noticeably higher.

As the scheme changes were broader than covered by our report the actual impact could be different to estimated. We recommend NT WorkSafe and insurers closely monitor the experience to ensure that there are no unintended consequences.

B 6.2 2020 legislative amendments

The Return to Work Legislation Amendment Act 2020 reverses a number of changes made to the legislation in 2015 as well as adding some new changes. The Act came into effect from 29 July 2020.

The following changes were made to the Act which are not retrospective:

- Changes to the definition of worker
- Inclusion of journey claims
- Removal of cap of 250% of average weekly earnings after 26 weeks
- Amendments regarding refusal to pay for medical treatment
- Changes to the ability to recover overpayments
- Changes to return to work plans not requiring an accredited vocational rehabilitation specialist
- Changes to wording in the act to clarify aspects of the settlement arrangements and to meet the minimum benchmarks of the National Injury Insurance Scheme (NIIS), by not allowing settlement of payments for lifetime care and medical payments for catastrophic injuries.

There were also changes to the Return to Work Regulations 2020 including:

- Post-traumatic stress disorder has become a deemed disease for first responders. Most first responders are government employees so are covered by the government self-insurance scheme and not part of this review. It will impact St John Ambulance officers who obtain a premium from insurers.
- Four new deemed diseases are included for firefighters. As firefighters are government employees, they are covered by the government self-insurance scheme and not part of this review.

We were not asked to cost any of the 2020 legislative amendments.

Some of these changes are a reversal of the 2015 legislative amendments which weren't costed at the time as they were considered minimal. The more material changes will mainly affect the government self-insurance

claims which are out of scope for the report. The changes to catastrophic injuries may have an impact if the settlements were previously significantly less than the actual lifetime cost.

As most changes are not retrospective, they will only impact the 2021 accident year for the 30 June 2021 outstanding claims liability and the 2021/22 projections. We have not made any specific allowance for the 2020 legislative amendments for the 2020/21 outstanding claims valuation and 2021/22 projections.

B 7 Wage and premium development factors

Earned wages and premium develop over time as wages are initially estimated at the beginning of the underwriting year and are updated with actual wages when known and reported to the insurers. Earned premium develops based on the development of earned wages but also based on adjustments for burner policies as the claim experience emerges.

The table below shows the development factors we have applied to earned wages. These are based on five year averages of the development of wages, with development year 3 assuming no more development. The development factor is lower than last year for DY0 and DY1 but higher for DY2.

Earned wages development factors			
Development year	2021	2020	2019
0	1.019	1.057	1.054
1	1.005	1.007	1.009
2	1.001	0.999	1.002
3	1.000	1.000	1.000

The table below shows the development factors applied to earned premium, including the earned but not yet raised (EBNYR) premium. These are based on five year averages of the development of premium. The development factor is slightly lower than last year for DY0 but higher for DY1 to DY3.

Earned premium development factors			
Development year	2021	2020	2019
0	1.016	1.051	1.056
1	1.003	0.999	1.013
2	1.002	1.000	1.000
3	1.001	1.000	1.000

Appendix C Insurer outstanding claim valuation

C 1 Data used in the valuation

C 1.1 Number of claims reported

Financial Year	Number of claims reported (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10 onwards	
2012	2,348	254	10	5	3	2	1	0	1	1	2	2,627
2013	2,423	256	13	9	1	1	0	0	0	1	1	2,705
2014	2,385	320	15	6	4	0	0	1	1	1	4	2,737
2015	2,335	335	21	4	2	3	2	0	0	0	2	2,704
2016	2,257	280	16	7	1	1	2	0	0	0	0	2,564
2017	2,141	244	18	7	3	0	2	0	0	0	2	2,417
2018	2,151	249	19	9	2	3	0	0	0	1	1	2,435
2019	1,982	235	17	11	4	2	0	1	2	0	1	2,255
2020	1,634	194	19	6	3	0	1	2	2	0	6	1,867
2021	1,661	190	12	13	3	3	0	0	0	2	3	1,887

Note: From summary of Form B returns up to 30 June 2021

C 1.2 Cumulative claims reported

Financial Year	Cumulative number of claims reported (a) for development year:										
	0	1	2	3	4	5	6	7	8	9	10
2012	2,348	2,639	2,507	2,614	2,729	2,471	2,713	2,751	2,573	2,867	2,898
2013	2,423	2,604	2,652	2,516	2,615	2,730	2,471	2,713	2,751	2,574	2,868
2014	2,385	2,743	2,619	2,658	2,520	2,615	2,730	2,472	2,714	2,752	2,578
2015	2,335	2,720	2,764	2,623	2,660	2,523	2,617	2,730	2,472	2,714	2,754
2016	2,257	2,615	2,736	2,771	2,624	2,661	2,525	2,617	2,730	2,472	2,714
2017	2,141	2,501	2,633	2,743	2,774	2,624	2,663	2,525	2,617	2,730	2,474
2018	2,151	2,390	2,520	2,642	2,745	2,777	2,624	2,663	2,525	2,618	2,731
2019	1,982	2,386	2,407	2,531	2,646	2,747	2,777	2,625	2,665	2,525	2,619
2020	1,634	2,176	2,405	2,413	2,534	2,646	2,748	2,779	2,627	2,665	2,531
2021	1,661	1,824	2,188	2,418	2,416	2,537	2,646	2,748	2,779	2,629	2,668

Note: Cumulative claim reports from table above

C 1.3 Active claims

Financial Year	Active claims (a) at the end of development year:											
	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2012	793	213	123	67	49	34	22	15	13	17	82	1,428
2013	844	231	110	72	44	37	26	15	14	10	83	1,486
2014	931	293	100	52	45	27	28	25	11	13	72	1,597
2015	854	279	145	57	37	35	25	23	19	10	59	1,543
2016	1,007	288	140	81	48	24	27	19	19	14	63	1,730
2017	912	281	152	68	52	26	14	22	16	16	65	1,624
2018	1,011	286	125	74	42	39	19	12	17	12	66	1,703
2019	821	332	106	59	43	25	25	16	11	14	65	1,517
2020	639	253	164	41	34	30	17	18	15	10	77	1,298
2021	738	218	117	100	22	24	23	17	11	13	78	1,361

Note: From summary of Form B returns up to 30 June 2021.

C 1.4 Claim payments

Financial Year	Claim payments (a) for development year (\$000):											
	0	1	2	3	4	5	6	7	8	9 10 onwards	Total	
2012	16,950	19,028	12,643	9,217	6,019	6,525	2,406	2,350	1,204	2,307	4,283	82,931
2013	18,470	22,405	11,394	7,690	16,149	3,794	2,519	661	726	1,124	4,139	89,070
2014	19,227	24,217	9,748	10,448	6,810	5,760	3,421	4,773	1,958	476	4,914	91,751
2015	19,189	24,957	15,515	9,393	3,877	4,145	3,315	2,818	1,704	1,546	5,852	92,311
2016	21,206	24,629	15,439	14,449	5,196	4,979	2,900	2,253	4,170	2,208	4,781	102,211
2017	23,602	30,360	20,541	12,743	7,258	5,034	5,829	2,782	1,629	2,446	9,690	121,914
2018	26,881	31,663	19,224	15,753	8,432	3,474	2,472	1,126	2,207	1,180	8,226	120,638
2019	24,960	43,705	20,499	11,979	9,568	5,423	5,713	2,154	1,360	1,413	7,955	134,728
2020	22,627	26,194	24,003	12,819	5,934	4,537	2,868	2,942	1,292	815	5,948	109,979
2021	21,061	25,773	15,748	16,078	5,264	3,665	7,436	1,067	1,707	1,383	8,048	107,231

Note: Data extracted from the WIMS system up to 30 June 2021

C 1.5 Case estimates

Financial Year	Case estimates (a) for development year (\$000):											
	0	1	2	3	4	5	6	7	8	9 10 onwards	Total	
2014	41,909	30,987	25,229	11,474	13,213	7,832	18,376	10,870	3,624	4,128	33,758	201,399
2015	49,148	25,816	20,696	16,394	10,023	7,330	9,704	15,151	8,164	2,212	32,364	197,002
2016	43,796	39,453	16,396	15,291	13,782	7,456	6,243	9,415	12,568	4,855	32,279	201,533
2017	46,664	33,128	33,218	12,093	12,531	7,468	4,042	5,589	8,461	10,207	31,103	204,503
2018	66,003	34,783	23,594	20,199	7,580	10,483	5,693	3,782	4,443	8,451	31,866	216,879
2019	44,442	46,620	18,260	13,031	13,916	3,887	5,096	4,886	2,488	3,427	32,511	188,564
2020	41,104	29,022	28,647	8,094	7,660	10,196	2,887	2,906	3,223	2,072	32,089	167,900
2021	44,005	27,918	15,439	22,538	6,032	7,514	7,266	2,744	3,424	4,336	28,885	170,102

Note: From summary of Form B returns up to 30 June 2021. Case estimates were provided for the first time at 30 June 2014

C 2 Actual and projected claims experience during 2020/21

This section compares the actual experience over the 2021 financial year with the expected experience based on the previous scheme valuation as at 30 June 2020.

C 2.1 Number of claims reported

Accident year ended 30 June	Number of claims reported		Actual / expected (c)
	Combined total		
	Actual (a)	Projected (b)	
2020	190	177	108%
2019	12	16	73%
2018	13	8	157%
2017	3	2	127%
2016	3	1	265%
2015	0	1	0%
2014	0	1	0%
2013	0	1	0%
2012	2	0	990%
2011 and earlier	3	2	147%
Total	226	209	108%

Notes: (a) Extracted from the WIMS database to 30 June 2021

(b) Derived using the reporting rates in Appendix C3.1 of our previous scheme report dated 17 February 2021

(c) = (a) / (b) x 100

C 2.2 Proportion of claims finalised

Proportion of claims finalised (a) during 2020/21			
Accident year ended 30 June	Actual	Projected (b)	Actual / expected (c)
2020	74%	75%	99%
2019	56%	59%	95%
2018	44%	57%	76%
2017	50%	43%	115%
2016	35%	37%	95%
2015	23%	34%	69%
2014	0%	23%	0%
2013	39%	19%	207%
2012	24%	20%	115%
2011 and earlier	13%	20%	65%
Total	59.1%	63.1%	94%

Note: (a) Defined as:

number of claims finalised during the year

number outstanding at beginning of year + number reported during the year

(b) According to claim finalised per handled rate in appendix C3.1 of previous scheme report dated 17 February 2021. Total is weighted average using the current year's actual number of claims handled by occurrence year as the weights

C 2.3 Claim payments

Amount of claim payments during 2020/21			
Accident year ended 30 June	Combined total (\$000)		Actual / expected (c)
	Actual (a)	Projected (b)	
2020	25,773	23,881	108%
2019	15,748	18,753	84%
2018	16,078	19,108	84%
2017	5,264	5,944	89%
2016	3,665	3,616	101%
2015	7,436	5,953	125%
2014	1,067	1,415	75%
2013	1,707	1,046	163%
2012	1,383	898	154%
2011 and earlier	8,048	9,698	83%
Total	86,170	90,314	95%

Notes: (a) Extracted from the WIMS database to 30 June 2021

(b) From previous scheme report dated 17 February 2021, in 30 June 2021 values

(c) = (a) / (b) x 100.

C 2.4 Case estimate development

Case estimate development during 2020/21			Ratio of actual to projected number reported %
Accident year ended 30 June	Actual	Projected (a)	
2020	1.310	1.352	97%
2019	1.077	1.206	89%
2018	1.352	1.151	117%
2017	1.399	1.187	118%
2016	1.464	1.039	141%
2015	1.446	1.164	124%
2014	1.324	1.224	108%
2013	1.771	1.043	170%
2012	1.780	1.052	169%
2011 and earlier	1.085	1.014	107%
Total	1.268	1.177	108%

Notes: (a) according to PCE model in Appendix C4 of our previous scheme report dated 17 February 2021

(b) according to estimates adopted in Appendix D4 of our previous scheme report dated 17 February 2021.

C 3 Analysis and projection models

C 3.1 All payment types

Claim notification pattern

Financial Year	Chain ladder ratio (a) for development year:									
	1	2	3	4	5	6	7	8	9 10 onwards	
2012	1.106	1.004	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.001
2013	1.109	1.005	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2014	1.132	1.006	1.002	1.002	1.000	1.000	1.000	1.000	1.000	1.002
2015	1.140	1.008	1.002	1.001	1.001	1.001	1.000	1.000	1.000	1.001
2016	1.120	1.006	1.003	1.000	1.000	1.001	1.000	1.000	1.000	1.000
2017	1.108	1.007	1.003	1.001	1.000	1.001	1.000	1.000	1.000	1.001
2018	1.116	1.008	1.003	1.001	1.001	1.000	1.000	1.000	1.000	1.000
2019	1.109	1.007	1.004	1.002	1.001	1.000	1.000	1.001	1.000	1.000
2020	1.098	1.008	1.002	1.001	1.000	1.000	1.001	1.001	1.000	1.002
2021	1.116	1.006	1.005	1.001	1.001	1.000	1.000	1.000	1.001	1.001
Adopted (b)	1.109	1.007	1.004	1.001	1.001	1.000	1.000	1.000	1.000	1.001

Notes: (a) Using cumulative claim report numbers from data

(b) Adopted for 30 June 2021 valuation

Numbers of claims incurred

Financial Year	Number of claims		
	Reported to 30 June 2021 (a)	IBNR at 30 June 2021 (b)	Incurred (c)
2009	2,619	0	2,619
2010	2,531	0	2,531
2011	2,668	0	2,668
2012	2,629	3	2,632
2013	2,779	3	2,782
2014	2,748	4	2,752
2015	2,646	5	2,651
2016	2,537	5	2,542
2017	2,416	6	2,422
2018	2,418	9	2,427
2019	2,188	16	2,204
2020	1,824	26	1,850
2021	1,661	208	1,869

Notes: (a) from number reported in appendix C1.1

(b) from pattern in chain ladder ratio table above

(c) = (a) + (b)

Claim finalised per handled rate

Financial Year	Finalisation rate (a) for development year:										
	0	1	2	3	4	5	6	7	8	9	10 onwards
2012	0.662	0.794	0.504	0.427	0.329	0.227	0.313	0.483	0.350	0.261	0.188
2013	0.652	0.780	0.513	0.455	0.353	0.260	0.235	0.318	0.067	0.286	0.170
2014	0.610	0.748	0.593	0.552	0.408	0.386	0.243	0.074	0.313	0.133	0.258
2015	0.634	0.780	0.538	0.452	0.315	0.271	0.138	0.179	0.240	0.091	0.322
2016	0.554	0.746	0.525	0.467	0.172	0.368	0.270	0.240	0.174	0.263	0.087
2017	0.574	0.775	0.503	0.537	0.381	0.458	0.462	0.185	0.158	0.158	0.177
2018	0.530	0.754	0.583	0.540	0.400	0.291	0.269	0.143	0.227	0.294	0.195
2019	0.586	0.734	0.650	0.566	0.449	0.432	0.359	0.200	0.214	0.176	0.177
2020	0.609	0.751	0.533	0.634	0.452	0.302	0.346	0.333	0.167	0.091	0.094
2021	0.556	0.737	0.558	0.435	0.500	0.351	0.233	0.000	0.389	0.235	0.133
Adopted (b)	0.582	0.744	0.544	0.565	0.462	0.366	0.333	0.190	0.231	0.198	0.154

Notes: (a) Defined as: Number of claims finalised / number of claims handled

(b) Adopted for 30 June 2021 valuation

C 3.2 Weekly benefits

Claim payments

Financial Year	Claim payments (a) for development year:											
	0	1	2	3	4	5	6	7	8	9 10 onwards	Total	
2012	7,653,424	7,576,791	3,964,698	1,803,241	1,270,971	1,584,552	642,719	349,971	409,600	551,010	1,061,221	26,868,198
2013	8,807,527	8,875,185	3,560,052	2,734,261	1,115,920	1,368,720	967,895	4,494	372,833	302,744	1,653,645	29,763,276
2014	8,077,186	10,391,858	3,401,196	2,381,386	2,125,933	1,102,380	1,214,201	678,973	358,515	389,871	1,849,780	31,971,279
2015	8,216,481	11,083,562	5,567,566	2,511,952	1,283,333	1,155,455	573,282	805,123	922,606	332,210	1,657,226	34,108,796
2016	8,742,822	10,679,038	5,401,577	3,190,393	1,338,501	815,046	614,507	474,422	522,645	679,442	1,582,173	34,040,566
2017	9,854,403	13,163,663	5,918,120	2,681,584	1,987,221	649,422	520,104	558,092	441,730	423,495	1,733,122	37,930,956
2018	9,548,417	14,918,084	5,975,214	3,766,731	1,707,889	998,863	612,951	296,451	325,736	390,855	1,522,341	40,063,532
2019	9,971,412	19,098,620	6,699,316	2,510,503	680,402	701,865	677,456	511,424	304,923	211,340	1,387,014	42,754,275
2020	8,123,353	10,780,042	8,359,586	2,545,033	1,180,938	1,179,405	548,182	442,073	396,987	540,906	1,489,926	35,586,431
2021	7,261,097	8,994,959	4,831,552	4,084,762	1,331,093	610,007	754,771	331,943	434,477	325,368	1,435,582	30,395,611

Notes: (a) Data extracted from the WIMS system up to 30 June 2021. DY10+ using the list of historical transaction by payment type.

Average real payment per active claim

Financial Year	Weekly Benefits PPAC (a) for development year:									
	1	2	3	4	5	6	7	8	9 10 onwards	Total
2012	11,980	20,492	19,806	22,336	46,411	25,505	14,845	26,520	30,810	13,187
2013	13,287	19,843	26,391	19,773	33,162	33,796	243	29,508	27,647	19,830
2014	14,528	17,373	25,544	34,839	29,562	38,720	30,813	28,201	32,858	23,469
2015	13,720	21,898	28,948	28,441	29,590	24,469	33,137	42,529	34,804	22,468
2016	13,641	21,120	24,003	25,617	24,031	19,153	20,702	24,789	39,011	25,014
2017	13,669	21,487	20,028	25,653	14,147	22,660	21,614	24,310	23,307	23,535
2018	16,792	21,829	25,440	25,783	19,719	24,201	21,738	15,200	25,078	19,294
2019	19,249	23,869	20,465	9,369	17,028	17,700	27,428	25,892	12,668	18,120
2020	13,158	25,233	24,061	20,058	27,486	21,974	17,720	24,864	49,278	18,900
2021	14,037	19,044	24,838	32,375	17,891	25,089	19,472	24,070	21,631	16,455
Adopted (b)	14,457	21,631	23,855	25,497	19,918	21,982	21,402	24,672	24,691	19,187

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 15% for the 2018 AY to reflect the significantly higher experience to date for this year.

Average real payment per claim incurred

Financial Year	Weekly Benefits PPACI (a) for development year:											
	0	1	2	3	4	5	6	7	8	9 10 onwards	Total	
2012	3,578	3,493	1,927	847	572	788	291	156	195	236	450	12,535
2013	3,758	4,004	1,584	1,283	506	595	464	2	161	139	685	13,180
2014	3,463	4,407	1,525	1,053	991	497	525	324	156	167	847	13,953
2015	3,572	4,641	2,306	1,100	554	526	252	340	430	141	693	14,556
2016	3,752	4,395	2,141	1,251	555	333	265	198	209	300	636	14,034
2017	4,254	5,415	2,335	1,019	747	258	204	231	176	162	733	15,532
2018	4,039	6,322	2,413	1,459	637	369	239	114	132	153	572	16,449
2019	4,610	8,019	2,818	1,006	262	260	248	198	116	85	540	18,162
2020	4,399	4,901	3,452	1,053	466	446	200	159	151	203	590	16,020
2021	3,873	4,848	2,186	1,678	548	239	284	120	156	123	537	14,592
Adopted (b)	4,312	5,417	2,441	1,136	604	315	235	163	146	146	592	15,508

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 33% for the 2018 AY to reflect the significantly higher experience to date for this year.

Estimates from models

Weekly Benefits					
Accident Year	Estimated outstanding claims claims at 30 June 2021 (\$'000s) (a)			Weighting	
	PPAC	PPCI	Adopted	PPAC	PPCI
2021	23,507	22,476	23,507	100%	0%
2020	11,711	11,729	11,716	70%	30%
2019	7,689	8,269	7,979	50%	50%
2018	9,528	8,143	9,528	100%	0%
2017	2,645	4,498	3,201	70%	30%
2016	3,196	3,797	3,196	100%	0%
2015	3,503	3,233	3,503	100%	0%
2014	2,708	2,818	2,708	100%	0%
2013	1,889	2,366	1,889	100%	0%
2012 & earlier	12,679	9,171	12,679	100%	0%
Total	79,055	76,500	79,906		

Notes: (a) From models described above, in 30 June 2021 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.3 Medical and hospital

Claim payments

Financial Year	Claim payments (a) for development year:											
	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2012	4,663,450	3,371,278	928,279	474,053	265,961	250,060	137,885	60,493	51,395	158,574	467,905	10,829,333
2013	4,660,439	3,600,075	1,042,539	442,068	197,289	183,961	255,237	28,860	19,463	157,285	597,418	11,184,634
2014	5,386,937	3,814,425	764,401	626,585	314,940	213,159	120,997	185,779	39,070	17,751	668,283	12,152,327
2015	6,205,292	4,214,871	1,173,637	357,145	435,689	254,927	148,729	174,226	296,992	34,874	1,050,548	14,346,930
2016	6,461,996	4,969,360	1,228,150	423,019	199,841	252,581	151,858	125,883	95,932	50,978	457,319	14,416,917
2017	7,116,664	5,337,940	1,786,388	450,042	348,802	162,028	232,516	63,737	108,095	27,720	314,508	15,948,440
2018	8,065,196	4,678,731	1,500,857	801,131	364,164	372,351	121,715	110,074	113,687	25,397	741,882	16,895,185
2019	7,041,407	6,584,477	1,548,724	428,901	349,840	168,751	307,367	54,339	66,674	29,766	225,475	16,805,721
2020	6,915,854	3,759,937	1,784,439	435,257	188,238	418,987	49,838	180,353	58,474	75,987	326,128	14,193,492
2021	6,518,818	4,106,928	1,177,332	877,659	396,304	353,799	201,951	49,958	43,445	54,179	265,523	14,045,896

Note: Data extracted from the WIMS system up to 30 June 2021. DY10+ using the list of historical transaction by payment type.

Average real payment per active claim

Financial Year	Medical And Hospital PPAC (a) for development year:									
	1	2	3	4	5	6	7	8	9	0 onwards
2012	5,331	4,798	5,207	4,674	7,324	5,472	2,566	3,328	8,867	5,814
2013	5,390	5,811	4,267	3,496	4,457	8,912	1,557	1,540	14,364	7,164
2014	5,333	3,904	6,721	5,161	5,716	3,859	8,431	3,073	1,496	8,479
2015	5,217	4,616	4,116	9,656	6,528	6,348	7,171	13,690	3,654	14,243
2016	6,348	4,802	3,183	3,825	7,447	4,733	5,493	4,550	2,927	7,230
2017	5,543	6,486	3,361	4,503	3,530	10,130	2,468	5,949	1,526	4,271
2018	5,267	5,483	5,411	5,498	7,351	4,806	8,071	5,305	1,629	9,402
2019	6,636	5,518	3,496	4,817	4,094	8,031	2,914	5,662	1,784	2,946
2020	4,589	5,386	4,115	3,197	9,765	1,998	7,229	3,662	6,923	4,137
2021	6,409	4,641	5,337	9,639	10,377	6,713	2,931	2,407	3,602	3,043
Adopted (b)	5,937	5,520	4,427	4,992	6,832	6,476	4,564	4,593	2,764	4,756

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 9% for the 2018 AY to reflect the significantly higher experience to date for this year.

Average real payment per claim incurred

Financial Year	Medical And Hospital PPCI (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10 onward:	
2012	2,180	1,554	451	223	120	124	62	27	25	68	199	5,033
2013	1,989	1,624	464	207	89	80	122	13	8	72	247	4,916
2014	2,309	1,618	343	277	147	96	52	89	17	8	306	5,261
2015	2,698	1,765	486	156	188	116	65	74	138	15	440	6,141
2016	2,773	2,045	487	166	83	103	65	52	38	22	184	6,020
2017	3,072	2,196	705	171	131	64	91	26	43	11	133	6,643
2018	3,411	1,983	606	310	136	137	47	42	46	10	279	7,009
2019	3,255	2,764	652	172	134	62	113	21	25	12	88	7,299
2020	3,745	1,709	737	180	74	158	18	65	22	29	129	6,867
2021	3,477	2,213	533	361	163	139	76	18	16	21	99	7,115
Adopted (b)	3,479	2,180	649	193	128	112	69	35	30	16	147	7,038

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 25% for the 2018 AY to reflect the significantly higher experience to date for this year.

Estimates from models

Medical And Hospital					
Accident Year	Estimated outstanding claims claims at 30 June 2021 (\$000s) (a)			Weighting	
	PPAC	PPCI	Adopted	PPAC	PPCI
2021	7,372	7,279	7,372	100%	0%
2020	2,719	2,952	2,789	70%	30%
2019	1,668	1,969	1,818	50%	50%
2018	2,132	2,034	2,132	100%	0%
2017	662	1,249	838	70%	30%
2016	740	978	740	100%	0%
2015	763	799	763	100%	0%
2014	594	703	594	100%	0%
2013	429	599	429	100%	0%
2012 & earlier	3,125	3,099	3,125	100%	0%
Total	20,203	21,661	20,600		

Notes: (a) From models described above, in 30 June 2021 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.4 Allied health, vocational rehabilitation, non-compensation (other) and death

Claim payments

Financial Year	Claim payments (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10 onwards	
2012	2,528,926	2,491,200	1,288,794	403,986	640,432	507,062	102,063	41,001	58,384	93,257	222,853	8,377,958
2013	2,448,274	2,840,104	1,100,827	468,702	298,929	216,879	143,948	94,135	33,874	30,464	431,956	8,108,092
2014	3,361,212	3,606,839	1,476,898	703,441	351,241	214,183	243,243	65,783	62,260	39,744	364,737	10,489,581
2015	2,555,254	4,054,156	2,099,504	995,769	445,876	386,029	138,582	191,187	166,531	116,635	433,579	11,583,102
2016	2,991,439	3,902,915	1,879,840	796,996	242,575	193,909	140,751	96,043	114,604	118,250	308,078	10,785,400
2017	3,561,486	5,263,252	2,348,993	884,416	387,565	197,411	482,483	165,590	65,307	121,999	372,516	13,851,018
2018	5,269,591	4,862,835	1,866,179	922,244	414,379	201,224	150,338	67,566	76,500	52,431	395,777	14,279,064
2019	4,761,349	7,086,964	2,778,246	759,371	590,528	236,107	157,526	138,496	125,318	60,951	320,407	17,015,263
2020	4,793,882	5,185,914	2,645,823	863,130	265,690	346,795	98,736	102,408	130,428	65,063	315,473	14,813,342
2021	4,269,156	4,850,419	1,645,534	1,278,241	389,606	205,152	262,094	63,121	69,912	88,444	382,006	13,503,685

Note: Data extracted from the WIMS system up to 30 June 2021. DY10+ using the list of historical transaction by payment type.

Average real payment per active claim

Financial Year	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death PPAC (a) for dev year:									
	1	2	3	4	5	6	7	8	9	10 onwards
2012	3,939	6,661	4,437	11,255	14,852	4,050	1,739	3,780	5,215	2,769
2013	4,252	6,136	4,524	5,297	5,255	5,026	5,080	2,681	2,782	5,180
2014	5,042	7,544	7,545	5,756	5,744	7,757	2,985	4,897	3,350	4,627
2015	5,018	8,258	11,475	9,881	9,886	5,915	7,869	7,677	12,219	5,878
2016	4,986	7,350	5,996	4,643	5,717	4,387	4,191	5,436	6,789	4,871
2017	5,465	8,528	6,606	5,003	4,300	21,021	6,413	3,594	6,714	5,059
2018	5,474	6,818	6,229	6,256	3,973	5,936	4,954	3,570	3,364	5,016
2019	7,143	9,898	6,190	8,132	5,728	4,116	7,428	10,641	3,653	4,186
2020	6,330	7,986	8,160	4,513	8,082	3,958	4,105	8,169	5,927	4,002
2021	7,569	6,486	7,772	9,476	6,017	8,712	3,703	3,873	5,880	4,379
Adopted (b)	6,872	7,983	6,965	6,462	5,505	8,192	5,384	5,459	5,088	4,526

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 15% for the 2018 AY to reflect the significantly higher experience to date for this year.

Average real payment per claim incurred

Financial Year	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death PPCI (a) for development year:											
	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2012	1,182	1,149	626	190	288	252	46	18	28	40	95	3,915
2013	1,045	1,281	490	220	136	94	69	41	15	14	179	3,583
2014	1,441	1,530	662	311	164	96	105	31	27	17	167	4,552
2015	1,111	1,698	870	436	193	176	61	81	78	50	181	4,933
2016	1,284	1,606	745	312	101	79	61	40	46	52	124	4,450
2017	1,537	2,165	927	336	146	78	189	68	26	47	157	5,677
2018	2,229	2,061	754	357	155	74	59	26	31	21	149	5,914
2019	2,201	2,975	1,169	304	227	87	58	54	48	25	125	7,273
2020	2,596	2,358	1,092	357	105	131	36	37	50	24	125	6,911
2021	2,277	2,614	744	525	160	80	99	23	25	34	143	6,725
Adopted (b)	2,349	2,475	939	374	165	100	64	38	41	28	140	6,710

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 53% for the 2018 AY to reflect the significantly higher experience to date for this year.

Estimates from models

Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death					
Accident Year	Estimated outstanding claims claims at 30 June 2021 (\$000s) (a)			Weighting	
	PPAC	PPCI	Adopted	PPAC	PPCI
2021	9,515	9,273	9,515	100%	0%
2020	3,891	4,189	3,980	70%	30%
2019	2,285	2,688	2,486	50%	50%
2018	2,775	2,924	2,775	100%	0%
2017	791	1,405	975	70%	30%
2016	947	1,143	947	100%	0%
2015	955	960	955	100%	0%
2014	732	840	732	100%	0%
2013	516	691	516	100%	0%
2012 & earlier	3,509	3,356	3,509	100%	0%
Total	25,915	27,468	26,389		

Notes: (a) From models described above, in 30 June 2021 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.5 Other goods and services

Claim payments

Financial Year	Claim payments (a) for development year:											
	0	1	2	3	4	5	6	7	8	9	10 onward:	Total
2012	1,624,433	1,487,394	537,704	1,014,463	182,189	779,617	49,111	41,856	18,135	118,795	503,016	6,356,713
2013	1,567,865	1,463,072	610,500	293,726	630,061	166,282	509,228	22,570	12,114	7,029	660,627	5,943,074
2014	1,739,505	1,385,289	430,785	347,657	149,912	187,116	156,222	-13,833	12,821	19,453	701,069	5,115,996
2015	1,546,816	1,683,725	452,168	202,359	316,201	119,758	154,664	240,214	135,516	14,040	651,208	5,516,669
2016	2,050,750	1,969,303	483,693	233,590	95,208	114,752	80,054	92,629	146,768	89,762	630,208	5,986,717
2017	1,847,739	1,839,423	822,753	194,073	112,078	43,362	88,437	47,582	148,294	56,237	827,405	6,027,383
2018	2,431,656	1,758,864	768,950	379,871	119,088	122,482	44,067	56,536	36,721	290,716	949,117	6,958,068
2019	1,836,810	2,302,039	831,093	273,563	224,337	53,408	134,704	61,567	75,089	32,693	1,176,939	7,002,242
2020	1,875,101	1,276,802	761,959	403,215	142,653	305,044	63,957	160,513	66,505	74,219	1,309,275	6,439,243
2021	1,851,437	1,984,118	413,261	305,228	136,203	127,726	426,455	49,193	73,002	44,052	1,460,363	6,871,038

Note: Data extracted from the WIMS system up to 30 June 2021. DY10+ using the list of historical transaction by payment type.

Average real payment per active claim

Financial Year	Other Goods And Services PPAC (a) for development year:									
	1	2	3	4	5	6	7	8	9	0 onwards
2012	2,352	2,779	11,142	3,202	22,834	1,949	1,775	1,174	6,643	6,250
2013	2,190	3,403	2,835	11,164	4,029	17,781	1,218	959	642	7,922
2014	1,937	2,200	3,729	2,457	5,018	4,982	-628	1,009	1,639	8,895
2015	2,084	1,778	2,332	7,008	3,067	6,601	9,887	6,247	1,471	8,829
2016	2,516	1,891	1,757	1,822	3,383	2,495	4,042	6,961	5,154	9,964
2017	1,910	2,987	1,450	1,447	945	3,853	1,843	8,161	3,095	11,236
2018	1,980	2,809	2,566	1,798	2,418	1,740	4,146	1,713	18,653	12,029
2019	2,320	2,961	2,230	3,089	1,296	3,519	3,302	6,376	1,960	15,375
2020	1,558	2,300	3,812	2,423	7,109	2,564	6,434	4,165	6,761	16,608
2021	3,096	1,629	1,856	3,313	3,746	14,176	2,886	4,044	2,929	16,739
Adopted (b)	1,991	2,550	2,300	2,312	3,007	2,974	3,730	4,698	6,524	16,261

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. No special allowance was made for AY18.

Average real payment per claim incurred

Financial Year	Other Goods And Services PPCI (a) for development year:											
	0	1	2	3	4	5	6	7	8	9	10 onward:	Total
2012	759	686	261	476	82	388	22	19	9	51	214	2,967
2013	669	660	272	138	286	72	244	10	5	3	273	2,632
2014	746	587	193	154	70	84	67	-7	6	8	321	2,230
2015	673	705	187	89	137	55	68	101	63	6	272	2,356
2016	880	810	192	92	39	47	35	39	59	40	253	2,485
2017	798	757	325	74	42	17	35	20	59	22	350	2,497
2018	1,029	745	311	147	44	45	17	22	15	114	357	2,846
2019	849	967	350	110	86	20	49	24	29	13	458	2,954
2020	1,016	581	315	167	56	115	23	58	25	28	518	2,902
2021	988	1,069	187	125	56	50	160	18	26	17	546	3,242
Adopted (b)	969	729	300	124	57	49	57	28	31	39	507	2,890

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. No special allowance was made for AY18.

Estimates from models

Other Goods And Services					
Estimated outstanding claims					
Accident Year	claims at 30 June 2021 (\$000s) (a)			Weighting	
	PPAC	PPCI	Adopted	PPAC	PPCI
2021	3,709	3,808	3,709	100%	0%
2020	2,103	2,395	2,190	70%	30%
2019	1,751	2,172	1,962	50%	50%
2018	2,418	2,076	2,418	100%	0%
2017	1,118	1,919	1,358	70%	30%
2016	1,488	1,875	1,488	100%	0%
2015	1,858	1,791	1,858	100%	0%
2014	1,628	1,768	1,628	100%	0%
2013	1,304	1,689	1,304	100%	0%
2012 & earlier	9,829	21,267	9,829	100%	0%
Total	27,206	40,759	27,744		

Notes: (a) From models described above, in 30 June 2021 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.6 Legals

Claim payments

Financial Year	Claim payments (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10 onward:	
2012	189,595	633,460	574,349	768,389	248,978	705,228	75,826	105,448	52,297	46,709	137,531	3,537,810
2013	188,116	592,132	775,905	604,921	1,139,497	588,270	216,238	139,320	58,533	56,996	82,970	4,442,898
2014	200,375	738,137	873,295	638,026	499,375	640,462	282,056	219,827	80,257	8,704	300,495	4,481,009
2015	143,327	946,238	880,787	499,253	660,560	354,353	344,651	349,078	114,010	181,815	187,221	4,661,293
2016	419,783	899,214	1,217,238	1,156,280	445,297	450,979	133,961	497,577	66,402	13,080	100,233	5,400,044
2017	388,426	1,418,857	1,561,753	1,086,107	482,854	420,027	231,269	88,302	34,962	69,404	134,110	5,916,071
2018	481,374	1,099,085	1,065,066	795,370	953,777	429,932	292,035	76,783	46,549	79,046	162,238	5,481,255
2019	636,594	1,883,256	1,357,164	823,170	1,061,168	311,545	368,218	263,195	54,143	31,269	1,242,423	8,032,145
2020	370,730	1,310,550	1,881,126	1,016,586	876,809	671,392	316,517	106,366	280,888	58,397	391,840	7,281,201
2021	365,150	954,656	899,768	991,566	306,157	265,427	258,482	-10,392	72,435	289,655	474,685	4,867,589

Note: Data extracted from the WIMS system up to 30 June 2021. DY10+ using the list of historical transaction by payment type.

Average real payment per claim finalised

Financial Year	Legals PPCF (a) for development year:										
	0	1	2	3	4	5	6	7	8	9	10 onwards
2012	150	951	5,652	18,905	12,762	86,754	9,328	9,266	9,190	9,577	8,904
2013	141	859	7,941	11,969	56,367	53,722	32,089	23,628	69,490	16,916	5,794
2014	163	1,000	7,058	11,763	19,007	44,452	36,978	129,688	18,939	5,135	14,182
2015	112	1,105	6,006	12,241	44,779	31,413	99,295	80,457	21,898	209,527	7,706
2016	366	1,160	8,567	17,766	48,577	35,141	14,614	90,468	18,109	2,854	18,224
2017	330	1,530	10,604	14,376	15,778	19,964	20,152	18,466	12,186	24,191	10,017
2018	433	1,289	6,248	9,385	34,969	27,585	42,828	39,412	9,557	16,229	10,409
2019	559	2,100	7,020	10,893	30,894	16,708	26,800	67,047	18,390	10,621	90,429
2020	373	1,724	10,081	14,348	31,381	51,755	35,243	11,843	93,828	58,521	49,084
2021	395	1,558	6,063	12,842	13,877	20,361	36,823	0	10,319	72,212	39,447
Adopted (b)	419	1,562	7,829	12,650	26,650	27,888	31,672	41,875	34,307	34,307	28,577

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 18% for the 2018 AY to reflect the significantly higher experience to date for this year.

Average real payment per claim incurred

Financial Year	Legals PPCI (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10 onwards	
2012	89	292	279	361	112	351	34	47	25	20	58	1,668
2013	80	267	345	284	517	256	104	61	25	26	34	1,999
2014	86	313	392	282	233	289	122	105	35	4	138	1,997
2015	62	396	365	219	285	161	152	147	53	77	78	1,996
2016	180	370	482	453	185	184	58	207	27	6	40	2,193
2017	168	584	616	413	181	167	91	36	14	27	57	2,353
2018	204	466	430	308	356	159	114	30	19	31	61	2,176
2019	294	791	571	330	408	115	135	102	21	13	483	3,263
2020	201	596	777	421	346	254	115	38	107	22	155	3,031
2021	195	514	407	407	126	104	97	-4	26	110	177	2,161
Adopted (b)	212	541	510	375	297	158	111	40	37	40	130	2,451

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 45% for the 2018 AY to reflect the significantly higher experience to date for this year.

Estimates from models

Accident Year	Legals				
	Estimated outstanding claims claims at 30 June 2021 (\$'000s) (a)			Weighting	
	PPCF	PPCI	Adopted	PPCF	PPCI
2021	5,278	4,837	5,278	100%	0%
2020	3,789	3,604	3,734	70%	30%
2019	3,030	3,010	3,020	50%	50%
2018	4,166	3,311	4,166	100%	0%
2017	1,017	1,476	1,155	70%	30%
2016	1,101	1,090	1,101	100%	0%
2015	1,076	801	1,076	100%	0%
2014	785	688	785	100%	0%
2013	523	565	523	100%	0%
2012 & earlier	3,317	1,731	3,317	100%	0%
Total	24,081	21,112	24,153		

Notes: (a) From models described above, in 30 June 2021 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.7 Redemptions and non-economic lump sum

Claim payments

Financial Year	Claim payments (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10 onwards	
2012	290,423	3,467,687	5,349,468	4,752,877	3,410,329	2,698,787	1,398,278	1,750,848	614,058	1,338,167	1,890,238	26,961,160
2013	798,093	5,034,020	4,304,159	3,146,178	12,767,423	1,269,418	426,392	371,696	228,690	569,448	712,612	29,628,129
2014	461,434	4,280,116	2,801,334	5,751,145	3,368,411	3,402,835	1,404,766	3,636,688	1,404,997	0	1,029,350	27,541,076
2015	522,306	2,974,003	5,341,548	4,826,066	735,591	1,874,791	1,954,630	1,058,632	68,471	866,380	1,871,749	22,094,167
2016	539,312	2,208,806	5,228,454	8,648,902	2,874,708	3,152,006	1,778,661	966,730	3,223,685	1,256,746	1,703,304	31,581,314
2017	833,335	3,337,204	8,102,884	7,446,525	3,939,263	3,561,253	4,274,513	1,859,084	830,709	1,746,804	6,308,659	42,240,233
2018	1,084,900	4,345,693	8,047,510	9,087,783	4,872,947	1,349,024	1,251,323	518,297	1,608,148	341,066	4,454,297	36,960,988
2019	712,246	6,749,440	7,284,290	7,183,482	6,661,238	3,951,044	4,067,511	1,124,902	733,979	1,047,184	3,603,225	43,118,541
2020	547,929	3,880,723	8,569,966	7,555,657	3,279,619	1,615,397	1,790,955	1,950,328	358,744	0	2,115,578	31,664,896
2021	795,000	4,881,939	6,780,376	8,540,851	2,705,089	2,102,867	5,532,583	582,845	1,013,771	581,251	4,030,139	37,546,711

Note: Data extracted from the WIMS system up to 30 June 2021. DY10+ using the list of historical transaction by payment type.

Average real payment per claim finalised

Financial Year	Redemptions And Non-Economic Lump Sum PPCF (a) for development year:										
	0	1	2	3	4	5	6	7	8	9	10 onwards
2012	230	5,209	52,645	116,935	174,801	331,992	172,010	153,844	107,912	274,358	122,383
2013	600	7,306	44,050	62,252	631,557	115,926	63,276	63,039	271,499	169,011	49,765
2014	374	5,798	22,639	106,029	128,207	236,179	184,166	2,145,482	331,554	0	48,582
2015	406	3,472	36,424	118,333	49,865	166,196	563,138	243,997	13,151	998,432	77,037
2016	471	2,848	36,798	132,888	313,602	245,609	194,034	175,768	879,179	274,197	309,689
2017	709	3,597	55,018	98,562	128,721	169,264	372,468	388,788	289,542	608,844	471,186
2018	977	5,098	47,208	107,233	178,658	86,554	183,511	266,035	330,176	70,026	285,791
2019	625	7,525	37,678	95,062	193,933	211,896	296,050	286,562	249,302	355,685	262,257
2020	552	5,104	45,926	106,643	117,378	124,525	199,417	217,162	119,835	0	265,008
2021	859	7,968	45,686	110,611	122,616	161,308	788,166	0	144,421	144,908	334,909
Adopted (b)	672	6,355	43,895	103,642	150,988	154,825	351,241	307,897	220,851	238,959	327,810

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 7% for the 2018 AY to reflect the higher experience to date for this year.

Average real payment per claim incurred

Financial Year	Redemptions And Non-Economic Lump Sum PPCI (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10 onwards	
2012	136	1,599	2,600	2,232	1,536	1,342	634	782	293	574	802	12,530
2013	341	2,271	1,915	1,476	5,787	552	205	163	99	262	295	13,365
2014	198	1,815	1,256	2,543	1,570	1,533	607	1,734	611	0	471	12,339
2015	227	1,245	2,212	2,113	318	854	860	447	32	368	783	9,459
2016	231	909	2,072	3,391	1,192	1,289	767	403	1,288	554	685	12,780
2017	360	1,373	3,196	2,829	1,480	1,415	1,675	768	332	669	2,666	16,764
2018	459	1,842	3,250	3,520	1,818	498	488	199	652	134	1,674	14,533
2019	329	2,834	3,064	2,880	2,561	1,463	1,490	436	280	422	1,402	17,159
2020	297	1,764	3,539	3,126	1,293	611	652	702	137	0	838	12,958
2021	424	2,631	3,068	3,509	1,114	825	2,081	211	363	220	1,506	15,953
Adopted (b)	349	1,853	3,149	3,167	1,665	962	1,276	461	351	290	1,451	14,974

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation. We increased these factors by 11% for the 2018 AY to reflect the higher experience to date for this year.

Estimates from models

Accident Year	Redemptions And Non-Economic Lump Sum Estimated outstanding claims				
	claims at 30 June 2021 (\$000s) (a)			Weighting	
	PPCF	PPCI	Adopted	PPCF	PPCI
2021	31,241	29,693	31,241	100%	0%
2020	24,903	25,431	25,062	70%	30%
2019	21,553	22,837	22,195	50%	50%
2018	25,825	18,940	25,825	100%	0%
2017	7,880	12,699	9,326	70%	30%
2016	9,540	10,652	9,540	100%	0%
2015	8,702	7,545	8,702	100%	0%
2014	6,651	6,431	6,651	100%	0%
2013	4,802	5,412	4,802	100%	0%
2012 & earlier	32,545	25,906	32,545	100%	0%
Total	173,643	165,547	175,889		

Notes: (a) From models described above, in 30 June 2021 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.8 Combined PCE method

Case estimates development factors

Financial Year	Case estimate development factors (a) for development year:									
	1	2	3	4	5	6	7	8	9	10 onwards
2016	1.262	1.196	1.394	1.118	1.201	1.205	1.159	1.066	0.836	1.032
2017	1.417	1.332	1.481	1.265	0.887	1.295	1.311	1.047	0.984	1.073
2018	1.396	1.267	1.061	1.298	1.090	1.070	1.188	1.165	1.113	0.950
2019	1.357	1.105	1.051	1.151	1.219	1.023	1.222	1.007	1.077	0.991
2020	1.236	1.124	1.141	1.038	1.053	1.473	1.142	0.919	1.153	1.051
2021	1.310	1.077	1.352	1.399	1.464	1.446	1.324	1.771	1.780	1.085
Adopted (b)	1.330	1.144	1.151	1.195	1.169	1.220	1.208	1.161	1.222	1.014

Notes: (a) defined as: (CE at end of year + payments in the year) / CE at beginning of year adjusted for normal inflation

(b) In 30 June 2021 values, adopted for 30 June 2021 valuation

Payment factors for case estimates outstanding

Financial Year	Payments to case estimates (a) for development year:									
	1	2	3	4	5	6	7	8	9	10 onwards
2016	0.491	0.586	0.684	0.311	0.487	0.388	0.228	0.270	0.265	0.136
2017	0.678	0.509	0.760	0.464	0.357	0.765	0.436	0.169	0.190	0.255
2018	0.667	0.571	0.466	0.686	0.273	0.326	0.274	0.388	0.137	0.196
2019	0.661	0.589	0.507	0.473	0.715	0.544	0.378	0.359	0.318	0.197
2020	0.588	0.514	0.701	0.455	0.325	0.737	0.576	0.264	0.327	0.165
2021	0.628	0.543	0.562	0.651	0.479	0.730	0.370	0.588	0.430	0.236
Adopted (b)	0.640	0.551	0.542	0.544	0.408	0.573	0.409	0.380	0.254	0.198

Notes: (a) defined as: Payments made in the year / case estimates at beginning of the year

(b) In 30 June 2021 values, adopted for 30 June 2021 valuation

Estimates from model

Combined (all payment types) PCE method	
Estimated outstanding claims	
Accident Year	at 30 June 2021 (\$'000s) (a)
Year	PCE method
2021	72,190
2020	40,486
2019	23,418
2018	36,085
2017	9,799
2016	12,018
2015	11,525
2014	4,043
2013	4,791
2012 & earlier	39,292
Total	253,645

Notes: (a) From models described above, in 30 June 2021 values, excluding the 2015 legislative amendments

Large claims

Large claims (\$000s)			
Accident year	Case estimates (a)	Development factor (b)	Current values (c)
2021	2,225	1.00	2,225
2020	5,974	1.00	5,974
2019	1,767	0.00	0
2018	1,562	0.00	0
2017	2,841	0.00	0
2016	4,818	1.00	4,818
2015	2,187	1.00	2,187
2014	0	0.00	0
2013	2,030	1.00	2,030
2012 & earlier	20,414	0.25	5,103
Total	43,817		22,337

Notes: (a) Provided by the insurers

(b) We have adopted a development factor of 1 where we consider that the valuation by payment types include insufficient allowance for the large claims. Where the valuation by payment type has sufficient allowance, we have adopted a development factor of 0. We have adopted a factor of 0.25 for 2012 & earlier to account for the combination of the individual payment methods and PCE method generally being sufficient to account for the large claims.

(c) = (a) x (b)

C 4 Adopted estimates of outstanding claims

C 4.1 Gross central estimates from models in 30 June 2021 values, excluding allowance for Act changes

Estimates of outstanding claims at 30 June 2021 (\$000s) (a) (b)										
Accident year	By payment type method						Sum of individual payment methods (c)	All payments PCE method (d)	Allowance for active large claims	Total (e)
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum				
2021	23,507	7,372	9,515	3,709	5,278	31,241	80,621	72,190	2,225	82,846
2020	11,716	2,789	3,980	2,190	3,734	25,062	49,471	40,486	5,974	55,445
2019	7,979	1,818	2,486	1,962	3,020	22,195	39,460	23,418	0	39,460
2018	9,528	2,132	2,775	2,418	4,166	25,825	46,844	36,085	0	46,844
2017	3,201	838	975	1,358	1,155	9,326	16,853	9,799	0	16,853
2016	3,196	740	947	1,488	1,101	9,540	17,011	12,018	4,818	19,333
2015	3,503	763	955	1,858	1,076	8,702	16,857	11,525	2,187	15,045
2014	2,708	594	732	1,628	785	6,651	13,098	4,043	0	6,306
2013	1,889	429	516	1,304	523	4,802	9,464	4,791	2,030	7,989
2012 & earlier	12,679	3,125	3,509	9,829	3,317	32,545	65,004	39,292	5,103	50,823
Total	79,906	20,600	26,389	27,744	24,153	175,889	354,682	253,645	22,337	340,943

Notes: (a) From models described in appendix C3, excluding allowance for the 2015 legislative amendments

(b) In 30 June 2021 values and includes superimposed inflation

(c) sum of all estimates from the individual by payment type method

(d) result from the combined PCE method described in appendix C3.8

(e) weighted average of (c) and (d) plus the allowance for active large claims. The weights for 2015 and earlier years are 25% x (c) + 75% x (d) and the weights for 2016 is 50% x (c) + 50% x (d) while, the weights for 2017 and onwards are 100% x (c).

C 4.2 Gross central estimates from models in 30 June 2021 values, including allowance for Act changes

Estimates of outstanding claims at 30 June 2021 (\$000s) (a) (b)										
Accident year	By payment type method						Sum of individual payment methods (c)	All payments		Total (e)
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum		Combined PCE method (d)	Allowance for active large claims	
2021	21,879	7,072	9,085	3,095	5,278	31,241	77,650	72,190	2,225	79,875
2020	10,103	2,470	3,548	1,564	3,734	25,062	46,481	40,486	5,974	52,454
2019	6,066	1,427	1,977	1,200	3,020	22,195	35,885	23,418	0	35,885
2018	6,332	1,578	1,991	1,359	4,166	25,825	41,251	36,085	0	41,251
2017	1,623	522	575	691	1,155	9,326	13,891	9,799	0	13,891
2016	1,475	383	491	706	1,101	9,540	13,696	12,018	4,818	17,675
2015	3,503	763	955	1,858	1,076	8,702	16,857	11,525	2,187	15,045
2014	2,708	594	732	1,628	785	6,651	13,098	4,043	0	6,306
2013	1,889	429	516	1,304	523	4,802	9,464	4,791	2,030	7,989
2012 & earlier	12,679	3,125	3,509	9,829	3,317	32,545	65,004	39,292	5,103	50,823
Total	68,258	18,363	23,378	23,234	24,153	175,889	333,275	253,645	22,337	321,194

- Notes:** (a) From models described in appendix C3, including allowance for the 2015 legislative amendments
 (b) In 30 June 2021 values and includes superimposed inflation
 (c) sum of all estimates from the individual by payment type method
 (d) result from the combined PCE method described in appendix C3.8
 (e) weighted average of (c) and (d) plus the allowance for active large claims. The weights for 2015 and earlier years are 25% x (c) + 75% x (d) and the weights for 2016 is 50% x (c) + 50% x (d) while, the weights for 2017 and onwards are 100% x (c).

C 4.3 Average claim size

Average claim size at 30 June 2021 (\$) (a)										
Accident year	By payment type method						Sum of individual payment methods (b)	All payments		Adopted (d)
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum		Combined PCE method (c)	Allowance for active large claims	
2021	15,578	7,261	7,137	2,643	3,018	17,136	52,773	49,853		53,963
2020	14,707	7,294	7,128	2,930	2,733	16,472	51,264	48,024		54,492
2019	14,449	6,145	6,200	2,161	2,667	15,231	46,854	41,198		46,854
2018	19,796	7,923	7,642	2,995	3,895	20,981	63,233	61,104		63,233
2017	15,666	6,265	5,522	2,401	2,228	13,356	45,437	43,747		45,437
2016	13,871	6,111	4,885	2,441	2,407	13,604	43,319	42,659		44,884
2015	14,074	6,415	4,818	3,018	2,521	16,388	47,234	45,222		46,550
2014	13,464	5,183	4,786	2,413	2,245	12,905	40,996	37,706		38,529
2013	14,079	4,874	4,281	2,224	1,939	14,018	41,415	39,736		40,885

- Note:** (a) In 30 June 2021 values, from results in appendix C4.2, includes superimposed inflation and 2015 legislation amendments
 (b) In 30 June 2021 values, from the results based on individual payment type methods
 (c) In 30 June 2021 values, based on the combined (all payment types) PCE method
 (d) Adopted average claim size is based on (e) in table C4.2 divided by (c) in C3.1 number of claims incurred.

C 4.4 Relationship to case estimates

Ratio of outstanding to case estimates at 30 June 2021 (\$) (a)										
Accident year	By payment type method						Sum of individual payment methods (b)	All payments Combined PCE method (c)	Allowance for active large claims	Adopted (d)
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum				
2021	50%	16%	21%	7%	12%	71%	176%	164%	5%	182%
2020	36%	9%	13%	6%	13%	90%	166%	145%	21%	188%
2019	39%	9%	13%	8%	20%	144%	232%	152%	0%	232%
2018	28%	7%	9%	6%	18%	115%	183%	160%	0%	183%
2017	27%	9%	10%	11%	19%	155%	230%	162%	0%	230%
2016	20%	5%	7%	9%	15%	127%	182%	160%	64%	235%
2015	48%	11%	13%	26%	15%	120%	232%	159%	30%	207%
2014	99%	22%	27%	59%	29%	242%	477%	147%	0%	230%
2013	55%	13%	15%	38%	15%	140%	276%	140%	59%	233%
2012 & earlier	38%	9%	11%	30%	10%	98%	196%	118%	15%	153%

- Note:** (a) In 30 June 2021 values, from results in appendix C4.2, includes superimposed inflation and 2015 legislation amendments
 (b) In 30 June 2021 values, from the results based on individual payment type methods
 (c) In 30 June 2021 values, based on the combined (all payment types) PCE method
 (d) Adopted is based on (e) in table C4.2 divided by case estimates in 30 June 2021 values

C 4.5 Summary of gross adopted estimates in 30 June 2021 values

Accident year	Estimate of outstanding claims (a)	Estimate of outstanding claims (b)	Average claim size (b)	Ratio of outstanding to case estimates (b)
	\$000s	\$000s	\$	
2021	82,846	79,875	53,963	182%
2020	55,445	52,454	54,492	188%
2019	39,460	35,885	46,854	232%
2018	46,844	41,251	63,233	183%
2017	16,853	13,891	45,437	230%
2016	19,333	17,675	44,884	235%
2015	15,045	15,045	46,550	207%
2014	6,306	6,306	38,529	230%
2013	7,989	7,989	40,885	233%
2012 & earlier	50,823	50,823		153%
Total	340,943	321,194		189%

- Notes:** (a) In 30 June 2021 values, including superimposed inflation but excluding the 2015 legislative amendments
 (b) Including the 2015 legislative amendments

C 4.6 Gross adopted estimates excluding expenses

Gross estimates at 30 June 2021 excluding expenses (\$000s)			
Accident year ending	30 June 2021	Inflated	Infl/disc
30 June	values	values	values
2021	79,875	83,900	81,296
2020	52,454	55,611	53,334
2019	35,885	38,247	36,386
2018	41,251	44,251	41,782
2017	13,891	15,228	14,041
2016	17,675	18,924	17,943
2015	15,045	16,197	15,268
2014	6,306	6,898	6,387
2013	7,989	8,616	8,126
2012 & earlier	50,823	55,141	51,651
Total	321,194	343,013	326,215

Note: Includes superimposed inflation and 2015 legislative amendments

C 4.7 Net outstanding claims provision

Estimates at 30 June 2021 (\$000s)							
	Gross o/s liability (a)	Reinsurance recoveries (b)	Net o/s liability (c)	Claims handling expenses (d)	Net central estimate (e)	Risk margin (f)	Net Provision (g)
Total	326,215	17,594	308,621	18,517	327,138	39,491	366,629

Notes: (a) from table above

(b) based on the reinsurance information provided by insurers on large claims

(c) = (a) – (b)

(d) = (c) x 6%

(e) = (c) + (d)

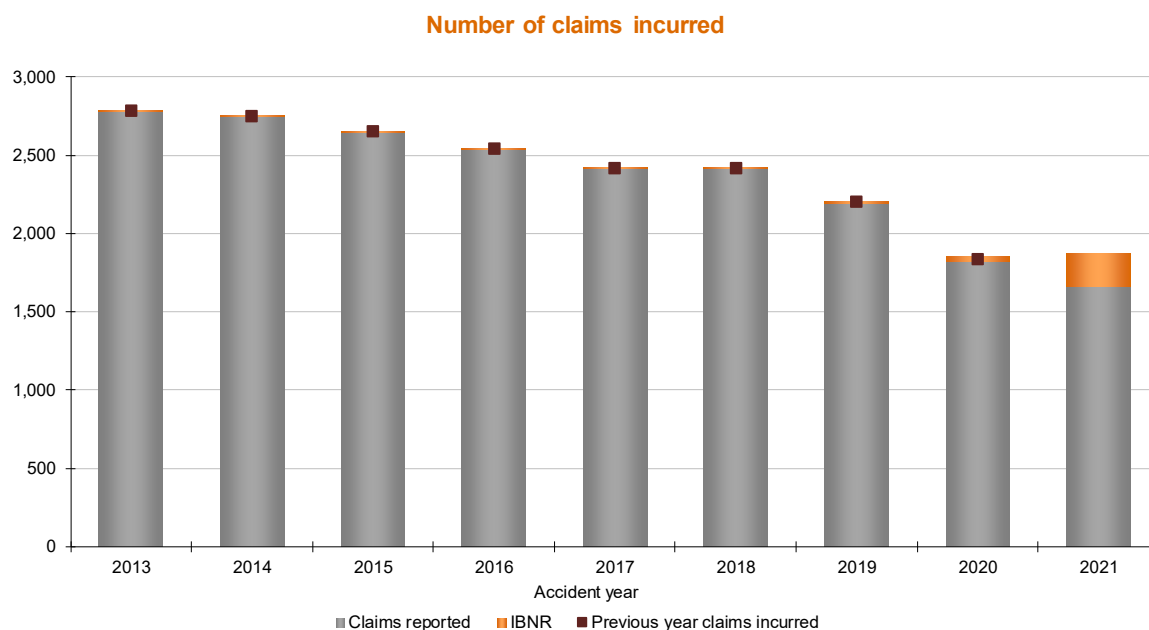
(f) = (e) x 12.07%

(g) = (e) + (f)

Appendix D Insurer claims statistics

D 1 Number of claims incurred

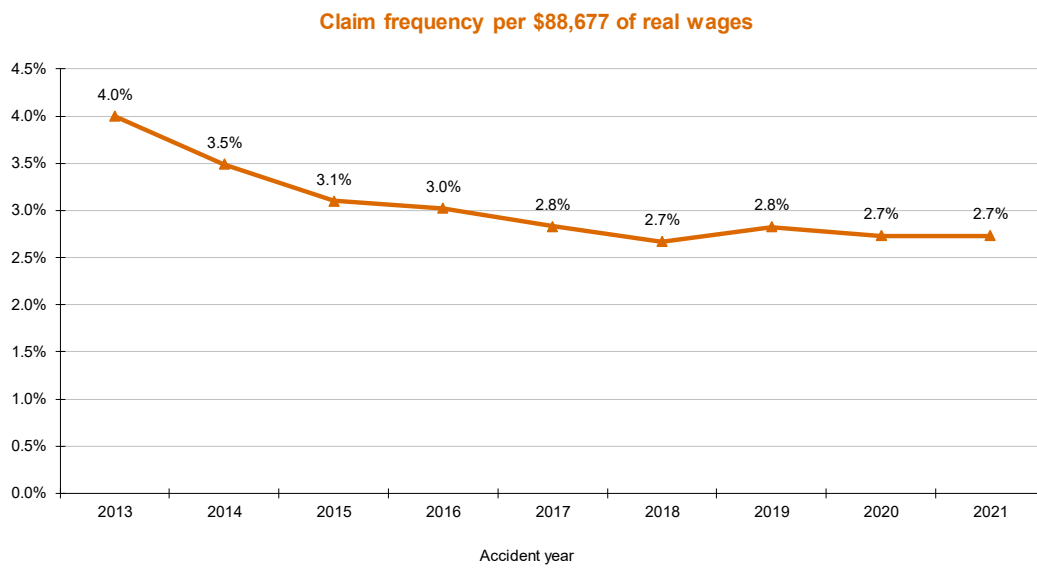
Decreasing trend from 2013 peak to 2020. 2021 is estimated to be slightly higher than 2020



The main points to highlight from this chart are:

- The number of claims incurred for the 2013 accident year was just under 2,800
- From the 2013 to 2020 accident years, there has been a decreasing trend in the number of claims incurred to 1,850 for the 2020 accident year
- For the 2021 accident year, the number of incurred claims at 1,869 claims is estimated to be slightly higher (1%) than the 2020 accident year but lower than 2019 and all prior years. The increase between 2020 and 2021 is partially due to Catholic Church claims being included in the insurer category from 1 December 2020
- The numbers of claims are similar to those estimated at the previous valuation.

Declining claim frequency due to significant increases in wages up to 2015 and more recently reducing number of claims incurred. 2021 is similar to 2020 as the number of claims increased by a similar proportion to the increase in wages



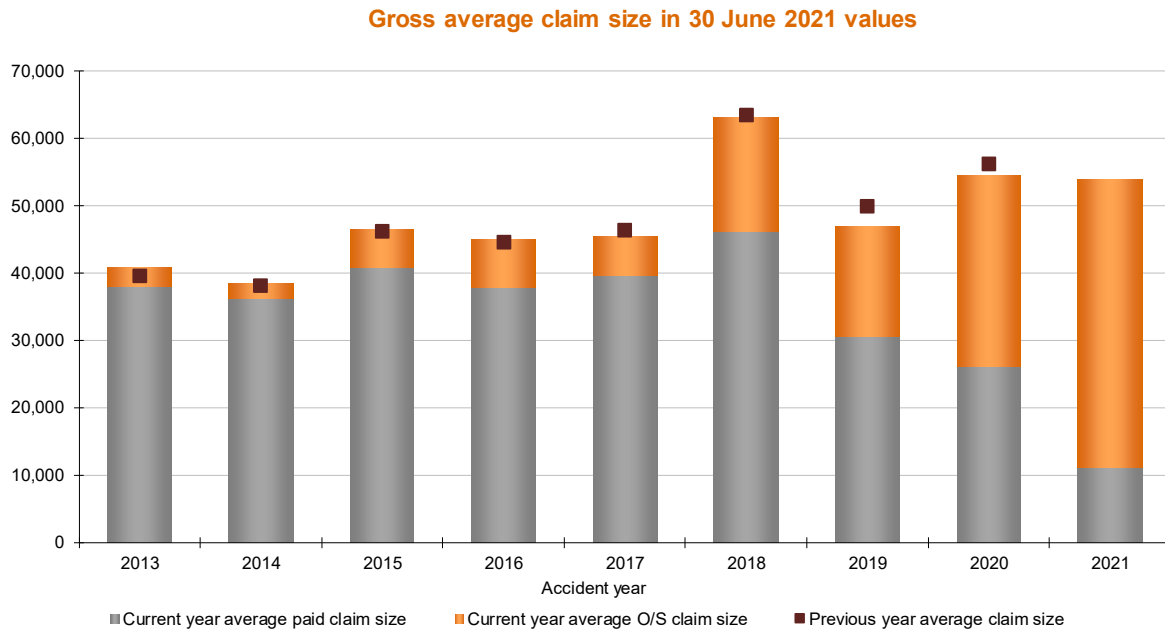
The claim frequency is calculated as:

$$\frac{\text{the number of claims incurred}}{\text{estimated number of full time equivalent employees}}$$

To estimate the number of employees we have used the wages provided, inflated this to 2021 values and divided by \$88,677 (the full time average weekly earnings for the NT from the ABS catalogue 6302). We have not used the number of employees provided in the ANZSIC data, as these are not full time equivalent.

D 2 Gross average claim size

2021 is estimated to be slightly lower compared to 2020 but higher than most prior years



Since 2013 the gross average claim size (in 2021 values):

- Exhibited volatility due in part to large claims
- Exhibited a broadly increasing trend from around \$40,885 in 2013 to around \$45,437 in 2017
- Increased significantly to \$63,233 in 2018 due to high payments and case estimates to date
- Decreased to \$46,854 in 2019 given lower total estimates reported to date, relative to 2018 but higher than prior years
- For the 2021 accident year, the gross average claim size is estimated to be \$53,963, which is slightly lower than the 2020 accident year of \$54,492 but higher than most prior years.

The uncertainty about the future development means that the ultimate level and our estimates may differ from those projected for recent accident years. This is especially true for the 2021 accident year, where a high proportion (79%) of the average claim size relates to uncertain future claims development.

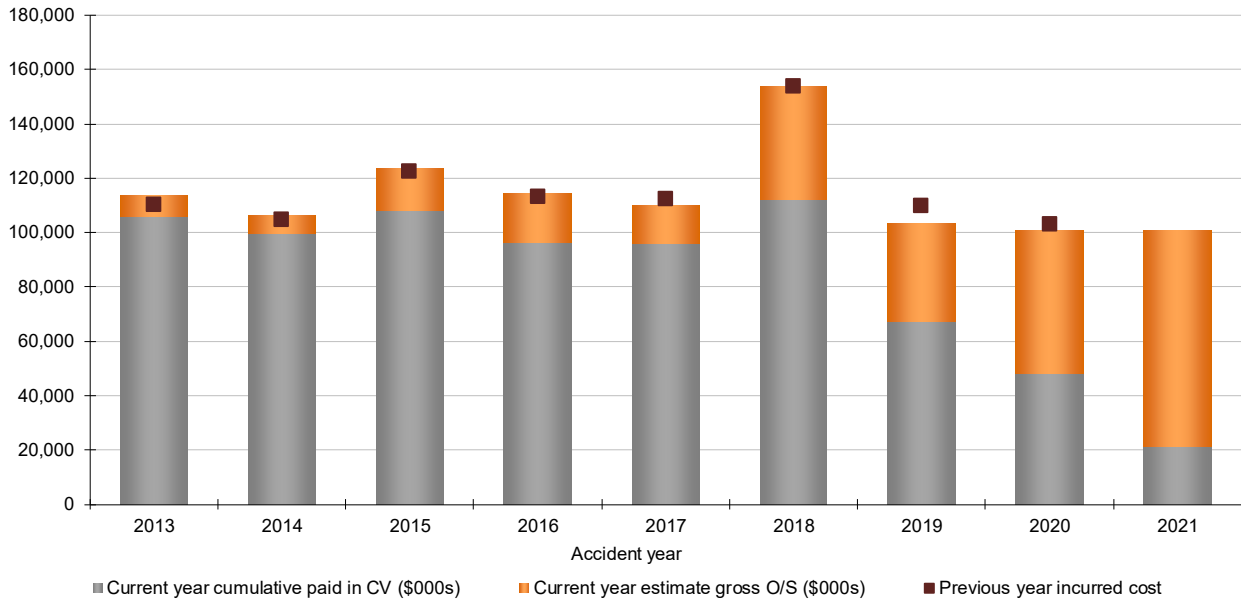
Compared to the previous valuation, the gross average claim size is similar all years, except for 2019 and 2020 where the current estimate is lower than the previous valuation. This reflects changes in total estimates over the year.

Appendix E contains the average claim size split by payment type. The mix of payment types across the accident years has remained stable. Redemptions and non-economic lump sums are the largest payment type, closely followed by weekly benefits. These two payment types account for just under two thirds of total incurred costs.

D 3 Gross incurred cost

2021 incurred cost is \$101 million, which is similar to 2020 but lower than all years since 2013

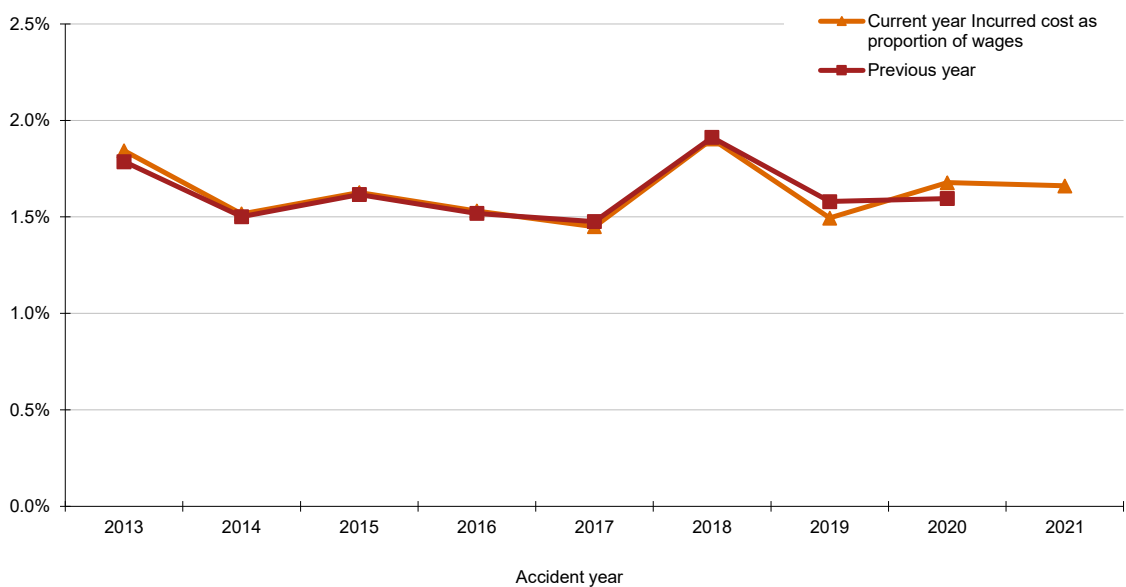
Gross incurred cost in 30 June 2021 values



Over the period shown in the graph, the proportion outstanding increases from 7% of the total incurred cost in 2013 to 79% of the total incurred cost for 2021.

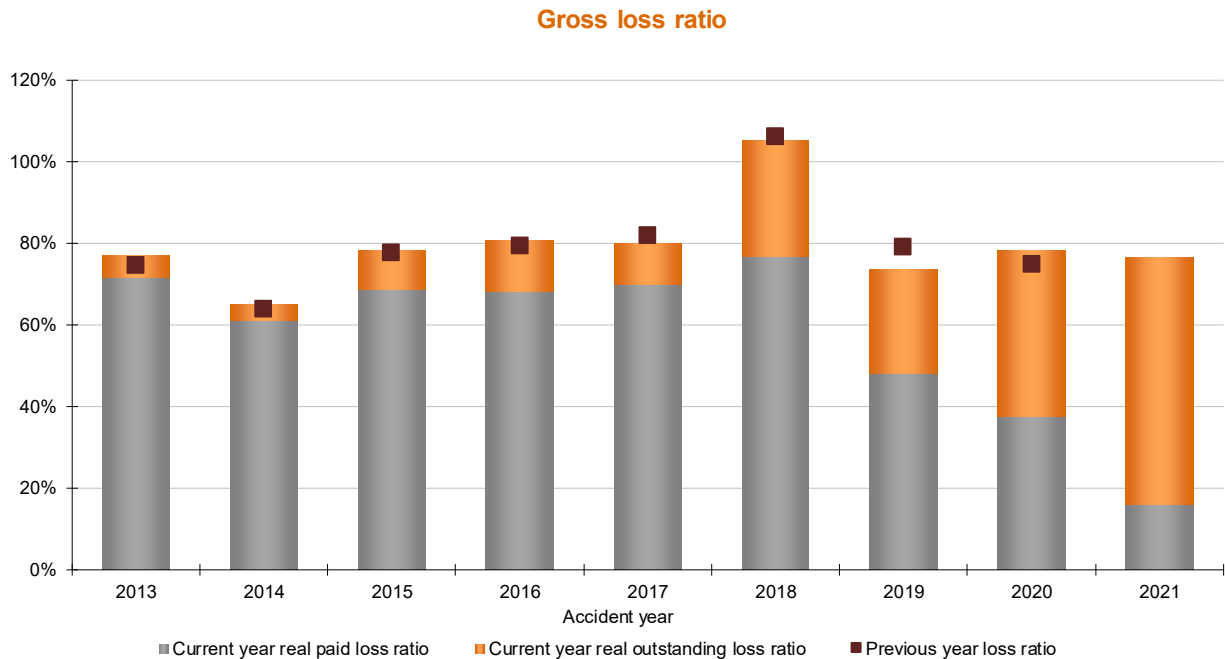
The 2021 gross incurred cost as a percentage of wages is similar to 2020 at 1.7%. It is higher than most years except 2018 due to lower real wages than prior years.

Gross incurred cost as a percentage of wages in 30 June 2021 values



D 4 Gross loss ratios

Loss ratio for 2021 estimated at 76%, which is lower than all prior years except 2014 and 2019



The gross loss ratios are calculated for each accident year using the following formula:

$$\frac{(\text{Past claim payments to 30 June 2021+ estimated outstanding liability at 30 June 2021})}{\text{Gross developed earned premium}}$$

The past claim payments, estimated outstanding liability and gross developed earned premium are all in 30 June 2021 values i.e. current values, and the estimated outstanding liability includes allowance for future superimposed inflation.

These ratios are not a proper measure of profitability, as they do not allow for investment returns or expenses. Nevertheless, as a crude measure, they do provide an indication of trends in the experience.

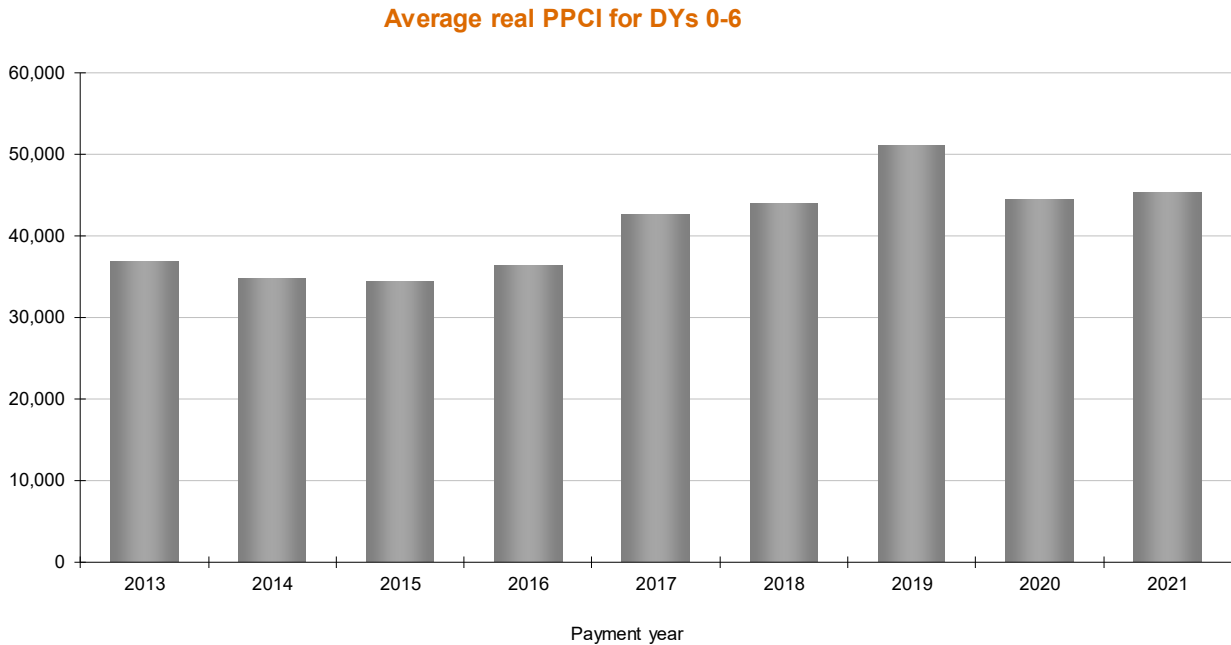
The chart shows:

- There was a decreasing trend in the loss ratio from 77% in 2013 to the low of 65% in 2014 due to premium and wages growth exceeding claims cost increases
- The loss ratio increased from 2014 to 78% in 2015 before stabilising over 2016 and 2017 at 80% to 81%
- The 2018 loss ratio of 105% is higher than all prior years, due to the high payments and case estimates as at 30 June 2021
- For 2021, the loss ratio is 76%, which is lower than 78% for 2020 and lower than most prior years

D 5 Payment per claim incurred

By payment year

2021 payment year was higher compared to all prior years except 2019



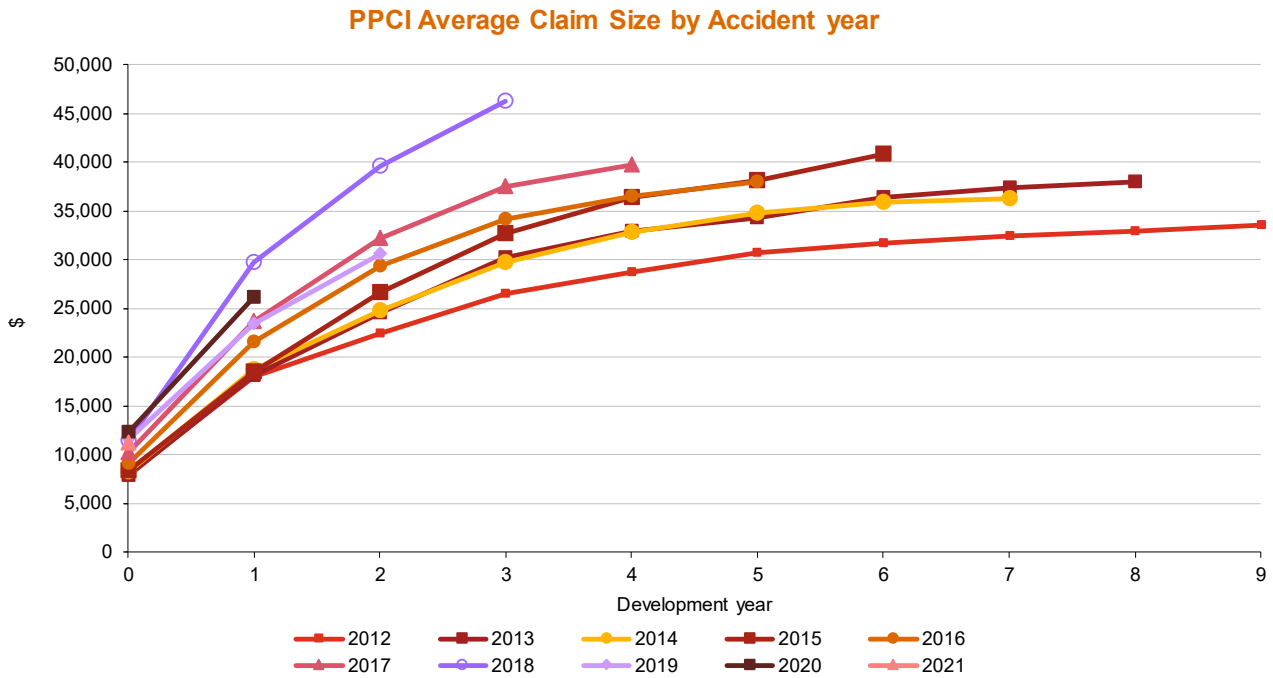
The average PPCI for DYs 0 to 6 was relatively stable between \$34,300 and \$36,900, up until 2016.

The average PPCI increased by 17% in 2017 due to higher payments for the three most recent accident years. The 2018 payment year is \$44,000, while the 2019 payment year is \$51,100, (16.0%) higher than the 2018 payment year, due to payments for the three most recent accident years (particularly 2018).

The 2020 payment year is \$44,500 which is lower than 2019 payment year but similar to 2018 payment year. The 2021 payment year is \$45,300, higher than all prior years except 2019.

By accident year

Evidence of superimposed inflation



The chart above shows cumulative PPCI by accident year. This is calculated as:

$$\frac{\text{sum of claim payments by development year made to date (in 30 June 2021 values)}}{\text{number of claims incurred to date}}$$

As the values in the chart are all in current values, any differences are the result of a change in the real cost of each claim. This is also referred to as superimposed inflation. The chart is based entirely on actual experience, and there are no future projections included in this graph.

The experience by accident year has been variable, and there is evidence of superimposed inflation over recent years from 2015, though 2019’s growth has slowed as it below 2017 in DY2, after it was similar to 2017 in DY1 and in DY0 was in line with 2018.

DY0 and DY1 for 2020 is higher than all prior year except for 2018. Meanwhile, 2021 is starting at similar level to all prior years.

Appendix E Insurer financial year claims experience

E 1 Aggregate claims experience during 2020/21

E 1.1 Summary of overall claim experience over 2020/21

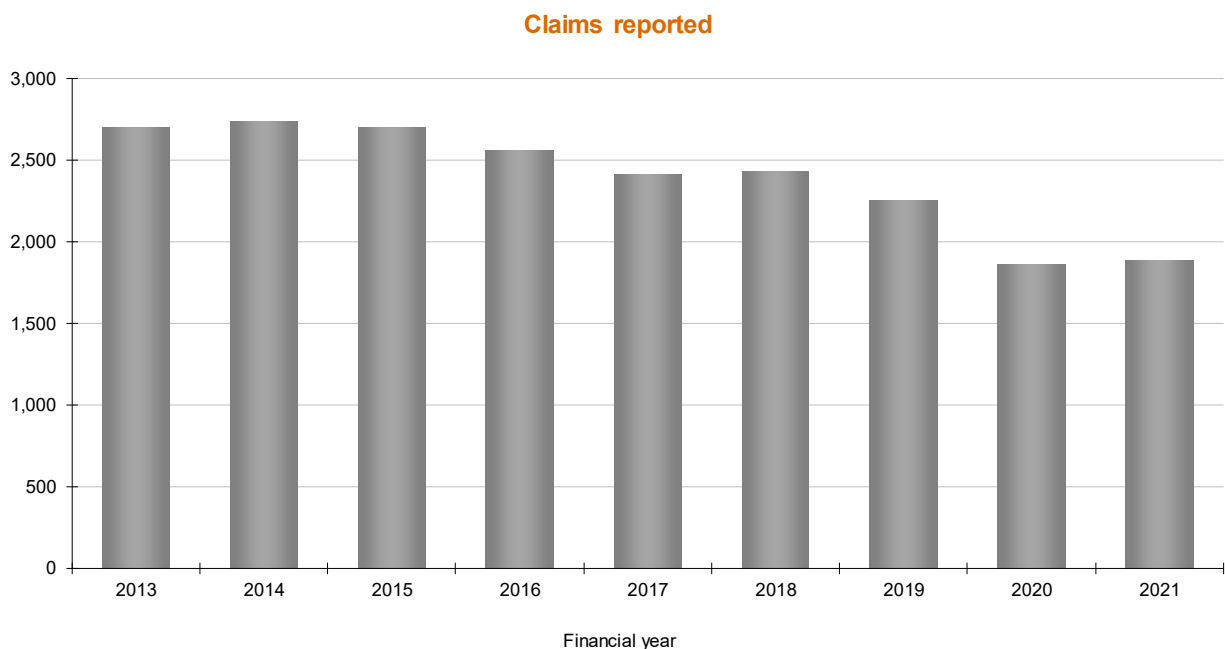
The overall claims experience over 2020/21 is marginally better compared to 2019/20, however the experience is mixed by accident year.

- An increase (1.1%) in the number of claims reported
- A decrease (3.0%) in the amount of real claim payments
- An increase (4.9%) in the number of active claims at the end of the year
- A slower finalisation rate (57.3% compared to 61.6% for 2020)
- An increase (1.3%) in case estimates.

The experience for each of these items is described in more detail below.

E 1.2 Claim reports

Claim reports have decreased by 1.1% in 2021

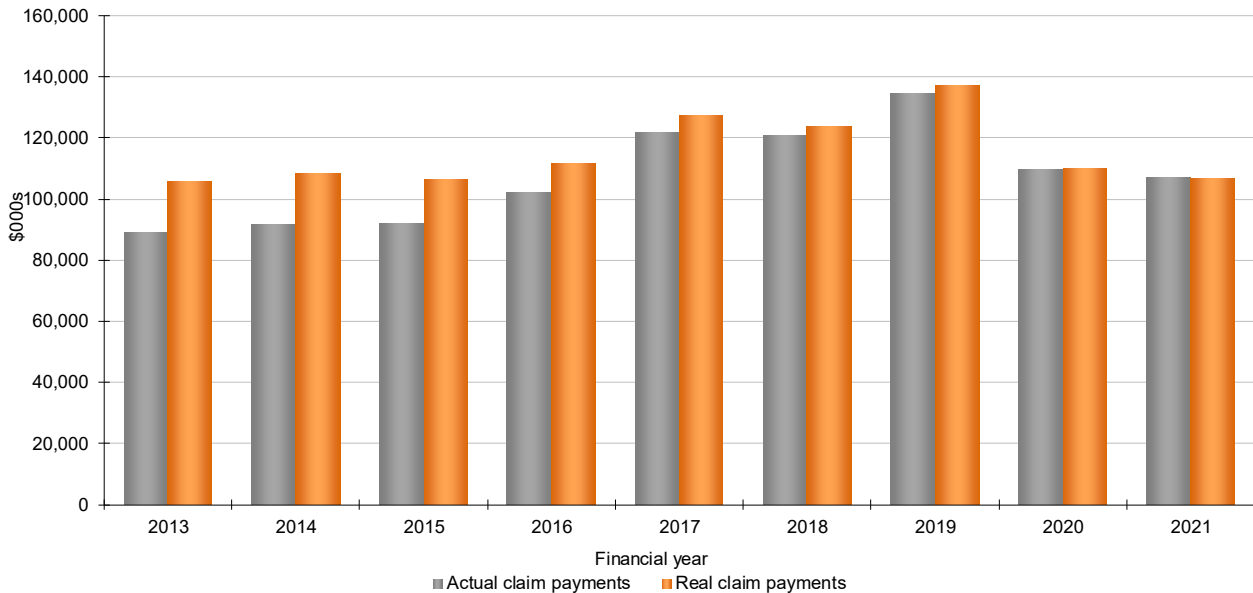


In the 2021 financial year there were 1,887 claims reported, which was 20 (1.1%) lower than 2020.

E 1.3 Claim payments

Real payments in 2021 of \$106.9 million, \$3.3 million lower than 2020

Total payments made each financial year, actual and in 30 June 2021 values



The orange bars of payments have been adjusted for wage inflation to allow for comparison between the financial years.

Claim payments in 30 June 2021 values have varied between \$106 million and \$137 million over the period shown.

Total actual payments in 2020/21 were \$107.2 million, which is \$2.7 million (2.5%) lower than actual payments 2019/20. In real values, this was a decrease of \$3.3 million (3.0%).

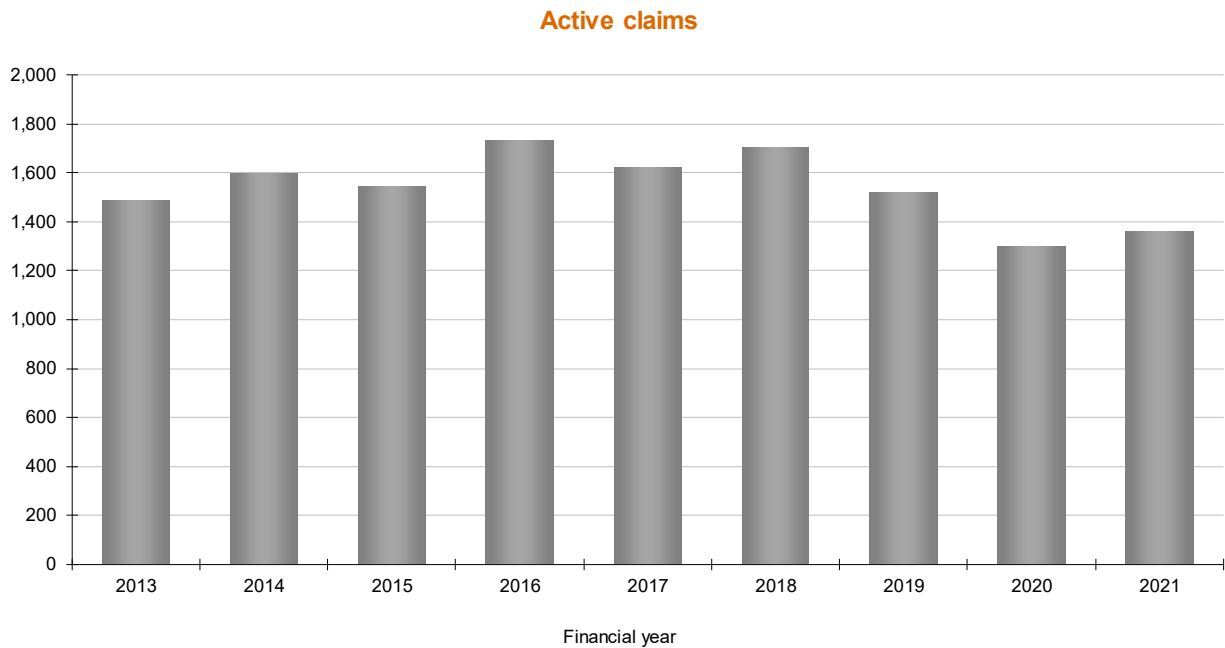
A breakdown of the change in actual payments by payment group is presented in the table below.

Payment group	Payments in 2020/21 (\$'000s)	Payments in 2019/20 (\$'000s)	Difference (\$)	Difference (%)
Weekly benefits	30,396	35,586	-5,191	-14.6%
Medical and hospital	14,046	14,193	-148	-1.0%
Allied health, vocational rehabilitation, non-compensation payments (other),	13,504	14,813	-1,310	-8.8%
Other goods and services	6,871	6,439	432	6.7%
Legals	4,868	7,281	-2,414	-33.1%
Redemptions and non-economic lump sum	37,547	31,665	5,882	18.6%
Total	107,231	109,979	-2,748	-2.5%

All payments groups except Other goods and services and Redemptions and non-economic lump sum had a decrease with Weekly benefits and Legals having the largest decrease.

E 1.4 Active claims

Active claim numbers increased by 4.9% from 1,298 in 2020 to 1,361 in 2021

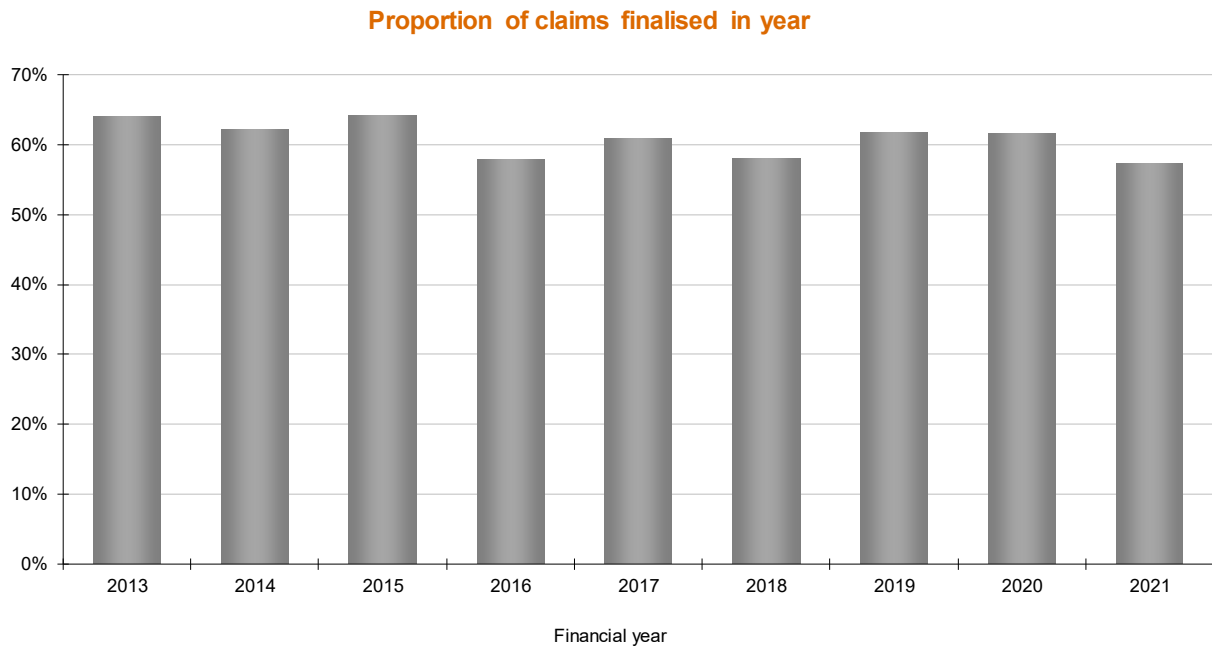


From 2013 to 2018, there was an increasing trend in active claims, despite the reduction in the claims reported. In 2019 and 2020 the number of active claims reduced, though to a smaller extent than the reduction in the number of claims reported.

There has been an increase from 1,298 to 1,361 claims over the 2021 financial year, a 4.9% increase due to a slightly higher number of claims reported and a slower finalisation rate in the financial year.

E 1.5 Proportion of claims finalised

2021 finalisation rate was 57.3%, which is lower than 2020 and all prior years



Probabilities of claim finalisation is defined as:

$$\frac{\text{Number of claims finalised in year}}{\text{(Number of outstanding at beginning of the year plus number reported during the year)}}$$

From 2013 to 2018, the finalisation rate has a decreasing trend. In 2019 and 2020, the finalisation rate increased to around 61.6%. For 2021, proportion of claims finalised was at 57.3% which was lower than 2020 and all prior years.

E 1.6 Claims incurred in 2021

There were 1,661 claims reported to 30 June 2021 for the 2021 accident year and the projected number of incurred claims is 1,869. This is 1% higher than the 1,850 projected incurred for the 2020 accident year.

The expected number of open claims for the 2021 accident year at 30 June 2021 is $1,661 \times (1 - 0.5715) = 712$. The actual number of open claims for the 2021 accident year at 30 June 2021 is 738, which is 3.7% higher than expected.

The 30 June 2020 projection basis led to an expected $\$12,401 \times (1.021 \times 1.031) = \$12,674$ to be paid on each of the 2021 accident year claims in the year of claim. The actual amount paid per claim was \$11,235 i.e., \$1,439 (11.4%) less in real values.

The average total estimates (paid plus case estimates) per claim reported in real values for the 2021 accident year is \$39,137 which is 0.5% higher than 2020.

The 2021 accident year on balance is similar to 2021 with slightly higher claims incurred and average total estimates per claim reported, higher open claims but significantly lower payments per claim than expected.

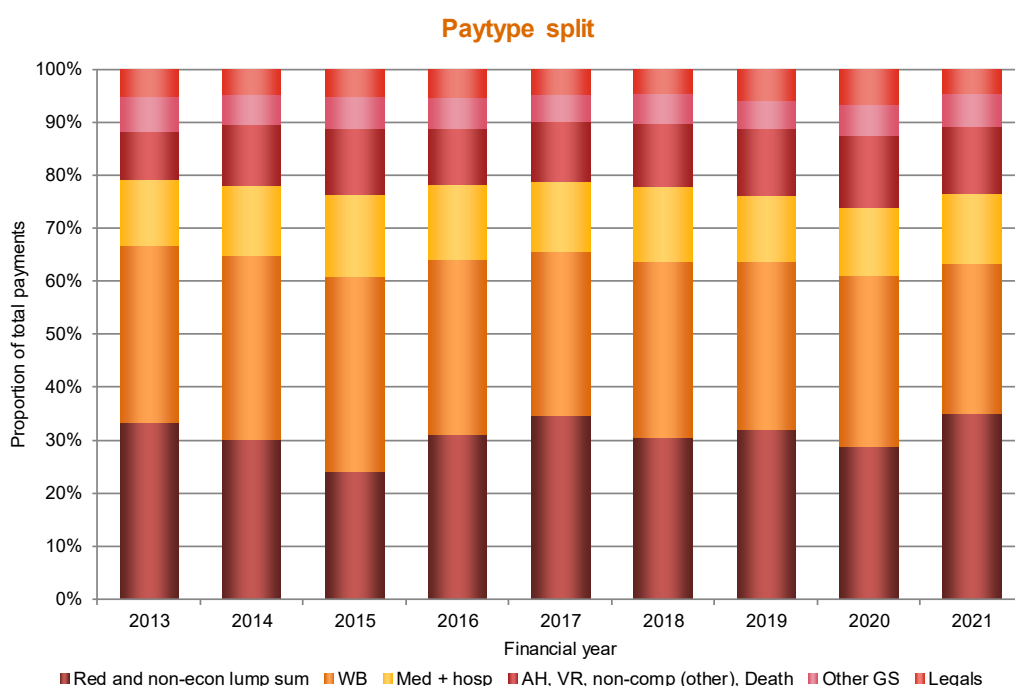
For details of the claims experience over the 2021 financial year for claims incurred up to 30 June 2020 see Appendix C2.

E 2 Analysis by payment group

The purpose of this section is to investigate trends in the composition of incurred costs by benefit type. We use higher level groups to explore the relative movement of periodic and lump sum benefits. We have performed this analysis based on the claim payment data and our outstanding claims valuation results.

E 2.1 Distribution by financial year

The following chart shows how the actual payments made in a financial year are split between the payment groups over the past nine years.



Payment type split	2013	2014	2015	2016	2017	2018	2019	2020	2021
Legals	5%	5%	5%	5%	5%	5%	6%	7%	5%
Other GS	7%	6%	6%	6%	5%	6%	5%	6%	6%
AH, VR, non-comp (other), Death	9%	11%	13%	11%	11%	12%	13%	13%	13%
Med + hosp	13%	13%	16%	14%	13%	14%	12%	13%	13%
WB	33%	35%	37%	33%	31%	33%	32%	32%	28%
Red and non-econ lump sum	33%	30%	24%	31%	35%	31%	32%	29%	35%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Over the last nine years, the split of payments by type have been variable, but there has been no maintained increase or decrease in any group. The key trends have been:

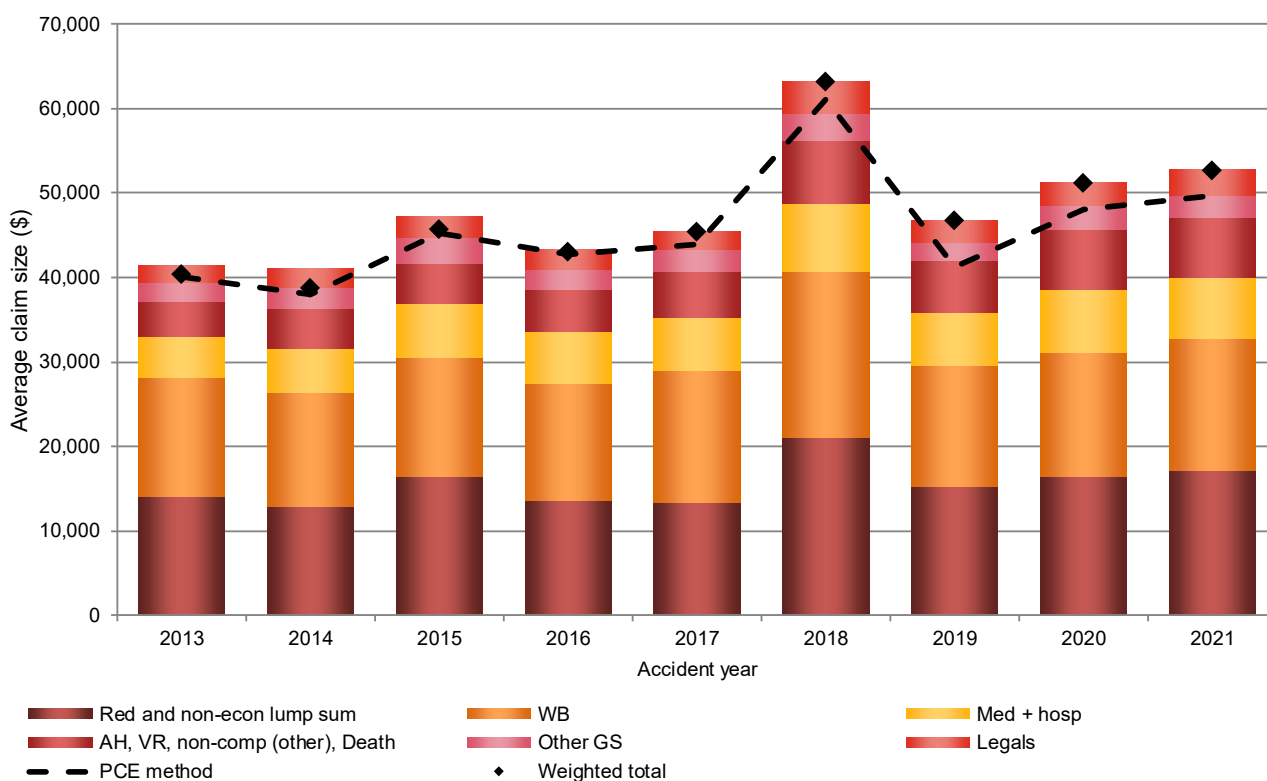
- Redemptions since 2013 has since ranged from 29% to 35%, except for the low in 2015 of 24%
- Any increases or decreases in redemptions payments have been matched by decreases or increases in weekly benefits payments, such that in total the proportion of total payments which are weekly benefits or redemptions has been relatively stable between 63% and 67%, except 2015 and 2020 which are lower at 61%
- The proportion of payments attributable to the other payment types has been stable over the last nine years.

This sort of analysis is important as it gives an indication of the cost drivers for the scheme and how these are changing, whether there is more use of periodic type payments, such as weekly benefits, or more lump sum payments, such as redemptions and non-economic lump sum. The dominance of one payment type over another will influence other cost drivers such as the total aggregate superimposed inflation.

E 2.2 Gross average claim size by payment group

Mix by payment type is relatively stable with weekly benefits and redemptions and non-economic lump sum combined accounting for just under two thirds of the total

Average claim size in 30 June 2021 values by payment type



Average claim size (exclude explicit large claims) (\$)	2013	2014	2015	2016	2017	2018	2019	2020	2021
Legals	1,939	2,245	2,521	2,407	2,228	3,895	2,667	2,733	3,018
Other GS	2,224	2,413	3,018	2,441	2,401	2,995	2,161	2,930	2,643
AH, VR, non-comp (other), Death	4,281	4,786	4,818	4,885	5,522	7,642	6,200	7,128	7,137
Med + hosp	4,874	5,183	6,415	6,111	6,265	7,923	6,145	7,294	7,261
WB	14,079	13,464	14,074	13,871	15,666	19,796	14,449	14,707	15,578
Red and non-econ lump sum	14,018	12,905	16,388	13,604	13,356	20,981	15,231	16,472	17,136
Total	41,415	40,996	47,234	43,319	45,437	63,233	46,854	51,264	52,773
PCE method	40,056	38,006	45,319	42,780	43,889	61,034	41,255	48,038	49,677
Weighted total	40,395	38,754	45,797	43,050	45,437	63,233	46,854	51,264	52,773

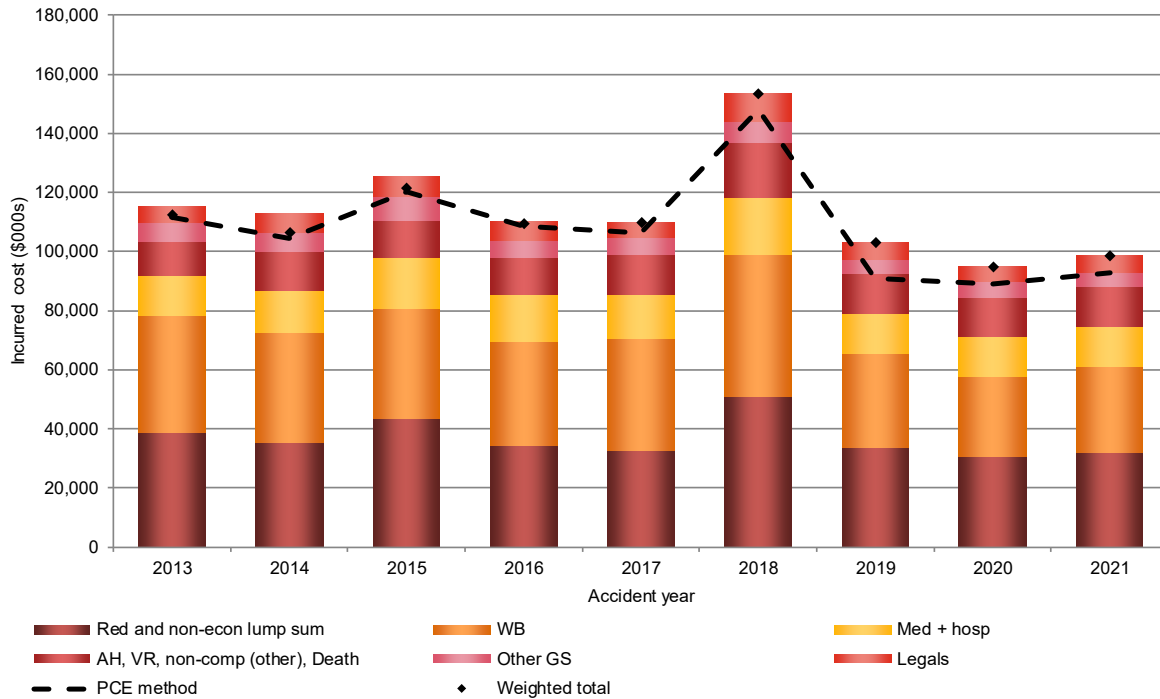
Note: weighted total is based on the weighted given to the sum of individual methods by payment type (Total) and the combine PCE method. For 2015 and prior years, the weights are 25% total of individual payment type methods and 75% PCE method, for 2016, the weights were 50% total of individual payment type methods and 50% PCE method, while for 2017 and onwards, we have adopted 100% total of individual payment type methods.

The mix of payment types across the accident years has remained stable. Redemptions and non-economic lump sums and weekly benefits are the two largest payment types. These two groups combined account for just under two thirds of total payments.

E 2.3 Gross incurred cost by payment group

Relatively stable distribution by payment type across accident years

Incurred cost in 30 June 2021 values by payment type



Incurred cost in current values (exclude explicit large claims) (\$000s)									
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Legals	5,394	6,178	6,683	6,118	5,396	9,453	5,879	5,057	5,642
Other GS	6,189	6,641	7,999	6,205	5,815	7,269	4,763	5,422	4,941
AH, VR, non-comp (other), Death	11,912	13,173	12,771	12,418	13,376	18,548	13,666	13,189	13,342
Med + hosp	13,560	14,264	17,004	15,534	15,176	19,230	13,544	13,496	13,573
WB	39,174	37,057	37,304	35,261	37,946	48,046	31,848	27,213	29,120
Red and non-econ lump sum	39,005	35,517	43,439	34,582	32,350	50,922	33,571	30,479	32,034
Total	115,235	112,830	125,200	110,118	110,059	153,467	103,272	94,857	98,652
PCE method	111,451	104,600	120,124	108,748	106,309	148,129	90,930	88,888	92,864
Weighted total	112,397	106,658	121,393	109,433	110,059	153,467	103,272	94,857	98,652

Percentage of incurred cost by paytype									
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Legals	5%	5%	5%	6%	5%	6%	6%	5%	6%
Other GS	5%	6%	6%	6%	5%	5%	5%	6%	5%
AH, VR, non-comp (other), Death	10%	12%	10%	11%	12%	12%	13%	14%	14%
Med + hosp	12%	13%	14%	14%	14%	13%	13%	14%	14%
WB	34%	33%	30%	32%	34%	31%	31%	29%	30%
Red and non-econ lump sum	34%	31%	35%	31%	29%	33%	33%	32%	32%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

The table above shows that the proportion of the incurred cost attributable to each payment group has been variable between accident years, though with more stability between the accident years than the percentage by financial year in E2.1. Redemptions and non-economic lump sum payment group in particular is more stable as a percentage of the incurred cost.

Appendix F Self-insurer outstanding claims valuation

F 1 Data used in the valuation

F 1.1 Numbers of claims reported

Year to 30 June	NT WorkSafe self-insurers - Incremental Claims Reported											Total	
	0	1	2	3	4	5	6	7	8	9	10		
2012	153	23	1	1	0	0	0	0	0	0	0	0	178
2013	121	22	2	1	0	0	0	0	0	0	0	0	146
2014	114	26	0	0	0	0	0	0	0	0	0	0	140
2015	114	12	1	0	0	0	0	0	0	0	0	0	127
2016	104	19	0	1	0	0	1	0	0	0	0	0	125
2017	76	17	0	0	0	0	1	0	0	0	0	0	94
2018	84	8	1	0	0	0	0	0	0	0	0	0	93
2019	68	10	1	0	0	0	0	0	0	0	0	0	79
2020	75	6	0	0	0	0	0	0	0	0	0	0	81
2021	60	12	0	0	0	0	0	0	0	0	0	0	72

Note: Data extracted from the WIMS system up to 30 June 2021

F 1.2 Cumulative claims reported

Year to 30 June	NT WorkSafe self-insurers - Cumulative Claims Reported											Total	
	0	1	2	3	4	5	6	7	8	9	10		
2012	153	203	150	117	115	123	123	117	92	102	112	112	1,407
2013	121	175	205	151	117	115	123	123	117	92	214	214	1,553
2014	114	147	175	205	151	117	115	123	123	117	306	306	1,693
2015	114	126	148	175	205	151	117	115	123	123	423	423	1,820
2016	104	133	126	149	175	205	152	117	115	123	546	546	1,945
2017	76	121	133	126	149	175	206	152	117	115	669	669	2,039
2018	84	84	122	133	126	149	175	206	152	117	784	784	2,132
2019	68	94	85	122	133	126	149	175	206	152	901	901	2,211
2020	75	74	94	85	122	133	126	149	175	206	1,053	1,053	2,292
2021	60	87	74	94	85	122	133	126	149	175	1,259	1,259	2,364

Note: Cumulative claim reports from table above

F 1.3 Active claims

Year to 30 June	NT WorkSafe self-insurers - Active Claims											Total	Finalised	
	0	1	2	3	4	5	6	7	8	9	10			
2016	43	15	3	0	1	2	0	0	0	0	0	0	64	1,881
2017	33	11	4	3	0	0	2	0	0	0	0	0	53	1,986
2018	29	12	10	1	1	0	2	0	0	0	0	0	55	2,077
2019	28	12	11	4	0	1	2	0	0	0	0	0	58	2,153
2020	28	6	7	4	0	0	0	0	0	1	1	1	47	2,245
2021	18	16	3	0	1	0	0	0	0	1	1	1	40	2,324

Note: From the self-insurers' Form B as at 30 June 2021. Active claim numbers are only available from 30 June 2016

F 1.4 Claim payments

Year to 30 June	NT WorkSafe self-insurers - Incremental Actual Claim Payments (\$000s)											Total	
	0	1	2	3	4	5	6	7	8	9	10	Total umulative	
2012	646	754	80	189	205	0	0	0	0	82	0	1,955	11,951
2013	379	1,145	184	72	8	170	0	16	0	0	195	2,169	14,120
2014	334	1,029	565	99	0	61	24	0	2	0	0	2,115	16,235
2015	425	430	622	574	86	0	5	189	0	12	0	2,343	18,578
2016	706	464	178	728	233	3	2	5	0	0	0	2,320	20,898
2017	555	544	474	77	0	0	4	3	4	0	0	1,662	22,559
2018	573	724	323	300	178	0	0	2	11	6	0	2,117	24,676
2019	637	914	582	210	1	3	1	0	10	5	2	2,365	27,042
2020	501	807	464	1,054	75	0	0	0	0	6	13	2,921	29,962
2021	647	950	187	463	137	0	0	0	0	2	53	2,439	32,402

Note: Data extracted from the WIMS system up to 30 June 2021

F 1.5 Case estimates

Year to 30 June	NT WorkSafe self-insurers - Case Estimates Outstanding (\$000s)											Total	
	0	1	2	3	4	5	6	7	8	9	10		
2013	333	406	373	4	40	199	14	0	0	0	0	0	1,369
2014	349	525	461	45	4	20	192	0	0	0	0	0	1,596
2015	340	216	482	239	50	4	58	0	0	0	0	0	1,389
2016	565	274	79	3	15	40	33	0	0	0	0	0	1,009
2017	540	319	143	85	6	0	14	0	0	0	0	0	1,108
2018	999	694	293	22	40	0	21	0	0	0	0	0	2,070
2019	512	766	636	139	9	5	47	0	0	0	0	0	2,114
2020	686	258	619	278	14	0	0	0	0	51	137	2,043	
2021	1,160	1,769	115	0	101	0	0	0	0	40	79	3,264	

Note: From the self-insurers' Form B as at 30 June 2021 and prior years. Case estimates are only available from 30 June 2013.

F 2 Actual and projected claims experience during 2020/21

F 2.1 Numbers of claims reported

Accident year ended 30 June	Number of claims reported during 2020/21			Actual / projected %
	Actual	Projected (a)		
2013	0	0	0.0%	
2014	0	0	0.0%	
2015	0	0	0.0%	
2016	0	0	0.0%	
2017	0	0	0.0%	
2018	0	0	0.0%	
2019	0	0	0.0%	
2020	12	9	129.6%	
Total	12.0	9.3	129.0%	

Note: (a) From previous scheme report dated 17 February 2021

F 2.2 Claim payments

Accident year ended 30 June	Actual payments (\$000s)	Expected Payments (\$000s) (a)	Actual / expected %
2013	0	1	0.0%
2014	0	1	38.3%
2015	0	2	0.0%
2016	0	14	0.0%
2017	137	289	47.6%
2018	463	671	69.0%
2019	187	324	57.8%
2020	950	850	111.7%
Total	1,737	2,153	80.7%

Note: (a) From previous scheme report dated 17 February 2021

F 3 Analysis and projection models

F 3.1 Payment per claim incurred model

Claim notification pattern

Financial year ending 30 June	Chain ladder ratio (a) for development year:									
	1	2	3	4	5	6	7	8	9	10 onwards
2012	1.13	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2013	1.14	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2014	1.21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2015	1.11	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2016	1.17	1.00	1.01	1.00	1.00	1.01	1.00	1.00	1.00	1.00
2017	1.16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2018	1.11	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2019	1.12	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2020	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2021	1.16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adopted (b)	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Notes: (a) Using cumulative claim report numbers from data

(b) Adopted for 30 June 2021 valuation

Numbers of claims incurred

Accident year ending 30 June	Number of claims		
	Reported to 30 Jun 2021	IBNR at 30 Jun 2021 (b)	Incurred (c)
2013	149	0	149
2014	126	0	126
2015	133	0	133
2016	122	0	122
2017	85	0	85
2018	94	0	94
2019	74	0	74
2020	87	0	87
2021	60	6	66

Notes: (a) from number reported in appendix F1.1

(b) from pattern in chain ladder ratio table above

(c) = (a) + (b)

Average real payment per claim incurred

Financial year ending 30 June	Average Real Payment Per Claim Incurred (a) for development year:											10 onwards	Total
	0	1	2	3	4	5	6	7	8	9			
2012	4,541	4,500	648	1,988	2,192	0	0	0	0	986	0	14,855	
2013	3,016	7,770	1,059	562	77	1,759	0	159	0	0	2,275	16,676	
2014	3,127	8,148	3,809	570	0	618	247	0	22	0	0	16,541	
2015	3,684	3,930	4,813	3,778	479	0	51	1,890	0	116	0	18,741	
2016	6,309	3,803	1,543	5,333	1,455	17	13	44	0	0	0	18,516	
2017	6,820	4,660	3,730	638	0	0	21	17	37	0	0	15,923	
2018	6,246	8,738	2,716	2,312	1,448	0	0	12	74	51	0	21,597	
2019	8,767	9,890	6,973	1,755	4	27	5	0	51	35	14	27,521	
2020	5,745	10,917	4,943	12,414	614	0	0	0	0	28	107	34,769	
2021	9,722	10,827	2,521	4,902	1,611	0	0	4	0	10	277	29,874	
Adopted (b)	7,886	10,508	4,917	3,387	642	98	94	39	32	29	0	27,632	

Notes: (a) In 30 June 2021 values

(b) Adopted for 30 June 2021 valuation

F 3.2 Projected case estimates model

Case estimate development

Financial year ending 30 June	Case Estimate Development (a) for development year:									
	1	2	3	4	5	6	7	8	9	10 onwards
2012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2014	4.721	2.559	0.391	1.016	2.054	1.102	0.000	0.000	0.000	0.000
2015	1.772	2.009	1.692	2.884	0.936	2.968	0.952	0.000	0.000	0.000
2016	2.109	1.160	1.486	1.018	0.830	8.381	0.079	0.000	0.000	0.000
2017	1.494	2.205	2.003	1.954	0.000	0.443	0.075	0.000	0.000	0.000
2018	2.575	1.893	2.211	2.516	0.000	0.000	0.168	0.000	0.000	0.000
2019	1.669	1.739	1.183	0.427	0.205	0.000	0.000	0.000	0.000	0.000
2020	2.074	1.406	2.089	0.639	0.000	0.000	0.000	0.000	0.000	0.000
2021	3.977	1.175	0.749	0.861	0.000	0.000	0.000	0.000	0.000	0.836
Adopted (b)	2.316	1.649	1.481	1.195	1.169	1.220	1.100	1.075	1.050	1.025

Notes: (a) defined as: (CE at end of year + payments in the year) / CE at beginning of year adjusted for normal inflation

(b) In 30 June 2021 values, adopted for 30 June 2021 valuation

Payment factors for case estimates outstanding

Financial year ending 30 June	Payments to case estimates (a) for development year:									10
	1	2	3	4	5	6	7	8	9	onwards
2012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2014	3.118	1.404	0.269	0.000	1.546	0.122	0.000	0.000	0.000	0.000
2015	1.193	1.149	1.207	1.843	0.000	0.252	0.952	0.000	0.000	0.000
2016	1.336	0.808	1.480	0.957	0.062	0.461	0.079	0.000	0.000	0.000
2017	0.942	1.695	0.952	0.000	0.000	0.101	0.075	0.000	0.000	0.000
2018	1.319	0.995	2.061	2.056	0.000	0.000	0.168	0.000	0.000	0.000
2019	0.914	0.838	0.716	0.024	0.082	0.000	0.000	0.000	0.000	0.000
2020	1.574	0.605	1.655	0.537	0.000	0.000	0.000	0.000	0.000	0.000
2021	1.387	0.727	0.749	0.495	0.000	0.000	0.000	0.000	0.000	0.836
Adopted (b)	1.182	0.878	1.186	0.744	0.408	0.573	0.409	0.380	0.254	0.198

Notes: (a) defined as: Payments made in the year / case estimates at beginning of the year

(b) In 30 June 2021 values, adopted for 30 June 2021 valuation

F 4 Adopted estimates of outstanding claims**F 4.1 Gross central estimates from models in current values**

Accident year ending 30 June	Estimates of Outstanding Claims (\$'000s) at 30 June 2021 (a)(b)	
	PPCI	PCE
2013 & earlier	4	122
2014	8	0
2015	14	0
2016	24	0
2017	26	145
2018	90	0
2019	325	184
2020	823	3,729
2021	1,337	4,144
Total	2,650	8,324

Notes: (a) From models described in appendix F3

(b) In 30 June 2021 values and includes superimposed inflation and excluding 2015 legislative changes

F 4.2 Average claim size

Accident year ending 30 June	Average Claim Size (\$000s) at 30 June 2021 (a)(b)	
	PPCI	PCE
2013	21	21
2014	11	11
2015	14	14
2016	16	16
2017	37	38
2018	27	26
2019	27	25
2020	26	59
2021	30	72

Note: (a) In 30 June 2021 values, from results in appendix F4.1, includes superimposed inflation and excluding 2015 legislative changes

F 4.3 Adopted estimates in 30 June 2021 values

Accident year ending 30 June	Estimate of o/s claims (\$000s)(a)(b)	Estimate of o/s claims (\$000s)(b)(c)	Average claim size (\$000s)(b)(c)	Ratio to case estimates (b)(c)
2013 & earlier	122	122		0%
2014	1	1	11	0%
2015	1	1	14	0%
2016	2	2	16	0%
2017	133	133	38	131%
2018	36	36	26	0%
2019	240	240	25	209%
2020	2,567	2,567	46	145%
2021	2,460	2,460	47	212%
Total	5,562	5,562		170%

Notes: (a) in 30 June 2021 values, including superimposed inflation and excluding 2015 legislative changes

(b) in 30 June 2021 values, including superimposed inflation and including 2015 legislative changes

(c) The adopted model is a composite weighted average of the statistical models. The weights attached to the models reflect the extent to which they are considered to appropriately project the experience of each accident year. We have used the PPCI method, except where the result is less than the case estimates.

Accident year ending 30 June	Weights Adopted For Estimates (a)(b) Method		
	PPCI	PCE	Total
2013 & earlier	0.10	0.90	1.00
2014	0.10	0.90	1.00
2015	0.10	0.90	1.00
2016	0.10	0.90	1.00
2017	0.10	0.90	1.00
2018	0.40	0.60	1.00
2019	0.40	0.60	1.00
2020	0.40	0.60	1.00
2021	0.60	0.40	1.00

F 4.4 Gross adopted estimates including expenses

NT WorkSafe self-insurers Estimates (\$000s) at 30 June 2021					
Accident year ending 30 June	30 June 2021 values (a)	Inflated values (b)	Inflated & discntd values (b)	Case estimates (c)	Ratio % (d)
2013 & earlier	122	136	132	119	102%
2014	1	1	1	0	-
2015	1	1	1	0	-
2016	2	3	3	0	-
2017	133	147	144	101	131%
2018	36	39	39	0	-
2019	240	259	258	115	209%
2020	2,567	2,780	2,767	1,769	145%
2021	2,460	2,672	2,659	1,160	212%
Total	5,562	6,038	6,003	3,264	170%

Note: (a) In 30 June 2021 values, includes superimposed inflation
 (b) includes 6% claims handling expenses, inflation and discounting assumptions in Appendix B 1
 (c) as at 30 June 2021 as provided by the self-insurers
 (d) = (a) / (c)

F 4.5 Net outstanding claims provision

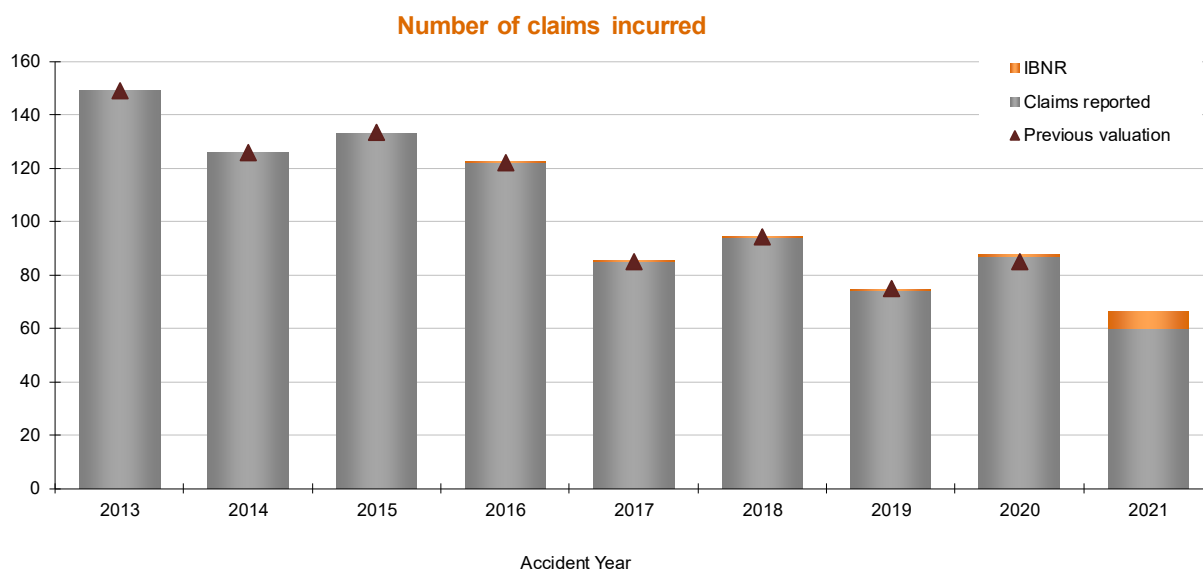
Estimates at 30 June 2021 (\$000s)							
Accident year ending 30 Jun	Gross o/s liability (a)	Reinsurance recoveries (b)	Net o/s liability (c)	Claims handling expenses (d)	Net central estimate (e)	Risk margin (f)	Net Provision (g)
Total	5,663	0	5,663	340	6,003	1,501	7,504

Notes: (a) from table above
 (b) (a) x 0%
 (c) = (a) – (b)
 (d) = (c) x 7%
 (e) = (c) + (d)
 (f) = (e) x 25.0%
 (g) = (e) + (f)

Appendix G Self-insurer claims statistics

G 1 Number of claims incurred

General decreasing trend from 2013 peak to 2021 at 66 claims



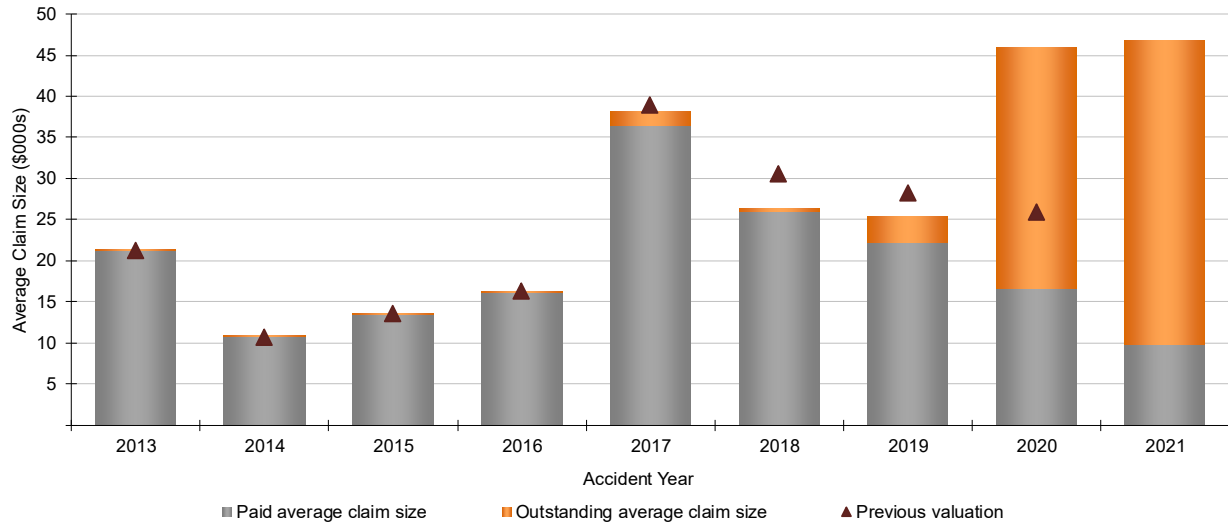
The main points to highlight from this chart are:

- Since the high in 2013, the number of claims has reduced each year to a level of 126 claims in 2014. From a review of the self-insurer reports, we understand that one self-insurer has changed its management and recording of small claims, which contributed to the decrease
- The number of claims was fairly stable over 2014 to 2016 at around 120 to 135 claims
- For 2017, the total estimated claims were 85, which is significantly lower than all prior years shown
- From 2017 to 2020 the number of claims incurred has varied between 74 and 94
- For 2021, number of claims incurred decreased to 66, of which 6 are IBNR claims. The significant decrease compared to 2020 and all prior accident years is partly due to Catholic Church becoming an insurer from 1 December 2020 which means 2021 only includes five months of Catholic Church claims
- The numbers of claims are similar to estimates at the previous valuation, however 2020 is slightly lower.

G 2 Gross average claim size

2021 average claim size is estimated to be \$46,800, which is higher than all previous years

Average claim size in 30 June 2021 values



The average claim size has been volatile between accident years and there has been no discernible trend. From 2013 to 2016, the average claim size has ranged been between \$10,500 and \$21,500.

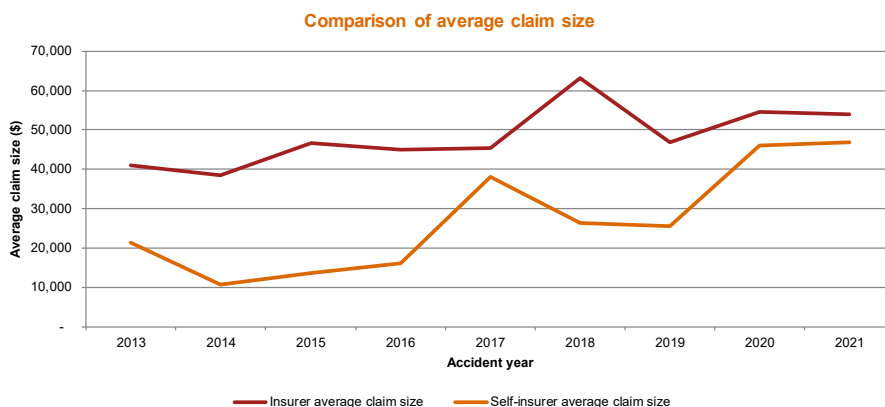
Our estimated average claim size for the 2017 accident year is higher than its surrounding years due to higher payments and case estimate development to date, driven by multiple large claims.

Our estimated average claim size for the 2020 and 2021 accident years are significantly higher at \$45,922 and \$46,800 which is higher than all prior accident years due to higher total estimates reported to date.

The uncertainty about the future development means that the ultimate level and our estimates may differ from that projected for recent accident years. This is especially true for the 2020 and 2021 accident years, where a high proportion (64% and 79% respectively) of the average claim size consists of the uncertain future estimate.

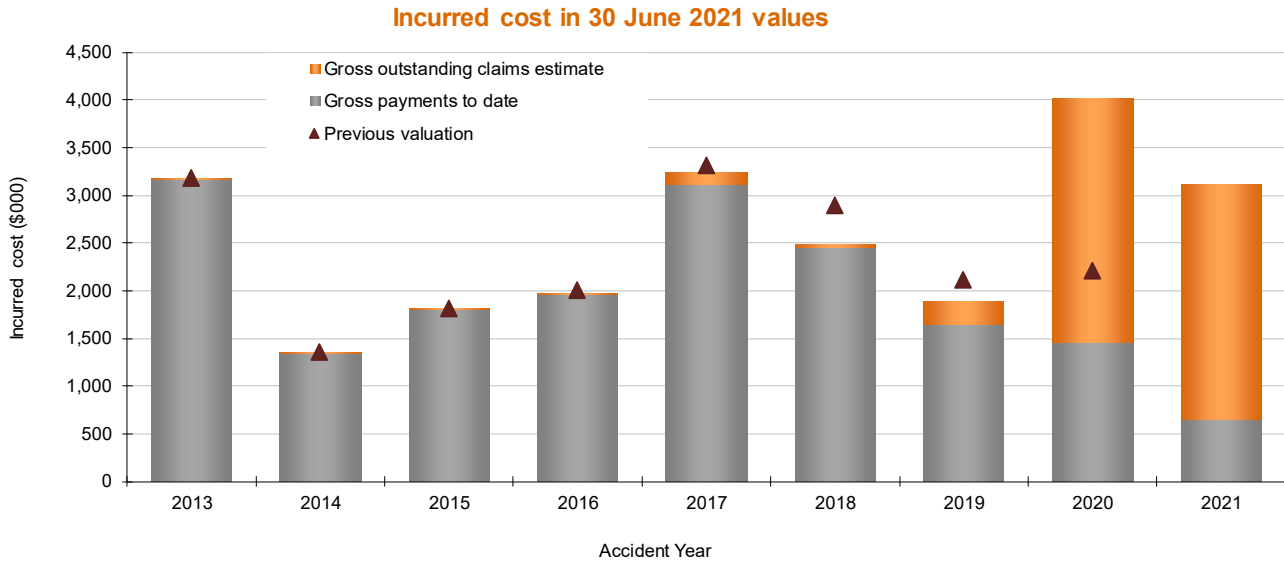
Compared to the previous valuation, the average claim size for 2013 to 2016 are similar, 2017 to 2019 are lower but 2020 is significantly higher than previously estimated.

The chart below compares the average claim size of self-insurers to insurers. The average claim size for self-insurers is consistently lower than insurers but is closer in 2020 and 2021.



G 3 Incurred cost

2021 incurred cost is \$3.1 million, which is lower than 2013, 2017 and 2020 but higher than all other years



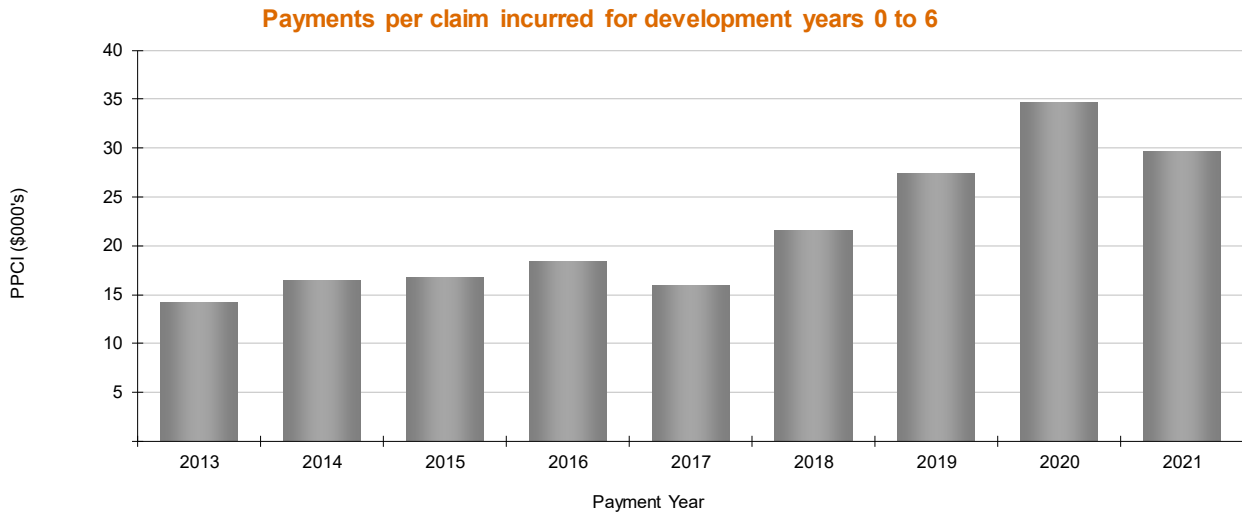
Compared to our previous valuation, there has been a significant decrease in the incurred costs for the 2018 and 2019 accident years due to lower than expected claim development and case estimate. For 2020 accident year there has been a significant increase in the incurred costs due to higher than expected claim development and case estimates.

The incurred cost for 2021 is \$3.1 million, which is \$0.9 million (23%) lower than the 2020 accident year incurred cost of \$4.0 million.

Over the period shown in the graph, the proportion outstanding increases from 0% of the total incurred cost for 2016 to 79% of the total incurred cost for 2021.

G 4 Payment per claim incurred

2013 to 2020 exhibits a broadly increasing trend, with a decrease in 2021



Payments per claim incurred for development years 0 to 6 exhibits an increasing trend, from \$14,243 in 2013 to \$34,633 in 2020, which then decreases to \$29,583 in 2021.

The 2021 payment per claim incurred for development years 0 to 6 decreased \$5,050 (15%) compared to the 2020 financial year. The high in 2020 was due to very high payments for the 2017 accident year (DY3).

Appendix H Insurer break-even premium rate

H 1 Calculation of discounted gross incurred cost

The following tables present the data and assumptions we have used to calculate the discounted gross incurred cost, which when combined with the actual expenses give a break-even premium to compare to the actual premium rates charged.

H 1.1 Actual claim payments

Accident Year	Claim payments (\$000s) (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10	
2009	13,722	17,095	13,682	9,201	16,073	5,726	3,315	2,253	1,629	1,165	4,959	88,819
2010	14,487	18,975	12,674	7,690	6,810	4,145	2,900	2,782	2,207	1,413	1,915	75,999
2011	15,299	19,094	11,394	10,450	3,877	4,979	5,829	1,126	1,360	815	1,029	75,252
2012	16,950	22,412	9,748	9,393	5,211	5,054	2,473	2,160	1,337	1,383	0	76,122
2013	18,470	24,288	15,522	14,449	7,258	3,474	5,713	2,942	1,707	0	0	93,823
2014	19,209	25,133	15,471	12,743	8,432	5,423	2,868	1,067	0	0	0	90,346
2015	19,188	24,668	20,541	15,753	9,571	4,537	7,438	0	0	0	0	101,696
2016	21,196	30,605	19,268	11,979	5,934	3,665	0	0	0	0	0	92,646
2017	23,602	31,724	20,569	12,836	5,265	0	0	0	0	0	0	93,996
2018	26,879	43,842	24,068	16,214	0	0	0	0	0	0	0	111,001
2019	24,960	26,209	15,741	0	0	0	0	0	0	0	0	66,910
2020	22,627	25,842	0	0	0	0	0	0	0	0	0	48,469
2021	21,060	0	0	0	0	0	0	0	0	0	0	21,060

Notes: (a) from data extracted from the WIMS system as at 30 June 2021

Note that the data in the table presented above is in a different form to the claim payments data in Appendix C1. Each row in the table shows the payments relating to that specific accident year, i.e. development year 1 for 2012 shows the actual payments made in 2013 financial year in relation to incidents, which occurred in 2012. In the previously presented table, this same cell represented payments made in 2012 financial year for incidents, which occurred in 2011. It also comes from Form 4 which has slight differences to the WIMS data.

H 1.2 Historic one year forward rates

	One year forward rate for the year to 30 June												
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Forward rate	0.03%	0.22%	0.97%	1.89%	1.63%	1.96%	2.47%	2.54%	2.79%	4.76%	4.48%	3.44%	7.07%

These rates are the one year forward rate, projected from one year prior, e.g. the rate to 30 June 2021 is the one year forward rate from the Commonwealth Bond yield curve as at 30 June 2020.

H 1.3 Discounted claim payments

Accident Year	Claim payments (\$000s) (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10	
2009	13,262	15,699	11,879	7,543	12,561	4,270	2,360	1,536	1,064	729	2,896	73,798
2010	14,244	17,947	11,515	6,776	5,826	3,445	2,346	2,196	1,697	1,063	1,397	68,451
2011	14,968	17,856	10,282	9,111	3,267	4,065	4,619	864	1,017	595	735	67,380
2012	16,561	21,102	8,855	8,235	4,421	4,156	1,968	1,671	1,010	1,021	0	68,999
2013	18,217	23,333	14,530	13,211	6,492	3,036	4,901	2,487	1,423	0	0	87,632
2014	18,970	24,214	14,577	11,761	7,614	4,812	2,511	922	0	0	0	85,379
2015	18,955	23,841	19,453	14,600	8,720	4,079	6,605	0	0	0	0	96,253
2016	20,991	29,774	18,390	11,268	5,522	3,377	0	0	0	0	0	89,320
2017	23,411	30,923	19,792	12,238	4,978	0	0	0	0	0	0	91,343
2018	26,628	42,820	23,262	15,522	0	0	0	0	0	0	0	108,232
2019	24,839	25,928	15,495	0	0	0	0	0	0	0	0	66,262
2020	22,602	25,781	0	0	0	0	0	0	0	0	0	48,383
2021	21,057	0	0	0	0	0	0	0	0	0	0	21,057

Notes: (a) payments from I1.1 above, discounted using the rates in I1.2

H 1.4 Discounted gross incurred cost

Underwriting year	Discounted gross claim payments (a) (\$000s)	Discounted gross outstanding claims (b) (\$000s)	Discounted gross incurred cost (c) (\$000s)
2021	21,057	81,270	102,327
2020	48,383	53,200	101,584
2019	66,262	35,945	102,206
2018	108,232	40,509	148,741
2017	91,343	13,394	104,738
2016	89,320	16,787	106,107
2015	96,253	13,940	110,193
2014	85,379	5,687	91,067
2013	87,632	7,039	94,670

Notes: (a) from I1.3 above

(b) outstanding claims inflated/discounted from Appendix C4, discounted to the start of the underwriting year using rates in Appendix H1.2 above

(c) = (a) + (b)

H 2 Estimated historic break-even premium rate

Accident year	Calculated break even premium						Actual premium				
	Reported earned wages (a) (\$000s)	Developed earned wages (b) (\$000s)	Discounted gross incurred cost (c) (\$000s)	Commission in financial year (d) (\$000s)	Discounted other expenses in the fin year (e) (\$000s)	Premium (f) (\$000s)	Estimated premium rate (g)	Reported earned premium (h) (\$000s)	Developed earned premium (i) (\$000s)	Actual premium rate charged (j)	Difference (break even - actual)
2021	5,944,273	6,090,234	102,327	4,727	27,323	134,387	2.2%	129,504	132,329	2.2%	-2,058
2020	5,963,976	5,999,411	101,584	4,501	23,377	129,533	2.2%	127,912	128,694	2.1%	-839
2019	6,779,085	6,784,187	102,206	4,701	20,885	128,102	1.9%	137,382	137,800	2.0%	9,698
2018	7,850,408	7,850,408	148,741	5,534	22,548	177,652	2.3%	141,950	142,145	1.8%	-35,507
2017	7,261,995	7,261,995	104,738	4,489	20,653	130,407	1.8%	131,558	131,558	1.8%	1,151
2016	6,833,594	6,833,594	106,107	4,163	20,086	130,990	1.9%	129,530	129,530	1.9%	-1,460
2015	6,582,845	6,582,845	110,193	4,558	20,288	135,867	2.1%	136,816	136,816	2.1%	950
2014	5,929,595	5,929,595	91,067	4,775	17,098	113,650	1.9%	138,578	138,578	2.3%	24,928
2013	5,199,017	5,199,017	94,670	3,697	15,016	114,167	2.2%	124,326	124,326	2.4%	10,159

- Notes:**
- (a) earned wages provided by insurers
 - (b) (a) x development factors in Appendix B7
 - (c) calculated in Appendix H1
 - (d) actual commission, from the consolidated Form A returns
 - (e) other expenses, from the consolidated Form A returns, discounted by half a year
 - (f) = (c) + (d) + (e) x (1 + one year historical interest rate) ^ (3/12) to allow for the fact that premiums are received 3 months after the commencement of the underwriting period
 - (g) = (f) / (b)
 - (h) earned premium, including earned but not yet reported premium provided by insurers
 - (i) (h) x development factors in Appendix B7
 - (j) = (i) / (b)

H 3 Calculation of break-even premium rate for 2021/22

H 3.1 Discounted incurred cost for 2021/22

We selected the number of incurred claims and average claim size for 2021/22 based on the recent experience and allowing for future inflation and superimposed inflation. The following table shows the number of incurred claims, claim frequency and average claim size over the last five years and our adopted values.

	Accident year					
	2021	2020	2019	2018	2017	Adopted
Number of claims incurred (a)	1,869	1,850	2,204	2,427	2,422	1,914
Claim frequency per \$88,677 of wages (b)	2.7%	2.7%	2.8%	2.7%	2.8%	2.7%
Average claim size (in 30 June 2021 values) (c)	53,963	54,492	46,854	63,233	45,437	54,226

- Notes:**
- (a) The adopted number of claims incurred is based on the adopted claim frequency in (b) times the projected wages.
 - (b) The adopted claim frequency is a two year average
 - (c) The adopted average claim size is also a two year average, which includes the 2015 legislative amendments

Allowing for inflation of 1.7%, superimposed inflation of 1.6% and an inflation/discount factor to allow for the timing of payments of 1.0144 the discounted incurred cost for 2021/22 can be calculated as:

$$1,914 \times [54,226 \times (1 + 1.7\%) \times (1 + 1.6\%) \times 1.0144] = \$108.8 \text{ million.}$$

We have not made any specific allowance for the 2020 legislative amendments. Some of these changes are a reversal of the 2015 legislative amendments which weren't costed at the time as they were considered immaterial. The more material changes will mainly affect the government self-insurance claims which are out of scope for the report.

H 3.2 Expense loadings

To calculate the break-even premium rate the discounted incurred cost must be loaded for expenses. To calculate an appropriate allowance for expenses in the premium rate we have analysed the commission rate and the other expenses (including claims handling) separately over a five year period.

This analysis is shown in the following table.

(\$000s)	Underwriting year					Adopted
	2021	2020	2019	2018	2017	
Gross written premiums (a)	145,986	125,789	142,690	135,842	134,286	
Earned premiums (a)	131,769	122,529	144,321	146,280	126,442	
Commission (a)	4,727	4,501	4,701	5,534	4,489	
Other expenses (a)	27,327	23,402	20,986	22,760	20,821	
Commission rate (b)	3.6%	3.7%	3.3%	3.8%	3.6%	3.6%
Expense rate (c)	18.7%	18.6%	14.7%	16.8%	15.5%	18.7%

Notes: (a), (b), (c), (d) from the consolidated Form A returns
 (e) commission / earned premium, the adopted value uses a two year average
 (f) other expenses / gross written premium, the adopted value uses a two year average

H 3.3 Projected break-even premium for 2020/21

Using the analysis above, the projected break-even premium rate for 2021/22 is:

Underwriting year	Actual wages (a) (\$000s)	Discounted gross incurred cost	Expenses (c) (\$000s)	Premium (d) (\$000s)	Calculated premium rate (e)
2022	6,219,826	108,818	31,222	140,050	2.3%

Notes: (a) 2021 developed earned wages, inflated for one year's wage inflation at 1.7%
 (b) from H3.1 above
 (c) = (b) / (1 – commission rate (3.6%) – other expense rate (18.7%)) – (b)
 (d) = (b) / (1 – commission rate (3.6%) – other expense rate (18.7%)) x (1 + interest rate (0.03%)) ^ (3/12) to allow for the fact that premiums are received 3 months after the commencement of the underwriting period
 (e) = (d) / (a)

This break-even premium rate allows for the same timing aspects as the historic calculations of the break-even rate.

We considered the economic indicators in the 2021/22 Northern Territory budget report, in adopting the assumptions for the 2021 break-even premium rate.

H 4 Historical rates by industry

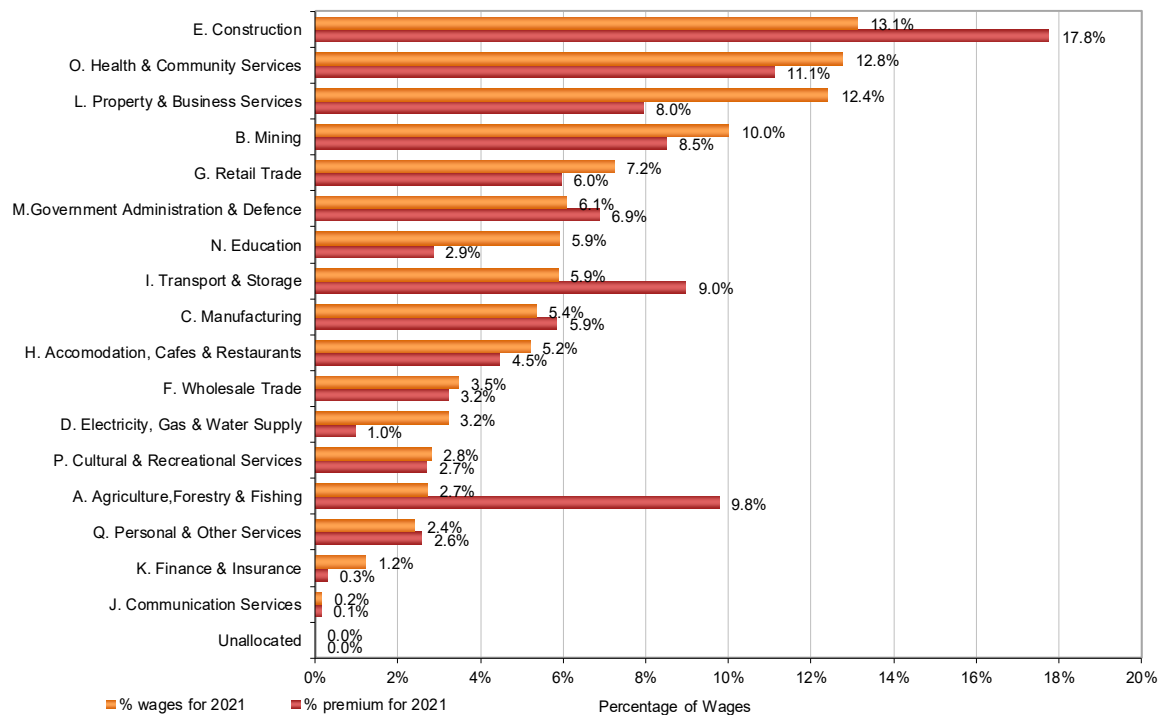
The following tables show the historical premium rates charged by industry (excluding self-insurers) on an underwriting/earned year basis.

The below table does not use developed wages or premium and does not contain an allowance for earned but not yet raised premium.

Underwriting year basis						Difference
Premium rate by ANZSIC division	2017	2018	2019	2020	2021	2021 / 2020
A. Agriculture, Forestry & Fishing	5.51%	6.06%	6.93%	7.37%	7.82%	6.02%
B. Mining	1.42%	1.16%	1.57%	1.79%	1.85%	3.06%
C. Manufacturing	2.26%	2.27%	2.16%	2.16%	2.38%	10.14%
D. Electricity, Gas & Water Supply	0.87%	0.78%	0.64%	0.70%	0.65%	-7.15%
E. Construction	1.91%	1.89%	2.40%	2.78%	2.94%	5.94%
F. Wholesale Trade	1.82%	1.82%	1.93%	2.06%	2.01%	-2.13%
G. Retail Trade	1.74%	1.81%	1.80%	1.79%	1.79%	0.17%
H. Accommodation, Cafes & Restaurants	1.89%	1.87%	1.94%	1.93%	1.87%	-3.22%
I. Transport & Storage	2.81%	3.31%	3.11%	3.23%	3.32%	2.77%
J. Communication Services	1.29%	1.36%	1.82%	1.86%	1.89%	2.13%
K. Finance & Insurance	0.67%	0.60%	0.53%	0.80%	0.53%	-34.46%
L. Property & Business Services	1.01%	1.05%	1.24%	1.27%	1.39%	9.81%
M. Government Administration & Defence	1.80%	1.87%	1.90%	2.55%	2.46%	-3.54%
N. Education	0.97%	1.06%	1.04%	0.99%	1.05%	5.99%
O. Health & Community Services	1.80%	1.79%	2.02%	1.92%	1.89%	-1.38%
P. Cultural & Recreational Services	2.33%	2.15%	2.30%	2.22%	2.10%	-5.23%
Q. Personal & Other Services	2.17%	2.48%	2.20%	2.46%	2.33%	-5.52%
Unallocated	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	1.80%	1.80%	2.03%	2.14%	2.17%	1.37%

The percentage of wages and premium by industry, on an underwriting year basis for the current year are:

Percentage of wages and premium by industry for the 2020/21 accident year only



Insurer break-even premium rate

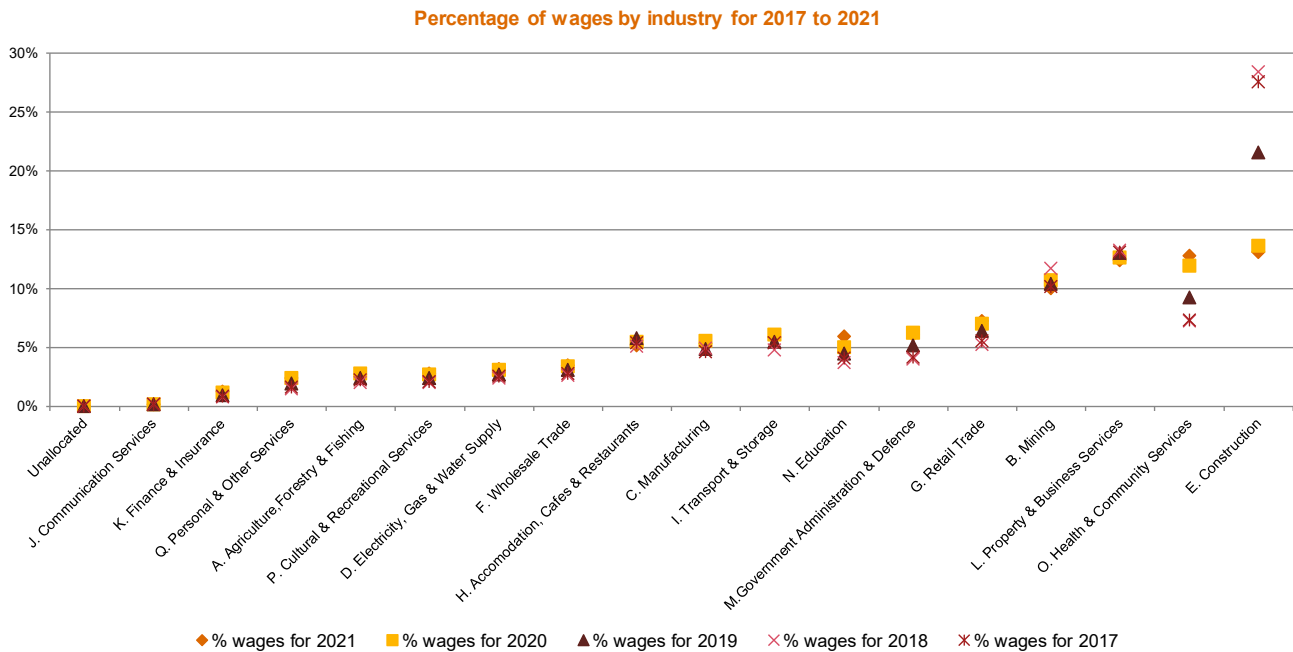
This shows that the sectors with significantly higher premium rate than the scheme average are:

- Agriculture, forestry and fishing
- Transport and storage
- Construction

Meanwhile the sectors with significantly lower premium rate than the scheme average are:

- Property and business services
- Mining
- Education
- Electricity, gas and water supply
- Health and Community Services

The chart below shows wages by ANZSIC class on an underwriting year basis. This split requires insurers to split wages and premium across the years that a multi-year policy is in force for.



Presenting the information in this way acts to smooth the variation in wages by industry from one year to the next. Of note is the strong increase in Construction to 2018, driven by the Inpex project, followed by the significant decrease in the percentage of wages in 2019 and 2020, as the Inpex project has moved into the production phase.

Appendix I Glossary

AASB

Australian Accounting Standards Board

ABS

Australian Bureau of Statistics

Accident year

The financial year ending 30 June, in which the accident event leading to a claim occurs, irrespective of when the claim is reported, paid and finalised.

APRA

Australian Prudential Regulation Authority

Break-even premium rate

This is the expected cost for policies, including an allowance for associated expenses and timing of premium payments. It is calculated as:

Break-even premium rate = Discounted incurred cost / (1 – commission rate – other expense rate) x (1 + interest rate) ^{3 / 12}

Central estimate

Unbiased actuarial estimate, which has 50% probability of being sufficient. It is the median of the range of possible outcomes. The central estimate is inflated and discounted and includes claims handling expenses (unless where specified) and does not include a risk margin.

Development year

The number of completed years since the end of the accident year. Development year zero refers to the financial year ending 30 June in which the accident event occurs. Development year is also abbreviated to DY in this report.

EBNYR premium

Earned but not yet raised premium.

The earned but not yet raised premium is the aggregate of the burner policy premium adjustments where the estimated claims experience suggests that either more premium will need to be collected or some premium will be refunded.

Funding ratio

The funding ratio is measuring the liabilities held by the insurers or self-insurers (the notional assets) compared to the aggregate outstanding claims liability calculated by the scheme actuary. The funding ratio is as defined by the Comparative Monitoring Committee.

For the insurers this is calculated as:
$$\frac{\text{inflated and discounted provision (including risk margin)}}{\text{inflated and discounted central estimate (excluding risk margin)}}$$

For the self-insurers this is calculated as:
$$\frac{\text{bank guarantee provision (1.5 x central estimate)}}{\text{inflated and discounted central estimate (excluding risk margin)}}$$

Inflated and discounted values

The estimates in current values are inflated to the dollar values in the estimated future year of payment. These values are discounted to 30 June 2021 values to allow for future investment income that will be earned until the claim is paid. The inflation and discount rates are outlined in appendix B1.

NT

Northern Territory

Provision

The central estimate plus the risk margin.

Risk margin

The margin added to the central estimate to increase its level of adequacy to above 50%.

Risk premium

The risk premium is an estimate of the pure risk cost of claims and does not include allowance for expenses or margins.

Risk Premium = estimated incurred cost of the risk covered i.e. of the claims with dates of occurrence in the risk/cover period
= number of claims x average claim size

www.pwc.com.au