www.pwc.com.au

NT WorkSafe

Actuarial review of Northern Territory workers compensation scheme as at 30 June 2020

February 2021

pwc

Strictly private and confidential

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

pwc

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

17 February 2020

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 2020 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 2020, 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 2020/21 underwriting year.

Yours sincerely

Lisa Simpson

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 four out of five financial years incurring a loss. The insurer funding ratio has increased this year to 108% from 107% 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 2020 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.

Funding ratio ($000s)	Actual provisions (a)	PwC central estimate (b)	Difference ($000) (b) - (a)	Funding ratio (a) / (b)
Insurers	381,908	353,313	-28,595	108%
Self-insurers	6,400	4,160	-2,240	154%
Total	388,308	357,473	-30,834	109%

Notes: see section 2 of this report

As at 30 June 2020 the insurers' funding ratio was 108% while the self-insurers' funding ratio was 154%. The insurers' funding ratio increased from 107% as at 30 June 2019 and the self-insurers' funding ratio increased from 138%.

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 2019. 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, while our central estimate decreased compared to 30 June 2019. We are not provided with a reconciliation for the self-insurers' provisions, so cannot identify the drivers of the self-insurers' increase.

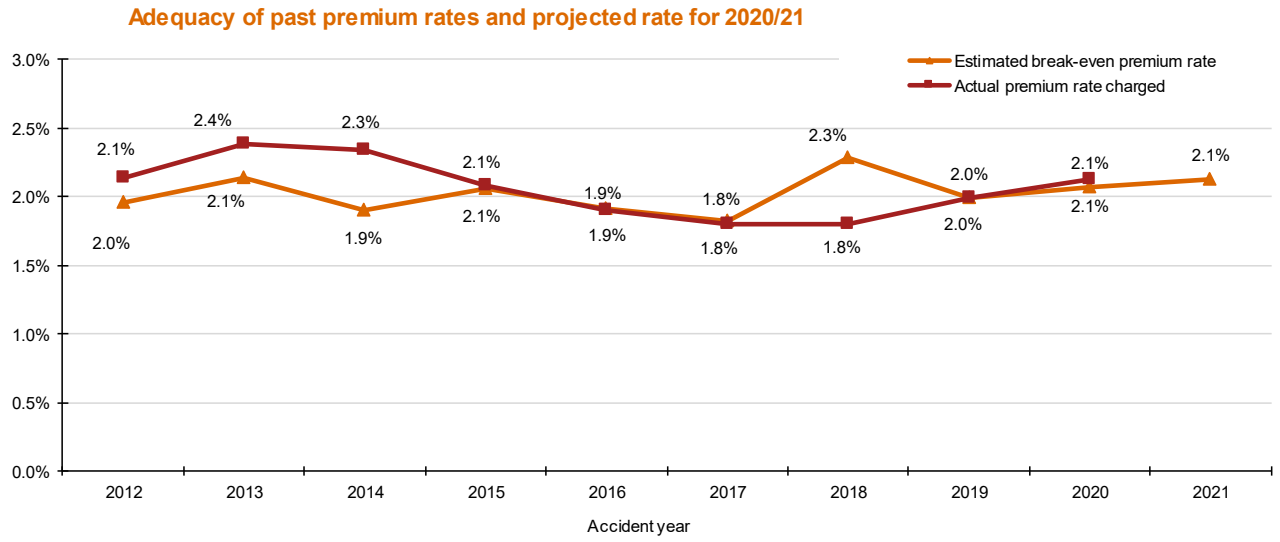
A ratio above 100% implies that, in aggregate, insurers are holding sufficient reserves to be likely to meet our central estimate of future claims costs. This year, the funding ratio has remained above 100%. We make the following comments which should be borne in mind when considering the funding ratio:

- 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 2019 and 2020 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 2020/21.



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 2012 to 2020 shown in the graph above. Actual premium rates charged by insurers are estimated to have been more than sufficient in 2012 to 2014. Subsequently, we estimate that actual premium rates were similar to estimates of break-even rates in 2015 to 2020, except for 2018 where they were not sufficient to cover the estimated break-even cost.

We estimate that the 2020 developed premiums charged of $137.0 million were $3.4 million (2.6%) higher than the estimated break-even premiums of $133.5 million. The 2020 developed premiums charged are less than the estimated break-even premium rate in last year's report of $156.8 million, which reflects the lower wages than projected, coupled with a lower premium rate. Overall, insurers increased their premium rates between 2019 and 2020 and are responding in a moderate fashion 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 2021.

Our projected break-even premium rate for 2021 is 2.1%, which is relatively in line with the estimated break-even premium rates and actual premium rates charged over the most recent two years. We estimated the

2020/21 break-even premium rate to be similar to the most recent two years after considering the economic indicators in the 2020/21 Northern Territory budget report.

The slight increase in the projected break-even premium rate has been driven by a lower estimated average claim size, due to lower payments and case estimates for the 2019 and 2020 accident years.

The estimated break-even premium rates for accident years 2016 to 2020 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	Decreasing trend in claim numbers since peak in 2013, with 2020 claim numbers (1,836) lower than 2019 (2,207). Similar to claim numbers, the claim frequency demonstrated a general decreasing trend from 2012 to 2020. Frequency is estimated to be 2.5% in 2020.	General decreasing trend from high 2012 to 2020. In 2020, there are estimated to be 85 claims incurred which is 14% higher than 2019 but lower than prior years.
Average claim size (in 30 June 2020 values)	2020 average claim size is just under $56,500, which is higher than all prior years (except 2018), driven by high payments and case estimates to 30 June 2020.	Significantly lower than insurers, at $26,088 for the 2020 accident year, which is lower than 2017 to 2019 but higher than 2016 and prior years
Incurred cost (in 30 June 2020 values)	2020 incurred cost is $103.7 million, which is lower than all prior years, except 2012, due to low number of claims partially offset by the high average claim size.	The incurred cost for 2020 of $2.2 million, which is slightly higher than the incurred cost for 2019 and within the range for prior years.
Gross loss ratio	2020 is 75.2%, which is lower than loss ratio for all accident years since 2012, except for the low in 2014.	n/a
Distribution by payment type	Redemption and non-economic lump sums and weekly benefits combined account for approximately two-thirds of the total incurred cost and payments each financial year. The distribution of payments for the last eight accident years has remained stable.	n/a

Risks and uncertainties

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

- **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 the 2019 year and a further 11% decrease for 2020. Up to and including the 2017 year, 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.

  In the previous valuation we had continued to estimate that the 2018 accident year would be significantly higher than prior years, though the payments and case estimates development over the 2020 financial year were slightly less than expected. Over 2020 financial year, we were still observing several late claims reported for the 2016 and prior accident years (more than expected), which may also relate to people being unable to find alternative work. It could be a few years before the full extent is known.

- **COVID-19**

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

  The outbreak has changed the way of working for a number of businesses with large numbers of employees being asked to work from home to limit the risk of transmitting the virus. A number of work places 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 accident year could be partially due to COVID-19, though the mix of claims may have changed.

  At the point of writing this report, NT WorkSafe has advised us that they had been three COVID-19 related claims (that are not government self-insurer claims), with the latest claim being reported on 10 July 2020. Out of the three claims known, two of these claims have not had any payments made to date with the other claim having had minimal payments (total paid to date on COVID -19 related claims less than of $3,000).

  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 emerge.

  The overall impact of COVID-19 is still unknown for both the outstanding claims liability and projection of 2020/21, and some impacts may offset each other at least to some extent. At this time, we have not made any other adjustments to the valuation parameters or risk margin assumptions.

  This should be borne in mind whenever using the result.

- **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. Aside from the Inpex project and COVID-19 virus discussed above, there may be more general real wage decreases or increases in bad debts for insurers. The 2020/21 Northern Territory budget report refers to soft economic conditions in the short-term with the NT government focussed on creating more job opportunities across the state, which we have reflected in the estimates for the 2020/21 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, particularly as it relates to the high average claim size for insurers for the 2018 accident year due to higher payments and outstanding case estimates to 30 June 2020.

- **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 increased slightly 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 are for 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 2015/16 to 2019/20 accident years and the future costs for the 2020/21 accident year. In separate advice, PwC estimated that there would be a 2.8% reduction in respect of the most significant benefit changes (excluding death benefit increases). In this valuation, we have also allowed for the increase in death and funeral benefits, so the net reduction is 2.4%. We have not estimated the impact of other changes. As the changes are not retrospective, this should not impact outstanding claims liabilities for accident years prior to 2015/16.

  The 2020/21 financial year will be 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. In next year's review we will be able to see what impact this has had.

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

- **2020 legislative amendments**

  Most of the 2020 legislative amendments are not retrospective. They are effective from 29 July 2020 so should not impact the 30 June 2020 outstanding claims liability. They will impact the projections for the 2020/21 accident year. 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 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 silicosis claims reported to date. An Occupational Health and Safety campaign in the NT identified 36 businesses where workers could have potentially been exposed to Silica.

As at 30 June 2020 and at the time of writing this report, NT WorkSafe has advised us that there were three silicosis claims (that are not government self-insurer claims), of which the total paid on these claims were less than $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.

Contents

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 2020 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 2020, 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 2020/21 based on historic data and future inflation assumptions.

This is the eighth time we have prepared this report for the NT workers compensation scheme. Our previous valuation was conducted using data as at 30 June 2019, the findings of which are detailed in our 17 March 2020 report titled *Actuarial review of Northern Territory workers compensation scheme as at 30 June 2019*.

Our review is for the following four active 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

and the following five active self-insurers:

- Catholic Church Insurance
- Coles Supermarkets Australia Pty Ltd
- Wesfarmers Retail Holdings Pty Ltd
- Westpac Banking Corporation
- Woolworths Supermarkets.

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.

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 Professional 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 2020 ($000s) (a) (b)										
	By payment type method							All payments		
Accident year	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)	Allowance for active large claims	Total (e)
2020	21,118	6,313	8,104	2,915	5,177	30,297	73,924	68,533	6,973	80,897
2019	12,683	2,954	4,532	1,608	5,913	31,148	58,838	42,029	0	58,838
2018	9,194	2,022	3,544	1,059	5,697	36,360	57,875	39,107	0	57,875
2017	2,966	689	1,333	356	2,022	14,130	21,496	11,104	0	21,496
2016	2,174	540	1,149	240	1,445	11,897	17,446	9,756	3,071	20,517
2015	4,481	991	1,102	692	1,323	12,442	21,033	13,836	4,363	21,797
2014	3,231	663	734	519	853	7,988	13,988	3,825	0	6,365
2013	3,545	696	789	577	818	8,416	14,841	3,272	0	6,165
2012	2,942	562	645	468	665	7,117	12,400	3,568	0	5,776
2011 & earlier	16,015	3,191	3,495	2,348	3,462	38,548	67,059	36,402	20,648	64,714
Total	**78,350**	**18,621**	**25,427**	**10,783**	**27,375**	**198,344**	**358,900**	**231,431**	**35,054**	**344,440**

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 (53% of the total for individual payments), followed by weekly benefits (24% 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 2020 excluding expenses ($000s)			
Accident year ending 30 June	30 June 2020 values	Inflated values	Infl/disc values
2020	80,897	85,589	83,142
2019	58,838	62,370	60,380
2018	57,875	61,746	59,424
2017	21,496	23,279	22,133
2016	20,517	22,413	21,186
2015	21,797	23,413	22,454
2014	6,365	6,930	6,577
2013	6,165	6,745	6,381
2012	5,776	6,303	5,983
2011 & earlier	64,714	70,011	67,241
Total	**344,440**	**368,800**	**354,901**

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 2020 ($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	354,901	21,587	333,314	19,999	353,313	42,650	395,963

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 $354.9 million is $34.0 million (8.7%) lower than the equivalent estimate as at 30 June 2019. This decrease is mostly driven by the decrease in case estimates by $20.7 million and the 2020 accident year being lower than 2019.

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 2020 is $396.0 million, which is $39.0 million (9.0%) lower than 30 June 2019.

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 due to 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, due to insurer commerciality reasons.

Gross estimates at 30 June 2020 excluding expenses ($000s)	Insurers' estimate (a)	PwC estimate (b)	Difference ($000) (b) - (a)	Difference (%) (b) / (a) - 1
Total	354,635	354,901	266	0.1%

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

As at 30 June 2020, our gross estimate is $0.27 million (0.1%) higher than that of the insurers. This compares to our estimate being $6.4 million (1.7%) higher than that of the insurers at 30 June 2019. 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	381,908	353,313	-28,595	108%

Notes: (a) as per table above, net provision including risk margin

(b) net central estimate, excluding risk margin

The aggregate funding ratio is 108%, which is an increase from 107% 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 2019. 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. This year, the funding ratio has increased from 107% to 108%. We make the following comments which should be borne in mind when considering the funding ratio:

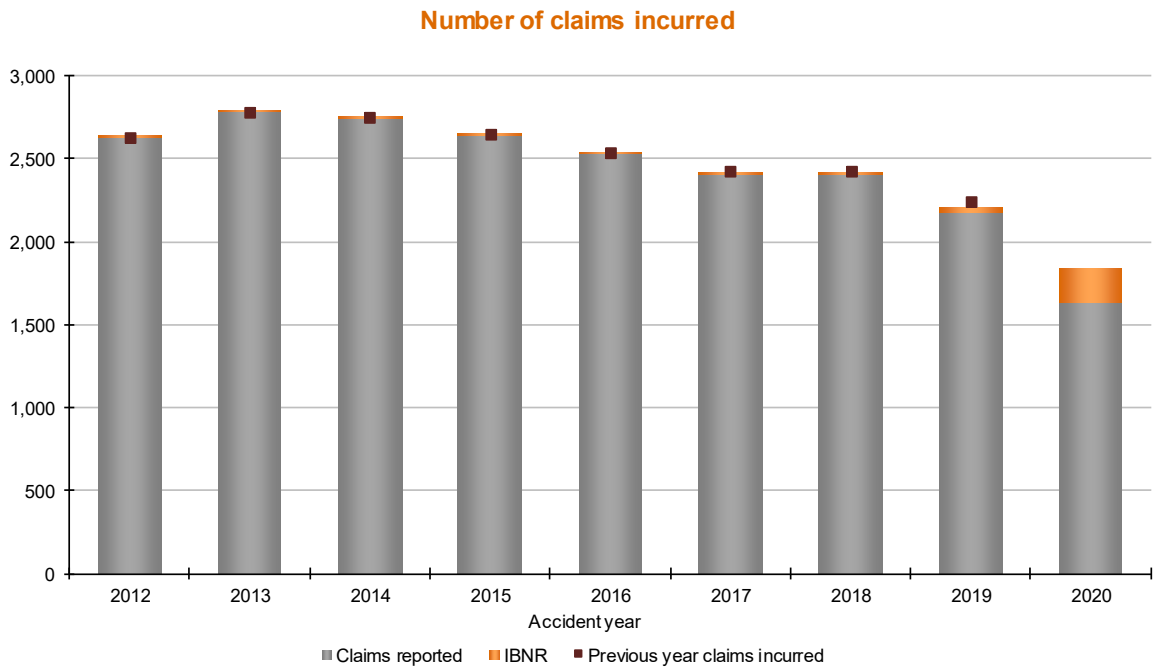
- The insurers' actuaries have access to more detailed claims data than we have to estimate the liabilities
- Insurers hold assets in excess of their liabilities due to APRA capital requirements and their own risk appetite
- Some insurers may be holding greater than 100% of our notional allocation to 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

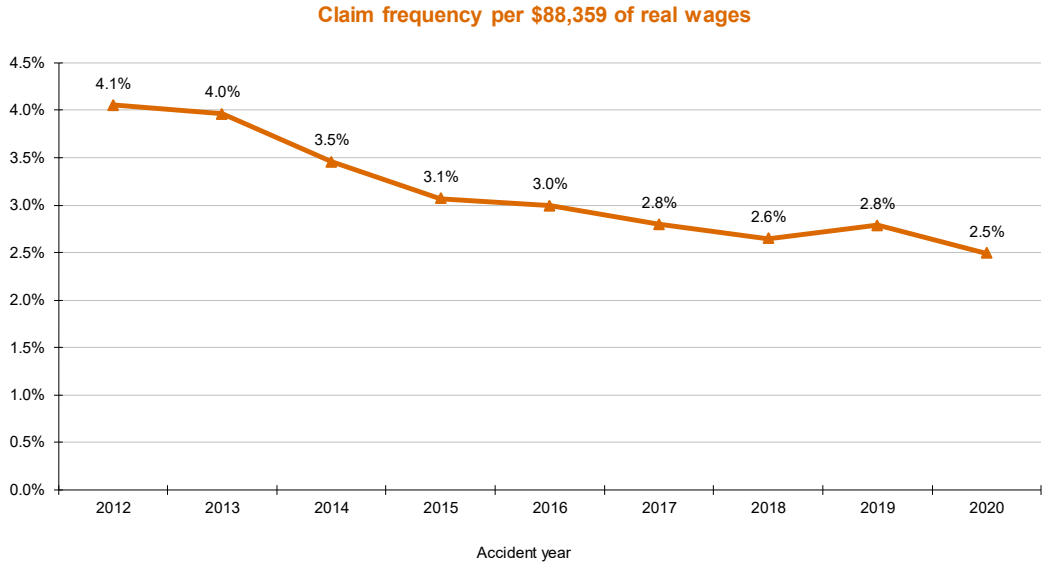
Decreasing trend from 2013 peak to 2020. The 2020 year is estimated to be lower than all prior accident years



The main points to highlight from this chart are:

- For the 2012 accident year, the number of claims incurred was just over 2,600
- There was a spike in the number of claims incurred for the 2013 accident year to just under 2,800
- From the 2013 to 2019 accident years, there has been a decreasing trend in the number of claims incurred
- For the 2020 accident year, the number of incurred claims is estimated to be lower than all prior years at 1,836 claims
- The numbers of claims are similar to those estimated at the previous valuation, except 2019 which is slightly lower.

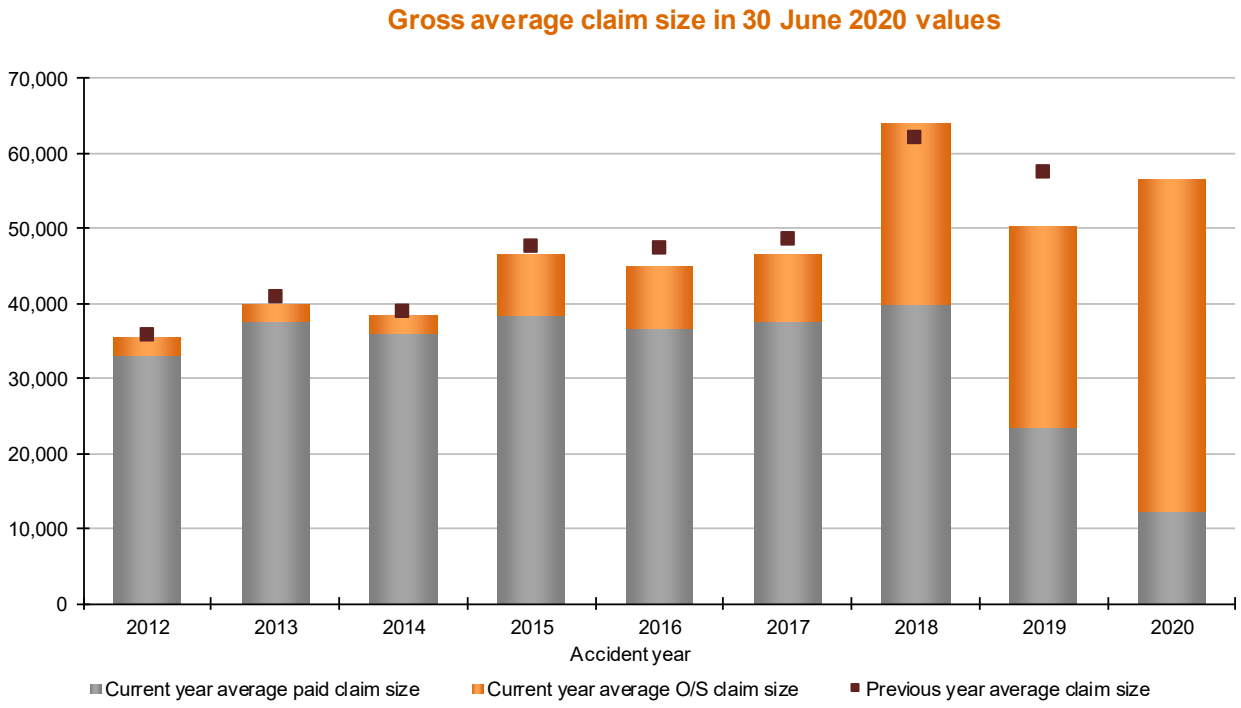
Declining claim frequency due to significant increases in wages up to 2015 and more recently reducing numbers of claims incurred. 2020 is lower than 2019 as the number of claims decreased by more than the wages



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

2.2.2 Gross average claim size

2020 is estimated to be higher than all prior years except for 2018



Since 2012 the gross average claim size (in 2020 values):

- Exhibited volatility due in part to large claims

- Exhibited a broadly increasing trend from around $35,345 in 2012 to around $46,622 in 2017
- Increased significantly to $63,825 in 2018 due to high payments and case estimates to date
- Decreased to around $50,087 in 2019 given lower total estimates reported to date, relative to 2018 but higher than prior years
- For 2020 accident year, gross average claim size was estimated to be $56,466, which is higher than the 2019 accident year but lower than 2018.

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 2020 accident year, where a high proportion (78%) of the average claim size relates to uncertain future claims development.

Compared to the previous valuation, the gross average claim size is similar or lower for most years especially for 2019 and except for 2018, where estimates increased slightly. 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 approximately two thirds of total incurred costs.

2.3 Actual vs expected claims experience over 2019/20

2.3.1 Claims incurred up to 30 June 2019

Actual experience compared to the expected experience over 2019/20 for claims incurred up to 30 June 2019 showed:

- Claim reports were fewer than expected (233 actual compared to 259 expected)
- The proportion of claims finalised was slower than expected (62.3% compared to 64.5%)
- Claim payments were lower than expected ($87.2 million actual compared to $112.7 million expected)
- Case estimate development was lower than expected (13% actual compared to 19% expected).

Expected experience is taken from the previous scheme report dated 17 March 2020. 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 2019/20

The actual experience for claims incurred over 2019/20 compared to expected showed:

- The number of incurred claims was 18.8% less than the 2019 accident year
- There were 639 claims active as at 30 June 2020, which is 10.6% lower than the 715 expected
- The average payment per claim was $12,412, which is 3.9% higher than the $11,944 expected.

The expected experience is based on the adopted parameters used for our 30 June 2019 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 2019.

Reconciliation of gross actuarial estimates, excluding expenses ($000s)										
	Accident year ending 30 June	2019	2018	2017	2016	2015	2014	2013	2012 & earlier	Total
A.	Gross estimates at 30 June 2019 (a)	104,568	78,658	39,512	33,672	29,840	11,045	11,906	79,659	388,859
B.	Gross payments 1 July 2019 to 30 June 2020	25,999	24,001	12,820	5,934	4,537	2,868	2,942	8,085	87,186
C.	Assumed investment return (b)	892	649	322	299	268	94	102	736	3,362
D.	= A - B + C	79,460	55,306	27,015	28,037	25,572	8,270	9,066	72,310	305,036
	Updated gross estimates at 30 June 2020									
E.	Revised gross estimates at 30 June 2020 (c)	60,380	59,424	22,133	21,186	22,454	6,577	6,381	73,224	271,758
F.	= E - D	-19,081	4,117	-4,882	-6,851	-3,118	-1,693	-2,685	914	-33,277
	Change 01 July 2019 to 30 June 2020									
G.	Proportion of change attributable to									
	Changes in real rates of return	-416	-473	-237	-259	-202	-75	-79	-725	-2,465
	Change in experience	-18,252	-970	-1,666	-5,416	-631	-113	-1,091	2,070	-26,069
	Change in actuarial assumptions	-413	5,560	-2,978	-1,176	-2,285	-1,506	-1,515	-431	-4,743
H.	Gross amount incurred and outstanding for 2019/20 accident year (e)									83,142
I.	= E + H									354,901
	Total gross outstanding liability, excluding expenses at 30 June 2020									

Notes: (a) from appendix C4 of our previous report dated 17 March 2020

(b) calculated using 0.97% p.a. being the one year forward rate from section 6.1 of our previous report dated 17 March 2020

(c) from appendix C4 of this report.

The table shows that:

- Overall estimates show a release of reserves of $33.3 million, which is 8.6% of the opening 30 June 2019 estimates. This decrease is made up by:
  - $26.1 million release (6.7% of opening estimates) due to change in actuarial assumptions
  - $4.7 million decrease (1.2%) due to change in experience
  - $2.5 million decrease (0.6%) due to the increase in the real rates of return
- The increase in real rates of return is due to a decrease in inflation rates more than offsetting the decrease in discount rates, as described in Section 6.1
- The change in experience is due to releases for most accident years as the claim's development has been favourable and better than expected, especially for 2019
- The release due to actuarial assumptions for 2012 to 2015 is due to shifting blend towards PCE method, details discussed in section 6. This is partially offset by the $5.6 million strain for 2018, where we increased the assumptions to reflect the higher claims experience and slower finalisations.

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 2020 ($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	3,925	0	3,925	235	4,160	1,040	5,200

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 2020 is $5.2 million, which is $0.1 million (2.8%) lower than the $5.3 million provision as at 30 June 2019.

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 2020 ($000s)				
Accident year ending 30 Jun	Self-insurers' estimate (a)	PwC estimate (b)	Difference ($000s) (b) - (a)	Difference (%) (b) / (a) - 1
2014 & earlier	189	216	27	14.5%
2015	9	6	-3	-28.6%
2016	43	47	4	9.9%
2017	353	365	11	3.2%
2018	1,179	974	-205	-17.4%
2019	804	707	-97	-12.1%
2020	1,689	1,845	156	9.2%
Total	**4,267**	**4,160**	**-106**	**-2.5%**

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

This comparison shows that our net central estimate is lower than the self-insurers' estimate by $0.1 million (2.5%). This is largely due to the lower estimate for the 2018 and 2019 accident years, partially offset by 2020 year.

Self-insurer funding ratio

For self-insurers, the funding ratio compares the self-insurers' bank guarantee provision (the central estimate times 1.5) 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	6,400	4,160	-2,240	154%

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

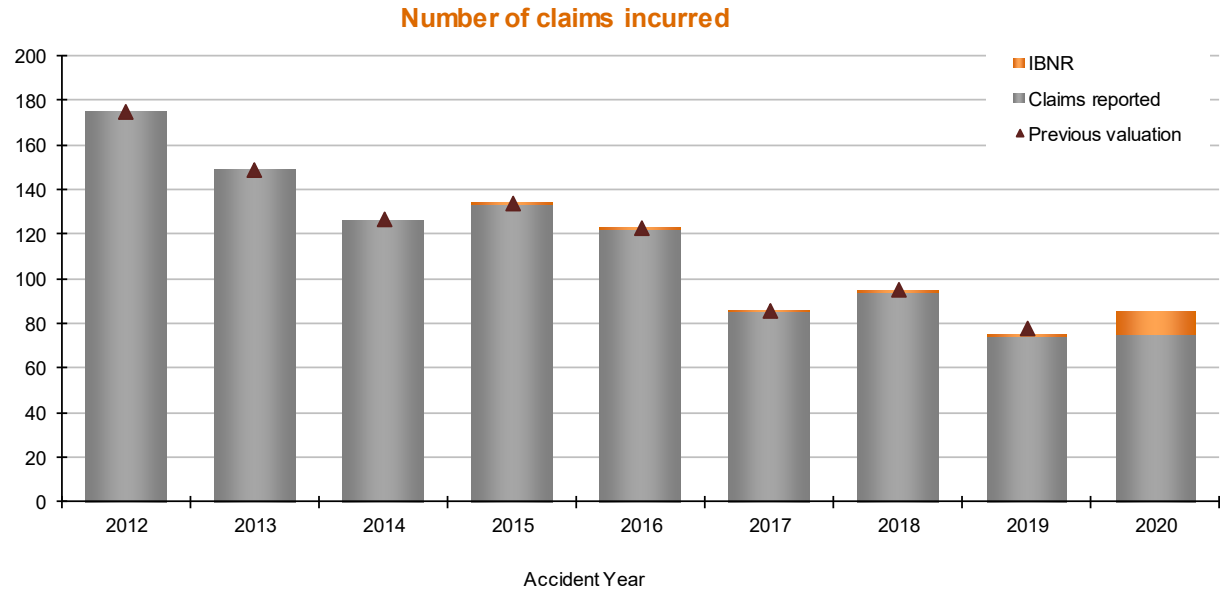
The aggregate funding ratio is 154%, which is higher than 138% as at 30 June 2019. This indicates that the current bank guarantee provisions held by self-insurers in aggregate are likely to be adequate to cover future claims costs.

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 2012 peak to 2020 at 85 claims



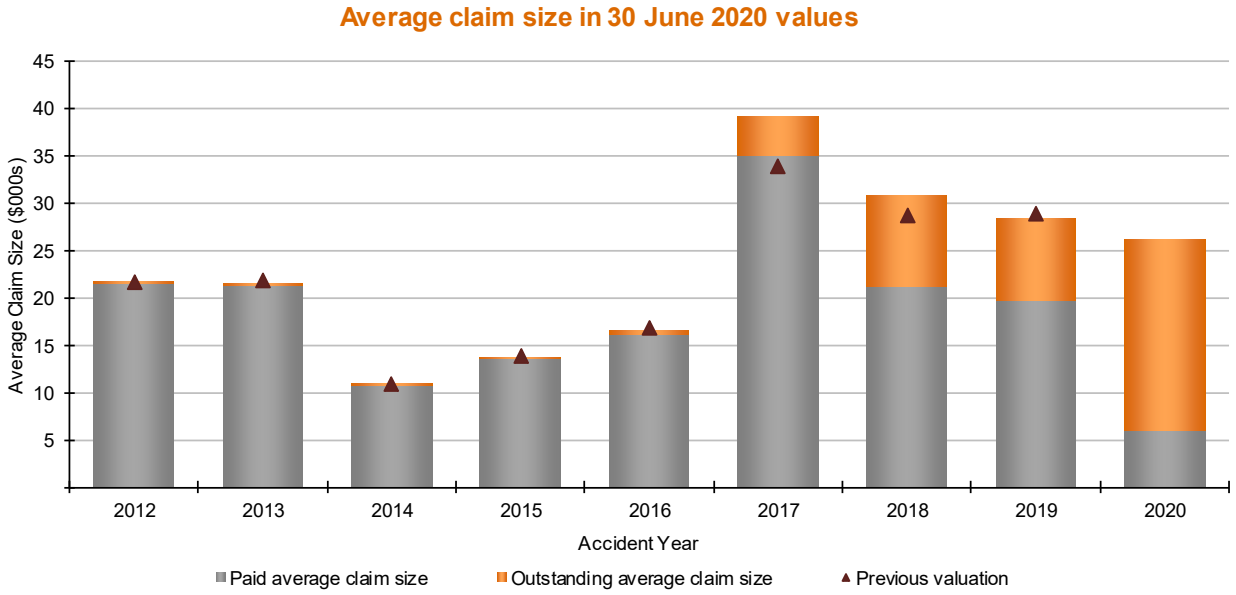
The main points to highlight from this chart are:

- Since the high in 2012, 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 75 and 94.

- For 2020, number of claims incurred increased to 85, of which 10 are IBNR claims
- The numbers of claims are similar to estimates at the previous valuation, however 2019 is slightly lower.

3.2.2 Gross average claims size

2020 average claim size is estimated to be $26,088, which is lower than 2017 to 2019



The average claim size has been volatile between accident years and there has been no discernible trend. From 2012 to 2016, the average claim size has ranged been between $10,000 and $21,500, with lows in 2014 surrounding highs in 2012 and 2013.

Our estimated average claim size for the 2017 accident year is significantly higher than our previous valuation due to higher than expected payments and case estimate development over the year due to multiple large claims.

Our estimated average claim size for the 2020 accident year is just over $26,000, which is lower than the 2017 to 2019 accident years due to lower 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 accident year, where a high proportion (77%) of the average claim size consists of the uncertain future estimate.

3.3 Actual vs expected claims experience over 2019/20

Actual experience compared to the expected experience over 2019/20 for claims incurred up to 30 June 2019 showed:

- Claim reports were fewer than expected (6 actual compared to 9.1 expected)
- Claim payments were significantly higher than expected ($2.40 million actual compared to $1.73 million expected).

The expected experience is taken from our previous report dated 17 March 2020. 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 2019.

Reconciliation of gross actuarial estimates, excluding expenses ($000s)									
Accident year ending 30 June ($000s)	2019	2018	2017	2016	2015	2014	2013	2012 & earlier	Total
A. Gross estimates at 30 Jun 2019 (a)	1,596	1,200	957	161	20	11	48	5	3,999
B. Gross payments 1 July 2019 to 30 June 2020	807	464	1,054	75	0	0	0	19	2,419
C. Expenses (b)	0	0	0	0	0	0	0	0	0
C. Assumed investment return (b)	12	9	4	1	0	0	0	0	27
D. = A - B + C Updated gross estimates at 30 June 2020	801	745	-93	87	20	11	49	-14	1,606
E. Revised gross estimates at 30 June 2020 (c)	667	919	344	45	6	3	3	198	2,184
F. = E - D Change 1 July 2019 to 30 June 2020	-134	174	437	-43	-14	-8	-46	212	578
G. Proportion of change attributable to									
Changes in real rates of return	-1	0	0	0	0	0	0	-1	-3
Change in experience	-100	-226	423	-63	-13	-7	-46	205	173
Change in actuarial assumptions	-32	400	13	21	-1	-1	-1	8	407
H. Gross amount incurred and outstanding for 2019/20 accident year (c)									1,741
I. = E + H Total gross outstanding liability, excluding expenses at 30 June 2020									3,925

Notes: (a) from appendix F4.4 of our previous report dated 17 March 2020

(b) calculated using 0.97% p.a. being the one year forward rate from section 6.1 of our previous report dated 17 March 2020

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

The table shows that:

- Overall estimates show a strain on reserves of $0.58 million, which is 14.5% of the opening 30 June 2019 estimates. This strain is made up of:
  - $0.41 million strain (10.2% of opening estimates) due to changes in actuarial assumptions
  - $0.17 million strain (4.3%) due to change in experience
  - Partially offset by $0.03 million release (0.1%) due to increase in the real rates of return.
- The biggest cause of the strain is the 2017 accident year, which increased due to higher than expected payments and case estimate development over the year due to multiple large claims.
- The strain for 2012 and earlier is due to one claim having a large increase in estimates over the year.

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:

	Calculated break even premium							Actual premium			
Accident year	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)
2020	6,070,512	6,454,759	105,570	4,501	23,377	133,521	2.1%	130,450	136,965	2.1%	3,443
2019	6,795,244	6,835,195	110,208	4,701	20,885	136,123	2.0%	136,137	136,048	2.0%	-75
2018	7,837,775	7,832,821	150,338	5,534	22,548	179,258	2.3%	140,831	140,831	1.8%	-38,426
2017	7,279,841	7,279,841	107,488	4,489	20,653	133,168	1.8%	130,885	130,885	1.8%	-2,283
2016	6,833,594	6,833,594	105,758	4,163	20,086	130,640	1.9%	130,179	130,179	1.9%	-461
2015	6,582,845	6,582,845	110,156	4,558	20,288	135,828	2.1%	136,816	136,816	2.1%	988
2014	5,929,595	5,929,595	90,323	4,775	17,098	112,901	1.9%	138,578	138,578	2.3%	25,677
2013	5,199,017	5,199,017	91,738	3,697	15,016	111,214	2.1%	124,326	124,326	2.4%	13,112
2012	4,633,724	4,633,724	72,927	2,864	14,015	90,857	2.0%	99,113	99,113	2.1%	8,257

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

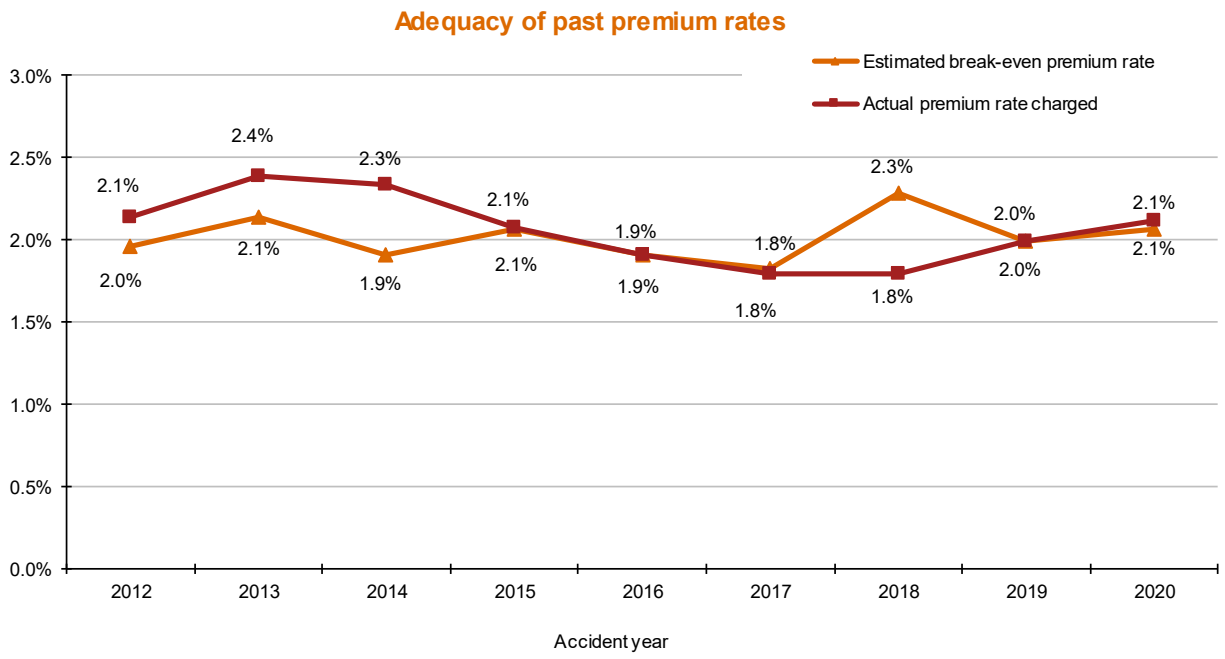
(g) = (f) / (b)

(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 2020 developed premiums charged of $137.0 million were $3.4 million (2.6%) higher than the estimated break-even premiums of $133.5 million.



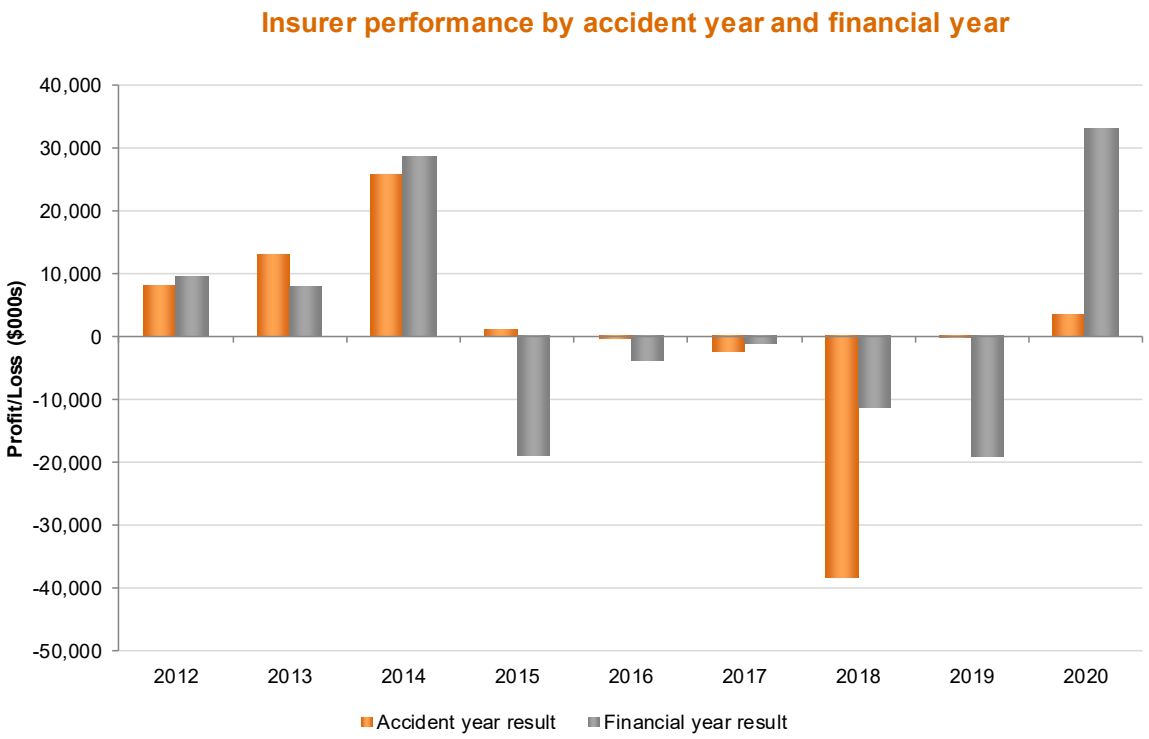
The key points to highlight from the above chart and table may be summarised as follows:

- The actual premium rate charged from 2012 to 2015, ranges between 2.0% and 2.4%/
- 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 2.0% over 2016 to 2019.
- For 2020, actual premium rate charged had increased to 2.1% and it is similar to the estimated break-even premium rate of 2.1% for the year
- With hindsight, the actual premium rate charged is estimated to have been more than sufficient to cover the break-even cost for accident years 2012 to 2014. Subsequently, the actual premiums were similar to estimates of break-even rates for 2015 through to 2020 year, with the exception of the 2018 year where actual was less than sufficient.

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.

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)
2021	6,590,309	111,860	28,271	140,208	2.1%
2020	6,454,759	105,570	27,878	133,521	2.1%
2019	6,835,195	110,208	25,586	136,123	2.0%
2018	7,832,821	150,338	28,082	179,258	2.3%
2017	7,279,841	107,488	25,142	133,168	1.8%
2016	6,833,594	105,758	24,248	130,640	1.9%

Notes: (a) 2021 = developed wageroll for 2020 x (1 + 2.1%)

(b) 2021 = adopted claims incurred x adopted average claim size in 30 June 2020 values x (1 + wage inflation) x (1 + superimposed inflation) x inflation/discounting factor

1,970 x 52,984 x (1 + 2.1%) x (1 + 3.1%) x 1.0181

(c) = (b) / (1 – commission rate (3.6%) – other expense rate (16.6%)) – (b)

(d) = (b) / (1 – commission rate (3.6%) – other expense rate (16.6%)) x (1 + interest rate (0.2%)) ^ (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 2021 underwriting year is reliant on three key items:

- Actual wages are forecast to increase at 2.10%, 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 2020 values, commission rate and other expense rate) are shown in Appendix H.

We considered the economic indicators in the 2020/21 Northern Territory budget report, in adopting the assumptions for the 2020 break-even premium rate.

The adopted average claim size includes an allowance for a 2.4% reduction for the 2015 legislative changes (including death benefit increases). 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 2020
  - 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 2020 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 four insurers and five self-insurers, which are active in the scheme. These nine 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
- Coles Supermarkets Australia Pty Ltd
- Wesfarmers Retail Holdings Pty Ltd
- Westpac Banking Corporation
- Woolworths Supermarkets.

We have not included Government Self Insurance or uninsured data. The total of nine companies over the financial year of 2020 is the same as 2019.

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. We have used the total payments from Report 4 for development year 10+ and have spread the payments in the tail across payment types based on the distribution of payments in development years eight and nine
- 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

To enhance the quality of future reviews we suggest the following data enhancements:

- For report 4, split the total payments triangle into different payment types. Currently we estimate what proportion of payments relate to each payment type based on the proportions paid in development year's seven to nine.

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.

In addition, this 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 2020, 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 2020. 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 2020/21, 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 2019/20 developed wages inflated by one 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 2020	Inflation rate 30 Jun 2020	Real rate 30 Jun 2020	30 Jun 2019
1	0.22%	2.10%	-1.88%	-1.30%
2	0.29%	0.80%	-0.51%	-1.34%
3	0.42%	0.60%	-0.18%	-1.36%
4	0.58%	1.90%	-1.32%	-1.20%
5	0.76%	1.87%	-1.11%	-1.03%
6	0.97%	1.84%	-0.87%	-0.83%
7	1.22%	1.81%	-0.60%	-0.58%
8	1.49%	1.78%	-0.29%	-0.31%
9	1.78%	1.76%	0.02%	-0.06%
10	2.02%	1.73%	0.30%	0.16%
11	2.21%	1.70%	0.51%	0.35%
12	2.34%	1.67%	0.67%	0.51%
13	2.42%	1.64%	0.78%	0.65%
14	2.44%	1.61%	0.83%	0.75%
15	2.43%	1.58%	0.85%	0.83%
16	2.42%	1.55%	0.87%	0.90%
17 & onwards	2.42%	1.52%	0.90%	0.90%

For this valuation, there has been an increase in the real rate of return for most years, so the overall impact is to decrease the liabilities. This is because the decrease in inflation rates are more than the reductions in discount rates.

The interest rate for one quarter of DY0 ((1 + 0.22%) ^ 0.25 – 1) = 0.06% 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, Vocactional Rehabilitation, Non-Compsenation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	Total
30 Jun 20	3.1%	5.0%	3.4%	1.6%	5.0%	2.7%	3.1%
30 Jun 19	2.8%	4.5%	3.3%	0.9%	4.1%	2.7%	2.9%

In total, our superimposed inflation estimate of 3.1% p.a. is 0.2% more than the 2.9% p.a. adopted for the previous valuation. Our estimate of superimposed inflation is higher or on par to the previous valuation for all payments type.

Due to the volatility for redemptions and non-economic lump sums, we also reviewed the calculation if we were to exclude claims with cumulative payments over $1 million when calculating the superimposed inflation assumption. This approach was previously introduced as it reduces the volatility, in order to better assess the underlying superimposed inflation rate for the payment group.

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, a decrease from the 7% assumed in the previous valuation

Commission and other expenses[1]

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 three years to set the commission rate, as a proportion of earned premium, and a three year average for the other expense rate, as a proportion of written premium, as follows:

($000s)	Underwriting year					
	2020	2019	2018	2017	2016	Adopted
Gross written premiums (a)	125,789	142,690	135,842	134,286	114,332	
Earned premiums (a)	122,529	144,321	146,280	126,442	119,514	
Commission (a)	4,501	4,701	5,534	4,489	4,163	
Other expenses (a)	23,402	20,986	22,760	20,821	20,282	
Commission rate (b)	3.7%	3.3%	3.8%	3.6%	3.5%	3.6%
Expense rate (c)	18.6%	14.7%	16.8%	15.5%	17.7%	16.6%

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.

[1] Other expenses include claims handling expenses

Compared to the previous valuation, the adopted commission rate has increased from 3.5% to 3.6%, and the other expense rate has increased from 15.6% to 16.6%. The increase in the commission and other expense rate is due to higher expenses for the 2020 year, in addition to the reduction in premium.

In total, the commission and other expense rate make up 20.2% of the break-even premium rate, which is lower than the 19.2% adopted for the 30 June 2019 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 none of them have allowed for any reinsurance recoveries. 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% 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% reduction. This has been allowed for in our calculations of the outstanding claims liabilities as at 30 June 2020 for the 2015/16 to 2019/20 accident years and the future costs for the 2020/21 accident year. There is no allowance for the 2015 legislative changes in the outstanding claims liability as at 30 June 2020 for accident years before 2015/16.

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.

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

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	-4.05%
	1% decrease	4.47%
Future inflation rates	1% increase	4.39%
	1% decrease	-4.06%
Adopted claim reporting rates	DY0 rate decrease from 10.81% to 5.40%	-1.05%
Superimposed inflation	1% increase	3.62%
	1% decrease	-3.33%
PPCI and PPAC values	10% increase	8.04%
Finalisation rate	10% decrease	3.66%

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	-1.27%
	1% decrease	1.32%
Future inflation rates	1% increase	1.29%
	1% decrease	-1.27%
Incurred claims	10% increase in IBNR claims	0.43%
	10% decrease in IBNR claims	-0.43%
Superimposed inflation	1% increase	0.75%
	1% decrease	-0.74%

The percentage change in the outstanding claim provisions as at 30 June 2020 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.

- **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 the 2019 year and a further 11% decrease for 2020. Up to and including the 2017 year, 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.

In the previous valuation we had continued to estimate that the 2018 accident year would be significantly higher than prior years, though the payments and case estimates development over the 2020 financial year were slightly less than expected. Over 2020 financial year, we were still observing several late claims reported for the 2016 and prior accident years (more than expected), which may also relate to people being unable to find alternative work. It could be a few years before the full extent is known.

- **COVID-19**

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

  The outbreak has changed the way of working for a number of businesses with large numbers of employees being asked to work from home to limit the risk of transmitting the virus. A number of work places 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 accident year could be partially due to COVID-19, though the mix of claims may have changed.

  At the point of writing this report, NT WorkSafe has advised us that they had been three COVID-19 related claims (that are not government self-insurer claims), with the latest claim being reported on 10 July 2020. Out of the three claims known, two of these claims have not had any payments made to date with the other claim having had minimal payments (total paid to date on COVID -19 related claims less than of $3,000).

  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 emerge.

  The overall impact of COVID-19 is still unknown for both the outstanding claims liability and projection of 2020/21, and some impacts may offset each other at least to some extent. At this time, we have not made any other adjustments to the valuation parameters or risk margin assumptions.

  This should be borne in mind whenever using the result.

- **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. Aside from the Inpex project and COVID-19 virus discussed above, there may be more general real wage decreases or increases in bad debts for insurers. The 2020/21 Northern Territory budget report refers to soft economic conditions in the short-term with the NT government focussed on creating more job opportunities across the state, which we have reflected in the estimates for the 2020/21 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, particularly as it relates to the high average claim size for insurers for the 2018 accident year due to higher payments and outstanding case estimates to 30 June 2020.

- **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 increased slightly 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 are for 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 2015/16 to 2019/20 accident years and the future costs for the 2020/21 accident year. In separate advice, PwC estimated that there would be a 2.8% reduction in respect of the most significant benefit changes (excluding death benefit increases). In this valuation, we have also allowed for the increase in death and funeral benefits, so the net reduction is 2.4%. We have not estimated the impact of other changes. As the changes are not retrospective, this should not impact outstanding claims liabilities for accident years prior to 2015/16.

  The 2020/21 financial year will be 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. In next year's review we will be able to see what impact this has had.

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

- **2020 legislative amendments**

  Most of the 2020 legislative amendments are not retrospective. They are effective from 29 July 2020 so should not impact the 30 June 2020 outstanding claims liability. It will impact the projections for the 2020/21 accident year. 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 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 silicosis claims reported to date. An Occupational Health and Safety campaign in the NT identified 36 businesses where workers could have potentially been exposed to Silica.

  As at 30 June 2020 and at the time of writing this report, NT WorkSafe has advised us that there were three silicosis claims (that are not government self-insurer claims), of which the total paid on these claims were less than $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.

Appendices

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 0.003%.

Report 2 – Data based on date of accident

We were provided with 10 different files of Report 2 from NT WorkSafe, one for each accident year from 2011. Each of the files contain unit claims data with the following information:

- Unique record identifier

- 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 2020 financial year for each self-insurer to enable us to determine the payments made in 2019/20 relating to the 2010 and earlier accident years.

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
- 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 added this 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 2020 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	Payments				Reports			
year	Form B	WIMS	Differenc ($)	Difference (%)	Form B	WIMS	Differenc ($)	Difference (%)
2020	22,476	22,635	160	0.7%	1,634	1,596	-38	-2.3%
2019	26,224	25,999	-224	-0.9%	194	205	11	5.7%
2018	23,819	24,001	181	0.8%	19	10	-9	-47.4%
2017	12,792	12,820	27	0.2%	6	6	0	0.0%
2016	5,958	5,934	-24	-0.4%	3	5	2	66.7%
2015	5,108	4,537	-571	-11.2%	0	2	2	0.0%
2014	1,909	2,868	960	50.3%	1	0	-1	-100.0%
2013	2,916	2,942	26	0.9%	2	2	0	0.0%
2012	1,195	1,292	97	8.1%	2	2	0	0.0%
2011	825	815	-10	-1.3%	0	0	0	0.0%
2010 & prior	6,603	5,978	-625	-9.5%	6	0	-6	-100.0%
Total	**109,824**	**109,821**	**-3**	**0.0%**	**1,867**	**1,828**	**-39**	**-2.1%**

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	Difference	Difference (%)	Form B	WIMS	Difference	Difference (%)
2020	496	501	5	1.1%	74	75	1	1.4%
2019	793	807	14	1.7%	5	6	1	20.0%
2018	394	464	70	17.9%	0	0	0	0.0%
2017	1,054	1,054	0	0.0%	0	0	0	0.0%
2016	77	75	-2	-2.5%	0	0	0	0.0%
2015	0	0	0	0.0%	0	0	0	0.0%
2014 & prior	17	19	1	8.1%	0	0	0	0.0%
Total	2,832	2,910	78	2.7%	79	81	2	2.5%

The information from Form B for the 2020 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 30 Jun 2020	Inflation rate 30 Jun 2020	Real rate 30 Jun 2020	30 Jun 2019
1	0.22%	2.10%	-1.88%	-1.30%
2	0.29%	0.80%	-0.51%	-1.34%
3	0.42%	0.60%	-0.18%	-1.36%
4	0.58%	1.90%	-1.32%	-1.20%
5	0.76%	1.87%	-1.11%	-1.03%
6	0.97%	1.84%	-0.87%	-0.83%
7	1.22%	1.81%	-0.60%	-0.58%
8	1.49%	1.78%	-0.29%	-0.31%
9	1.78%	1.76%	0.02%	-0.06%
10	2.02%	1.73%	0.30%	0.16%
11	2.21%	1.70%	0.51%	0.35%
12	2.34%	1.67%	0.67%	0.51%
13	2.42%	1.64%	0.78%	0.65%
14	2.44%	1.61%	0.83%	0.75%
15	2.43%	1.58%	0.85%	0.83%
16	2.42%	1.55%	0.87%	0.90%
17 & onwards	2.42%	1.52%	0.90%	0.90%

The 30 June 2020 real rates are higher than the 30 June 2019 rates for most years, so the overall impact is to decrease the liabilities. This is because the decrease in inflation rates are more than the reductions in discount rates.

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

The interest rate for one quarter of DY0 ((1 + 0.22%) ^ 0.25 – 1) = 0.06% 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 2020.

The interest rates are obtained by fitting a curve to the 30 June 2020 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.

The inflation and interest rates are chosen to be consistent with those currently used in our actuarial assessments for long tail classes.

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 inflation on Deloitte Access Economics forecasts for NT as published on NT Treasury's website.

From projection year 17 onwards, we used a long term 'gap' assumption, the inflation rate is set to achieve a real rate of interest of 0.90%. From projection years five to 17, we allow for a steady linear adjustment in the inflation rate to reach the long-term rate.

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:

			Claims escalation factors		
Year to 30-Jun	Mid Quarter AWE	End Quarter AWE	% Change p.a.	For payments	For case estimates
2006	1,016.0	1,016.9		1.681	1.675
2007	1,043.0	1,052.0	3.4%	1.657	1.620
2008	1,107.4	1,114.0	5.9%	1.570	1.529
2009	1,150.9	1,158.6	4.0%	1.498	1.470
2010	1,224.2	1,235.3	6.6%	1.427	1.379
2011	1,289.3	1,311.1	6.1%	1.340	1.299
2012	1,408.6	1,410.8	7.6%	1.236	1.208
2013	1,449.3	1,449.2	2.7%	1.193	1.176
2014	1,417.2	1,426.3	-1.6%	1.186	1.194
2015	1,513.5	1,523.3	6.8%	1.158	1.118
2016	1,569.7	1,586.6	4.2%	1.096	1.074
2017	1,616.5	1,624.3	2.4%	1.051	1.049
2018	1,668.5	1,662.2	2.3%	1.032	1.025
2019	1,690.3	1,689.0	1.6%	1.024	1.009
2020	1,701.6	1,703.7	0.9%	1.007	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.

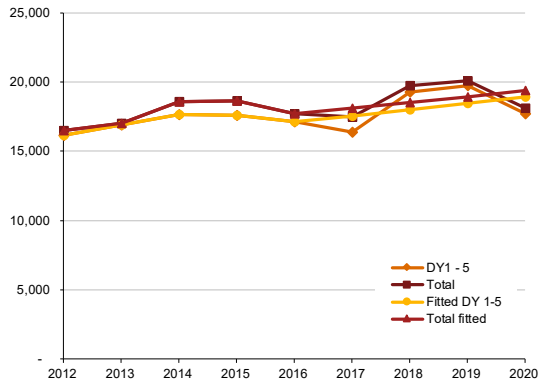
The recent trends in real growth, i.e. superimposed inflation, are shown in the charts below.

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

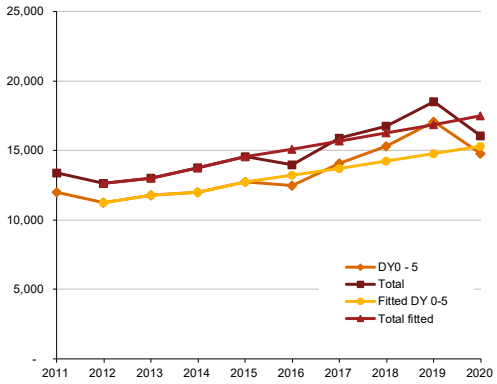
Superimposed Inflation - averaging periods (years)						
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum
PPAC/PPCF	5	6	9	5	8	8
PPCI	6	9	9	5	8	9

Weekly benefits

PPAC

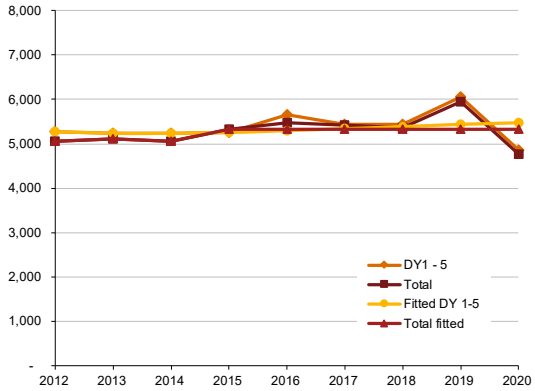


PPCI

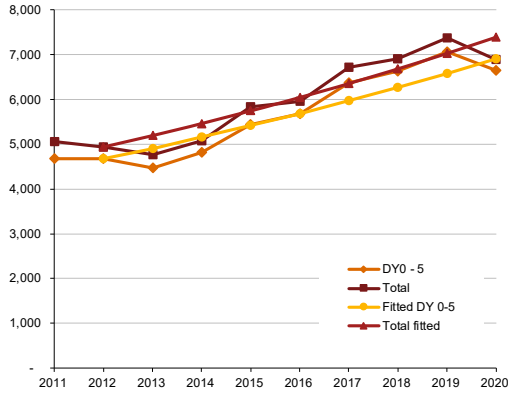


Medical and hospital

PPAC

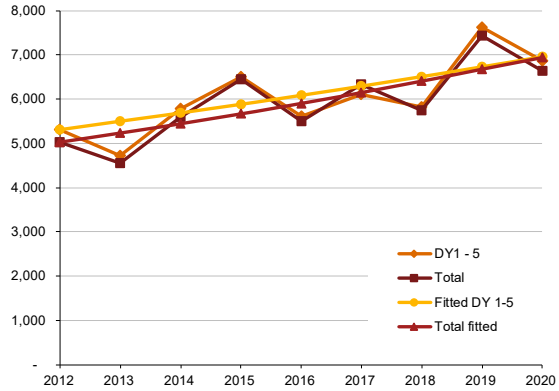


PPCI

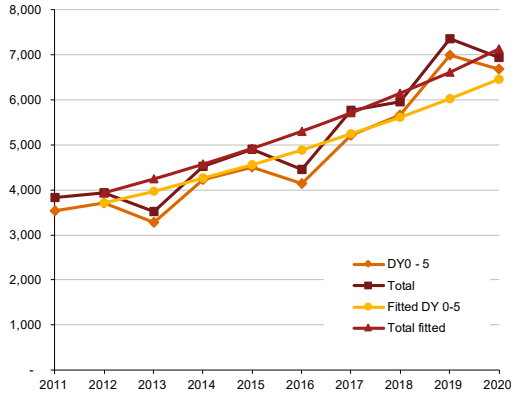


Allied health, vocational rehabilitation, non-compensation other and death

PPAC

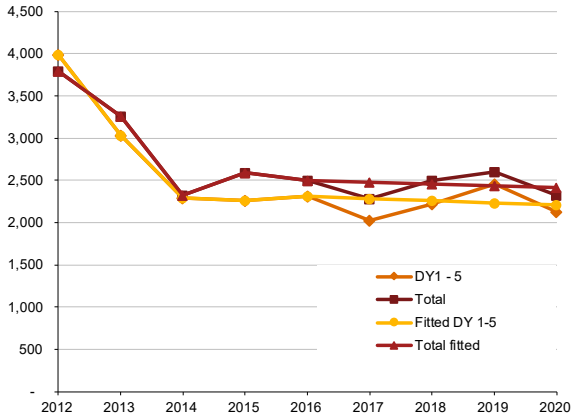


PPCI

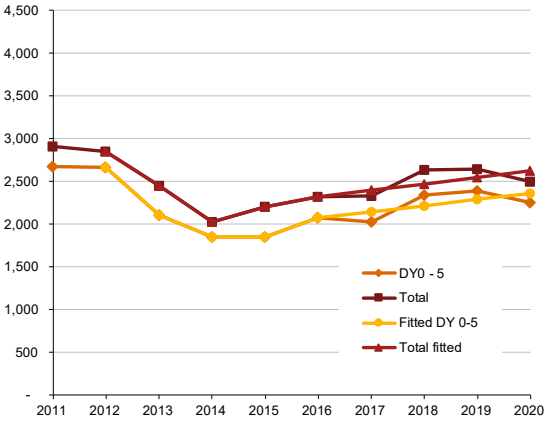


Other goods and services

PPAC

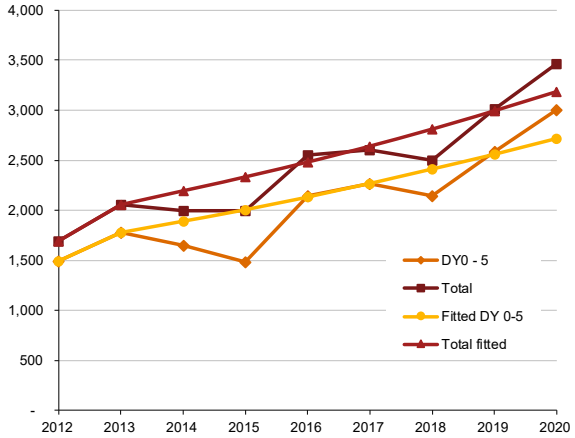


PPCI

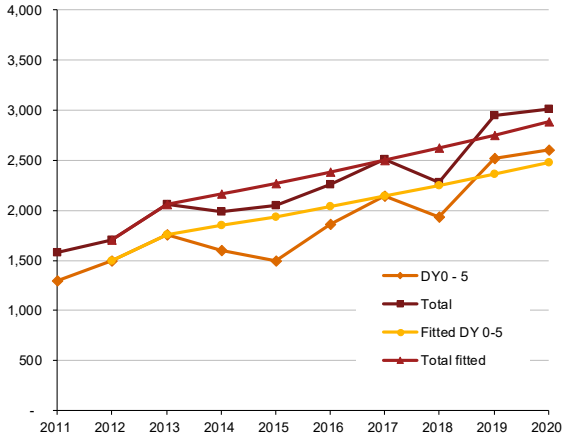


Legal

PPCF

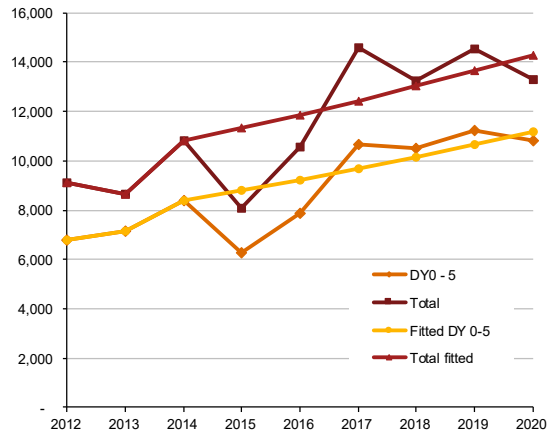


PPCI

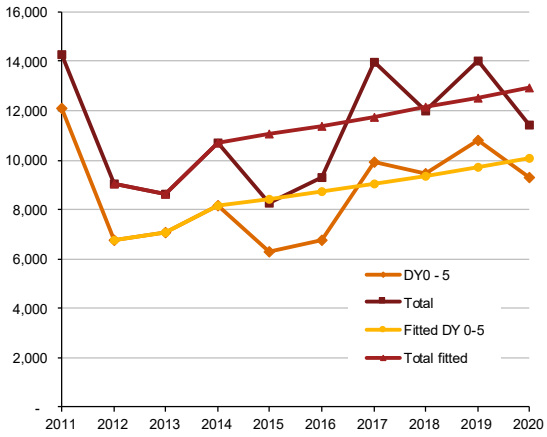


Redemptions and non-economic lump sum

PPCF



PPCI



The above graphs for Redemptions and Non-Economic Lump Sum payment group we have excluded claims with cumulative payments to date over $1 million. This has been done to try to reduce the volatility to find a true underlying superimposed inflation rate for the payment group.

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

Superimposed Inflation	Weekly Benefits	Medical And Hospital	Allied Health, Vocactional Rehabilitation, Non-Compsenation Payments	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	Total
PPAC/PPCF	2.6%	5.0%	3.4%	0.0%	5.0%	2.6%	
PPCI	3.7%	5.0%	3.4%	3.5%	5.0%	2.7%	
30 Jun 20	3.1%	5.0%	3.4%	1.6%	5.0%	2.7%	3.1%
30 Jun 19	2.8%	4.5%	3.3%	0.9%	4.1%	2.7%	2.9%

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. For Medical and Hospital and Legals, we adopted the PPCI superimposed inflation for the PPAC/PPCF methods while for Allied health, Vocational Rehabilitation, Non-Compensation payments (other) and Death we adopted the PPAC superimposed inflation for the PPCI method.

In total, our superimposed inflation estimate of 3.1% p.a. is a 0.2% increase on the 2.9% p.a. adopted for the previous valuation. Our estimate of superimposed inflation is higher or on par with the previous valuation for all payment type.

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

B 3 Expenses

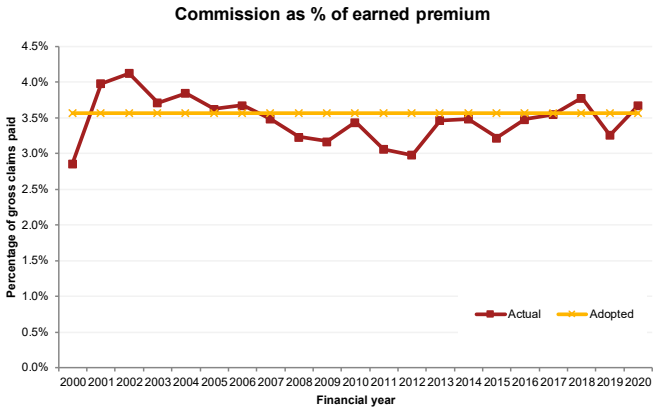
Claims handling expenses

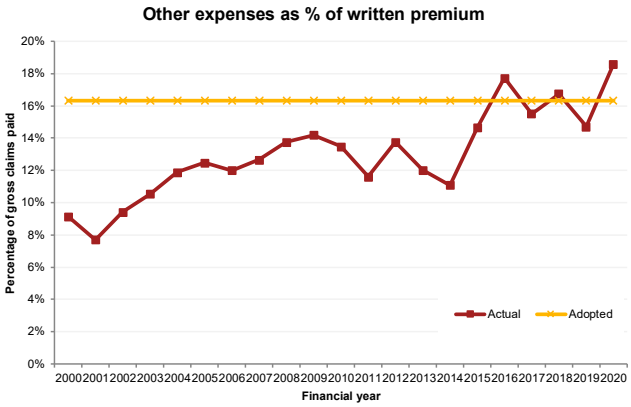
We have reviewed the allowances made for claims handling expenses in the insurers' and self-insurers' returns provided to us, and used our knowledge and experience of other workers compensation schemes in Australia to set the following claims handling expense assumptions for use in the outstanding claims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

- 6% of projected future claim payments for insurers, as per previous valuation
- 6% of projected future claim payments for self-insurers, a decrease from the 7% assumed in 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 the 2020 year have also increased, which combined with the decrease in premium has caused the other expense ratio to increase significantly for 2020.

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

($000s)	Underwriting year					
	2020	2019	2018	2017	2016	Adopted
Gross written premium (a)	125,789	142,690	135,842	134,286	114,332	
Earned premium (b)	122,529	144,321	146,280	126,442	119,514	
Commission paid (c)	4,501	4,701	5,534	4,489	4,163	
Other expenses (d)	23,402	20,986	22,760	20,821	20,282	
Commission rate (e)	3.7%	3.3%	3.8%	3.6%	3.5%	3.6%
Other expense rate (f)	18.6%	14.7%	16.8%	15.5%	17.7%	16.6%

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 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 has increased from 3.5% to 3.6%, and the adopted other expense rate has increased from 15.6% to 16.6%. The increase in the commission and other expense rate is due to higher expense ratios for the 2020 financial year, as other expenses increased and premiums reduced over the year.

The actual 2020 financial year commission and other expenses rates are higher than we had adopted in our projections last year.

In total, the commission and other expense rate make up 20.2% of the break-even premium rate, which is higher than the 19.2% adopted for the 30 June 2019 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.

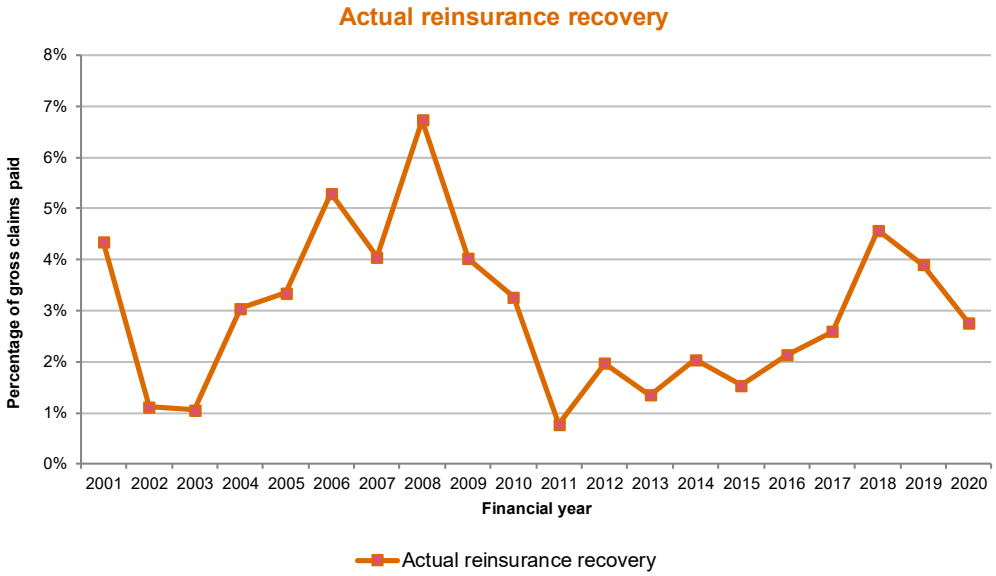
We reviewed the self-insurers' reports and as none of them allowed for any reinsurance recoveries, we have not allowed for any reinsurance recoveries for self-insurers.

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) (%)
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%

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

(c) = (b) / (a)



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.

Our 2014 report, estimated 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 has been allowed for in our calculations of the outstanding claims liabilities as at 30 June 2020 for the 2015/16 to 2019/20 accident years and the future costs for the 2020/21 accident year. There is no allowance for the 2015 legislative changes for accident years before 2015/16.

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.

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

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 three year averages of the development of wages, with development year 3 assuming no more development. The development factor is slightly higher than last year for DY0 but lower for DY1 and 2.

Earned wages development factors			
Development year	2020	2019	2018
0	1.057	1.054	1.035
1	1.007	1.009	1.016
2	0.999	1.002	1.006
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 three year averages of the development of premium, with development years 2 and 3 assuming no more development. The development factor is slightly lower than last year for DY0 and DY1.

Earned premium development factors			
Development year	2020	2019	2018
0	1.051	1.056	1.040
1	0.999	1.013	1.028
2	1.000	1.000	1.000
3	1.000	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	Number of claims reported (a) for development year:										
Year	0	1	2	3	4	5	6	7	8	9 10 onwards	Total
2011	2,385	240	18	6	2	1	1	0	0	0 3	2,656
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

Note: From summary of Form B returns up to 30 June 2020

C 1.2 Cumulative claims reported

Financial	Cumulative number of claims reported (a) for development year:										
Year	0	1	2	3	4	5	6	7	8	9	10
2011	2,385	2,497	2,609	2,726	2,469	2,712	2,751	2,572	2,866	2,896	2,867
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

Note: Cumulative claim reports from table above

C 1.3 Active claims

Financial	Active claims (a) at the end of development year:										
Year	0	1	2	3	4	5	6	7	8	9 10 onwards	Total
2011	778	238	112	70	42	31	29	19	22	12 87	1,440
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

Note: From summary of Form B returns up to 30 June 2020. Active claims were provided for the first time at 30 June 2010

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
2011	15,299	18,856	13,739	9,562	7,328	7,050	1,695	1,446	3,003	2,297	3,724	83,999
2012	16,950	19,028	12,645	9,217	6,019	6,525	2,406	2,350	1,204	2,307	4,390	83,040
2013	18,470	22,405	11,394	7,690	16,149	3,794	2,519	661	726	1,124	4,351	89,283
2014	19,227	24,255	9,748	10,448	6,810	5,760	3,421	4,773	1,958	476	5,031	91,907
2015	19,189	24,961	15,515	9,393	3,877	4,146	3,315	2,818	1,704	1,546	5,971	92,435
2016	21,206	24,629	15,443	14,449	5,196	4,979	2,903	2,253	4,170	2,208	4,794	102,230
2017	23,601	30,349	20,541	12,743	7,258	5,034	5,829	2,783	1,629	2,446	9,709	121,921
2018	26,879	31,664	19,222	15,753	8,432	3,474	2,472	1,126	2,207	1,180	8,246	120,655
2019	24,926	43,705	20,501	11,979	9,568	5,423	5,713	2,154	1,360	1,418	7,978	134,724
2020	22,635	25,999	24,001	12,820	5,934	4,537	2,868	2,942	1,292	815	5,978	109,821

Note: Data extracted from the WIMS system up to 30 June 2020

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

Note: From summary of Form B returns up to 30 June 2020. Case estimates were provided for the first time at 30 June 2014

C 2 Actual and projected claims experience during 2019/20

This section compares the actual experience over the 2020 financial year with the expected experience based on the previous scheme valuation as at 30 June 2019.

C 2.1 Number of claims reported

Accident year ended 30 June	Number of claims reported Combined total Actual (a)	Projected (b)	Actual / expected (c)
2019	194	225	86%
2018	19	18	108%
2017	6	9	64%
2016	3	2	133%
2015	0	2	0%
2014	1	1	80%
2013	2	0	948%
2012	2	0	496%
2011	0	0	0%
2010 and earlier	6	1	526%
Total	**233**	**259**	**90%**

Notes: (a) Extracted from the WIMS database to 30 June 2020

(b) Derived using the reporting rates in Appendix C3.1 of our previous scheme report dated 17 March 2020

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

C 2.2 Proportion of claims finalised

Accident year ended 30 June	Proportion of claims finalised (a) during 2019/20 Actual	Projected (b)	Actual / expected (c)
2019	75%	75%	100%
2018	53%	58%	92%
2017	63%	55%	116%
2016	45%	41%	110%
2015	30%	36%	84%
2014	35%	30%	116%
2013	33%	19%	173%
2012	17%	20%	82%
2011	9%	20%	44%
2010 and earlier	9%	20%	46%
Total	**62.3%**	**64.5%**	**97%**

Note: (a) Defined as:

$$\frac{\text{number of claims finalised during the year}}{\text{number outstanding at beginning of year + number reported during the year}}$$

(b) According to claim finalised per handled rate in appendix C3.1 of previous scheme report dated 17 March 2020. 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

Accident year ended 30 June	Amount of claim payments during 2019/20 Combined total ($000) Actual (a)	Projected (b)	Actual / expected (c)
2019	25,999	37,574	69%
2018	24,001	27,464	87%
2017	12,820	12,077	106%
2016	5,934	8,594	69%
2015	4,537	5,297	86%
2014	2,868	2,893	99%
2013	2,942	2,442	120%
2012	1,292	1,564	83%
2011	815	828	98%
2010 and earlier	5,978	13,937	43%
Total	**87,186**	**112,670**	**77%**

Notes: (a) Extracted from the WIMS database to 30 June 2020

(b) From previous scheme report dated 17 March 2020, in 30 June 2020 values

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

C 2.4 Case estimate development

Accident year ended 30 June	Case estimate development during 2019/20 Actual	Projected (a)	Ratio of actual to projected number reported %
2019	1.231	1.354	91%
2018	1.123	1.231	91%
2017	1.140	1.210	94%
2016	1.037	1.196	87%
2015	1.052	1.074	98%
2014	1.473	1.139	129%
2013	1.142	1.213	94%
2012	0.918	1.070	86%
2011	1.153	1.042	111%
2010 and earlier	1.051	1.010	104%
Total	**1.128**	**1.193**	**95%**

Notes: (a) according to PCE model in Appendix C4 of our previous scheme report dated 17 March 2020

(b) according to estimates adopted in Appendix D4 of our previous scheme report dated 17 March 2020.

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
2011	1.106	1.007	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.001
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
Adopted (b)	**1.108**	**1.008**	**1.003**	**1.001**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.001**

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

(b) Adopted for 30 June 2020 valuation

Numbers of claims incurred

Financial Year	Number of claims Reported to 30 June 2020 (a)	IBNR at 30 June 2020 (b)	Incurred (c)
2008	2,731	0	2,731
2009	2,619	0	2,619
2010	2,531	0	2,531
2011	2,665	2	2,667
2012	2,627	2	2,629
2013	2,779	3	2,782
2014	2,748	4	2,752
2015	2,646	5	2,651
2016	2,534	6	2,540
2017	2,413	8	2,421
2018	2,405	16	2,421
2019	2,176	31	2,207
2020	1,634	202	1,836

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
2011	0.674	0.762	0.568	0.493	0.447	0.340	0.171	0.321	0.000	0.143	0.155
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
Adopted (b)	**0.572**	**0.745**	**0.586**	**0.575**	**0.433**	**0.368**	**0.338**	**0.230**	**0.188**	**0.205**	**0.160**

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

(b) Adopted for 30 June 2020 valuation

C 3.2 Weekly benefits

Claim payments

Financial	Claim payments (a) for development year:											
Year	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	7,024,526	8,365,356	2,792,467	2,222,666	1,470,556	1,455,385	512,217	523,367	686,608	257,529	930,911	26,241,588
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	1,097,437	26,904,414
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	1,087,873	29,197,504
2014	8,077,186	10,398,348	3,401,196	2,381,386	2,125,933	1,102,380	1,214,201	678,973	358,515	389,871	1,257,652	31,385,641
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	1,492,865	33,944,435
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	1,198,424	33,656,817
2017	9,854,403	13,155,992	5,918,120	2,681,584	1,987,221	649,422	520,104	558,092	441,730	423,495	2,427,261	38,617,424
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	2,061,576	40,602,767
2019	9,971,409	19,098,620	6,699,315	2,510,503	680,402	701,865	677,456	511,424	304,923	211,340	1,994,386	43,361,643
2020	8,133,858	10,644,206	8,359,586	2,545,033	1,180,938	1,179,405	548,182	442,073	396,987	540,906	1,494,537	35,465,711

Notes: (a) Data extracted from the WIMS system up to 30 June 2020. DY10+ using the Report 4 payments

Average real payment per active claim

Financial	Weekly Benefits PPAC (a) for development year:									
Year	1	2	3	4	5	6	7	8	9	10 onwards
2011	14,754	15,532	22,571	26,638	42,410	20,194	25,055	41,834	24,657	12,478
2012	12,038	20,591	19,902	22,443	46,635	25,628	14,917	26,648	30,959	13,702
2013	13,351	19,938	26,518	19,869	33,322	33,959	244	29,651	27,781	13,109
2014	14,607	17,457	25,667	35,007	29,704	38,907	30,961	28,337	33,017	16,033
2015	13,786	22,004	29,088	28,578	29,733	24,587	33,297	42,734	34,972	20,338
2016	13,707	21,222	24,119	25,741	24,147	19,246	20,802	24,909	39,199	19,039
2017	13,727	21,591	20,125	25,777	14,215	22,769	21,718	24,427	23,419	33,121
2018	16,873	21,935	25,562	25,908	19,815	24,318	21,843	15,273	25,199	26,254
2019	19,342	23,984	20,564	9,414	17,110	17,786	27,560	26,017	12,729	26,180
2020	13,055	25,355	24,177	20,155	27,619	22,080	17,806	24,984	49,515	19,050
Adopted (b)	**14,367**	**22,189**	**22,631**	**25,212**	**19,562**	**20,792**	**21,646**	**24,985**	**25,483**	**24,837**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 9% for the 2018 AY to reflect the significantly higher experience to date for these years.

Average real payment per claim incurred

Financial	Weekly Benefits PPCI (a) for development year:											
Year	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	3,530	4,430	1,429	1,091	797	719	249	272	321	119	435	13,393
2012	3,598	3,512	1,936	851	575	792	293	157	196	237	468	12,616
2013	3,776	4,027	1,592	1,289	508	598	467	2	161	140	452	13,013
2014	3,480	4,431	1,534	1,059	996	499	527	325	157	168	578	13,754
2015	3,590	4,664	2,317	1,106	557	529	253	341	432	142	628	14,559
2016	3,774	4,416	2,152	1,257	558	335	266	199	210	301	484	13,951
2017	4,277	5,443	2,346	1,024	750	260	205	232	177	163	1,031	15,908
2018	4,068	6,357	2,427	1,466	640	370	240	115	133	154	779	16,749
2019	4,626	8,077	2,834	1,012	263	261	249	199	117	85	780	18,504
2020	4,460	4,857	3,477	1,059	468	448	201	160	152	204	595	16,080
Adopted (b)	**4,618**	**5,259**	**2,428**	**1,142**	**608**	**335**	**232**	**180**	**158**	**181**	**730**	**15,871**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 16% for the 2018 AY to reflect the significantly higher experience to date for these years.

Estimates from models

Weekly Benefits					
	Estimated outstanding claims				
Accident	claims at 30 June 2020 ($000s) (a)			Weighting	
Year	PPAC	PPCI	Adopted	PPAC	PPCI
2020	20,802	22,808	22,808	0%	100%
2019	13,654	15,036	14,622	30%	70%
2018	12,054	11,758	11,906	50%	50%
2017	4,353	7,062	5,166	70%	30%
2016	4,222	5,631	4,222	100%	0%
2015	4,481	4,799	4,481	100%	0%
2014	3,231	4,180	3,231	100%	0%
2013	3,545	3,586	3,545	100%	0%
2012	2,942	2,860	2,942	100%	0%
2011 & earlier	16,015	11,235	16,015	100%	0%
Total	**85,299**	**88,955**	**88,938**		

Notes: (a) From models described above, in 30 June 2020 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.3 Medical and hospital

Claim payments

Financial	Claim payments (a) for development year:											
Year	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	4,547,728	2,725,107	722,979	478,082	334,251	318,953	124,344	65,743	323,875	142,187	158,910	9,942,159
2012	4,663,450	3,371,278	928,296	474,053	265,961	250,060	137,885	60,493	51,395	158,574	187,337	10,548,782
2013	4,660,439	3,600,075	1,042,539	442,068	197,289	183,961	255,237	28,860	19,463	157,285	185,704	10,772,920
2014	5,386,937	3,829,045	764,401	626,585	314,940	213,159	120,997	185,779	39,070	17,751	214,686	11,713,350
2015	6,205,292	4,218,876	1,173,637	357,145	435,689	255,130	148,729	174,226	296,992	34,874	254,838	13,555,428
2016	6,461,875	4,969,360	1,232,030	423,019	199,841	252,581	151,932	125,883	95,932	50,978	204,576	14,168,007
2017	7,116,091	5,336,488	1,786,388	450,042	348,802	162,028	232,516	64,108	108,095	27,720	414,343	16,046,621
2018	8,065,208	4,679,531	1,499,271	801,131	364,164	372,351	121,715	110,074	113,687	25,397	351,919	16,504,448
2019	7,012,091	6,584,715	1,549,724	428,901	349,840	168,751	307,367	54,339	66,674	29,766	340,450	16,892,618
2020	6,923,160	3,732,216	1,784,200	437,913	188,238	418,987	49,838	180,353	58,474	76,248	255,123	14,104,750

Note: Data extracted from the WIMS system up to 30 June 2020. DY10+ using the Report 4 payments

Average real payment per active claim

Financial	Medical And Hospital PPAC (a) for development year:									
Year	1	2	3	4	5	6	7	8	9	10 onwards
2011	4,806	4,021	4,855	6,055	9,294	4,902	3,147	19,733	13,614	2,130
2012	5,356	4,821	5,232	4,696	7,359	5,498	2,578	3,344	8,910	2,339
2013	5,416	5,839	4,287	3,513	4,479	8,955	1,565	1,548	14,433	2,238
2014	5,379	3,923	6,753	5,186	5,744	3,877	8,472	3,088	1,503	2,737
2015	5,247	4,638	4,136	9,702	6,565	6,379	7,205	13,756	3,671	3,472
2016	6,378	4,841	3,198	3,843	7,483	4,758	5,520	4,572	2,941	3,250
2017	5,568	6,517	3,378	4,524	3,547	10,179	2,495	5,978	1,533	5,654
2018	5,293	5,504	5,437	5,524	7,386	4,829	8,110	5,331	1,637	4,482
2019	6,669	5,548	3,513	4,841	4,114	8,070	2,928	5,689	1,793	4,469
2020	4,578	5,411	4,160	3,213	9,812	2,007	7,264	3,680	6,980	3,252
Adopted (b)	**5,465**	**5,564**	**4,456**	**4,594**	**6,423**	**6,049**	**5,056**	**5,034**	**2,664**	**4,240**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 11% for the 2018 AY to reflect the significantly higher experience to date for these years.

Average real payment per claim incurred

Financial	Medical And Hospital PPCI (a) for development year:											
Year	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	2,286	1,443	370	235	181	158	61	34	151	66	74	5,058
2012	2,192	1,562	453	224	120	125	63	27	25	68	80	4,940
2013	1,998	1,633	466	208	90	80	123	13	8	73	77	4,771
2014	2,321	1,632	345	279	148	96	53	89	17	8	99	5,085
2015	2,711	1,775	488	157	189	117	66	74	139	15	107	5,839
2016	2,789	2,055	491	167	83	104	66	53	39	23	83	5,951
2017	3,089	2,208	708	172	132	65	92	27	43	11	176	6,721
2018	3,436	1,994	609	312	137	138	48	43	46	10	133	6,905
2019	3,253	2,785	656	173	135	63	113	21	26	12	133	7,369
2020	3,796	1,703	742	182	75	159	18	65	22	29	102	6,893
Adopted (b)	**3,476**	**1,980**	**658**	**182**	**113**	**106**	**67**	**42**	**35**	**17**	**125**	**6,801**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 21% for the 2018 AY to reflect the significantly higher experience to date for these years.

Estimates from models

Medical And Hospital					
	Estimated outstanding claims				
Accident	claims at 30 June 2020 ($000s) (a)			Weighting	
Year	PPAC	PPCI	Adopted	PPAC	PPCI
2020	6,398	6,730	6,730	0%	100%
2019	3,272	3,441	3,391	30%	70%
2018	2,753	2,478	2,616	50%	50%
2017	1,008	1,517	1,161	70%	30%
2016	1,025	1,237	1,025	100%	0%
2015	991	958	991	100%	0%
2014	663	767	663	100%	0%
2013	696	625	696	100%	0%
2012	562	473	562	100%	0%
2011 & earlier	3,191	1,851	3,191	100%	0%
Total	**20,559**	**20,079**	**21,025**		

Notes: (a) From models described above, in 30 June 2020 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	Claim payments (a) for development year:											
Year	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	1,618,634	2,839,141	969,159	764,929	342,332	321,059	136,660	81,571	145,650	70,965	192,653	7,482,753
2012	2,528,926	2,491,200	1,288,794	403,986	640,432	507,062	102,063	41,001	58,384	93,257	227,116	8,382,221
2013	2,448,274	2,840,104	1,100,827	468,853	298,929	216,879	143,948	94,135	33,874	30,464	225,137	7,901,424
2014	3,361,212	3,607,837	1,476,898	703,441	351,251	214,183	243,243	65,783	62,260	39,744	260,273	10,386,125
2015	2,555,254	4,054,206	2,099,504	995,769	445,876	386,029	138,582	191,187	166,531	116,635	308,950	11,458,523
2016	2,991,861	3,902,915	1,879,840	796,996	242,575	193,909	140,751	96,043	114,604	118,250	248,015	10,725,759
2017	3,561,486	5,261,045	2,348,993	884,416	387,565	197,411	482,483	165,590	65,307	121,999	502,325	13,978,620
2018	5,266,947	4,862,845	1,866,179	922,244	414,379	201,224	150,338	67,566	76,500	52,431	426,646	14,307,299
2019	4,761,604	7,086,964	2,778,566	759,371	590,528	236,107	157,526	138,496	125,318	65,871	412,741	17,113,092
2020	4,792,636	5,168,353	2,643,517	863,130	265,690	346,715	98,736	102,408	130,428	65,063	309,296	14,785,972

Note: Data extracted from the WIMS system up to 30 June 2020. DY10+ using the Report 4 payments

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
2011	5,007	5,390	7,768	6,201	9,356	5,388	3,905	8,874	6,795	2,582
2012	3,958	6,694	4,459	11,309	14,923	4,070	1,748	3,798	5,240	2,836
2013	4,272	6,165	4,547	5,322	5,280	5,051	5,104	2,694	2,795	2,713
2014	5,068	7,580	7,582	5,784	5,771	7,794	3,000	4,921	3,366	3,318
2015	5,043	8,298	11,531	9,929	9,934	5,944	7,907	7,714	12,278	4,209
2016	5,010	7,386	6,025	4,665	5,745	4,408	4,211	5,462	6,822	3,940
2017	5,489	8,570	6,637	5,027	4,321	21,122	6,444	3,611	6,746	6,854
2018	5,500	6,851	6,259	6,286	3,992	5,965	4,978	3,587	3,380	5,433
2019	7,177	9,947	6,220	8,171	5,756	4,136	7,463	10,693	3,967	5,418
2020	6,339	8,018	8,199	4,535	8,119	3,977	4,125	8,208	5,956	3,942
Adopted (b)	**5,898**	**8,159**	**6,588**	**5,819**	**5,488**	**7,228**	**5,399**	**5,791**	**5,425**	**5,140**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 14% for the 2018 AY to reflect the significantly higher experience to date for these years.

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
2011	814	1,504	496	375	185	159	67	42	68	33 90	3,833
2012	1,189	1,155	629	191	290	253	46	18	28	40 97	3,937
2013	1,050	1,289	492	221	136	95	69	41	15	14 94	3,516
2014	1,448	1,537	666	313	165	97	106	32	27	17 120	4,527
2015	1,116	1,706	874	439	194	177	61	81	78	50 130	4,905
2016	1,291	1,614	749	314	101	80	61	40	46	52 100	4,449
2017	1,546	2,177	931	338	146	79	190	69	26	47 213	5,762
2018	2,244	2,072	758	359	155	75	59	26	31	21 161	5,961
2019	2,209	2,997	1,175	306	228	88	58	54	48	27 161	7,352
2020	2,628	2,358	1,100	359	105	132	36	37	50	25 123	6,953
Adopted (b)	**2,463**	**2,209**	**962**	**341**	**164**	**98**	**51**	**39**	**43**	**24 149**	**6,542**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 40% for the 2018 AY to reflect the significantly higher experience to date for these years.

Estimates from models

Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death					
Accident Year	Estimated outstanding claims claims at 30 June 2020 ($000s) (a)			Weighting	
	PPAC	PPCI	Adopted	PPAC	PPCI
2020	7,420	8,022	8,022	0%	100%
2019	4,224	4,532	4,439	30%	70%
2018	3,330	3,517	3,423	50%	50%
2017	1,080	1,627	1,245	70%	30%
2016	1,067	1,245	1,067	100%	0%
2015	1,102	1,005	1,102	100%	0%
2014	734	873	734	100%	0%
2013	789	749	789	100%	0%
2012	645	574	645	100%	0%
2011 & earlier	3,495	3,467	3,495	100%	0%
Total	**23,886**	**25,611**	**24,961**		

Notes: (a) From models described above, in 30 June 2020 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.5 Other goods and services

Claim payments

Financial	Claim payments (a) for development year:											
Year	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	1,355,576	1,419,816	1,773,413	370,817	199,111	85,453	59,446	48,905	211,722	15,125	158,735	5,698,119
2012	1,624,433	1,487,394	539,124	1,014,463	182,189	779,617	49,111	41,856	18,135	118,795	187,130	6,042,247
2013	1,567,865	1,463,072	610,500	294,071	630,061	166,282	509,228	22,570	12,114	7,029	185,500	5,468,292
2014	1,739,505	1,401,922	430,785	347,657	149,912	187,116	156,222	-13,833	12,821	19,453	214,450	4,646,010
2015	1,546,816	1,683,725	452,168	202,359	316,201	119,758	154,664	240,214	135,516	14,040	254,557	5,120,018
2016	2,050,750	1,969,303	483,693	233,590	95,208	114,752	80,054	92,629	146,768	89,762	204,350	5,560,859
2017	1,847,739	1,838,996	822,753	194,073	112,078	43,362	88,437	47,582	148,294	56,237	413,887	5,613,438
2018	2,431,656	1,758,906	768,950	379,871	119,088	122,482	44,067	56,536	36,721	290,716	351,532	6,360,525
2019	1,832,241	2,301,801	831,808	273,563	224,337	53,408	134,704	61,567	75,089	32,693	340,075	6,161,286
2020	1,867,140	1,265,013	762,113	401,263	142,653	304,963	63,957	160,513	66,505	74,219	254,842	5,363,181

Note: Data extracted from the WIMS system up to 30 June 2020. DY10+ using the Report 4 payments

Average real payment per active claim

Financial	Other Goods And Services PPAC (a) for development year:									
Year	1	2	3	4	5	6	7	8	9	10 onwards
2011	2,504	9,864	3,766	3,607	2,490	2,344	2,341	12,900	1,448	2,128
2012	2,363	2,800	11,196	3,217	22,945	1,958	1,784	1,180	6,675	2,336
2013	2,201	3,419	2,852	11,218	4,048	17,867	1,224	963	645	2,235
2014	1,969	2,211	3,747	2,469	5,042	5,006	-631	1,013	1,647	2,734
2015	2,094	1,787	2,343	7,041	3,082	6,633	9,934	6,277	1,478	3,468
2016	2,528	1,900	1,766	1,831	3,400	2,507	4,061	6,995	5,179	3,246
2017	1,919	3,002	1,457	1,454	949	3,872	1,852	8,201	3,110	5,648
2018	1,989	2,823	2,578	1,807	2,430	1,748	4,166	1,722	18,743	4,477
2019	2,331	2,978	2,241	3,104	1,302	3,536	3,318	6,407	1,969	4,464
2020	1,552	2,311	3,812	2,435	7,142	2,576	6,465	4,185	6,794	3,248
Adopted (b)	**1,984**	**2,683**	**2,299**	**2,119**	**2,971**	**2,876**	**3,950**	**5,418**	**6,897**	**4,235**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. No special allowance was made for AY18.

Average real payment per claim incurred

Financial	Other Goods And Services PPCI (a) for development year:											
Year	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	681	752	908	182	108	42	29	25	99	7	74	2,908
2012	764	689	263	479	82	390	22	19	9	51	80	2,848
2013	672	664	273	139	287	73	246	10	5	3	77	2,448
2014	749	597	194	155	70	85	68	-7	6	8	99	2,024
2015	676	709	188	89	137	55	68	102	63	6	107	2,200
2016	885	814	193	92	40	47	35	39	59	40	83	2,326
2017	802	761	326	74	42	17	35	20	59	22	176	2,334
2018	1,036	750	312	148	45	45	17	22	15	115	133	2,637
2019	850	973	352	110	87	20	50	24	29	13	133	2,641
2020	1,024	577	317	167	57	116	23	58	25	28	101	2,494
Adopted (b)	**915**	**779**	**327**	**117**	**54**	**49**	**32**	**33**	**38**	**43**	**124**	**2,511**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 22% for the 2018 AY to reflect the significantly higher experience to date for these years.

Estimates from models

Other Goods And Services					
	Estimated outstanding claims				
Accident	claims at 30 June 2020 ($000s) (a)			Weighting	
Year	PPAC	PPCI	Adopted	PPAC	PPCI
2020	2,583	3,251	3,251	0%	100%
2019	1,600	2,087	1,941	30%	70%
2018	1,299	1,756	1,528	50%	50%
2017	570	1,111	732	70%	30%
2016	634	993	634	100%	0%
2015	692	875	692	100%	0%
2014	519	792	519	100%	0%
2013	577	685	577	100%	0%
2012	468	528	468	100%	0%
2011 & earlier	2,348	2,279	2,348	100%	0%
Total	**11,292**	**14,359**	**12,692**		

Notes: (a) From models described above, in 30 June 2020 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.6 Legals

Claim payments

Financial	Claim payments (a) for development year:											
Year	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	119,748	435,187	911,353	435,657	327,544	296,488	143,894	73,735	73,122	116,630	181,271	3,114,629
2012	189,595	633,460	574,349	768,389	248,978	705,228	75,826	105,448	52,297	46,709	213,698	3,613,977
2013	188,116	592,132	775,905	604,921	1,139,497	588,270	216,238	139,320	58,533	56,996	211,836	4,571,764
2014	200,375	738,137	873,295	638,026	499,375	640,462	282,056	219,827	80,257	8,704	244,896	4,425,410
2015	143,327	946,238	880,787	499,253	660,560	354,353	344,651	349,078	114,010	181,815	290,697	4,764,769
2016	419,783	899,214	1,217,238	1,156,280	445,297	450,979	136,629	497,577	66,402	13,080	233,362	5,535,841
2017	388,426	1,418,857	1,561,753	1,086,107	482,854	420,027	231,269	88,302	34,962	69,404	472,647	6,254,608
2018	481,374	1,099,085	1,065,066	795,370	953,777	429,932	292,035	76,783	46,549	79,046	401,439	5,720,456
2019	636,594	1,883,256	1,357,164	823,170	1,061,168	311,545	368,218	263,195	54,143	31,269	388,356	7,178,078
2020	370,730	1,308,900	1,881,126	1,016,586	876,809	671,392	316,517	106,366	280,888	58,397	291,023	7,178,734

Note: Data extracted from the WIMS system up to 30 June 2020. DY10+ using the Report 4 payments

Average real payment per claim finalised

Financial	Legals PPCF (a) for development year:										
Year	0	1	2	3	4	5	6	7	8	9	10 onwards
2011	100	766	8,310	8,588	12,913	24,839	32,147	10,982	0	78,167	15,186
2012	151	956	5,680	18,996	12,823	87,173	9,373	9,310	9,235	9,623	13,903
2013	142	864	7,979	12,027	56,639	53,982	32,244	23,743	69,825	16,998	14,865
2014	163	1,005	7,092	11,819	19,099	44,667	37,156	130,314	19,031	5,160	11,614
2015	112	1,110	6,035	12,301	44,995	31,564	99,775	80,845	22,004	210,538	12,022
2016	368	1,165	8,608	17,852	48,812	35,311	14,977	90,904	18,197	2,868	42,634
2017	332	1,537	10,655	14,445	15,854	20,060	20,249	18,556	12,245	24,307	35,472
2018	436	1,296	6,278	9,430	35,137	27,718	43,035	39,602	9,603	16,308	25,881
2019	561	2,110	7,054	10,946	31,044	16,789	26,930	67,371	18,479	10,672	28,403
2020	375	1,730	10,129	14,418	31,532	52,005	35,413	11,901	94,281	58,803	36,631
Adopted (b)	**414**	**1,570**	**8,477**	**13,235**	**29,690**	**28,264**	**26,726**	**42,077**	**28,680**	**28,680**	**28,680**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 44% for the 2018 AY & 29% for the 2019 AY to reflect the significantly higher experience to date for these years.

Average real payment per claim incurred

Financial Year	Legals PPCI (a) for development year: 0	1	2	3	4	5	6	7	8	9 10 onwards	Total
2011	60	230	466	214	177	146	70	38	34	54	85	1,576
2012	89	294	281	363	113	352	35	47	25	20	91	1,709
2013	81	269	347	285	519	257	104	61	25	26	88	2,063
2014	86	315	394	284	234	290	122	105	35	4	113	1,981
2015	63	398	367	220	287	162	152	148	53	78	122	2,050
2016	181	372	485	456	186	185	59	208	27	6	94	2,259
2017	169	587	619	415	182	168	91	37	14	27	201	2,509
2018	205	468	433	310	358	159	115	30	19	31	152	2,279
2019	295	796	574	332	410	116	136	102	21	13	152	2,947
2020	203	597	782	423	348	255	116	38	108	22	116	3,008
Adopted (b)	**235**	**550**	**527**	**353**	**372**	**176**	**122**	**56**	**49**	**22**	**140**	**2,603**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 40% for the 2018 AY & 25% for the 2019 AY to reflect the significantly higher experience to date for these years.

Estimates from models

Legals Accident Year	Estimated outstanding claims claims at 30 June 2020 ($000s) (a) PPCF	PPCI	Adopted	Weighting PPCF	PPCI
2020	4,922	5,177	5,177	0%	100%
2019	5,914	5,913	5,913	30%	70%
2018	6,192	5,201	5,697	50%	50%
2017	1,724	2,717	2,022	70%	30%
2016	1,445	1,798	1,445	100%	0%
2015	1,323	1,338	1,323	100%	0%
2014	853	1,000	853	100%	0%
2013	818	813	818	100%	0%
2012	665	609	665	100%	0%
2011 & earlier	3,462	3,753	3,462	100%	0%
Total	**27,319**	**28,318**	**27,375**		

Notes: (a) From models described above, in 30 June 2020 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: 0	1	2	3	4	5	6	7	8	9 10 onwards	Total
2011	633,217	3,071,083	6,569,632	5,289,766	4,654,321	4,572,384	718,199	652,827	1,562,328	1,694,999	2,101,163	31,519,919
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	2,477,029	27,547,951
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	2,455,443	31,370,960
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	2,838,651	29,350,377
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	3,369,552	23,591,970
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	2,704,967	32,582,977
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	5,478,582	41,410,156
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	4,653,192	37,159,883
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	4,501,538	44,016,854
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	3,373,326	32,922,644

Note: Data extracted from the WIMS system up to 30 June 2020. DY10+ using the Report 4 payments

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
2011	528	5,402	59,906	104,273	183,494	383,060	160,449	97,230	0	1,136,014	176,029
2012	231	5,234	52,899	117,500	175,645	333,595	172,840	154,586	108,433	275,683	161,149
2013	603	7,341	44,263	62,552	634,605	116,486	63,581	63,343	272,809	169,827	172,303
2014	376	5,826	22,748	106,540	128,826	237,319	185,055	2,155,838	333,154	0	134,621
2015	408	3,489	36,600	118,904	50,106	166,998	565,856	245,175	13,215	1,003,251	139,353
2016	473	2,862	36,976	133,530	315,115	246,794	194,971	176,616	883,423	275,520	494,182
2017	712	3,615	55,283	99,038	129,342	170,081	374,266	390,664	290,939	611,783	411,164
2018	982	5,123	47,436	107,751	179,521	86,972	184,396	267,319	331,770	70,364	299,994
2019	628	7,561	37,860	95,521	194,869	212,918	297,479	287,945	250,506	357,402	329,221
2020	555	5,128	46,148	107,158	117,944	125,126	200,379	218,211	120,413	0	424,599
Adopted (b)	**637**	**5,125**	**44,509**	**102,426**	**156,816**	**154,363**	**279,764**	**280,182**	**260,316**	**272,763**	**371,158**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 25% for the 2018 AY to reflect the significantly higher experience to date for these years.

Average real payment per claim incurred

Financial Year	Redemptions And Non-Economic Lump Sum PPCI (a) for development year: 0	1	2	3	4	5	6	7	8	9 10 onwards	Total
2011	318	1,626	3,362	2,596	2,522	2,258	350	339	730	784	982	15,869
2012	137	1,607	2,613	2,243	1,544	1,348	637	786	294	577	1,057	12,842
2013	342	2,284	1,925	1,483	5,815	554	206	163	99	264	1,021	14,157
2014	199	1,824	1,263	2,557	1,578	1,540	610	1,743	614	0	1,305	13,233
2015	228	1,251	2,223	2,126	319	858	864	449	32	370	1,417	10,137
2016	233	913	2,083	3,408	1,199	1,295	770	405	1,294	557	1,093	13,249
2017	362	1,381	3,212	2,843	1,488	1,423	1,684	772	333	672	2,327	16,496
2018	462	1,852	3,269	3,537	1,827	500	491	200	655	134	1,758	14,685
2019	330	2,855	3,081	2,896	2,573	1,470	1,497	438	282	424	1,760	17,606
2020	300	1,771	3,565	3,143	1,300	614	655	706	137	0	1,342	13,533
Adopted (b)	**334**	**1,660**	**3,189**	**3,104**	**1,799**	**1,058**	**1,025**	**504**	**545**	**356**	**1,492**	**15,064**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 valuation. We increased these factors by 30% for the 2018 AY to reflect the significantly higher experience to date for these years.

Estimates from models

Accident Year	Redemptions And Non-Economic Lump Sum Estimated outstanding claims claims at 30 June 2020 ($000s) (a) PPCF	PPCI	Adopted	Weighting PPCF	PPCI
2020	28,038	30,297	30,297	0%	100%
2019	29,488	31,860	31,148	30%	70%
2018	38,371	34,349	36,360	50%	50%
2017	12,329	18,331	14,130	70%	30%
2016	11,897	14,230	11,897	100%	0%
2015	12,442	11,704	12,442	100%	0%
2014	7,988	9,055	7,988	100%	0%
2013	8,416	7,538	8,416	100%	0%
2012	7,117	5,528	7,117	100%	0%
2011 & earlier	38,548	22,520	38,548	100%	0%
Total	**194,635**	**185,412**	**198,344**		

Notes: (a) From models described above, in 30 June 2020 values and includes superimposed inflation but excludes the 2015 legislative amendments

C 3.8 Combined PCE method

Case estimates development factors

Financial	Case estimate development factors (a) for development year:									
Year	1	2	3	4	5	6	7	8	9	10 onwards
2015	1.154	1.111	0.969	1.146	0.824	1.570	0.921	0.855	0.985	0.953
2016	1.262	1.196	1.394	1.118	1.201	1.206	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	1.074
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	1.078	0.991
2020	1.231	1.123	1.140	1.037	1.052	1.473	1.142	0.918	1.153	1.051
Adopted (b)	**1.352**	**1.206**	**1.151**	**1.187**	**1.039**	**1.164**	**1.224**	**1.043**	**1.052**	**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 2020 values, adopted for 30 June 2020 valuation

Payment factors for case estimates outstanding

Financial	Payments to case estimates (a) for development year:									
Year	1	2	3	4	5	6	7	8	9	10 onwards
2015	0.577	0.485	0.361	0.328	0.304	0.410	0.149	0.152	0.414	0.153
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	0.256
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	0.319	0.198
2020	0.584	0.514	0.701	0.455	0.325	0.737	0.576	0.264	0.327	0.166
Adopted (b)	**0.650**	**0.542**	**0.577**	**0.510**	**0.382**	**0.571**	**0.422**	**0.270**	**0.206**	**0.205**

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

(b) In 30 June 2020 values, adopted for 30 June 2020 valuation

Estimates from model

Combined (all payment types) PCE method	
Accident Year	Estimated outstanding claims claims at 30 June 2020 ($000s) (a) PCE method
2020	68,533
2019	42,029
2018	39,107
2017	11,104
2016	9,756
2015	13,836
2014	3,825
2013	3,272
2012	3,568
2011 & earlier	36,402
Total	**231,431**

Notes: (a) From models described above, in 30 June 2020 values, excluding the 2015 legislative amendments

Large claims

Large claims ($000s) Accident year	Case estimates (a)	Development factor (b)	Current values (c)
2020	6,973	1.00	6,973
2019	1,820	0.00	0
2018	2,644	0.00	0
2017	0	0.00	0
2016	3,071	1.00	3,071
2015	4,363	1.00	4,363
2014	0	0.00	0
2013	0	0.00	0
2012	0	0.00	0
2011 & earlier	20,648	1.00	20,648
Total	**39,518**		**35,054**

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

(c) = (a) x (b)

C 4 Adopted estimates of outstanding claims

C 4.1 Gross central estimates from models in 30 June 2020 values, excluding allowance for Act changes

Estimates of outstanding claims at 30 June 2020 ($000s) (a) (b)										
	By payment type method							All payments		
Accident year	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)	Allowance for active large claims	Total (e)
2020	22,808	6,730	8,022	3,251	5,177	30,297	76,285	68,533	6,973	83,258
2019	14,622	3,391	4,439	1,941	5,913	31,148	61,454	42,029	0	61,454
2018	11,906	2,616	3,423	1,528	5,697	36,360	61,529	39,107	0	61,529
2017	5,166	1,161	1,245	732	2,022	14,130	24,455	11,104	0	24,455
2016	4,222	1,025	1,067	634	1,445	11,897	20,291	9,756	3,071	23,361
2015	4,481	991	1,102	692	1,323	12,442	21,033	13,836	4,363	21,797
2014	3,231	663	734	519	853	7,988	13,988	3,825	0	6,365
2013	3,545	696	789	577	818	8,416	14,841	3,272	0	6,165
2012	2,942	562	645	468	665	7,117	12,400	3,568	0	5,776
2011 & earlier	16,015	3,191	3,495	2,348	3,462	38,548	67,059	36,402	20,648	64,714
Total	**88,938**	**21,025**	**24,961**	**12,692**	**27,375**	**198,344**	**373,334**	**231,431**	**35,054**	**358,874**

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

(b) In 30 June 2020 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 2014 and earlier years are 25% x (c) + 75% x (d) and the weights for 2015 is 50% x (c) + 50% x (d) while, the weights for 2016 and onwards are 100% x (c).

C 4.2 Gross central estimates from models in 30 June 2020 values, including allowance for Act changes

Estimates of outstanding claims at 30 June 2020 ($000s) (a) (b)										
	By payment type method							All payments		
Accident year	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)	Allowance for active large claims	Total (e)
2020	21,118	6,313	8,104	2,915	5,177	30,297	73,924	68,533	6,973	80,897
2019	12,683	2,954	4,532	1,608	5,913	31,148	58,838	42,029	0	58,838
2018	9,194	2,022	3,544	1,059	5,697	36,360	57,875	39,107	0	57,875
2017	2,966	689	1,333	356	2,022	14,130	21,496	11,104	0	21,496
2016	2,174	540	1,149	240	1,445	11,897	17,446	9,756	3,071	20,517
2015	4,481	991	1,102	692	1,323	12,442	21,033	13,836	4,363	21,797
2014	3,231	663	734	519	853	7,988	13,988	3,825	0	6,365
2013	3,545	696	789	577	818	8,416	14,841	3,272	0	6,165
2012	2,942	562	645	468	665	7,117	12,400	3,568	0	5,776
2011 & earlier	16,015	3,191	3,495	2,348	3,462	38,548	67,059	36,402	20,648	64,714
Total	**78,350**	**18,621**	**25,427**	**10,783**	**27,375**	**198,344**	**358,900**	**231,431**	**35,054**	**344,440**

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

(b) In 30 June 2020 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 2014 and earlier years are 25% x (c) + 75% x (d) and the weights for 2015 is 50% x (c) + 50% x (d) while, the weights for 2016 and onwards are 100% x (c).

C 4.3 Average claim size

Average claim size at 30 June 2020 ($) (a)										
	By payment type method							All payments		
Accident year	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 (b)	Combined PCE method (c)	Allowance for active large claims	Adopted (d)
2020	15,960	7,234	7,041	2,611	3,022	16,799	52,668	49,733		56,466
2019	15,230	6,294	6,621	2,156	3,572	16,215	50,087	42,471		50,087
2018	19,421	7,799	7,805	2,764	4,137	21,900	63,825	56,073		63,825
2017	15,752	6,205	5,703	2,218	2,469	14,275	46,622	42,329		46,622
2016	13,980	6,066	5,090	2,220	2,450	13,764	43,569	40,541		44,779
2015	14,219	6,454	4,796	2,428	2,527	15,771	46,196	43,480		46,484
2014	13,596	5,217	4,787	2,001	2,283	13,231	41,116	37,423		38,346
2013	14,586	4,983	4,375	1,953	2,027	15,013	42,937	38,779		39,818
2012	12,793	4,781	4,170	2,013	1,903	12,204	37,864	34,505		35,345

Note: (a) In 30 June 2020 values, from results in appendix C4.2, includes superimposed inflation and 2015 legislation amendments

(b) In 30 June 2020 values, from the results based on individual payment type methods

(c) In 30 June 2020 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 2020 ($) (a)									
	By payment type method							All payments		
Accident year	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 (b)	Combined PCE method (c)	Allowance for active large claims	Adopted (d)
2020	51%	15%	20%	7%	13%	74%	180%	167%	17%	197%
2019	44%	10%	16%	6%	20%	107%	203%	145%	0%	203%
2018	32%	7%	12%	4%	20%	127%	202%	137%	0%	202%
2017	37%	9%	16%	4%	25%	175%	266%	137%	0%	266%
2016	28%	7%	15%	3%	19%	155%	228%	127%	40%	268%
2015	44%	10%	11%	7%	13%	122%	206%	136%	43%	214%
2014	112%	23%	25%	18%	30%	277%	485%	132%	0%	221%
2013	122%	24%	27%	20%	28%	290%	511%	113%	0%	212%
2012	91%	17%	20%	15%	21%	221%	385%	111%	0%	179%
2011 & earlier	47%	9%	10%	7%	10%	113%	196%	107%	60%	189%

Note: (a) In 30 June 2020 values, from results in appendix C4.2, includes superimposed inflation and 2015 legislation amendments

(b) In 30 June 2020 values, from the results based on individual payment type methods

(c) In 30 June 2020 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 2020 values

C 4.5 Summary of gross adopted estimates in 30 June 2020 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	$	
2020	83,258	80,897	56,466	197%
2019	61,454	58,838	50,087	203%
2018	61,529	57,875	63,825	202%
2017	24,455	21,496	46,622	266%
2016	23,361	20,517	44,779	268%
2015	21,797	21,797	46,484	214%
2014	6,365	6,365	38,346	221%
2013	6,165	6,165	39,818	212%
2012	5,776	5,776	35,345	179%
2011 & earlier	64,714	64,714		189%
Total	**358,874**	**344,440**		**205%**

Notes: (a) In 30 June 2020 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 2020 excluding expenses ($000s)			
Accident year ending 30 June	30 June 2020 values	Inflated values	Infl/disc values
2020	80,897	85,589	83,142
2019	58,838	62,370	60,380
2018	57,875	61,746	59,424
2017	21,496	23,279	22,133
2016	20,517	22,413	21,186
2015	21,797	23,413	22,454
2014	6,365	6,930	6,577
2013	6,165	6,745	6,381
2012	5,776	6,303	5,983
2011 & earlier	64,714	70,011	67,241
Total	**344,440**	**368,800**	**354,901**

Note: Includes superimposed inflation and 2015 legislative amendments

C 4.7 Net outstanding claims provision

Estimates at 30 June 2020 ($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	354,901	21,587	333,314	19,999	353,313	42,650	395,963

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)

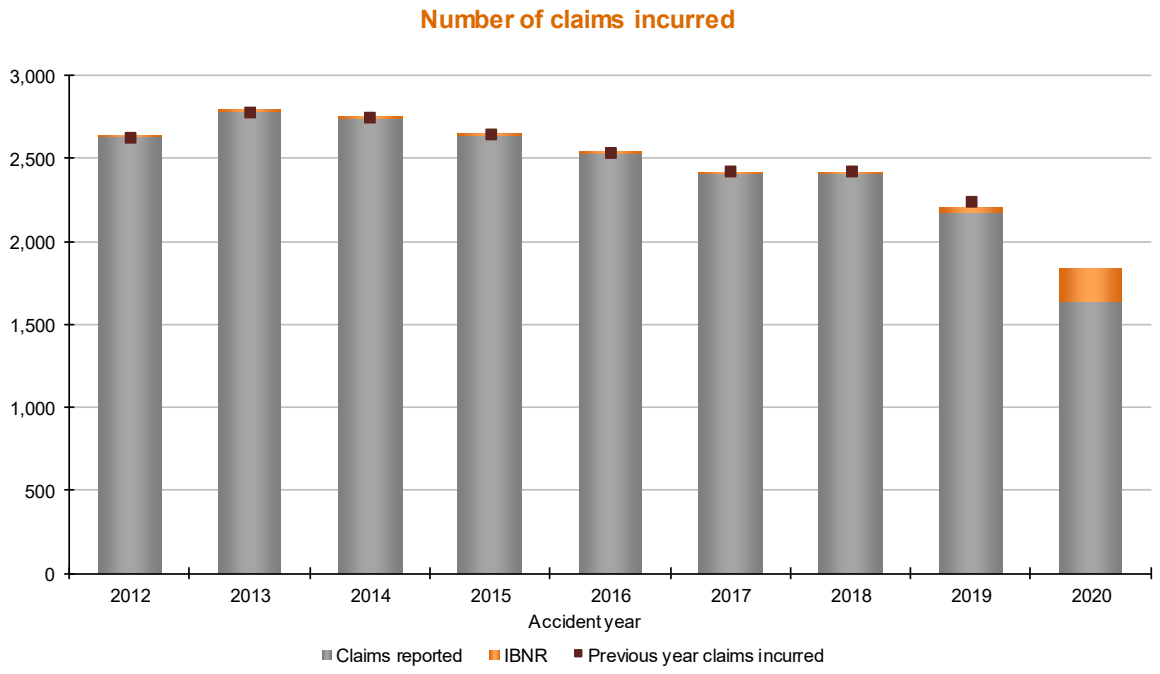
(f) = (e) x 12.07%

(g) = (e) + (f)

Appendix D Insurer claims statistics

D 1 Number of claims incurred

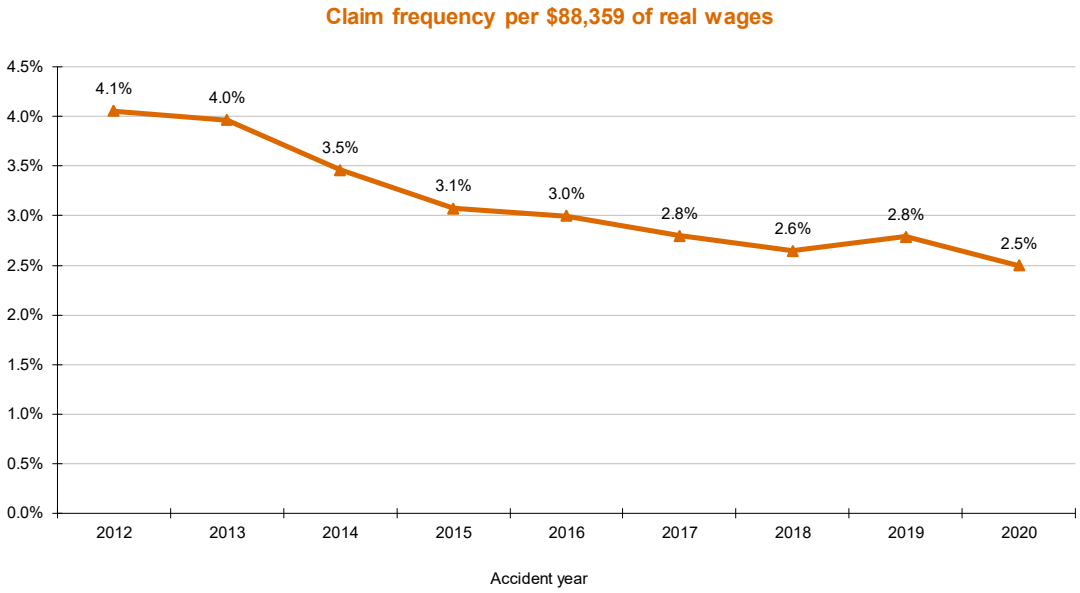
Decreasing trend from 2013 peak to 2020. The 2020 year is estimated to be lower than all prior accident years



The main points to highlight from this chart are:

- For the 2012 accident years, the number of claims incurred was just over 2,600
- There was a spike in the number of claims incurred for the 2013 accident year to just under 2,800
- From the 2013 to 2019 accident years, there has been a decreasing trend in the number of claims incurred
- For the 2020 accident year, the number of incurred claims is estimated to be lower than all prior years at 1,836 claims
- The numbers of claims are similar to those estimated at the previous valuation, except 2019 which is slightly lower.

Declining claim frequency due to significant increases in wages up to 2015 and more recently reducing numbers of claims incurred. 2020 is lower than 2019 as the number of claims decreased by more than the wages



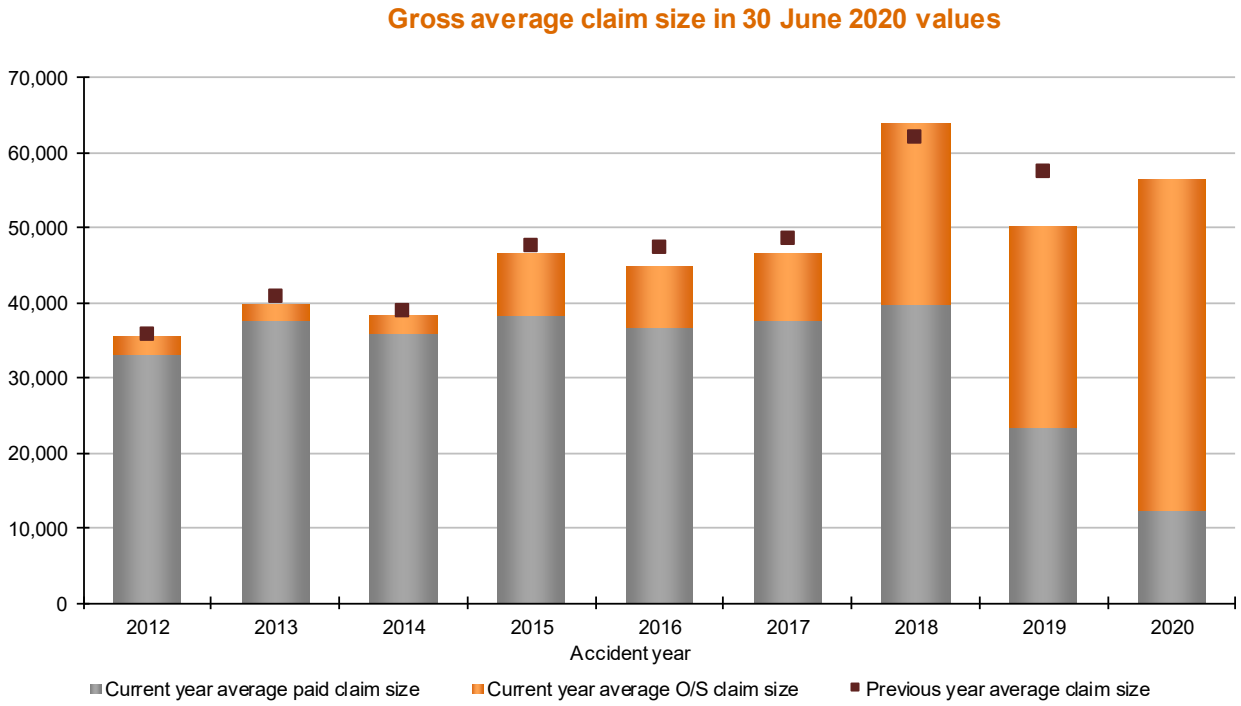
The claim frequency is calculated as:

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

To estimate the number of employees we have used the wages provided, inflated this to 2020 values and divided by $88,359 (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

2020 is estimated to be higher than all prior years except for 2018



Since 2012 the gross average claim size (in 2020 values):

- Exhibited volatility due in part to large claims
- Exhibited a broadly increasing trend from around $35,345 in 2012 to around $46,622 in 2017
- Increased significantly to $63,825 in 2018 due to high payments and case estimates to date
- Decreased to around $50,087 in 2019 given lower total estimates reported to date, relative to 2018 but higher than prior years
- For 2020 accident year, gross average claim size was estimated to be $56,466, which is higher than the 2019 accident year but lower than 2018.

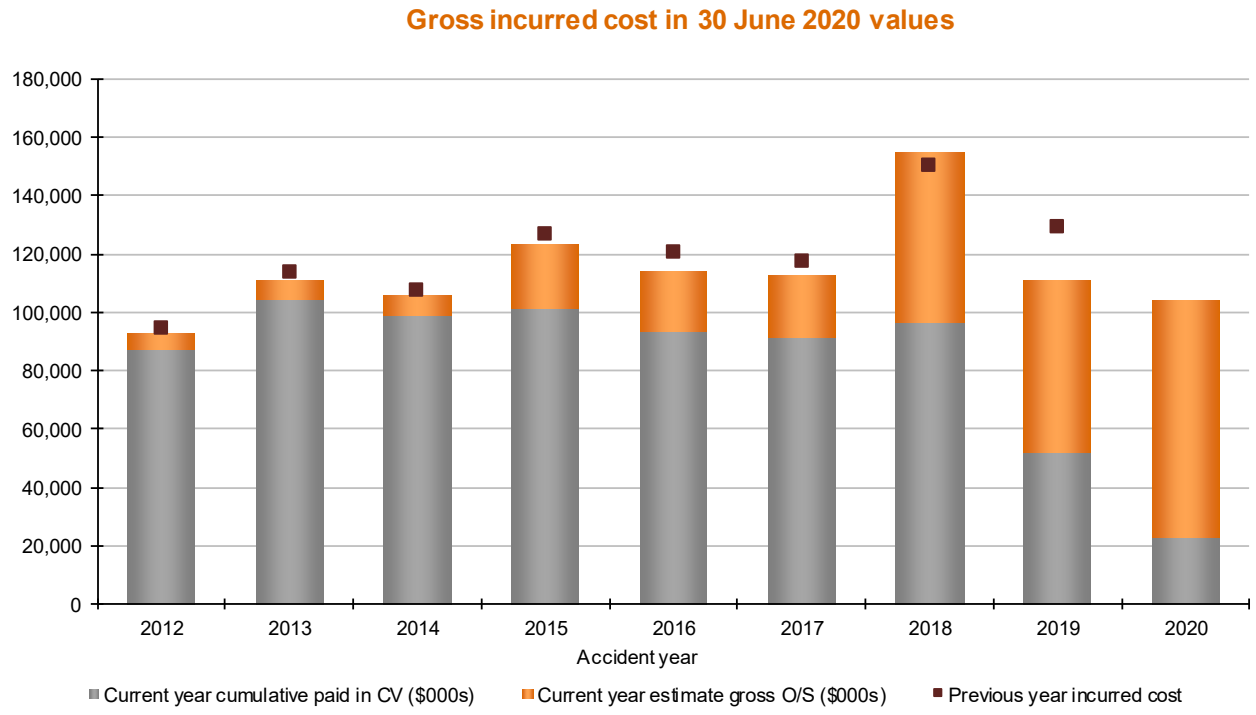
The uncertainty about the future development means that the ultimate level and our estimates may differ from those projected for recent accident years. This is especially true for the 2020 accident year, where a high proportion (78%) of the average claim size relates to uncertain future claims development.

Compared to the previous valuation, the gross average claim size is similar or lower for most years especially for 2019 and except for 2018, where estimates increased slightly. 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 approximately two thirds of total incurred costs.

D 3 Gross incurred cost

2020 incurred cost is $103.7 million, which is lower than all years since 2013

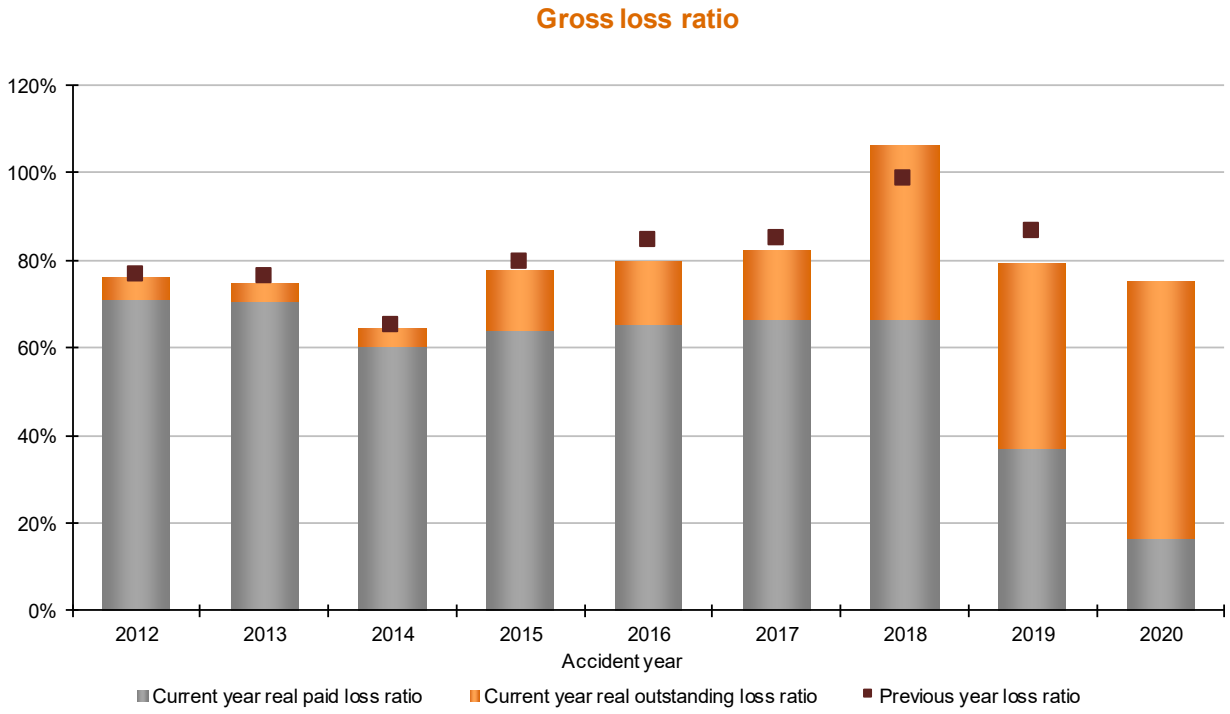


Over the period shown in the graph, the proportion outstanding increases from 6% of the total incurred cost in 2012 to 78% of the total incurred cost for 2020.

As for the average claim size graph, the changes since the previous valuation are mostly due to higher or lower claims payments and development than expected over the year.

D 4 Gross loss ratios

Loss ratio for 2020 estimated at 75%, which is lower than all prior years except 2014



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

$$\frac{\text{(Past claim payments to 30 June 2020+ estimated outstanding liability at 30 June 2020)}}{\text{Gross developed earned premium}}$$

The past claim payments, estimated outstanding liability and gross developed earned premium are all in 30 June 2020 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.

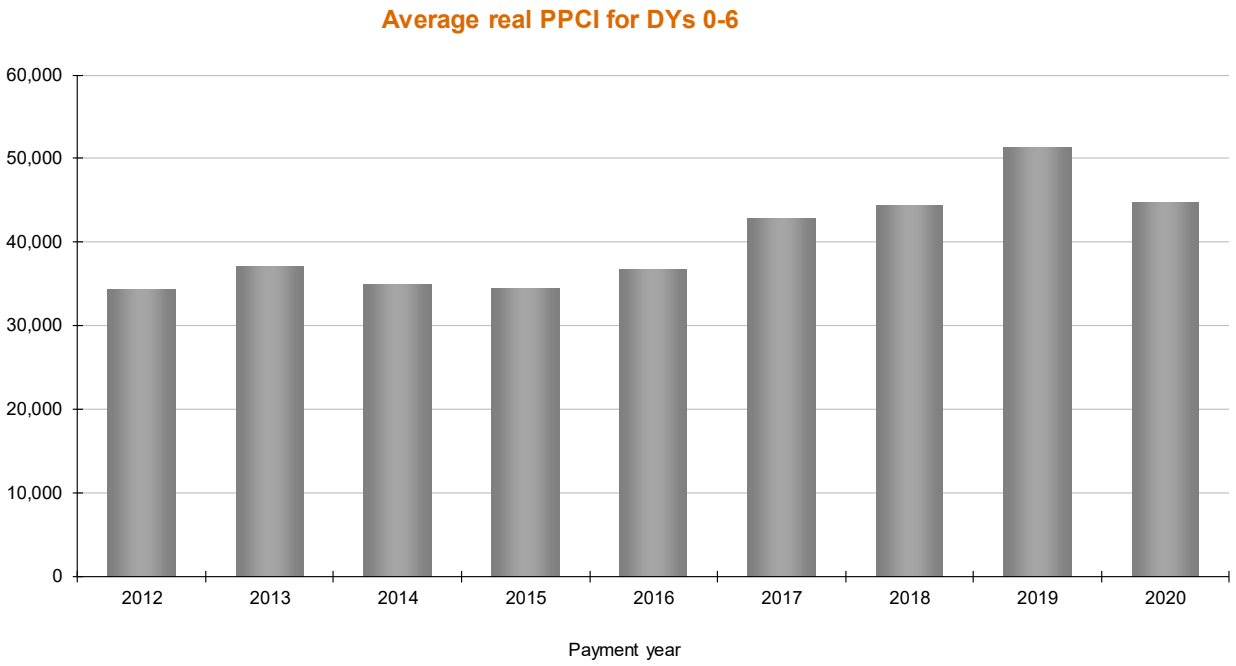
The chart shows:

- There was a decreasing trend in the loss ratio from 76% in 2012 to the low of 64% 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 82%
- The 2018 loss ratio of 106% is higher than all prior years, due to the high payments and case estimate as at 30 June 2020
- For 2020, the loss ratio is 75%, which is lower than 79% in 2019 year

D 5 Payment per claim incurred

By payment year

2020 payment year was higher compared to all prior years except 2019

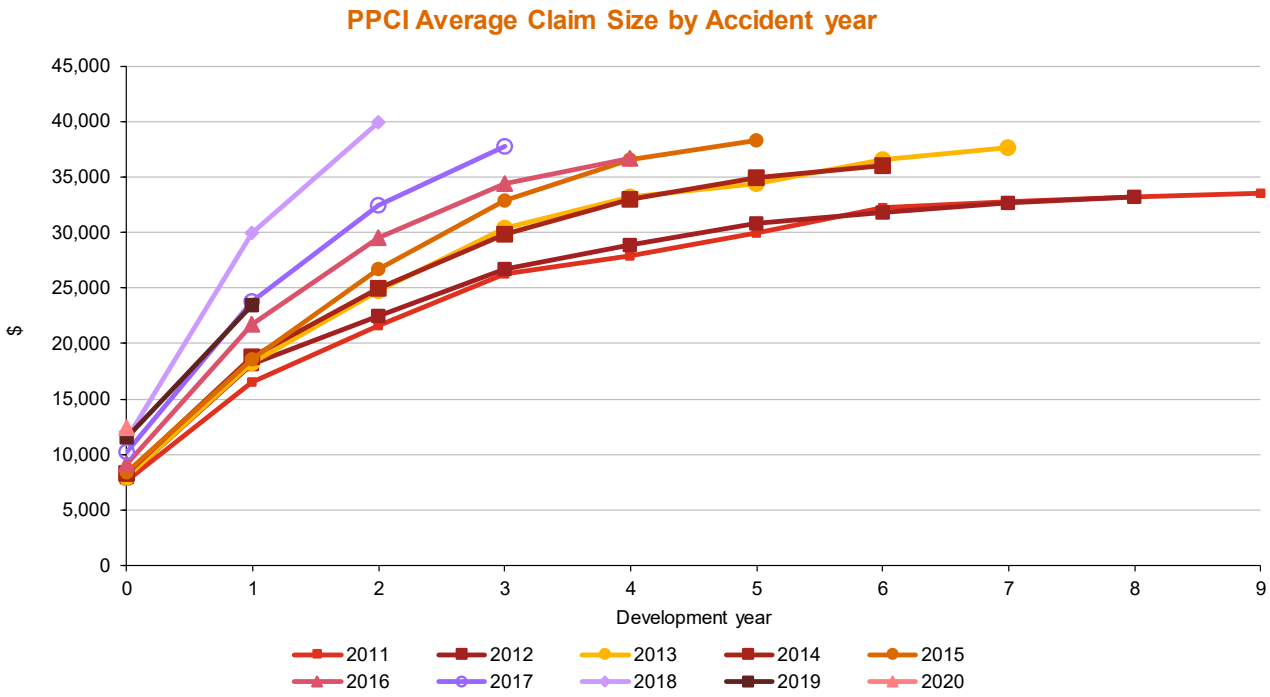


The average PPCI for DYs 0 to 6 was relatively stable between $34,500 and $37,100, up until 2016.

The average PPCI increased by 17% in 2017 due to higher payments for the three most recent accident years. The 2018 payment year is $44,300, while the 2019 payment year is $51,400, (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 $44,700 which is lower than 2019 payment year but similar to 2018 payment year.

By accident year

Increasing evidence of superimposed inflation from 2015 to 2020



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

$$\frac{\text{sum of claim payments by development year made to date (in 30 June 2020 values)}}{\text{number of claims incurred to date}}$$

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 increasing evidence of superimposed inflation over recent years from 2015, though 2019's growth has slowed as it is similar to 2017 in DY1 after DY0 was in line with 2018.

Appendix E Insurer financial year claims experience

E 1 Aggregate claims experience during 2019/20

E 1.1 Summary of overall claim experience over 2019/20

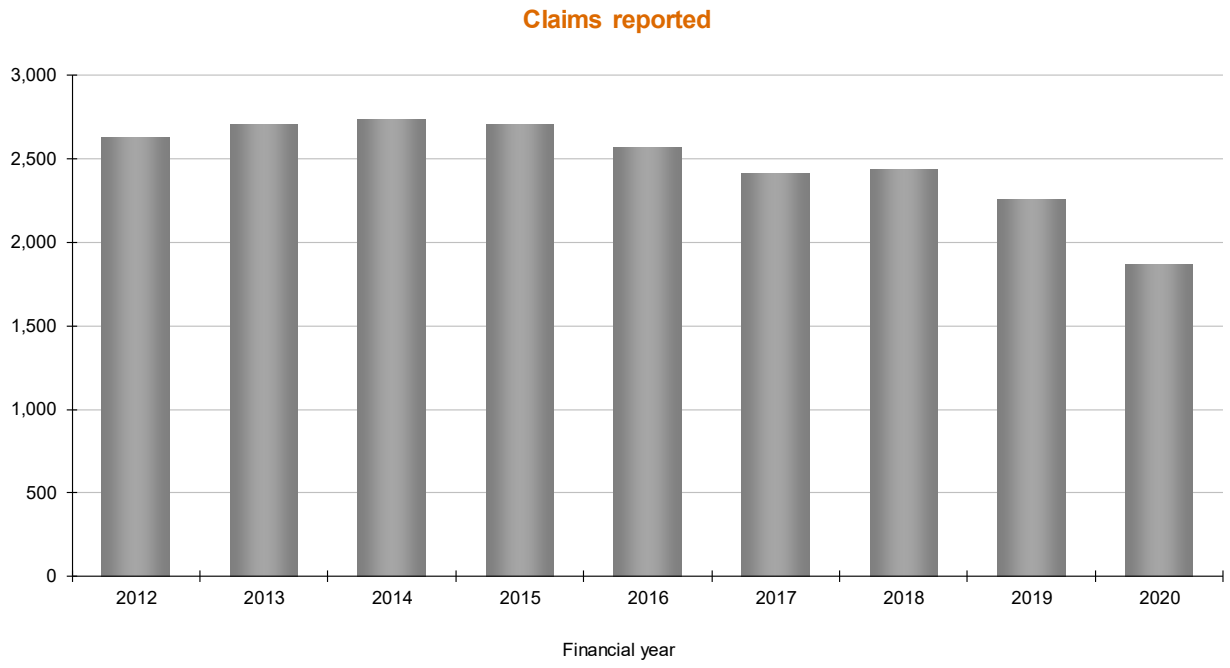
The overall claims experience over 2019/20 is generally better compared to 2018/19, however the experience is mixed by accident year.

- A decrease (17.2%) in the number of claims reported
- A decrease (19.8%) in the amount of real claim payments
- A decrease (14.4%) in the number of active claims at the end of the year
- A similar finalisation rate (61.6% compared to 61.7% for 2019 year)
- A decrease (11.0%) in case estimates.

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

E 1.2 Claim reports

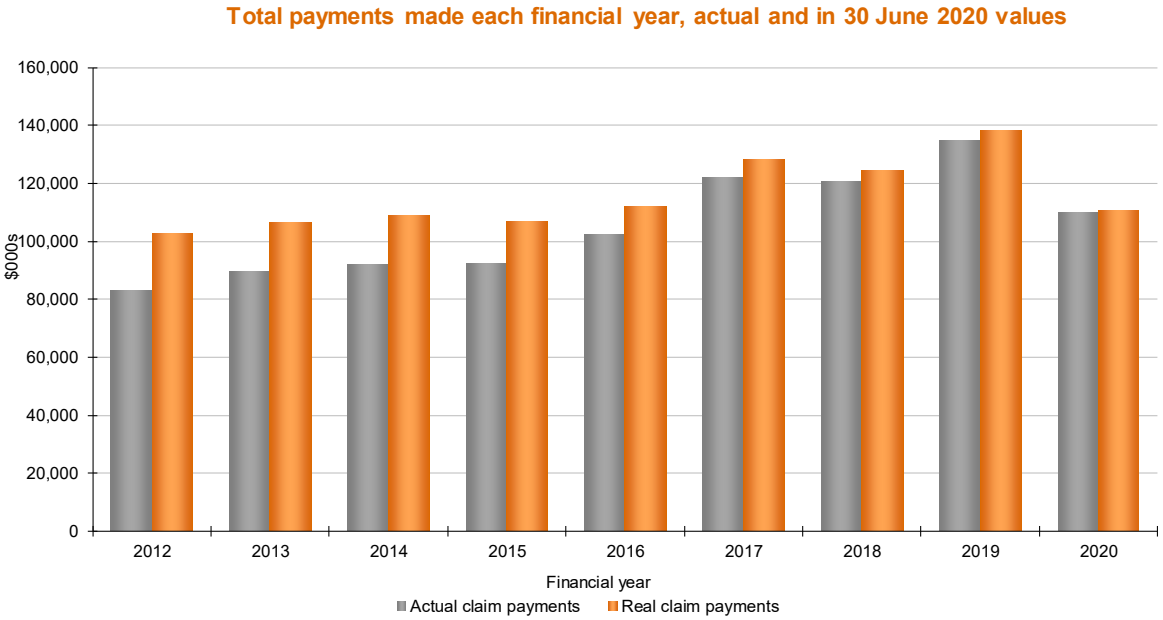
Claim reports have decreased by 17.2% in 2020



In 2020 there were 1,867 claims reported, which was 388 (17.2%) fewer than 2019.

E 1.3 Claim payments

Real payments in 2020 of $110.6 million, $27.4 million lower than 2019



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

Claim payments in 30 June 2020 values have varied between $102 million and $138 million over the period shown.

Total actual payments in 2019/20 were $109.8 million, which is $24.9 million (18.5%) lower than actual payments 2018/19. In real values, this was a decrease of $27.4 million (19.8%).

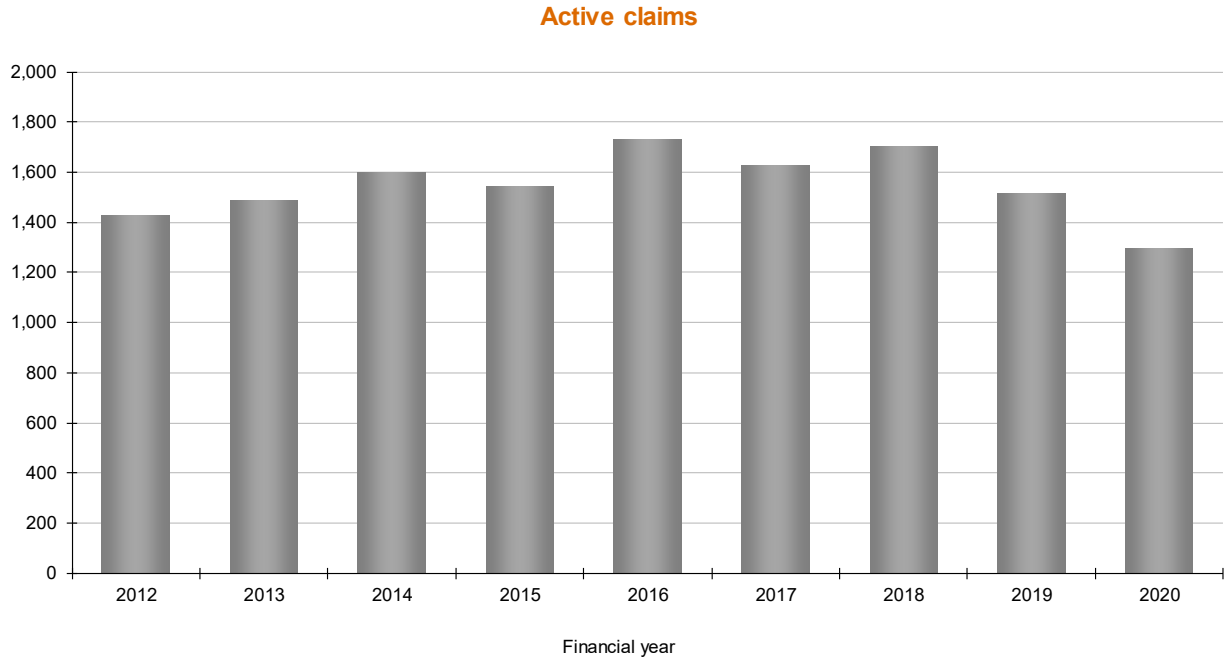
A breakdown of the change in actual payments by payment group is presented in the table below.

Payment group	Payments in 2019/20 ($000s)	Payments in 2018/19 ($000s)	Difference ($)	Difference (%)
Weekly benefits	35,466	43,362	-7,896	-18.2%
Medical and hospital	14,105	16,893	-2,788	-16.5%
Allied health, vocational rehabilitation, non-compensation payments (other),	14,786	17,113	-2,327	-13.6%
Other goods and services	5,363	6,161	-798	-13.0%
Legals	7,179	7,178	1	0.0%
Redemptions and non-economic lump sum	32,923	44,017	-11,094	-25.2%
Total	109,821	134,724	-24,903	-18.5%

All payments groups had a decrease with the 76% of the decrease related to the two categories of: redemptions and non-economic lump sum and weekly benefits.

E 1.4 Active claims

Active claim numbers decreased by 14.4% from 1,517 in 2019 to 1,298 in 2020

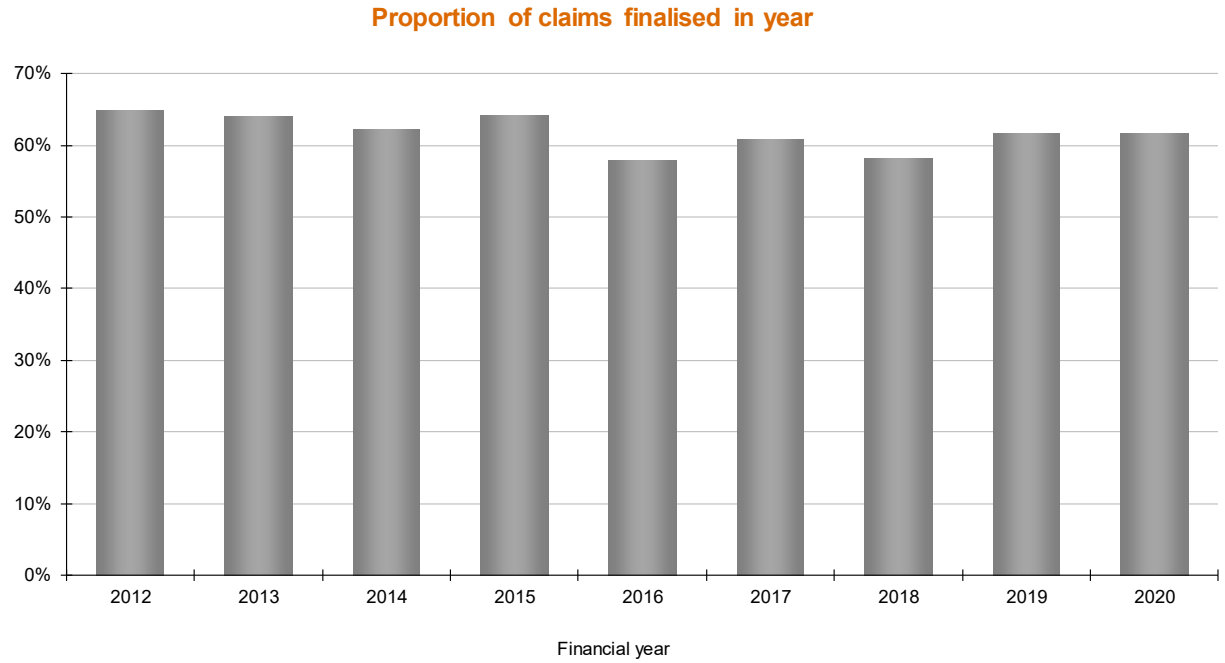


From 2012 to 2018, there was an increasing trend in active claims, despite the reduction in the claims reported.

From 2019 to 2020, there has been a decrease from 1,517 to 1,298, a 14.4% decrease due to lower number of claims reported in the financial year.

E 1.5 Proportion of claims finalised

2020 finalisation rate was 61.6%, which is similar to 2019



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 2012 to 2018, the finalisation rate has a decreasing trend. In 2019, the finalisation rate is 61.7%, which was higher than 2018 but line with 2017. For 2020 year, proportion of claims finalised was in line with 2019.

E 1.6 Claims incurred in 2019/20

There were 1,634 claims reported to 30 June 2020 for the 2019/20 accident year and the projected number of incurred claims is 1,836. This is 17% fewer than the 2,207 projected incurred for the 2018/19 accident year.

The expected number of open claims for the 2019/20 accident year at 30 June 2020 is 1,634 x (1 – 0.563) =715. The actual number of open claims for the 2019/20 accident year at 30 June 2020 is 639, which is 10.6% fewer than expected.

The 30 June 2019 projection basis lead to an expected $11,450 x (1.014 x 1.029) = $11,944 to be paid on each of the 2019/20 accident year claims in the year of claim. The actual amount paid per claim was $12,412 i.e. $468 (3.9%) more in real values.

The 2019/20 accident year shows favourable experience compared to 2018/19 with lower claims incurred, fewer than expected open claims. Partially offset by, 2019/20 having higher projected payment for 2019/20 claims in the year of claim than expected.

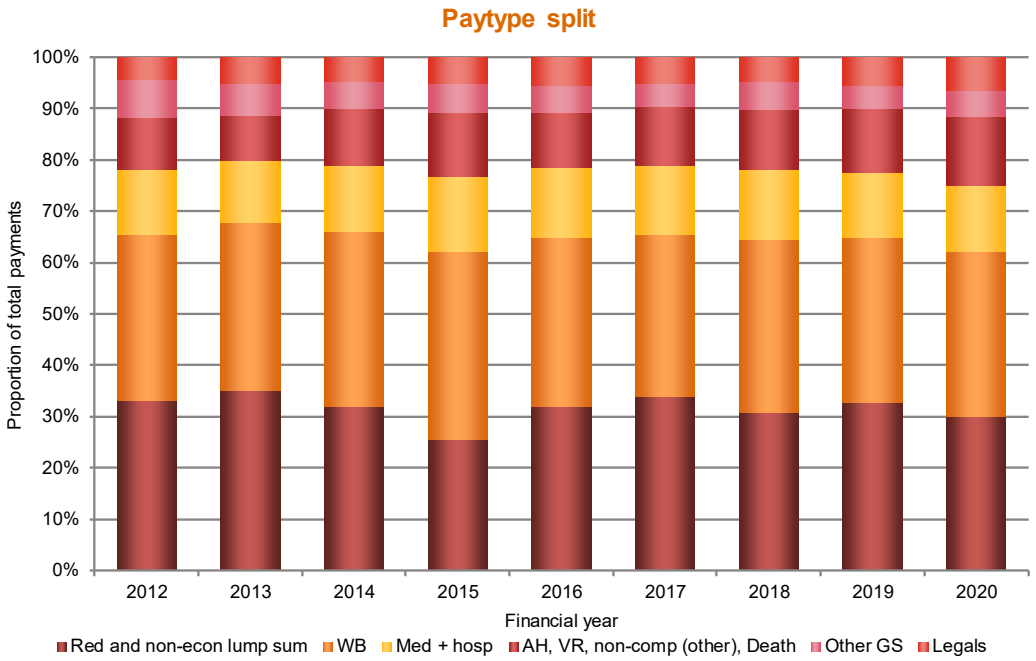
For details of the claims experience over 2019/20 for claims incurred up to 30 June 2019 see appendix C2.

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	2012	2013	2014	2015	2016	2017	2018	2019	2020
Legals	4%	5%	5%	5%	5%	5%	5%	5%	7%
Other GS	7%	6%	5%	6%	5%	5%	5%	5%	5%
AH, VR, non-comp (other), Death	10%	9%	11%	12%	10%	11%	12%	13%	13%
Med + hosp	13%	12%	13%	15%	14%	13%	14%	13%	13%
WB	32%	33%	34%	37%	33%	32%	34%	32%	32%
Red and non-econ lump sum	33%	35%	32%	26%	32%	34%	31%	33%	30%
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:

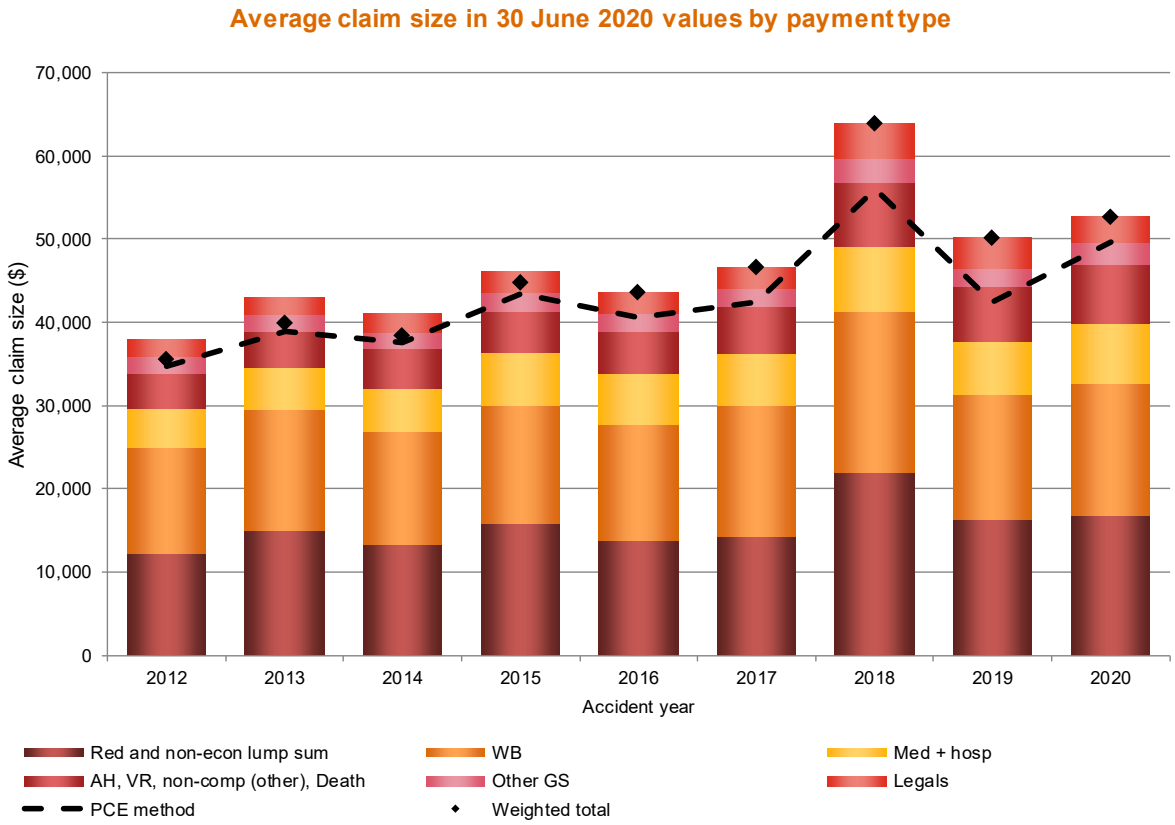
- Redemptions since 2012 has since ranged from 30% to 35%, except for the low in 2015 of 26%
- Any increases or decreases in redemptions payments have been matched by decreases or increases in weekly benefits payments, such that in total the proportion of total payments which are weekly benefits or redemptions has been relatively stable between 64% and 66%, except 2015 and 2020 which are lower at 62%
- 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. The higher percentage of Legals in 2020 could be a leading indicator for an increase in redemptions and non-economic lump sum payments in 2021.

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 around two thirds of the total



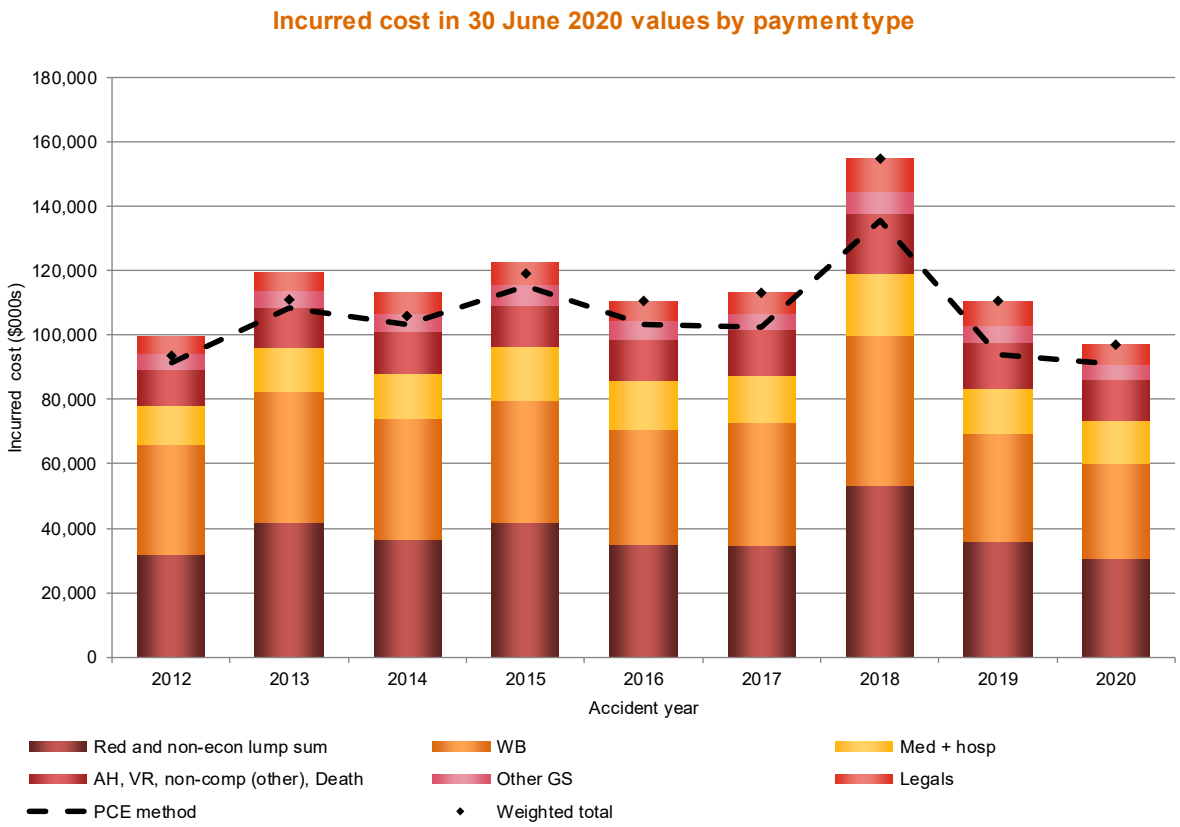
Average claim size (exclude explicit large claims) ($)	2012	2013	2014	2015	2016	2017	2018	2019	2020
Legals	1,903	2,027	2,283	2,527	2,450	2,469	4,137	3,572	3,022
Other GS	2,013	1,953	2,001	2,428	2,220	2,218	2,764	2,156	2,611
AH, VR, non-comp (other), Death	4,170	4,375	4,787	4,796	5,090	5,703	7,805	6,621	7,041
Med + hosp	4,781	4,983	5,217	6,454	6,066	6,205	7,799	6,294	7,234
WB	12,793	14,586	13,596	14,219	13,980	15,752	19,421	15,230	15,960
Red and non-econ lump sum	12,204	15,013	13,231	15,771	13,764	14,275	21,900	16,215	16,799
Total	**37,864**	**42,937**	**41,116**	**46,196**	**43,569**	**46,622**	**63,825**	**50,087**	**52,668**
PCE method	34,706	38,944	37,558	43,504	40,608	42,392	56,054	42,470	49,632
Weighted total	**35,495**	**39,942**	**38,448**	**44,850**	**43,569**	**46,622**	**63,825**	**50,087**	**52,668**

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 2014 and prior years, the weights are 25% total of individual payment type methods and 75% PCE method, for 2015 year, the weights were 50% total of individual payment type methods and 50% PCE method, while for 2016 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 around 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 current values (exclude explicit large claims) ($000s)	2012	2013	2014	2015	2016	2017	2018	2019	2020
Legals	5,003	5,640	6,283	6,699	6,221	5,977	10,016	7,883	5,550
Other GS	5,292	5,433	5,507	6,435	5,637	5,368	6,691	4,758	4,795
AH, VR, non-comp (other), Death	10,965	12,171	13,172	12,713	12,926	13,805	18,895	14,612	12,930
Med + hosp	12,570	13,865	14,357	17,108	15,406	15,020	18,880	13,892	13,284
WB	33,636	40,582	37,413	37,689	35,504	38,131	47,016	33,611	29,309
Red and non-econ lump sum	32,088	41,768	36,410	41,803	34,954	34,555	53,019	35,785	30,849
Total	**99,554**	**119,458**	**113,142**	**122,447**	**110,647**	**112,856**	**154,518**	**110,540**	**96,717**
PCE method	91,249	108,350	103,352	115,314	103,127	102,617	135,705	93,730	91,141
Weighted total	**93,325**	**111,127**	**105,800**	**118,881**	**110,647**	**112,856**	**154,518**	**110,540**	**96,717**

Percentage of incurred cost by paytype	2012	2013	2014	2015	2016	2017	2018	2019	2020
Legals	5%	5%	6%	5%	6%	5%	6%	7%	6%
Other GS	5%	5%	5%	5%	5%	5%	4%	4%	5%
AH, VR, non-comp (other), Death	11%	10%	12%	10%	12%	12%	12%	13%	13%
Med + hosp	13%	12%	13%	14%	14%	13%	12%	13%	14%
WB	34%	34%	33%	31%	32%	34%	30%	30%	30%
Red and non-econ lump sum	32%	35%	32%	34%	32%	31%	34%	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

NT WorkSafe self-insurers - Incremental Claims Reported												
Year to 30 June	0	1	2	3	4	5	6	7	8	9	10	Total
2011	180	10	0	1	0	0	0	0	0	0	0	**191**
2012	153	23	1	1	0	0	0	0	0	0	0	**178**
2013	121	22	2	1	0	0	0	0	0	0	0	**146**
2014	114	26	0	0	0	0	0	0	0	0	0	**140**
2015	114	12	1	0	0	0	0	0	0	0	0	**127**
2016	104	19	0	1	0	0	1	0	0	0	0	**125**
2017	76	17	0	0	0	0	1	0	0	0	0	**94**
2018	84	8	1	0	0	0	0	0	0	0	0	**93**
2019	68	10	1	0	0	0	0	0	0	0	0	**79**
2020	75	6	0	0	0	0	0	0	0	0	0	**81**

Note: Data extracted from the WIMS system up to 30 June 2020

F 1.2 Cumulative claims reported

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

Note: Cumulative claim reports from table above

F 1.3 Active claims

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

Note: From the self-insurers' Form B as at 30 June 2020

F 1.4 Claim payments

Year to 30 June	NT WorkSafe self-insurers - Incremental Actual Claim Payments ($000s) 0	1	2	3	4	5	6	7	8	9	10	Total	Total Cumulative
2011	401	740	496	236	318	0	349	0	7	5	15	**2,566**	**9,996**
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**

Note: Data extracted from the WIMS system up to 30 June 2020

F 1.5 Case estimates

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

Note: From the self-insurers' Form B as at 30 June 2020 and prior years

F 2 Actual and projected claims experience during 2019/20

F 2.1 Numbers of claims reported

Accident year ended 30 June	Number of claims reported during 2019/20 Actual	Projected (a)	Actual / projected %
2012	0	0	0.0%
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	6	9	66.6%
Total	**6.0**	**9.1**	**66.1%**

Note: (a) From previous scheme report dated 17 March 2020

F 2.2 Claim payments

Accident year ended 30 June	Actual payments ($000s)	Expected Payments ($000s) (a)	Actual / expected %
2012	0	2	0.0%
2013	0	18	0.0%
2014	0	5	0.0%
2015	0	7	0.0%
2016	75	75	100.3%
2017	1,054	438	240.6%
2018	464	475	97.8%
2019	807	711	113.5%
Total	**2,401**	**1,730**	**138.8%**

Note: (a) From previous scheme report dated 17 March 2020

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
2011	1.07	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Adopted (b)	**1.12**	**1.01**	**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 2020 valuation

Numbers of claims incurred

Accident year ending 30 June	Number of claims Reported to 30 Jun 2020 (a)	IBNR at 30 Jun 2020 (b)	Incurred (c)
2012	175	0	175
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	1	75
2020	75	10	85

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: 0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2011	2,610	6,527	5,683	2,756	3,463	0	3,996	0	87	72	847	**26,041**
2012	4,563	4,521	651	1,998	2,203	0	0	0	0	990	0	**14,926**
2013	3,031	7,808	1,064	564	78	1,767	0	159	0	0	2,286	**16,757**
2014	3,142	8,188	3,827	573	0	621	248	0	22	0	0	**16,621**
2015	3,693	3,949	4,836	3,797	481	0	52	1,899	0	116	0	**18,823**
2016	6,332	3,812	1,550	5,358	1,462	17	14	44	0	0	0	**18,589**
2017	6,844	4,677	3,739	641	0	0	21	18	38	0	0	**15,977**
2018	6,258	8,770	2,726	2,317	1,455	0	0	12	75	51	0	**21,663**
2019	8,726	9,910	6,999	1,761	4	27	5	0	51	35	14	**27,532**
2020	5,928	10,866	4,953	12,459	616	0	0	0	0	29	108	**34,958**
Adopted (b)	**6,866**	**9,809**	**4,628**	**3,258**	**730**	**213**	**167**	**96**	**92**	**70**	**0**	**25,929**

Notes: (a) In 30 June 2020 values

(b) Adopted for 30 June 2020 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
2011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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	2.073	1.406	2.088	0.639	0.000	0.000	0.000	0.000	0.000	0.000
Adopted (b)	**1.896**	**1.706**	**1.866**	**1.187**	**1.039**	**1.164**	**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 2020 values, adopted for 30 June 2020 valuation

Payment factors for case estimates outstanding

Financial year ending 30 June	Payments to case estimates (a) for development year: 1	2	3	4	5	6	7	8	9	10 onwards
2011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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
Adopted (b)	**1.184**	**0.768**	**1.452**	**1.029**	**0.382**	**0.571**	**0.422**	**0.270**	**0.206**	**0.205**

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

(b) In 30 June 2020 values, adopted for 30 June 2020 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 2020 (a)(b) PPCI	PCE
2012 & earlier	13	191
2013	25	0
2014	34	0
2015	60	0
2016	83	18
2017	123	340
2018	452	1,211
2019	721	672
2020	1,695	2,083
Total	**3,205**	**4,515**

Notes: (a) From models described in appendix F3

(b) In 30 June 2020 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 2020 (a)(b) PPCI	PCE
2012	22	21
2013	22	21
2014	11	11
2015	14	14
2016	17	16
2017	37	39
2018	26	34
2019	29	29
2020	26	30

Note: (a) In 30 June 2020 values, from results in appendix F4.1, includes superimposed inflation and excluding 2015 legislative changes

F 4.3 Adopted estimates in 30 June 2020 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)
2012 & earlier	193	193		0%
2013	2	2	21	0%
2014	3	3	11	0%
2015	6	6	14	0%
2016	44	44	16	305%
2017	340	340	39	122%
2018	908	908	31	147%
2019	711	659	28	255%
2020	1,772	1,717	26	250%
Total	**3,979**	**3,872**		**190%**

Notes: (a) in 30 June 2020 values, including superimposed inflation and excluding 2015 legislative changes

(b) in 30 June 2020 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
2012 & earlier	0.10	0.90	1.00
2013	0.10	0.90	1.00
2014	0.10	0.90	1.00
2015	0.10	0.90	1.00
2016	0.40	0.60	1.00
2017	0.00	1.00	1.00
2018	0.40	0.60	1.00
2019	0.80	0.20	1.00
2020	0.80	0.20	1.00

F 4.4 Gross adopted estimates including expenses

NT WorkSafe self-insurers Estimates ($000s) at 30 June 2020 Accident year ending 30 June	30 June 2020 values (a)	Inflated values (b)	Inflated & discntd values (b)	Case estimates (c)	Ratio % (d)
2012 & earlier	193	214	210	188	102%
2013	2	3	3	0	-
2014	3	4	4	0	-
2015	6	6	6	0	-
2016	44	48	47	14	305%
2017	340	366	365	278	122%
2018	908	977	974	619	147%
2019	659	709	707	258	255%
2020	1,717	1,852	1,845	686	250%
Total	**3,872**	**4,179**	**4,160**	**2,043**	**190%**

Note: (a) In 30 June 2020 values, includes superimposed inflation

(b) includes 7% claims handling expenses, inflation and discounting assumptions in Appendix B 1

(c) as at 30 June 2020 as provided by the self-insurers

(d) = (a) / (c)

F 4.5 Net outstanding claims provision

Estimates at 30 June 2020 ($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	3,925	0	3,925	235	4,160	1,040	5,200

Notes: (a) from table above

(b) there are no expected reinsurance recoveries in the self-insurers actuary's valuations

(c) = (a) – (b)

(d) = (c) x 7%

(e) = (c) + (d)

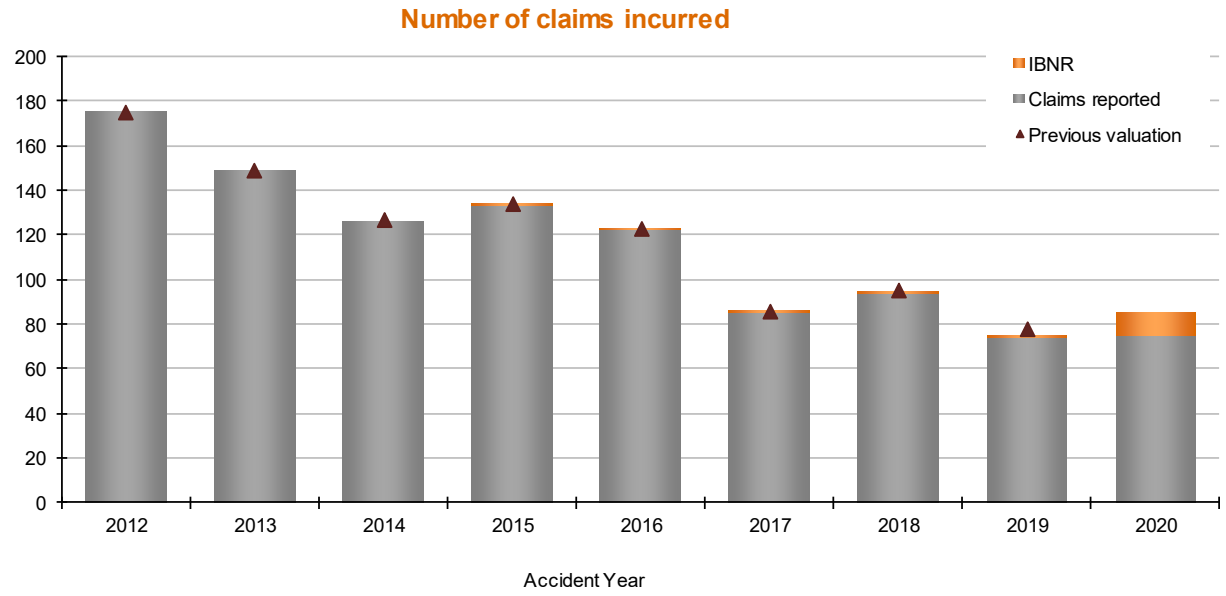
(f) = (e) x 25.0%

(g) = (e) + (f)

Appendix G Self-insurer claims statistics

G 1 Number of claims incurred

General decreasing trend from 2012 peak to 2020 at 85 claims

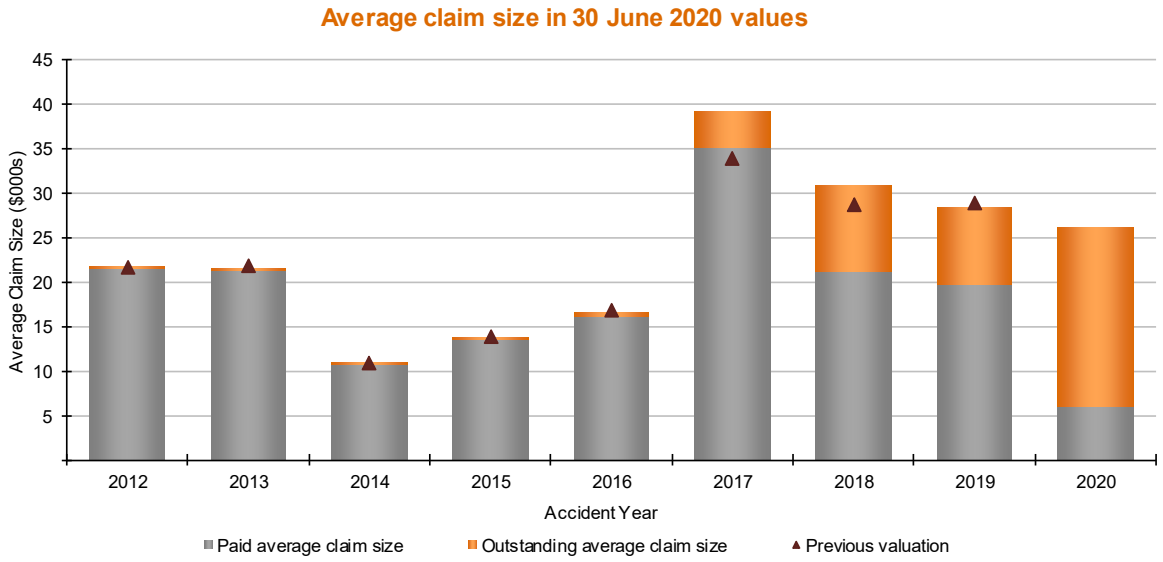


The main points to highlight from this chart are:

- Since the high in 2012, 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 has 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 is 85, significantly lower than all prior years shown
- From 2017 to 2020 the number of claims incurred has varied between 75 and 94
- For 2020, the total estimated claim is 85 which is higher than 2019, of which 10 is IBNR claims
- The numbers of claims are similar to estimates at the previous valuation, however 2019 is slightly lower.

G 2 Gross average claim size

2020 average claim size is estimated to be $26,088, which is lower than 2017 to 2019



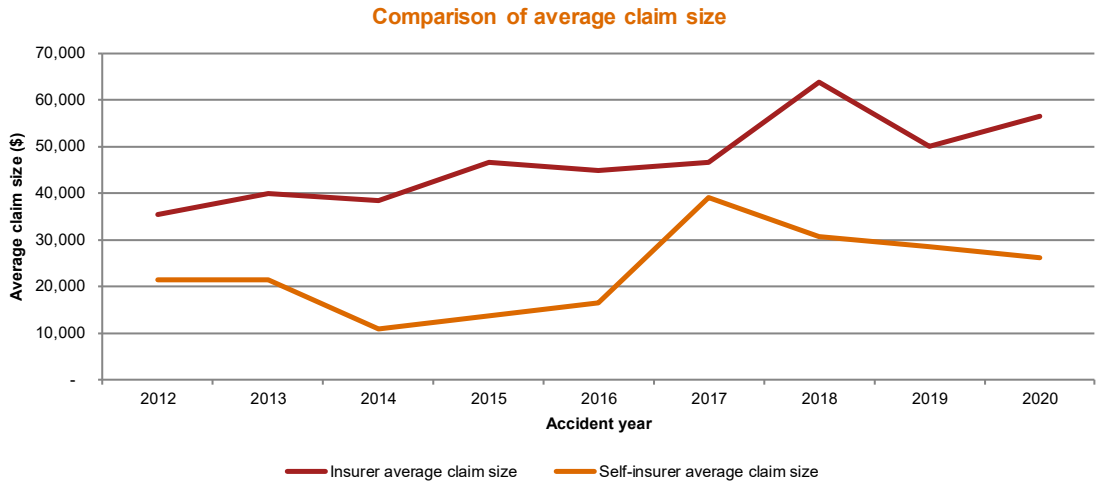
The average claim size has been volatile between accident years and there has been no discernible trend. From 2012 to 2016, the average claim size has ranged been between $10,000 and $21,500, with lows in 2014 surrounding highs in 2012 and 2013.

Our estimated average claim size for the 2017 accident year is significantly higher than our previous valuation due to higher than expected payments and case estimate development over the year due to multiple large claims.

Our estimated average claim size for the 2020 accident year is just over $26,000, which is lower than the 2017 to 2019 accident years due to lower total estimates reported to date.

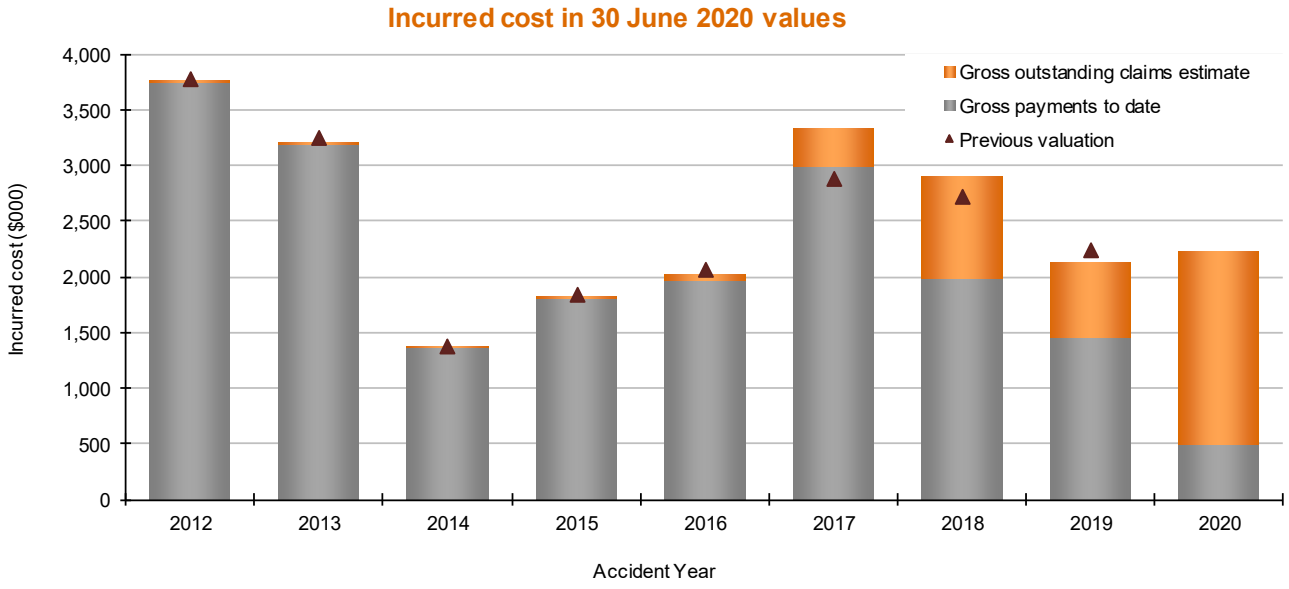
The uncertainty about the future development means that the ultimate level and our estimates may differ from that projected for recent accident years. This is especially true for the 2020 accident year, where a high proportion (77%) of the average claim size consists of the uncertain future estimate.

The chart below compares the average claim size of self-insurers to insurers.



G 3 Incurred cost

2020 incurred cost is $2.2 million, which is lower than the incurred in 2017 and 2018 but higher than 2019



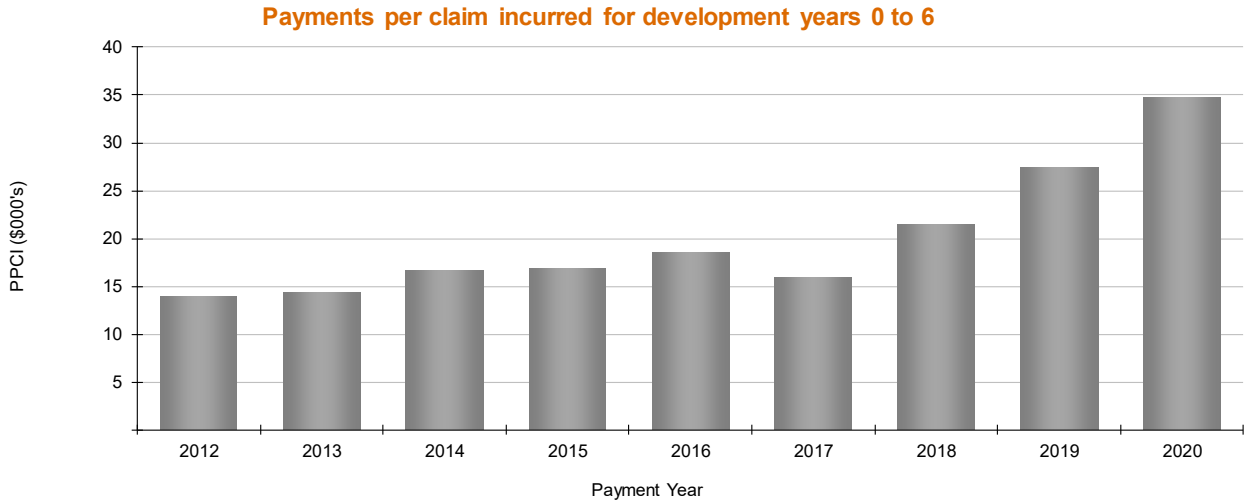
Compared to our previous valuation, there has been a significant increase in the incurred costs for the 2017 and 2018 accident years due to higher than expected claim development and case estimate. For 2017 this is due to development on multiple large claims.

The incurred cost for 2020 is $2.2 million, which is $0.1 million (5%) higher than the 2019 accident year incurred cost of $2.1 million.

Over the period shown in the graph, the proportion outstanding increases from 0% of the total incurred cost for 2015 to 77% of the total incurred cost for 2020.

G 4 Payment per claim incurred

2012 to 2020 exhibits a broadly increasing trend



Payments per claim incurred for development years 0 to 6 exhibits an increasing trend, from $13,936 in 2012 to $34,821 in 2020.

The 2020 payment per claim incurred for development years 0 to 6 increased $7,390 (27%) compared to the 2019 financial year, mainly due to 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:											
	0	1	2	3	4	5	6	7	8	9	10	Total
2008	12,606	17,169	11,425	9,561	6,019	3,793	3,390	2,818	4,170	2,445	2,180	75,575
2009	13,722	17,095	13,682	9,201	16,073	5,726	3,315	2,253	1,629	1,165	3,212	87,073
2010	14,487	18,975	12,674	7,690	6,810	4,145	2,900	2,782	2,207	1,413	521	74,605
2011	15,299	19,094	11,394	10,450	3,877	4,979	5,829	1,126	1,360	815	0	74,224
2012	16,950	22,412	9,748	9,393	5,211	5,054	2,473	2,160	1,337	0	0	74,738
2013	18,470	24,288	15,522	14,449	7,258	3,474	5,713	2,942	0	0	0	92,116
2014	19,209	25,137	15,475	12,743	8,432	5,423	2,868	0	0	0	0	89,287
2015	19,188	24,668	20,541	15,753	9,571	4,537	0	0	0	0	0	94,258
2016	21,196	30,593	19,266	11,979	5,934	0	0	0	0	0	0	88,968
2017	23,601	31,725	20,571	12,836	0	0	0	0	0	0	0	88,733
2018	26,879	43,842	24,065	0	0	0	0	0	0	0	0	94,785
2019	24,927	26,014	0	0	0	0	0	0	0	0	0	50,942
2020	22,635	0	0	0	0	0	0	0	0	0	0	22,635

Notes: (a) from data extracted from the WIMS system as at 30 June 2020

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											
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Forward rate	0.22%	0.97%	1.89%	1.63%	1.96%	2.47%	2.54%	2.79%	4.76%	4.48%	3.44%	7.07%	6.50%

These rates are the one year forward rate, projected from one year prior, e.g. the rate to 30 June 2020 is the one year forward rate from the Commonwealth Bond yield curve as at 30 June 2019.

H 1.3 Discounted claim payments

Accident Year	Claim payments ($000s) (a) for development year: 0	1	2	3	4	5	6	7	8	9	10	Total
2008	12,215	15,579	9,878	7,836	4,670	2,813	2,406	1,915	2,718	1,532	1,280	62,842
2009	13,262	15,699	11,879	7,543	12,561	4,270	2,360	1,536	1,064	729	1,915	72,818
2010	14,244	17,947	11,515	6,776	5,826	3,445	2,346	2,196	1,697	1,063	385	67,439
2011	14,968	17,856	10,282	9,111	3,267	4,065	4,619	864	1,017	595	0	66,645
2012	16,561	21,102	8,855	8,235	4,421	4,156	1,968	1,671	1,010	0	0	67,979
2013	18,217	23,333	14,530	13,211	6,492	3,036	4,901	2,487	0	0	0	86,209
2014	18,970	24,217	14,580	11,761	7,614	4,812	2,511	0	0	0	0	84,465
2015	18,955	23,841	19,453	14,600	8,720	4,079	0	0	0	0	0	89,648
2016	20,991	29,762	18,388	11,268	5,522	0	0	0	0	0	0	85,931
2017	23,411	30,924	19,794	12,238	0	0	0	0	0	0	0	86,367
2018	26,628	42,820	23,259	0	0	0	0	0	0	0	0	92,707
2019	24,807	25,735	0	0	0	0	0	0	0	0	0	50,542
2020	22,611	0	0	0	0	0	0	0	0	0	0	22,611

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)
2020	22,611	82,959	105,570
2019	50,542	59,666	110,208
2018	92,707	57,631	150,338
2017	86,367	21,121	107,488
2016	85,931	19,827	105,758
2015	89,648	20,507	110,156
2014	84,465	5,858	90,323
2013	86,209	5,529	91,738
2012	67,979	4,949	72,927

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

	Calculated break even premium							Actual premium			
Accident year	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)
2020	6,070,512	6,454,759	105,570	4,501	23,377	133,521	2.1%	130,450	136,965	2.12%	3,443
2019	6,795,244	6,835,195	110,208	4,701	20,885	136,123	2.0%	136,137	136,048	1.99%	-75
2018	7,837,775	7,832,821	150,338	5,534	22,548	179,258	2.3%	140,831	140,831	1.8%	-38,426
2017	7,279,841	7,279,841	107,488	4,489	20,653	133,168	1.8%	130,885	130,885	1.8%	-2,283
2016	6,833,594	6,833,594	105,758	4,163	20,086	130,640	1.9%	130,179	130,179	1.9%	-461
2015	6,582,845	6,582,845	110,156	4,558	20,288	135,828	2.1%	136,816	136,816	2.1%	988
2014	5,929,595	5,929,595	90,323	4,775	17,098	112,901	1.9%	138,578	138,578	2.3%	25,677
2013	5,199,017	5,199,017	91,738	3,697	15,016	111,214	2.1%	124,326	124,326	2.4%	13,112
2012	4,633,724	4,633,724	72,927	2,864	14,015	90,857	2.0%	99,113	99,113	2.1%	8,257

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 2020/21

H 3.1 Discounted incurred cost for 2020/21

We selected the number of incurred claims and average claim size for 2020/21 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					
	2020	2019	2018	2017	2016	Adopted
Number of claims incurred (a)	1,836	2,207	2,421	2,421	2,540	1,970
Claim frequency per $88,359 of wages (b)	2.5%	2.8%	2.6%	2.8%	3.0%	2.6%
Average claim size (in 30 June 2020 values) (c)	56,466	50,087	63,825	46,622	44,779	52,984

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 2.10%, superimposed inflation of 3.10% and an inflation/discount factor to allow for the timing of payments of 1.0181 the discounted incurred cost for 2020/21 can be calculated as:

1,970 x [52,984 x (1 + 2.10%) x (1 + 3.10%) x 1.0181] = $111.9 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					
	2020	2019	2018	2017	2016	Adopted
Gross written premium (a)	125,789	142,690	135,842	134,286	114,332	
Earned premium (b)	122,529	144,321	146,280	126,442	119,514	
Commission paid (c)	4,501	4,701	5,534	4,489	4,163	
Other expenses (d)	23,402	20,986	22,760	20,821	20,282	
Commission rate (e)	3.7%	3.3%	3.8%	3.6%	3.5%	3.6%
Other expense rate (f)	18.6%	14.7%	16.8%	15.5%	17.7%	16.6%

Notes: (a), (b), (c), (d) from the consolidated Form A returns

(e) commission / earned premium, the adopted value uses a three year average

(f) other expenses / gross written premium, the adopted value uses a three year average

H 3.3 Projected break-even premium for 2019/20

Using the analysis above, the projected break-even premium rate for 2020/21 is:

Underwriting year	Actual wages (a) ($000s)	Discounted gross incurred cost (b) ($000s)	Expenses (c) ($000s)	Premium (d) ($000s)	Calculated premium rate (e)
2021	6,590,309	111,860	28,271	140,208	2.1%

Notes: (a) 2020 developed earned wages, inflated for one year's wage inflation at 2.10%

(b) from H3.1 above

(c) = (b) / (1 – commission rate (3.6%) – other expense rate (16.6%)) – (b)

(d) = (b) / (1 – commission rate (3.6%) – other expense rate (16.6%)) x (1 + interest rate (0.2%)) ^ (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 2020/21 Northern Territory budget report, in adopting the assumptions for the 2020 break-even premium rate.

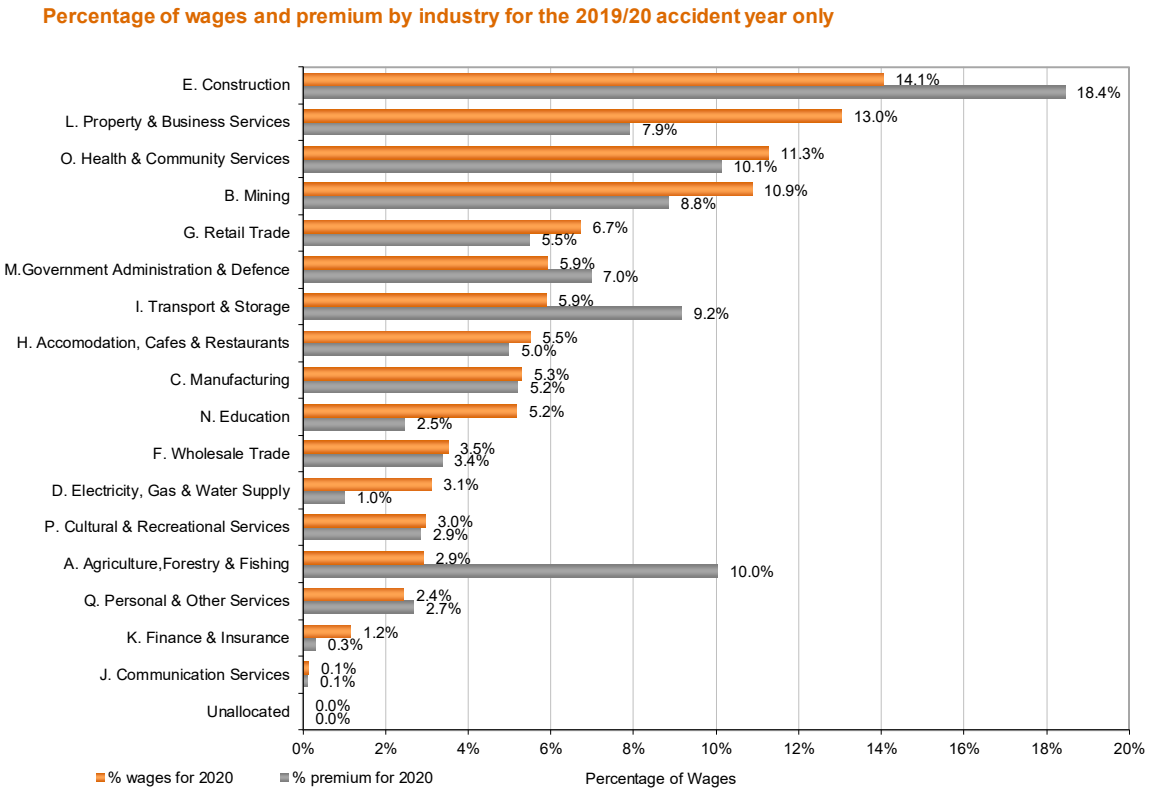
H 4 Historical rates by industry

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 Premium rate by ANZSIC division	2016	2017	2018	2019	2020	Difference 2020 / 2019
A. Agriculture,Forestry & Fishing	5.64%	5.50%	6.06%	6.93%	7.38%	6.6%
B. Mining	1.62%	1.34%	1.16%	1.37%	1.74%	27.1%
C. Manufacturing	2.39%	2.27%	2.27%	2.20%	2.10%	-4.4%
D. Electricity, Gas & Water Supply	0.84%	0.87%	0.78%	0.67%	0.69%	4.2%
E. Construction	2.02%	1.90%	1.87%	2.44%	2.81%	14.9%
F. Wholesale Trade	1.91%	1.81%	1.83%	1.96%	2.06%	4.8%
G. Retail Trade	1.83%	1.75%	1.81%	1.81%	1.75%	-3.5%
H. Accomodation, Cafes & Restaurants	1.92%	1.89%	1.89%	1.89%	1.94%	2.7%
I. Transport & Storage	2.98%	2.80%	3.31%	3.23%	3.33%	3.2%
J. Communication Services	1.51%	1.30%	1.36%	1.80%	1.77%	-1.7%
K. Finance & Insurance	0.72%	0.67%	0.60%	0.52%	0.57%	9.1%
L. Property & Business Services	1.03%	1.00%	1.08%	1.15%	1.30%	13.4%
M.Government Administration & Defence	2.04%	1.79%	1.88%	1.89%	2.52%	33.4%
N. Education	1.00%	0.97%	1.05%	1.03%	1.02%	-0.5%
O. Health & Community Services	2.05%	1.82%	1.78%	2.05%	1.92%	-6.2%
P. Cultural & Recreational Services	2.08%	2.31%	2.05%	2.20%	2.06%	-6.4%
Q. Personal & Other Services	2.38%	2.15%	2.35%	2.18%	2.35%	7.7%
Unallocated	0.00%	0.00%	0.00%	0.00%	0.00%	0.0%
Total	1.90%	1.79%	1.79%	2.00%	2.14%	7.0%

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



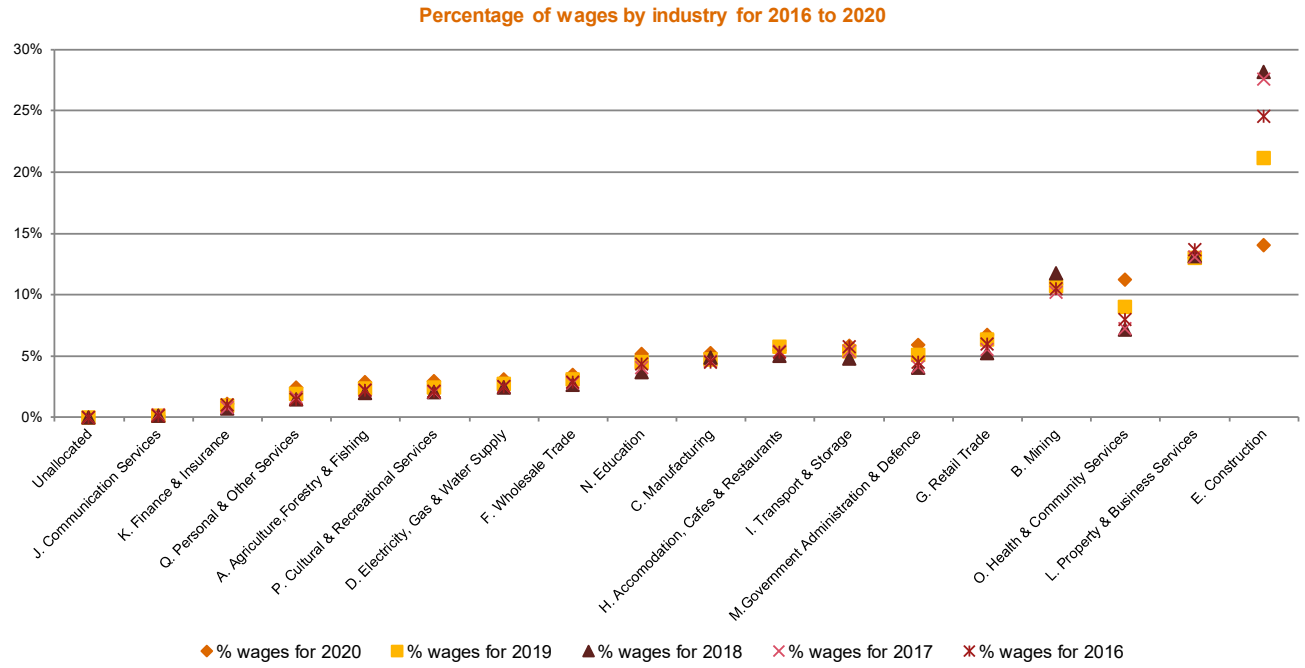
This shows that the sectors with significantly higher premium rate than the scheme average are:

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

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

- Property and business services
- Mining
- Education
- Electricity, gas and water supply
- Finance and insurance.

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 2020 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

© 2021 PricewaterhouseCoopers Consulting (Australia) Pty Limited. All rights reserved. PwC refers to PricewaterhouseCoopers Consulting (Australia) Pty Limited, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details. Liability limited by a scheme approved under Professional Standards Legislation.