

NT WorkSafe

Actuarial review of
Northern Territory
workers compensation
scheme as at
30 June 2015

June 2016



Stephen Gelding
Executive Director
Department of Business
NT WorkSafe
Northern Territory Government
Level 1, Darwin Plaza
41 Smith Street
DARWIN NT 0880

3 June 2016

Dear Stephen

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 2015 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 2015, 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 2015/16 underwriting year.

Yours sincerely

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

Lisa Simpson

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

Kathryn Cannon

Fellows of the Institute of Actuaries of Australia

PricewaterhouseCoopers Actuarial Pty Limited, ACN 003 562 696, ABN 29 003 562 696
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.

Key findings

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 2015 for insurers, self-insurers and for the whole scheme. The PwC central estimate excludes any risk margin, the insurer's provision includes a risk margin, and the self-insurer's provision includes 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	352,159	322,687	-29,471	109%
Self-insurers	6,922	4,464	-2,457	155%
Total	359,080	327,152	-31,928	110%

Notes: see section 2 of this report

As at 30 June 2015 the insurers' funding ratio was 109% while the self-insurers' funding ratio was 155%. The insurers' funding ratio increased from 99% as at 30 June 2014 whereas the self-insurers' funding ratio decreased from 178%.

The increase in the insurers' funding ratio was due to the insurer's provision increasing by more than our central estimate compared to 30 June 2014. We are not provided with a reconciliation for the insurers' provision so cannot identify the drivers of the insurers' increase.

The decrease in the self-insurer funding ratio is due to a decrease in the actual provisions. Despite this reduction, the funding ratio is still higher than the ratio as at 30 June 2013 of 123%.

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. Over the most recent two valuation dates the funding ratio has been less than 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 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%.

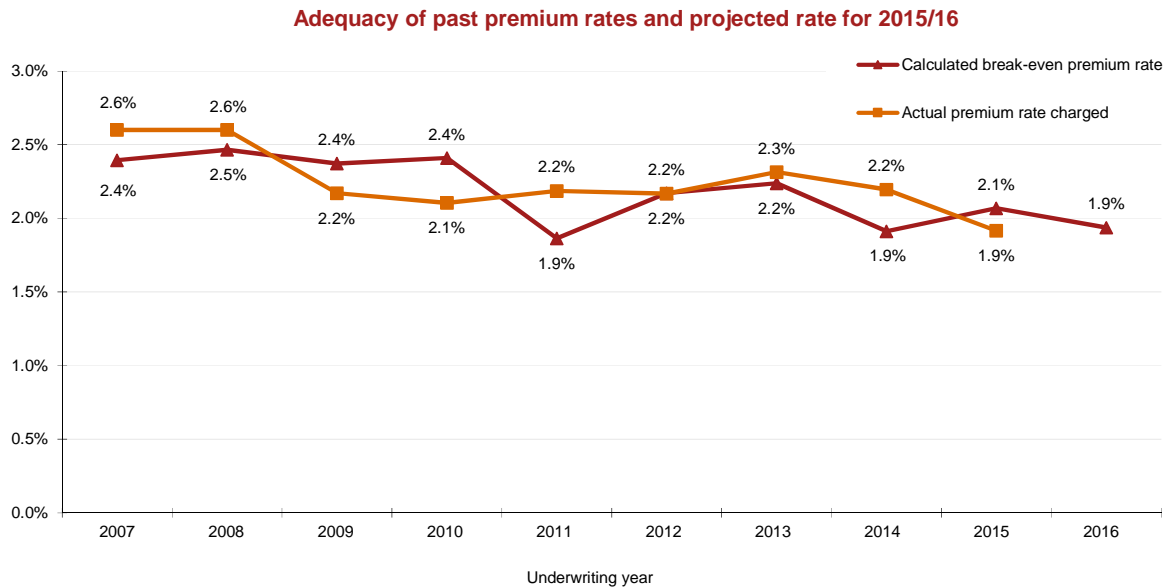
The above projections involve assumptions about future uncertain claim events and economic, social and legislative conditions and hence the actual outcome may well be different from the results shown above. This should be borne in mind whenever using the results. In particular, the 2014 and 2015 accident year costs are

Key findings

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 calculated 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 2015/16.



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

Actual premium rates charged by insurers have predominantly been more than sufficient to cover the break-even cost for all accident years shown in the graph above, except 2009, 2010, 2012 and 2015.

Our projected break-even premium rate for 2016 is 1.9%, which is lower than the calculated break even premium rate of 2.1% for 2015, and equal to the actual premium charged for 2015.

The break even premium for 2015/16 includes an allowance for the 2015 legislative changes. See Appendix B for a summary of the changes.

This comparison uses premium processed information provided by insurers on the consolidated ANZSIC form, with adjustments where necessary. This includes wage or premium adjustments relating to prior underwriting periods, which distorts the comparisons, particularly in the case of a growing economy, as wage adjustments for previous years will artificially increase the current year's wages and premium received. We have started collecting the premium data on an underwriting basis and we will use this when we are able to confirm the robustness of the data and estimate the premium development.

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

Key scheme trends

Claim statistic	Insurer	Self-insurers
Number of claims incurred	<p>Stable trend. 2015 incurred claims is 2,684, which is slightly lower than 2014 but on par with prior years.</p> <p>Claim frequency is decreasing due to the significant increases in wages without a corresponding increase in claim numbers. Frequency is estimated to be 3.8% in 2013, 3.1% in 2014 and 2.9% in 2015.</p>	<p>Slight increase in 2015 to 132 compared to 127 in 2014. This experience comes after a decreasing trend since the spike of 205 in 2011.</p>
Average claim size	<p>An increasing trend from \$32,100 in 2011 to \$44,400 in 2015. Significant increase in 2015 due unfavourable large claims experience.</p>	<p>Lower than insurers, around \$15,800 in the 2015 accident year. This is higher than 2014 (\$13,000), but within the range of prior years.</p>
Incurred cost	<p>Increasing trend since the 2011 accident year.</p> <p>Increase in incurred costs is caused by the increase in average claim size.</p>	<p>2015 accident year higher than 2014 but lower than 2012 and 2013.</p>
Gross loss ratio	<p>Deteriorated in 2015 to 87% from 70% in 2014. This was predominantly driven by the increase in incurred cost.</p>	n/a
Distribution by payment type	<p>Redemption and non-economic lump sums and weekly benefits combined account for two-thirds of the total incurred cost and payments each financial year.</p> <p>The distribution of payments for the last seven accident years has remained fairly stable.</p>	n/a

Data enhancements

To further enhance the quality of future reviews we have suggested a couple of improvements on additional data items which are detailed in section 5.3.

Risks and uncertainties

The key risks and uncertainties to the NT scheme are:

- **Inpex project**

Significant increases in wages over recent financial years have been driven by the Inpex project and the associated contracts. The number of claims incurred and claims cost has increased at a slower rate than the increase in wages, causing the claim frequency and premium rate to reduce. As the project moves into production phase, this may significantly reduce the premium pool for the NT scheme in future years. There may be an increase in claims due to late claim reports if people cannot find alternative work, in the absence of new contract commencing.

- **Changing economic environment**

There is considerable uncertainty associated with the current economic environment and what it will mean for Australia over the near future. Aside from the Inpex project discussed above, there may be more general real wage decreases or increases in bad debts for insurers.

Over the last three to 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. This reduction has been less obvious in the NT, but we will continue to monitor the mix by size of claims lodged in NT to ensure that we adequately allow for any change in claiming behaviour.

- **Large claims**

The incurred cost for each accident year, and the break-even premium rate for each underwriting 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 Hopkins settlements.

Future claims costs will continue to be impacted by these settlements, with net costs to insurers impacted by the nature and adequacy of any reinsurance arrangements in place.

The net of reinsurance results have only been provided in total, as we have no specific information regarding the insurers' reinsurance policies or which individual claims may exceed retention levels. We have used the same method as last year to estimate the reinsurance recoveries. Our estimate of reinsurance recoveries is similar to that of the insurers', which gives comfort that our approach is reasonable, given that insurers clearly have more insight into their own reinsurance retentions and large claims experience.

Large claims can also have an impact on superimposed inflation. While superimposed inflation remained fairly stable 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 future costs for the 2015/16 premium year. In separate advice, PwC estimated that there would be a 2.8% reduction in respect of the most significant benefit changes. We have not estimated the impact of other changes. As the changes are not retrospective this should not impact the 30 June 2015 outstanding claims liabilities and so have not been included. However, they may create behavioural changes given the reduction in benefits for claims incurred from 1 July 2015.

We recommend WorkSafe NT and insurers closely monitor the experience after the legislation is promulgated to ensure that there aren't any unintended consequences.

See Appendix B6 for more information.

Contents

Key findings	i
1 About this report	1
1.1 Context for our review	2
1.2 Disclaimer	3
1.3 Compliance with standards	3
2 Insurer outstanding claims liabilities	5
2.1 Outstanding claims liability	6
2.2 Claims statistics	10
2.3 Actual vs expected claims experience over 2014/15	12
2.4 Reconciliation of estimates	13
3 Self-insurer outstanding claims liabilities	14
3.1 Outstanding claims liability	15
3.2 Claims statistics	16
3.3 Actual vs expected claims experience over 2014/15	18
3.4 Reconciliation of central estimates	18
4 Break even premium rates	20
4.1 Adequacy of past premiums	21
4.2 Forecast break even premium rate	24
5 Data and methods	25
5.1 Data provided	26
5.2 Data quality and reconciliation	27
5.3 Data enhancements and additional data	28
5.4 Projection methods for outstanding claims	28
5.5 Approach to estimate break-even premium rates	30
6 Assumptions	32
6.1 Financial assumptions	33

6.2	Superimposed inflation	34
6.3	Expenses	34
6.4	Reinsurance	35
6.5	2015 legislative amendments	36
7	Uncertainty	37
7.1	Uncertainty in the estimates	38
7.2	Determination of provisions	38
7.3	Key risks for NT WorkSafe scheme	41
Appendix A	Detailed data description	45
Appendix B	Assumptions	51
Appendix C	Insurer outstanding claim valuation	61
Appendix D	Insurer claims statistics	77
Appendix E	Insurer financial year claims experience	84
Appendix F	Self-insurer outstanding claims valuation	91
Appendix G	Self-insurer claims statistics	97
Appendix H	Insurer break-even premium rate	101
Appendix I	Glossary	109

1 About this report

Key points of this section

- NT WorkSafe have engaged us to value the outstanding claims liability for the scheme as at 30 June 2015 and review the adequacy of premium rates charged by insurers
 - We have complied with the relevant actuarial and accounting standards when performing this review.
-

1.1 Context for our review

This report has been prepared for NT WorkSafe and the Scheme Monitoring Committee in accordance with contract number D13-0250, dated 31 October 2013. Under this contract we have conducted the following analyses which are detailed in this report:

- Calculation of the funding ratio based on 30 June 2015 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 2015, 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 the 2015/16 underwriting year, based on historic data and future inflation assumptions.

This is the third time that we have prepared this report for NT WorkSafe. Our previous valuation was conducted using data as at 30 June 2014, the findings of which are detailed in our 5 June 2015 report titled *Actuarial review of Northern Territory workers compensation scheme as at 30 June 2014*.

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
- QBE Insurance Australia

and the following four active self-insurers:

- Catholic Church Insurance
- Coles Supermarkets Australia 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.

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 Disclaimer

Report and Advice

This report has been prepared for the sole use and benefit of NT WorkSafe. It should not be used or relied upon by any other person for any purpose.

You agree to use this report only in connection with the purpose in respect of which this report is provided being to present the outstanding claims liability as at 30 June 2015 and review the adequacy of premium rates charged by insurers operating under the scheme. We therefore accept no liability or responsibility for any loss or damage arising from use of the report for any other use or purpose.

Judgements based on the contents of this report should be made only after studying the report and the appendices in their entirety, as conclusions reached by a review of an aspect or section in isolation may be misleading.

The advice contained in this report has been prepared on the instructions of NT WorkSafe in accordance with the terms of reference in the tender document referred to in section 1.1 above and is based on the information and data provided to us.

The conclusions reached in this report are reliant on the completeness and accuracy of information compiled and provided by NT WorkSafe, and by insurers and self-insurers to NT WorkSafe. Other than preliminary data checks, we have not conducted an independent review of this information. We do not accept any liability or responsibility for errors or omissions arising from the provision of inaccurate or incomplete information to us.

Third Parties

This report and the advice contained in it are confidential. You agree not to disclose the report and/or our advice to third parties by any means (including orally or in writing) without our prior written consent. We may, at our discretion, withhold or give our consent subject to conditions, including:

- The report is to be released in its entirety in response to a request, including all appendices
- We accept no liability or responsibility to any other person or entity other than NT WorkSafe in relation to this report and
- No-one other than NT WorkSafe should rely on this report for any purpose.

1.3 Compliance with standards

1.3.1 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 *GPS320 Actuarial and Related Matters* where applicable. It also complies with the Institute of Actuaries of Australia's Professional Standard PS300 to the extent possible given the data available.

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

1.3.2 Premium rates

Our advice to you constitutes a Professional Service as defined in the Code of Professional Conduct (the Code) issued by the Institute of Actuaries of Australia and our advice complies with the Code in this respect.

2 Insurer outstanding claims liabilities

Key points of this section

- Our estimate of the net outstanding claims provision as at 30 June 2015 is \$369.6 million, which is \$39.3 million (11.9%) higher than the provision as at 30 June 2014
 - This provision is \$17.5 million (5.0%) higher than insurers' own provisions of \$352.2 million. This difference is less than the 30 June 2014 difference of \$44.0 million (15.4%)
 - The funding ratio is 109% which is higher than 99% last year
 - There has been a stable trend in the number of claims incurred over recent years, but a decreasing trend in the claim frequency due to increases in wages
 - The average claim size has been steadily increasing since 2011. There was a large increase in 2015 due to unfavourable large claims experience
 - The reconciliation of our gross estimates, excluding claims handling expenses, to our estimates as at 30 June 2014 shows a strain on reserves of \$8.9 million, which is 2.9% of the opening estimates.
-

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 and excluding claims handling expenses*:

Estimates of outstanding claims at 30 June 2015 (\$000s) (a) (b)										
Accident year ending 30 June	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation		Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum		Active large claims allowance	Total
			Payments (Other), Death	Payments			Economic	Lump Sum		
2015	25,912	7,305	8,364	3,784	5,217	33,594	15,194	99,370		
2014	15,584	3,305	4,643	2,203	4,461	29,927	0	60,122		
2013	11,055	2,236	2,772	1,659	3,515	24,320	0	45,557		
2012	6,310	1,283	1,308	1,039	2,252	14,597	5,628	32,416		
2011	4,278	875	808	686	1,459	8,677	1,870	18,651		
2010	3,978	828	639	558	1,221	7,589	0	14,813		
2009	2,780	586	425	318	792	5,198	-917	9,181		
2008	2,468	579	402	281	621	4,439	6,653	15,442		
2007	1,825	468	297	186	398	3,265	2,183	8,623		
2006 & earlier	7,818	1,747	1,072	956	1,124	12,912	12,953	38,581		
Total	82,008	19,211	20,729	11,670	21,058	144,517	43,563	342,757		

Notes: (a), (b) from appendix C4

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

Gross estimates at 30 June 2015 excluding expenses (\$000s)			
Accident year ending 30 June	30 June 2015 values	Inflated values	Infl/disc values
2015	99,370	112,370	101,527
2014	60,122	67,487	61,395
2013	45,557	51,104	46,488
2012	32,416	36,428	33,114
2011	18,651	20,915	19,050
2010	14,813	16,626	15,119
2009	9,181	10,340	9,359
2008	15,442	17,169	15,767
2007	8,623	9,706	8,807
2006 & earlier	38,581	42,563	39,199
Total	342,757	384,709	349,827

An allowance for reinsurance recoveries, a claims handling expense and a risk margin are included on the gross inflated/discounted estimate to find the net outstanding claims provision:

Estimates at 30 June 2015 (\$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	349,827	45,404	304,422	18,265	322,687	46,921	369,609

- Notes:** (a) from table above
 (b) allows for 100% reinsurance recoveries 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 14.54%, see section 7.2.2 for details on the risk margin
 (g) = (e) + (f)

The inflated and discounted gross central estimate of \$349.8 million is \$43.8 million (14.3%) higher than the equivalent estimate as at 30 June 2014. This increase is driven by changes in the adopted actuarial assumptions in response to higher than expected claim payments over recent financial years and an increase in the large claim allowance from \$34.0 million in 2014 to \$45.4 million in 2015.

The net provision at 30 June 2015 is \$369.6 million, which is \$39.3 million (11.9%) higher than the \$330.3 million estimated provision as at 30 June 2014. The increase in the net provision is less than the increase in the gross provision. This is because there was an increase in the estimated outstanding reinsurance recoveries compared to our 30 June 2014 valuation, due to an increase in the large claims allowance.

The first table presented in this section shows that the largest component of the outstanding claims liability relates to the *redemptions and non-economic lump sum* payment group (42% of the total), followed by *weekly benefits* (24% of the total). We note that 90% to 95% of redemptions and non-economic lump sum payments are Hopkins settlements.

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. While we have received some information on specific large claims experience, we do not receive a comprehensive data set, and we do not receive information on individual reinsurance treaties. As such, the reinsurance recoveries are a high level estimate and are not presented by accident year. As per last year, we have assumed 100% of the large claims will result in reinsurance recoveries, excluding the large known non-reinsurance recovery in the 2009 accident year. While some of the large claim payments would be retained by the insurers, this method gave reasonable total reinsurance recoveries compared to insurers.

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.

2.1.2 Comparison with insurers

We have compared our gross and net outstanding claim estimates to the insurers' estimates by accident year. We have not compared the results by accident year due to the lack of reinsurance information to enable us to assess the expected reinsurance recoveries by accident year.

Gross estimates at 30 June 2015 excluding expenses (\$000s)				
	Insurers' estimate (a)	PwC estimate (b)	Difference (\$000) (b) - (a)	Difference (%) (b) / (a) - 1
Total	355,605	349,827	-5,778	-1.6%

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

Net provision at 30 June 2015 (\$000s)				
	Insurers' provisions (a)	PwC provision (b)	Difference (\$000) (b) - (a)	Difference (%) (b) / (a) - 1
Total	352,159	369,609	17,450	5.0%

Notes:(a), (b) = net inflated and discounted values including reinsurance, claims handling expenses and risk margin

As at 30 June 2015, our gross estimate is \$5.8 million (1.6%) lower than that of the insurers. This compares to our estimate being \$27.4 million (9.8%) higher than that of the insurers at 30 June 2014. 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. While we received some information on large claims from insurers, for future valuations we will continue to work with insurers to obtain more information about large claims and reinsurance recovery case estimates and conduct a more thorough large claims analysis.

Our net provision is higher than that of the insurers due to different risk margin assumptions. Individual insurers would be expected to have a lower risk margin than the scheme, due to diversification benefits and overall larger portfolio sizes 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 (ie including risk margin) with our central estimate (ie excluding risk margin). This shows:

Funding ratio (\$000s)				
	Actual provisions (a)	PwC central estimate (b)	Difference (\$000) (b) - (a)	Funding ratio (a) / (b)
Insurers	352,159	322,687	-29,471	109%

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

The aggregate funding ratio is 109%, which is an increase from 99% last year. Compared to the valuation result at 30 June 2014 our central estimate has increased, but the insurers' actual provisions have increased by a higher amount. We are not provided with a reconciliation for the insurers' provision so cannot identify the drivers of the insurers' increase. 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. Over the most recent two valuation dates the funding ratio has been less than 100%. We make the following comments which should be borne in mind when considering the funding ratio:

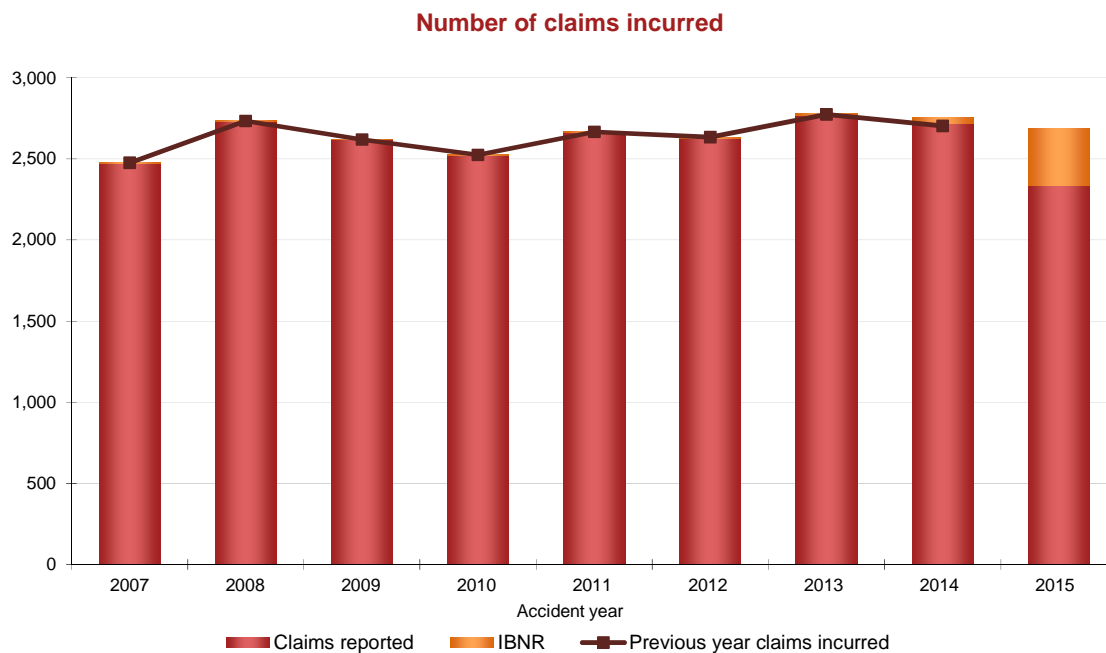
- The insurers' actuaries have access to more detailed claims data than we have to estimate the liabilities
- Insurers hold assets in excess of their liabilities due to APRA capital requirements and their own risk appetite
- Some insurers may be holding greater than 100% of our notional allocation to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

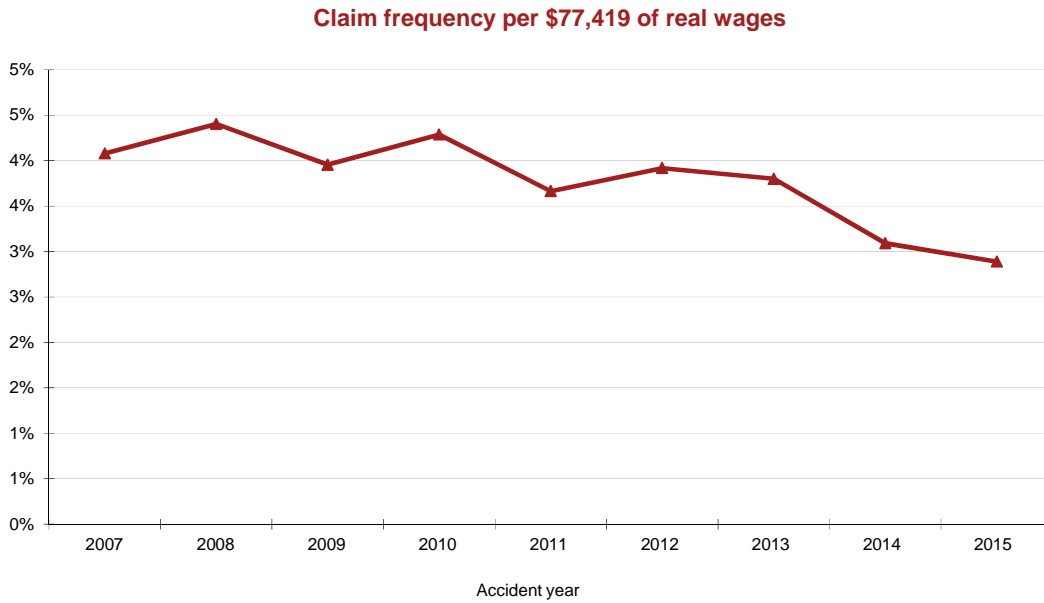
Generally stable experience between 2,500 and 2,800 incurred claims per annum



The main points to highlight from this chart are:

- Since 2007 the number of claims incurred has varied from one year to the next, but has generally exhibited a stable trend
- For the 2009 to 2012 accident years, the number of claims incurred was between 2,500 and 2,700
- There was a spike in the number of claims incurred for the 2013 accident year to just under 2,800
- Incurred claims estimated for the 2015 accident year are 2,684, which is 68 (2.5%) fewer than 2014.

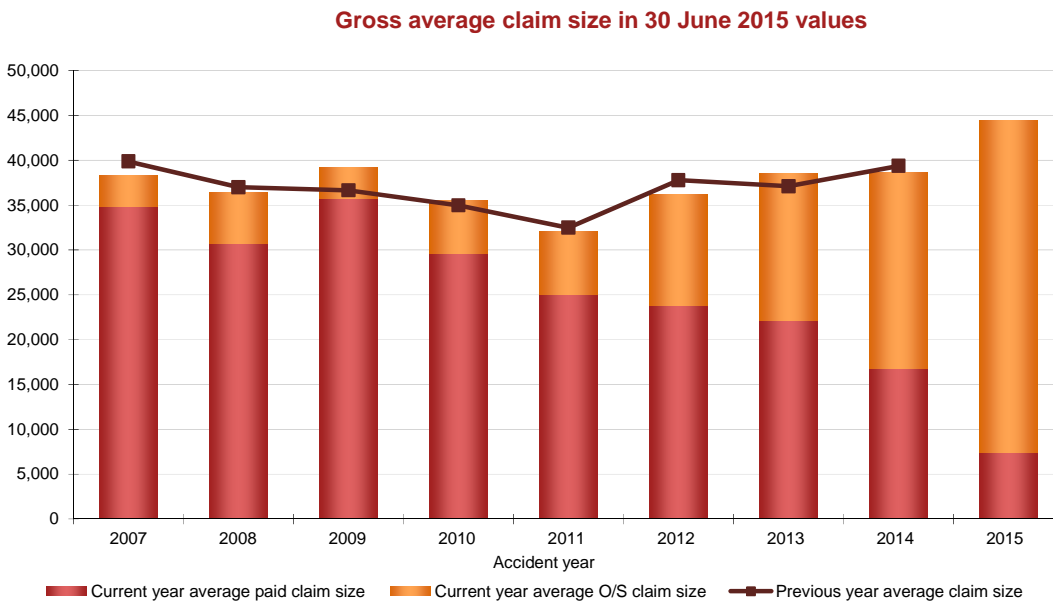
Declining claim frequency due to significant increases in wages with relatively stable number of claims



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

2.2.2 Gross average claim size

Significant increase in 2015 average claim size compared to prior years due to unfavourable large claims experience



Since 2007 the average claim size (in 2015 values):

- Exhibited a decreasing trend from around \$38,500 in 2007 to around \$32,000 in 2011
- Exhibited a increasing trend from around \$32,000 in 2007 to around \$44,400 in 2015

- The significant increase in 2015 is caused by unfavourable large claims experience.

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 2015 accident year, where a high proportion (83%) of the average claim size relates to uncertain future claims development.

Compared to the previous valuation, the gross average claim size is similar for most years with the exception of 2009 and 2013, where estimates increased due to higher than expected claims development. Conversely, 2012 reduced due to lower than expected payments and development.

Appendix E contains the average claim size split by payment type. The mix of payment types across the accident years has remained fairly stable. Redemptions and non-economic lump sums (90% to 95% are Hopkins settlements) are the largest payment type, closely followed by weekly benefits. These two payment types account for two thirds of total incurred costs.

2.3 Actual vs expected claims experience over 2014/15

2.3.1 Claims incurred up to 30 June 2014

Actual experience compared to the expected experience over 2014/15 for claims incurred up to 30 June 2014 showed:

- Claim reports were higher than expected (369 actual compared to 320 expected)
- The proportion of claims finalised was slightly higher than expected (65.0% compared to 63.8%)
- Claim payments were lower than expected (\$73.3 million actual compared to \$82.2 million expected).

Expected experience is taken from the previous scheme report dated 5 June 2015. 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 2014/15

The actual experience for claims incurred over 2014/15 compared to expected showed:

- The number of incurred claims reduced by 2.5% relative to the 2014 accident year
- There were 854 claims active as at 30 June 2015, which is 1.9% higher than the 838 expected
- Average payment per claim was \$7,403, which is 2.9% higher than the \$7,192 expected.

The expected experience is based on the adopted parameters used for our 30 June 2014 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 2014.

Reconciliation of gross actuarial estimates, excluding expenses (\$'000s)									
Accident year ending 30 June	2014	2013	2012	2011	2010	2009	2008	2007 & earlier	Total
A. Gross estimates at 30 June 2014 (a)	82,655	55,453	44,943	23,144	17,437	6,140	19,751	56,503	306,026
B. Gross payments 1 July 2014 to 30 June 2015	24,972	15,571	9,385	3,892	4,148	3,317	2,834	9,214	73,332
C. Assumed investment return (b)	1,736	1,179	995	524	380	111	453	1,283	6,661
D. = A - B + C	59,419	41,061	36,553	19,775	13,670	2,934	17,370	48,572	239,355
Updated gross estimates at 30 June 2015									
E. Revised gross estimates at 30 June 2015 (c)	61,395	46,488	33,114	19,050	15,119	9,359	15,767	48,007	248,299
F. = E - D	1,977	5,426	-3,440	-725	1,450	6,425	-1,603	-566	8,944
Change 01 July 2014 to 30 June 2015									
G. Proportion of change attributable to									
Changes in real rates of return	-332	-255	-175	-100	-83	-55	-74	-239	-1,313
Change in experience	326	2,137	-4,051	-755	177	5,868	-1,604	-95	2,003
Change in actuarial assumptions	1,983	3,544	786	129	1,356	612	75	-232	8,254
H. Gross amount incurred and outstanding for 2014/15 accident year (e)									101,527
I. = E + H									349,827
Total gross outstanding liability, excluding expenses at 30 June 2015									

- Notes : (a) from section 2.1 of our previous report dated 5 June 2015
 (b) calculated using 2.5% pa being the one year forward rate from section 6.1 of our previous report dated 5 June 2015
 (c) from appendix C4 of this report.

The table shows that:

- Overall estimates show a strain on reserves of \$8.9 million, which is 2.9% of the opening 30 June 2014 estimates. This strain is made up:
 - \$1.3 million release (0.4% of opening estimates) due to changes in the real rates of return,
 - \$2.0 million strain (0.7%) due to changes in experience
 - \$8.0 million strain (2.7%) due to changes in underlying assumptions
- The change in experience is due to:
 - The significant strains for the 2009 and 2013 accident years were due to higher than expected payments and case estimate development
 - The release for 2012 was driven by lower payments compared to expected.
- The strain in actuarial assumptions is due to strengthening the adopted payment pattern for most payment types as payments were higher than expected, before allowing for large claims.

3 *Self-insurer outstanding claims liabilities*

Key points of this section

- Our estimate of the net outstanding claims provision as at 30 June 2015 is \$5.5 million, which is \$0.5 million (9.3%) higher than the 30 June 2014 provision
 - Our inflated and discounted central estimate, including claims handling expenses, is \$4.5 million. This is \$0.1 million (3.3%) lower than self-insurers' combined central estimate of \$4.6 million
 - The funding ratio is 155%, which is lower than 178% last year but higher than 123% as at 30 June 2013
 - Claim incurred numbers had a strong declining between 2011 and 2014. However, the 2015 accident year increased slightly to 132 from 127 in 2014
 - The reconciliation of our central estimates, excluding expenses, to our previous valuation as at 30 June 2014 shows a strain on reserves of \$0.1 million, which is 2.0% of the opening estimates.
-

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.

We do not allow for any reinsurance recoveries for self-insurers.

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

Estimates at 30 June 2015 (\$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	4,172	0	4,172	292	4,464	1,027	5,491

- Notes :**
- (a) in inflated and discounted values
 - (b) (a) x 0%
 - (c) (a) + (b)
 - (d) assumed to be 7% of the net outstanding liability
 - (e) = (c) + (d)
 - (f) a risk margin to increase the provision to a 75% level of sufficiency, = (d) x 23.0%
 - (g) = (e) + (f)

The inflated and discounted net provision at 30 June 2015 is \$5.5 million, which is \$0.5 million (9.3%) higher than the \$5.0 million provision as at 30 June 2014.

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 2015 (\$000s)				
Accident year ending 30 Jun	Self-insurers' estimate (a)	PwC estimate (b)	Difference (\$) (b) - (a)	Difference (%) (b) / (a) - 1
2009 & earlier	100	196	96	96.5%
2010	51	107	55	107.8%
2011	163	236	73	44.9%
2012	686	489	-198	-28.8%
2013	822	717	-105	-12.8%
2014	913	936	23	2.5%
2015	1,880	1,784	-96	-5.1%
Total	4,614	4,464	-150	-3.3%

- 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 \$0.15 million (3.3%). This is driven by the 2012, 2013 and 2015 accident years where our average claim size is lower than self-insurers.

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 (\$) (b) - (a)	Difference (%) (b) / (a) - 1
Total	6,922	4,464	-2,457	155%

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

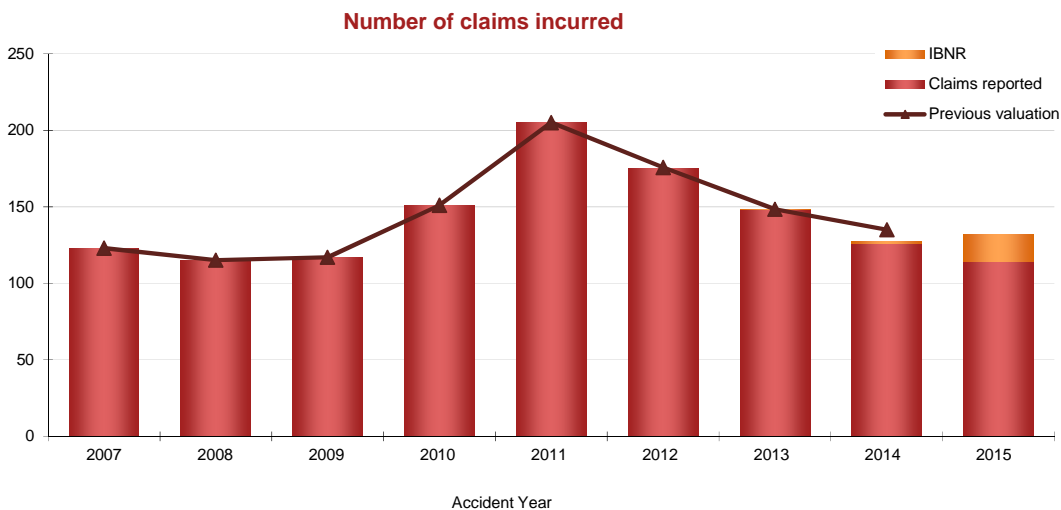
The aggregate funding ratio is 155%, which is lower than 178% as at 30 June 2014, but higher than 123% as at 30 June 2013. This indicates that the current bank guarantee provisions held by self-insurers in aggregate are likely to be adequate to cover future claims costs.

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

Slight increase in 2015 following decreasing trend since 2011 peak



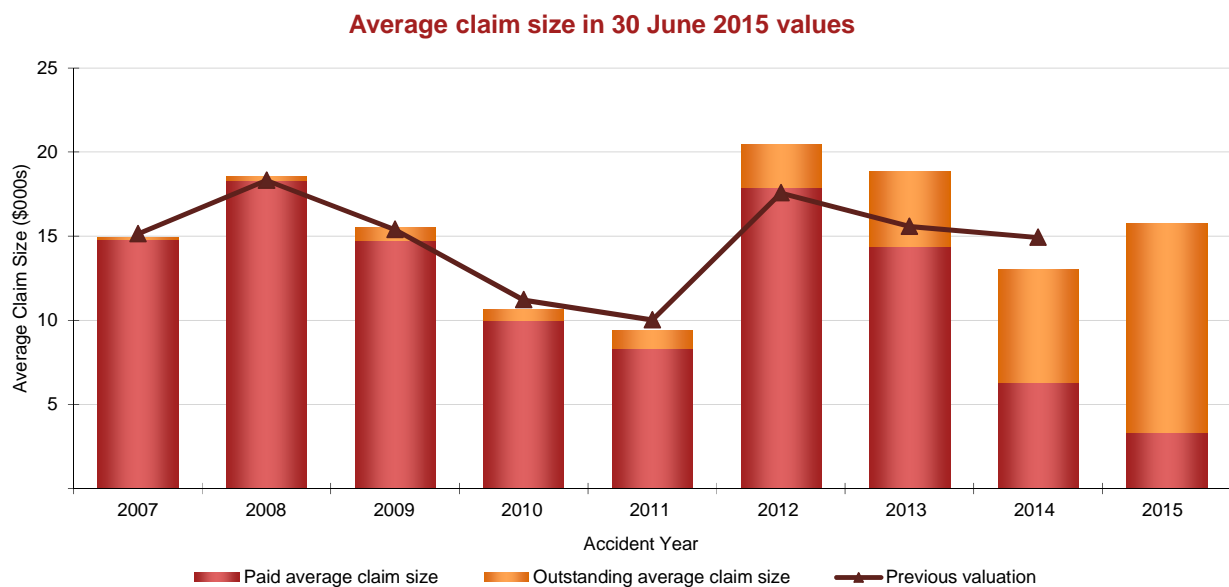
The main points to highlight from this chart are:

- The number of claims incurred was stable from 2007 to 2009, between 115 and 125
- There were strong increases in the number of incurred claims in the 2010 and 2011 accident years, to 151 and 205 respectively. We are unaware of what drove this increase

- Since the high in 2011, the number of claims has reduced each year to a level of 127 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
- There was a slight increase in 2015 to 132 claims, 18 of which are IBNR
- The total estimated claims for 2014 is lower than at the previous valuation due to fewer claims reported in 2015 than expected.

3.2.2 Gross average claim size

2015 average claim size is \$15,800 which is a \$2,700 (21%) increase from 2014



The average claim size has been volatile between accident years and there has been no discernible trend. Since 2007 the average claim size has typically been between \$12,000 and \$17,500, except for lows in 2010 and 2011 followed by highs in 2012 and 2013. This potentially implies that the increase in the incurred claim numbers in 2010 and 2011 shown in 3.2.1 is related to smaller claims.

Our projected average claim size for the 2012 to 2013 accident years is significantly higher than our previous valuation due to higher than expected payments and development for these accident years over the 2015 financial year.

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 2015 accident year, where a high proportion (79%) of the average claim size consists of the uncertain future estimate.

3.3 Actual vs expected claims experience over 2014/15

Actual experience compared to the expected experience over 2014/15 for claims incurred up to 30 June 2014 showed:

- Claim reports were considerably lower than expected (13 actual compared to 25.2 expected)
- Claim payments were higher than expected (\$1.9 million actual compared to \$1.5 million expected).

The expected experience is taken from our previous report dated 5 June 2015. 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 2014.

Reconciliation of gross actuarial estimates, excluding expenses (\$000s)										
Accident year ending 30 June (\$000s)	2014	2013	2012	2011	2010	2009	2008	2007	2006 & earlier	Total
A. Gross estimates at 30 Jun 2014 (a)	1,717	870	647	473	198	98	213	54	118	4,387
B. Gross payments 1 July 2014 to 30 June 2015	430	622	574	86	0	5	189	0	12	1,917
C. Expenses (b)	30	44	40	6	0	0	13	0	1	134
D. Assumed investment return (b)	37	13	8	11	5	2	3	1	3	83
E. = A - B - C + D	1,294	217	42	392	203	94	14	55	108	2,419
Updated gross estimates at 30 June 2015										
F. Revised gross estimates at 30 June 2015 (c)	874	670	457	221	100	95	23	19	45	2,505
G. = F - E	-420	453	415	-171	-103	1	9	-36	-63	86
Change 1 July 2014 to 30 June 2015										
H. Proportion of change attributable to										
Changes in real rates of return	5	4	4	2	1	1	0	0	0	18
Change in experience	-497	367	486	-1	-58	8	-14	-11	0	270
Change in actuarial assumptions	72	81	-74	-172	-46	-8	23	-25	-63	-202
I. Gross amount incurred and outstanding for 2014/15 accident year (C)										1,667
J. = F + I										4,172
Total gross outstanding liability, excluding expenses at 30 June 2015										4,172

- Notes :**
- (a) from section 3.1 of our previous report dated 5 June 2015
 - (b) assumed to be 7.0% of claim payments in 2014/15
 - (c) calculated using 2.5% pa being the one year forward rate from section 6 of our previous report dated 5 June 2015
 - (d) from appendix F4.4 of this report.

The table shows that:

- Overall estimates show a strain on reserves of \$0.1 million, which is 2.0% of the opening 30 June 2014 estimates. This strain is made up:
 - \$0.02 million strain (0.4% of opening estimates) due to changes in the real rates of return,
 - \$0.27 million strain (6.2%) due to changes in experience
 - \$0.20 million release (2.7%) due to changes in underlying assumptions
- The strains due to changes in experience were mostly related to the 2012 and 2013 accident years, as the payments and development were significantly higher than expected. This was partially offset by a release for 2014, where the payments and development were lower than expected

- The release due to actuarial assumptions was mainly attributable to the 2010 to 2012 accident years, where more weighting was given to the case estimates than the PPCI method compared to last year.

4 Break even premium rates

Key points of this section

- Actual premium rates charged by insurers have been variable around the break-even cost for accident years since 2007. However, actual premium rates have been more than sufficient to cover the break-even cost for most accident years since 2007, except 2009, 2010, 2012 and 2015
 - Our projected break-even premium rate for 2016 is 1.9%, which is lower than the 2.1% calculated break-even premium rate for 2015, but consistent with the actual premium rate charged in 2015 of 1.9%.
-

4.1 Adequacy of past premiums

The break-even premium rate is calculated on an inflated and discounted basis and is gross of reinsurance, as each insurer will have a unique 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.

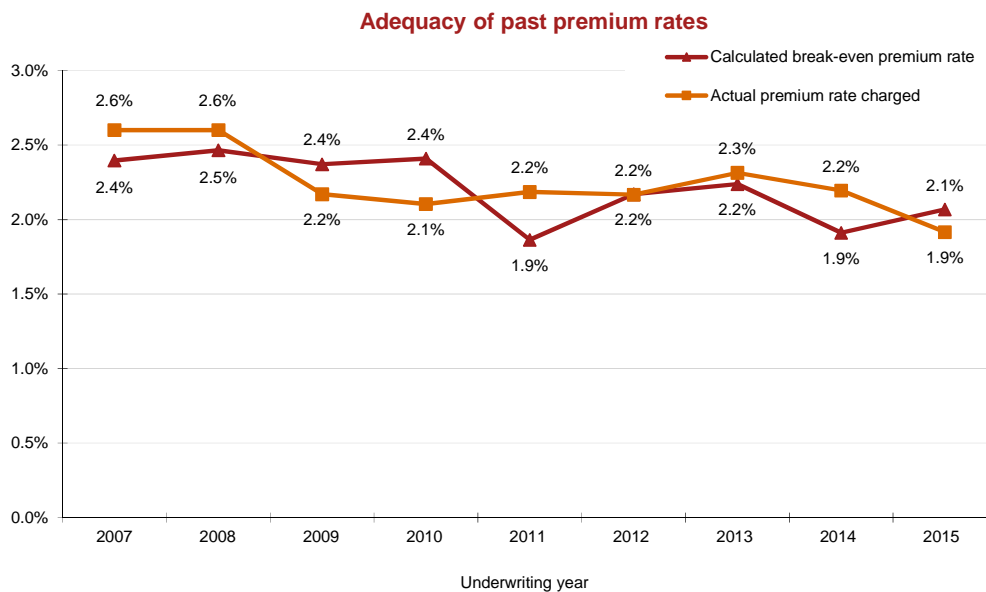
For this analysis, we have allowed for the claims costs and expenses to be discounted to the point that the premium is received. We have used all claims experience available to date to calculate the break-even premium rate.

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

Underwriting year	Calculated break even premium				Actual premium				
	Actual wages (a) (\$000s)	Discounted gross incurred cost (b) (\$000s)	Commission in financial year (c) (\$000s)	Discounted other expenses in the fin year (d) (\$000s)	Premium (e) (\$000s)	Calculated premium rate (f)	Premium (g) (\$000s)	Actual premium rate charged (h)	Difference (break even - actual)
2015	6,949,254	118,039	4,558	20,288	143,760	2.1%	133,072	1.9%	-10,688
2014	6,501,801	101,642	4,775	17,098	124,292	1.9%	142,767	2.2%	18,475
2013	5,305,053	99,208	3,697	15,016	118,736	2.2%	122,776	2.3%	4,040
2012	4,704,972	84,057	2,864	14,015	102,116	2.2%	101,981	2.2%	-135
2011	4,700,283	71,815	2,863	11,998	87,630	1.9%	102,688	2.2%	15,057
2010	3,576,580	72,174	2,624	10,680	86,204	2.4%	75,252	2.1%	-10,952
2009	3,829,000	74,885	2,544	11,837	90,803	2.4%	83,089	2.2%	-7,714
2008	3,423,000	68,680	2,658	11,713	84,369	2.5%	88,998	2.6%	4,629
2007	3,170,000	62,019	2,753	10,065	75,936	2.4%	82,420	2.6%	6,484

- Notes :**
- (a) from the consolidated ANZSIC data
 - (b) calculated in Appendix H1
 - (c) actual commission, from the consolidated Form A returns
 - (d) other expenses, from the consolidated Form A returns, discounted by half a year
 - (e) = (b) + (c) + (d) 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
 - (f) = (e) / (a)
 - (g) from the consolidated ANZSIC data
 - (h) = (g) / (a)

This comparison uses premium processed information provided by insurers on the consolidated ANZSIC form, with adjustments where necessary. This includes wage or premium adjustments relating to prior underwriting periods, which distorts the comparisons, particularly in the case of a growing economy, as wage adjustments for previous years will artificially increase the current year’s wages and premium received. Changes in the mix of burner policies could also distort the level of premium received by year. We have started collecting the premium data on an underwriting basis and we will use this when we are able to confirm the robustness of the data and estimate the premium development.



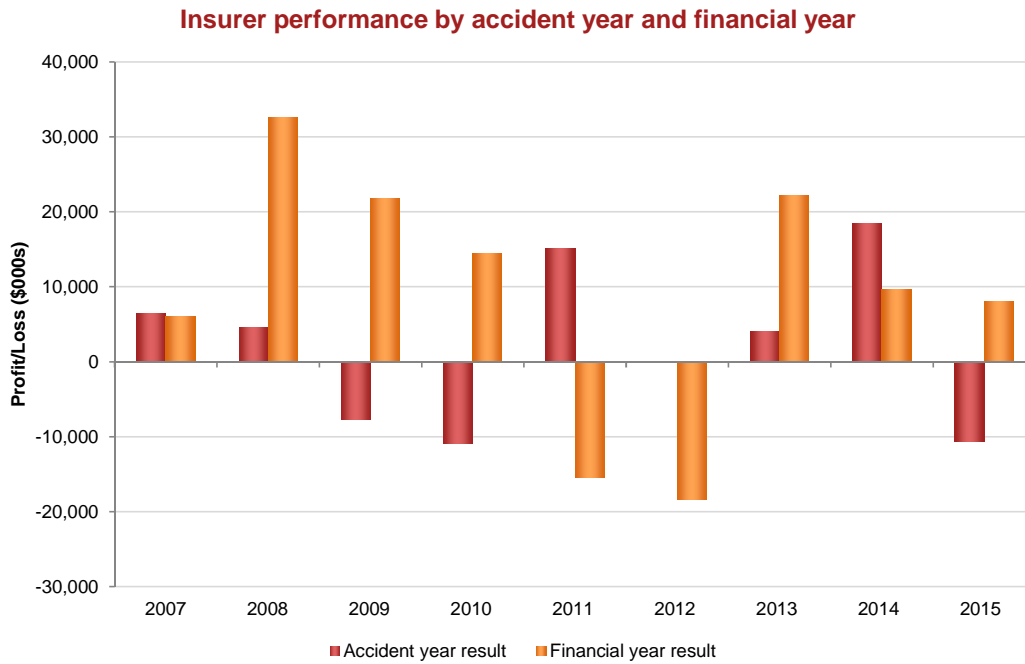
The key points to highlight from the above chart and table may be summarised as follows:

- Over 2007 and 2008 the actual premium rate charged by insurers was stable at 2.6%, which was higher than the calculated break-even premium rate
- From 2009 onwards there was a significant decrease in the actual premium rate charged, to a stable level between 2.1% and 2.3%, except for 2015 over which the rate decreased to 1.9%
- The break-even premium rate remained stable in 2009 and 2010 around 2.4%, which is higher than the actual premium rate charged
- Since 2011, there has been a decrease in the break-even premium rate to between 1.9% and 2.2%, which is lower than the actual rate charged, except in 2015
- With hindsight, the actual premium rate charged was more than sufficient to cover the break-even cost for all accident years except 2009, 2010, 2012 and 2015.

Historically, the actual rate has fluctuated around the break-even premium rate. However we would expect the premium charged by insurers to be consistently higher than our break-even premium, to incorporate an appropriate profit margin.

Another source of difference between the two rates is reinsurance. We have calculated 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.

On an accident year basis the 2009, 2010, 2012 and 2015 actual premium charged is lower than the hindsight break-even premium based on current claims experience.

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)
2016	7,175,105	116,256	22,015	138,945	1.9%
2015	6,949,254	118,039	24,846	143,760	2.1%
2014	6,501,801	101,642	21,873	124,292	1.9%
2013	5,305,053	99,208	18,713	118,736	2.2%
2012	4,704,972	84,057	16,879	102,116	2.2%
2011	4,700,283	71,815	14,861	87,630	1.9%

- Notes:**
- (a) 2016 = wageroll for 2015 x (1+3.25%)
 - (b) 2016 = adopted claims incurred x adopted average claim size in 30 June 2015 values x (1 + wage inflation) x (1 + superimposed inflation) x inflation/discounting factor
3,021 x 36,938 x (1 + 3.25%) x (1 + 1.5%) x 0.9944
 - (c) = (b) / (1 – commission rate (3.4%) – other expense rate (12.5%)) – (b)
 - (d) = (b) / (1 – commission rate (3.4%) – other expense rate (12.5%)) x (1 + interest rate (2.0%)) ^ (3/12) to allow for the fact that premiums are received 3 months after the commencement of the underwriting period
 - (e) = (d) / (a)

Our projections of the break-even rate for the 2016 underwriting year is reliant on three key items:

- *Actual wages* are forecast to increase at 3.25%, 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 allow for 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 2015 values, commission rate and other expense rate) are shown in Appendix H.

The adopted average claim size includes an allowance for a 2.8% reduction for the 2015 legislative changes. See Appendix B for more details.

5 *Data and methods*

Key points of this section

- NT WorkSafe provided us with the data required for this review
 - To improve the quality of future reviews we suggest:
 - Collecting details and potential reinsurance recoveries on all large claims, including case estimates and the applicable retention limit
 - Collecting more detail from self-insurers at 30 June each year
 - The methodologies used to estimate the outstanding claims for insurers and self-insurers, and for the break-even premium rate are the same as those used for the previous valuation.
-

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.

Following our review as at 30 June 2013, we worked with NT WorkSafe to create a data template for all insurers and self-insurers to complete. This template was provided as an Excel workbook. These returns enable us to receive consistent data, in a consistent form for our review, from all insurers. We will continue to work with insurers to improve the template for ease of use and completeness for our analysis purposes and ensure that it is feasible for all insurers to complete it.

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 2015
 - *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.

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 four self-insurers which are active in the scheme. These eight companies are:

- Allianz Australia Insurance Limited (including Territory Insurance Office)
- CGU Insurance Australia (Part of Insurance Australia Limited)
- GIO Insurance Australia
- QBE Insurance Australia
- Catholic Church Insurance
- Coles Supermarkets Australia Pty Ltd
- Westpac Banking Corporation
- Woolworths Supermarkets.

We have not included Government Self Insurance or uninsured data.

At 30 June 2014, TIO was a separate insurer. However, over the 2015 financial year it was purchased by Allianz.

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 and self-insurer data templates*
- Assumptions regarding reinsurance recoveries and claims handling expenses have been set by considering the *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 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:

- This year the self-insurers' completed part of the Form B submitted by insurers. As the WIMS system cannot be easily adjusted to allow for finalisation date and case estimates, we will see if the self-insurers can complete the full version of the Form B, including case estimates and large claims information. This will allow us to use PPCF, PPAC or PCE method in addition to the PPCI method for self-insurers.
- To accurately estimate the net liability by accident year we would need the following reinsurance information:
 - Details of each large claim that has a potential reinsurance recovery, including case estimates of the claim, and retention limit
 - Reinsurance treaties for each insurer, or sufficient summarised detail from the treaties to enable us to understand the retentions, limits and other key features for each accident and/or underwriting period.

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 (90% to 95% are Hopkins settlements).

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.

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.

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 investment return attributable to the assets backing the provisions during the run-off period
- c reinsurance recoveries on the gross future payment amounts
- d expenses associated with administering claims during the run-off period.

We have not been provided with any detailed data on large claims or any information on the reinsurance treaties in place for the active insurers. To estimate the reinsurance recoveries, we have allowed for 100% of the large claim allowance, excluding the known non-reinsurance recoveries.

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 GPS320 for liability valuations for general insurance. It also complies with the Institute of Actuaries of Australia's Professional Standard PS300 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 2015. We have used the PPCI method for our analysis and compared this to case estimates. For accident years where the PPCI result was insufficient we have adopted the case estimates or for older years we have adopted a blend of PPCI and case estimates.

The PPCI method calculates the projected liability in current values, including an allowance for superimposed inflation. We then used the same method applied to insurers to calculate the future claim payments, allowing for (a) – (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 underwriting years:

- a Using historic one-year forward rates, discount actual claim payments back to the start of each underwriting 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 underwriting year back to the start of each underwriting year
- c Sum (a) and (b) to find the total discounted gross incurred cost for each underwriting year
- d Using the Form A returns 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 actual level of wages to find the break-even premium rate.

We have allowed for the following timing aspects in the calculated 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 half way 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 premiums charged by insurers and wages from the ANZSIC data to calculate the actual premium rate charged.

To project the break-even premium rate for the 2015/16 underwriting year, we take the following steps:

- a From historical data, estimate the incurred number of claims using average claim frequency and projected wages, an 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 underwriting 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 calculated incurred cost and expense allowances, and divide this by projected wages for the next underwriting year, which are calculated as the 2014/15 wages inflated by one year. Also allow for the timing adjustment as premiums will be received one quarter after policy commencement.

6 *Assumptions*

Key points of this section

- The real rate of return has increased for a majority of future years since the previous valuation. This is mainly due to the reduction in the inflation rate from 4.00% to 3.25%, partially offset by decreases in the discount rate
 - Overall, the adopted superimposed inflation rate has increased since the previous valuation, from 1.2% to 1.5%
 - The commission rate, claims handling expense rate and other expense rate have been set by considering insurer data and with our knowledge and experience of other schemes in Australia. These are broadly similar to last year, in total being 15.9% of the break-even premium rate
 - For insurers, we have allowed for 100% reinsurance recoveries on large claims valued separately, adjusting for the known non-reinsurance recoveries, which is the same method as the previous valuation
 - For self-insurers, we have adopted a 0% reinsurance recovery rate, which is the same as the previous valuation.
-

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	Inflation rate	Real rate	
	30 Jun 2015	30 Jun 2015	30 Jun 2015	30 Jun 2014
1	1.96%	3.25%	-1.29%	-1.53%
2	1.99%	3.25%	-1.26%	-1.38%
3	2.20%	3.25%	-1.05%	-0.97%
4	2.57%	3.25%	-0.68%	-0.58%
5	3.11%	3.25%	-0.14%	-0.26%
6	3.61%	3.25%	0.36%	-0.01%
7	3.81%	3.25%	0.56%	0.18%
8	3.91%	3.25%	0.66%	0.31%
9	4.00%	3.25%	0.75%	0.42%
10	4.09%	3.25%	0.84%	0.53%
11	4.17%	3.25%	0.92%	0.53%
12	4.25%	3.25%	1.00%	0.53%
13	4.32%	3.25%	1.07%	0.53%
14	4.38%	3.25%	1.13%	0.53%
15 & onwards	4.44%	3.25%	1.19%	0.53%

We have based the future interest rate assumptions on the Commonwealth Government Bond yield curve as at 30 June 2015.

We assume future wage inflation of 3.25%, based on Access Economics forecasts for the NT. More details of how we derive our assumptions are given in Appendix B.

There has been an increase in the real rates of return for all future years, except three and four. This is due to a reduction in our estimate of future wage inflation compared to our 30 June 2014 valuation, for which we assumed 4.00%, partially offset by decreases in the discount rates for all future periods.

The interest rate for one quarter of DY0 $((1 + 1.96\%)^{0.25} - 1) = 0.6\%$ 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.

Past wage inflation

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

6.2 Superimposed inflation

The superimposed assumptions for each payment category are as follows:

Superimposed Inflation							
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	Total
30 Jun 15	1.5%	1.3%	0.0%	0.0%	2.5%	1.6%	1.5%
30 Jun 14	1.6%	0.6%	0.0%	0.0%	3.7%	1.1%	1.2%

In total, our superimposed inflation estimate of 1.5% is 0.3% higher than the 1.2% adopted for the previous valuation. Our estimate of superimposed inflation is higher than the previous valuation for '*Redemptions and Non-Economic Lump Sum*' and '*Medical and Hospital*' and lower for '*Legals*' and '*Weekly benefits*'.

To calculate the superimposed inflation assumption for the *Redemptions and Non-Economic Lump Sum* payment group we have excluded payments over \$1 million in an individual payment year. This has been done to try and reduce the volatility to find a true 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.

A 0% superimposed inflation rate has been adopted for payment categories which had a calculated negative superimposed inflation rate.

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
- 7% of projected future claim payments for self-insurers.

These are the same as the previous valuation.

Commission and other expenses¹

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

(\$000s)	Underwriting year					Adopted
	2015	2014	2013	2012	2011	
Gross written premium (a)	140,232	156,328	126,743	104,221	105,664	
Earned premium (b)	141,354	137,054	106,715	96,150	93,450	
Commission paid (c)	4,558	4,775	3,697	2,864	2,863	
Other expenses (d)	20,537	17,314	15,224	14,345	12,264	
Commission rate (e)	3.2%	3.5%	3.5%	3.0%	3.1%	3.4%
Other expense rate (f)	14.6%	11.1%	12.0%	13.8%	11.6%	12.5%

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

(e) = (c) / (b)

(f) = (d) / (a)

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

Compared to the previous valuation, the adopted commission rate has decreased (from 3.5% to 3.4%), and the other expense rate has increased (from 12.1% to 12.5%). The increase in the other expense rate is mainly due to a high expense ratio for 2015.

In total, the commission and other expense rate make up 15.9% of the break-even premium rate, which is higher than the 15.6% adopted for the 30 June 2014 valuation.

6.4 Reinsurance

We have allowed for a 100% reinsurance recovery on the separate large claims valuation category, adjusting for known non-reinsurance recoveries. This is equivalent to 13% of all claims. We compared the reinsurance recoveries based on the large claims with insurers' total reinsurance recoveries and they were similar so we did not feel it was necessary to allow for any further reinsurance recoveries on the smaller claims.

For our previous valuation we used the same method and it was equivalent to 11% of all 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.

¹ Other expenses include claims handling expenses

6.5 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. This has been allowed for in the 2015/16 break even premium rate. There is no allowance for the 2015 legislative changes in the outstanding claims liability as at 30 June 2015 as the act changes relate to claims incurred from 1 July 2015.

As the scheme changes were broader than covered by our previous report, the actual impact could be different to estimated. We recommend WorkSafe NT and insurers closely monitor the experience after the legislation is promulgated to ensure that there aren't any unintended consequences.

7 *Uncertainty*

Key points of this section

- A sufficient risk margin to increase the level of reserving adequacy from 50% to 75% is 14.5% for insurers, and 23.0% for self-insurers. The rate is higher for self-insurers due to the smaller size of the portfolio causing higher volatility.
 - The sensitivity testing showed greatest sensitivity to changes in the economic assumptions.
-

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 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

Because of the uncertainty described above, provisions which are somewhat greater than the actuarial "central" estimates are often adopted. A 50% probability of provisions being too low, is seen as involving a higher than desirable risk.

This is intended to provide security for stakeholders.

However, security is not the only reason to adopt provisions which are greater than the statistical central estimates. It may be to ensure as far as possible that provisions are not released until it is reasonably certain that they are not required. A 50% chance that the provisions will eventually not be required is generally not seen as sufficient.

Any decision to adopt provisions for outstanding claims which are greater than the central estimates, together with the extent of any margin, is in our view a decision which should properly be taken by the Boards of insurers. In making this decision they may take into account various matters (both objective and subjective) which influence their view of future experience.

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.

It is common practice for the actuary to provide a central estimate of the liabilities. Such an estimate should contain no deliberate or conscious over or under estimation.

The provision adopted in the accounts should usually be greater than the central estimate. The difference is referred to as a risk margin. As explained above, the 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 25% 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 calculated as described above is taken as 25% for insurers and 50% for self-insurers. This leads to the following prudential margins.

Level of sufficiency and risk margins				
Level of sufficiency	70%	75%	80%	85%
Risk margin (insurers)	10.39%	14.54%	19.35%	25.22%
Risk margin (self-insurers)	14.58%	23.00%	33.11%	45.94%

7.2.3 Sensitivity

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

NT WorkSafe Insurers - sensitivity analysis		
Assumption varied	Variation	% Change in total provision
Future interest rates	1% increase	-3.18%
	1% decrease	3.43%
Future inflation rates	1% increase	3.38%
	1% decrease	-3.19%
Adopted claim reporting rates	DY0 rate decreased from 13.62% to 6.81%	-1.85%
Superimposed inflation	1% increase	3.00%
	1% decrease	-2.83%

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	-2.95%
	1% increase	3.19%
Future inflation rates	1% increase	3.14%
	1% increase	-2.96%
Incurred claims	10% increase	0.57%
	10% increase	-0.57%
Superimposed inflation	1% increase	3.08%
	1% increase	-2.89%

The percentage change in the outstanding claim provisions as at 30 June 2015 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 over recent financial years have been driven by the Inpex project and the associated contracts. The number of claims incurred and claims cost has increased at a slower rate than the increase in wages, causing the claim frequency and premium rate to reduce. As the project moves into production phase, this may significantly reduce the premium pool for the NT scheme in future years. There may be an increase in claims due to late claim reports if people cannot find alternative work, in the absence of new contract commencing.

- **Changing economic environment**

There is considerable uncertainty associated with the current economic environment and what it will mean for Australia over the near future. Aside from the Inpex project discussed above, there may be more general real wage decreases, or increases in bad debts for insurer.

Over the last three to five financial years, there has been a notable 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. This reduction has been less obvious in the NT, but we will continue to monitor the mix by size of claims lodged in NT to ensure that we adequately allow for any change in claiming behaviour.

- **Large claims**

The incurred cost for each accident year, and the break-even premium rate for each underwriting 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 Hopkins settlements.

Future claims costs will continue to be impacted by these settlements, with net costs to insurers impacted by the nature and adequacy of any reinsurance arrangements in place.

The net of reinsurance results have only been provided in total as we have no information regarding the insurers' reinsurance policies or which claims may exceed the relevant retentions. We have used the same method as last year to estimate the reinsurance recoveries, which gives a similar result to the insurers' estimates. This is an appropriate high level check, as the insurers have more insight into their own reinsurance retentions and large claims.

Large claims can also have an impact on superimposed inflation. While superimposed inflation remained fairly stable 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 are effective from 1 July 2015 and 1 October 2015. This creates additional uncertainty in the future costs for the 2015/16 premium year. In separate advice, PwC estimated a 2.8% reduction in claims cost relating to the largest expected changes. We have not estimated the impact of the other changes. As the changes are not retrospective, they should not impact the 30 June 2015 outstanding claims liabilities and so have not been included. However, they may create behavioural change given the reduction in benefits for claims incurred from 1 July 2015. See Appendix B6 for more information.

Appendices

Appendix A	Detailed data description	45
A 1	Data supplied by NT WorkSafe	45
A 2	Data quality	49
Appendix B	Assumptions	51
B 1	Financial assumptions	51
B 2	Superimposed inflation	53
B 3	Expenses	56
B 4	Reinsurance	57
B 5	GST	58
B 6	2015 legislative amendments	58
Appendix C	Insurer outstanding claim valuation	61
C 1	Data used in the valuation	61
C 2	Actual and projected claims experience during 2014/15	63
C 3	Analysis and projection models	64
C 4	Adopted estimates of outstanding claims	74
Appendix D	Insurer claims statistics	77
D 1	Number of claims incurred	77
D 2	Gross average claim size	79
D 3	Gross incurred cost	80
D 4	Gross loss ratios	81
D 5	Payment per claim incurred	82
Appendix E	Insurer financial year claims experience	84
E 1	Aggregate claims experience during 2014/15	84
E 2	Analysis by payment group	88
Appendix F	Self-insurer outstanding claims valuation	91
F 1	Data used in the valuation	91

Uncertainty		PwC
	F 2	Actual and projected claims experience during 2014/15
	F 3	Analysis and projection models
	F 4	Adopted estimates of outstanding claims
Appendix G		Self-insurer claims statistics
	G 1	Number of claims incurred
	G 2	Gross average claim size
	G 3	Incurred cost
	G 4	Payment per claim incurred
Appendix H		Insurer break-even premium rate
	H 1	Calculation of discounted gross incurred cost
	H 2	Calculated historic break-even premium rate
	H 3	Calculation of break-even premium rate for 2015/16
	H 4	Historical rates by industry
Appendix I		Glossary
		92
		93
		94
		97
		97
		98
		99
		100
		101
		101
		103
		103
		105
		109

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.

Following our review as at 30 June 2013, we worked with NT WorkSafe to create a data template for all insurers and self-insurers to complete. This template was provided as an Excel workbook. These returns enable us to receive consistent data, in a consistent form for our review, from all insurers. We will continue to work with insurers to improve the template for ease of use and completeness for our analysis purposes and ensure that it is feasible for all insurers to complete it.

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.

A1.1 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 on data entry.

Report 2 – Data based on date of accident

We were provided with 13 different files of Report 2 from NT WorkSafe, one for each accident year from 2001.

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.

A1.2 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.

NT WorkSafe has provided each of the completed template workbooks to us and also consolidated versions of Form A, Form B and the summary by ANZSIC class.

Self-insurers provide a short version of Form B, not including case estimates and aggregate large claim information.

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 2015 for each of the five most recent earned years.

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 reports between the Form B returns and the WIMS system and found them to be consistent.

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

Accident year	Payments				Reports					
	Form B	WIMS	Difference	Difference (%)	Form B	WIMS	Difference	Difference (%)		
2015	19,307	19,192	-115	-0.6%	2,335	2,304	-31	-1.3%		
2014	43,621	44,220	599	1.4%	2,969	2,747	-222	-7.5%		
2013	57,863	58,348	485	0.8%	2,687	2,791	104	3.9%		
2012	59,166	58,534	-632	-1.1%	2,529	2,641	112	4.4%		
2011	59,114	60,290	1,176	2.0%	2,621	2,707	86	3.3%		
2010	65,308	64,694	-614	-0.9%	2,737	2,516	-221	-8.1%		
2009	79,891	78,969	-922	-1.2%	2,477	2,606	129	5.2%		
2008	65,421	66,841	1,420	2.2%	2,717	2,747	30	1.1%		
2007	67,029	66,953	-76	-0.1%	2,754	2,489	-265	-9.6%		
2006	56,148	56,526	378	0.7%	2,578	2,725	147	5.7%		
2005	51,996	52,110	114	0.2%	2,868	2,774	-94	-3.3%		
2004	44,456	43,237	-1,219	-2.7%	2,898	2,583	-315	-10.9%		
2003	55,433	55,395	-37	-0.1%	2,868	2,892	24	0.8%		
2002	44,603	46,001	1,398	3.1%	2,984	2,927	-57	-1.9%		
Total	769,354	771,309	1,955	0.3%	38,022	37,449	-573	-1.5%		

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

This is the first year for which self-insurers have complete Form B, which is a shorter version of the form used by insurers. Previously they complete Form 1, which took a slightly different form.

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				Reports				
	Form B	WIMS	Difference (\$)	Difference (%)	Form B	WIMS	Difference	Difference (%)	
2015	502	425	-76	-15.2%	114	114	0	0.0%	
2014	645	430	-215	-33.3%	7	12	5	71.4%	
2013	357	622	265	74.2%	1	1	0	0.0%	
2012	571	574	3	0.4%	0	0	0	0.0%	
2011	66	86	20	29.6%	0	0	0	0.0%	
2010	0	0	0	0.0%	0	0	0	0.0%	
2009	5	5	0	4.1%	0	0	0	0.0%	
2008	188	189	1	0.3%	0	0	0	0.0%	
2007 & earlier	16	12	-4	-22.8%	0	0	0	0.0%	
Total	2,350	2,343	-7	-0.3%	122	127	5	4.1%	

Notes : (a) Financial years 2010 to 2011 are from Form 1 from our previous valuation, 2015 is taken from Form B

The information from Form B for the 2015 financial year reconciles well with the WIMS data in aggregate, but with significant discrepancies by accident year. As this is the first year the Form B has been produced we have continued to rely upon the WIMS data.

Appendix B Assumptions

B 1 Financial assumptions

Future inflation and interest rates

Years ahead	Interest rate 30 Jun 2015	Inflation rate 30 Jun 2015	Real rate	
			30 Jun 2015	30 Jun 2014
1	1.96%	3.25%	-1.29%	-1.53%
2	1.99%	3.25%	-1.26%	-1.38%
3	2.20%	3.25%	-1.05%	-0.97%
4	2.57%	3.25%	-0.68%	-0.58%
5	3.11%	3.25%	-0.14%	-0.26%
6	3.61%	3.25%	0.36%	-0.01%
7	3.81%	3.25%	0.56%	0.18%
8	3.91%	3.25%	0.66%	0.31%
9	4.00%	3.25%	0.75%	0.42%
10	4.09%	3.25%	0.84%	0.53%
11	4.17%	3.25%	0.92%	0.53%
12	4.25%	3.25%	1.00%	0.53%
13	4.32%	3.25%	1.07%	0.53%
14	4.38%	3.25%	1.13%	0.53%
15 & onwards	4.44%	3.25%	1.19%	0.53%

The 30 June 2015 real rates are higher than the 30 June 2014 rates for almost all future years. There has been a decrease in the inflation rate from 4.00% to 3.25%, this is slightly offset by a decrease in the discount rate for all future years.

Forward interest rates are those estimated to be anticipated over future years by the Commonwealth bond market as it stood at 30 June 2015.

The interest rates are obtained by fitting a curve to the 30 June 2015 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 central estimate of the outstanding claims liability is calculated as its "market value" ie the value it might attract in a hypothetical open market, in insurance claim liability portfolios. This is done by discounting the projected future cash flows at the market related future rates of interest, calculated as described above. By using this method the discounted value of the projected liability cash flows equals the market value of a matched hypothetical portfolio of Commonwealth Government Securities.

The interest rates assumed are therefore consistent with a market value approach to asset valuation and with the requirements in section 1.3. The application of this approach is theoretically correct for both reserving and premium rating.

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 higher than those used for the previous valuation. We have based future wage inflation on Deloitte Access Economics forecasts for NT as published on NT Treasury's website. Our analysis suggested an equivalent uniform rate of 3.28% and we adopt 3.25%.

Future wage inflation forecasts		
Financial year	Deloitte Access Economics forecasts (a)	PwC assumed (b)
	2016	4.20%
2017	2.20%	3.25%
2018	3.00%	3.25%
2019	3.20%	3.25%
2020	3.40%	3.25%
2021	3.40%	3.25%
2022	3.40%	3.25%
2023	3.40%	3.25%
2024	3.40%	3.25%
and later		
Equivalent uniform rate	3.28%	3.25%

Notes :

- (a) from Deloitte Access Economics forecast for NT
- (b) as assumed by PwC for long tail classes, based on (a)

Past wage inflation

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

Year to 30-Jun	Mid Quarter AWE	End Quarter AWE	% Change p.a.	Claims escalation factors	
				For payments	For case estimates
2001	816.3	816.7		1.888	1.865
2002	835.4	839.5	2.8%	1.848	1.815
2003	884.8	891.6	6.2%	1.767	1.709
2004	934.7	942.1	5.7%	1.661	1.617
2005	1,000.2	1,003.8	6.5%	1.564	1.518
2006	1,016.0	1,016.9	1.3%	1.503	1.498
2007	1,043.0	1,052.0	3.4%	1.482	1.448
2008	1,107.4	1,114.0	5.9%	1.404	1.367
2009	1,150.9	1,158.6	4.0%	1.340	1.315
2010	1,224.2	1,235.3	6.6%	1.276	1.233
2011	1,289.3	1,311.1	6.1%	1.198	1.162
2012	1,408.6	1,410.8	7.6%	1.105	1.080
2013	1,449.3	1,449.2	2.7%	1.067	1.051
2014	1,417.2	1,426.3	-1.6%	1.060	1.068
2015	1,513.5	1,523.3	6.8%	1.035	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.

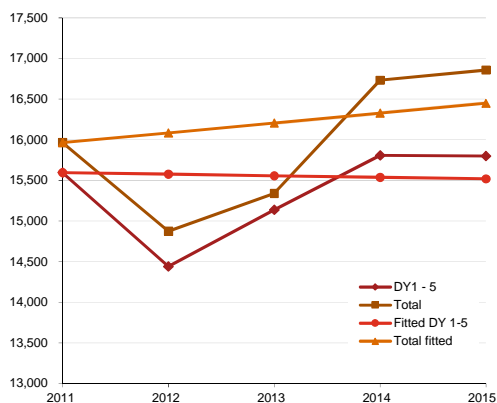
The recent trends in real growth, ie superimposed inflation, are shown in the charts below.

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

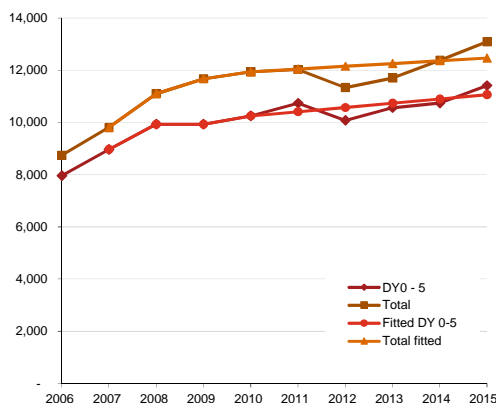
Superimposed Inflation - averaging periods (years)							
	Weekly Benefits	Medical And Hospital	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	
PPAC/PPCF	5	4	5	5	4	4	
PPCI	6	7	6	3	4	4	

Weekly benefits

PPAC

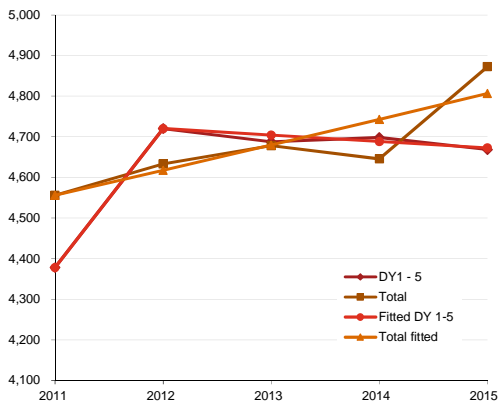


PPCI

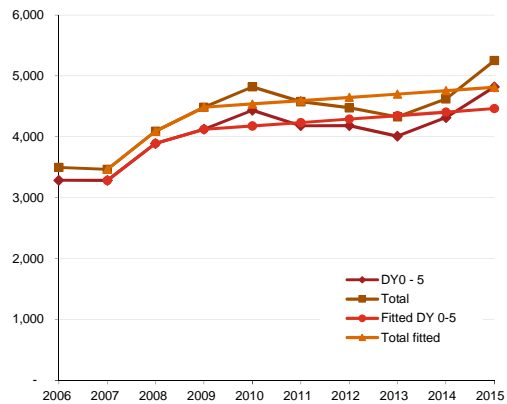


Medical and hospital

PPAC

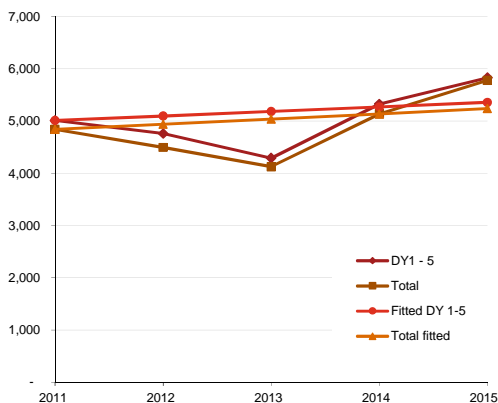


PPCI

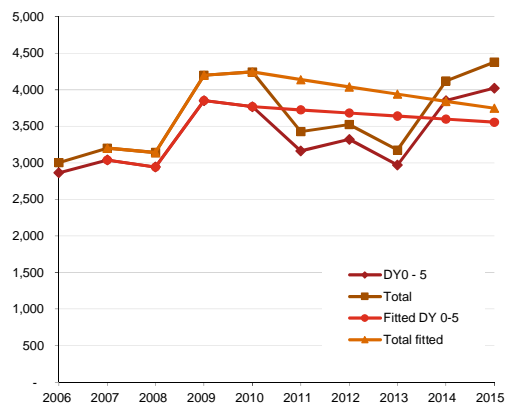


Allied health, vocational rehabilitation, non-compensation other and death

PPAC

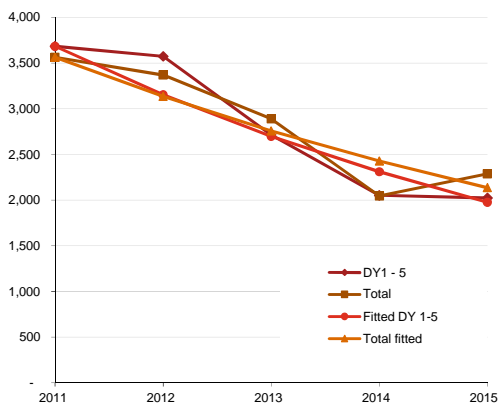


PPCI

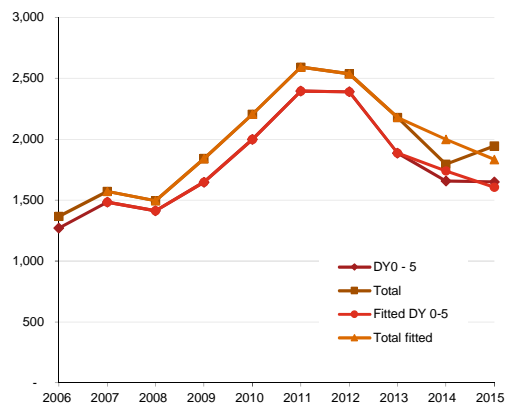


Other goods and services

PPAC

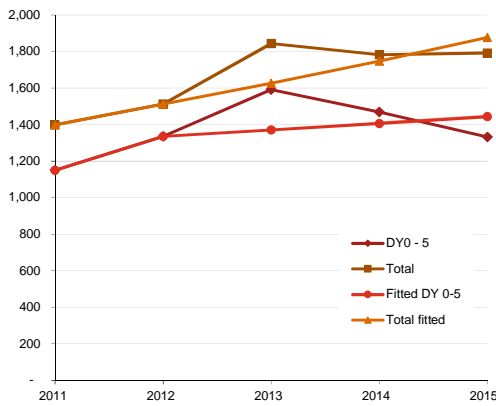


PPCI

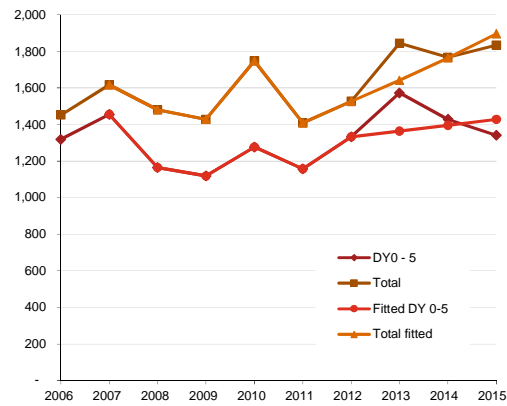


Legal

PPCF

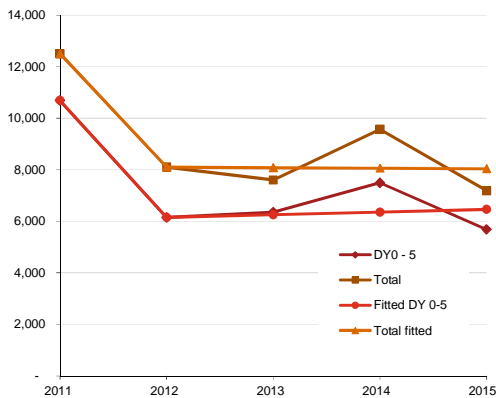


PPCI

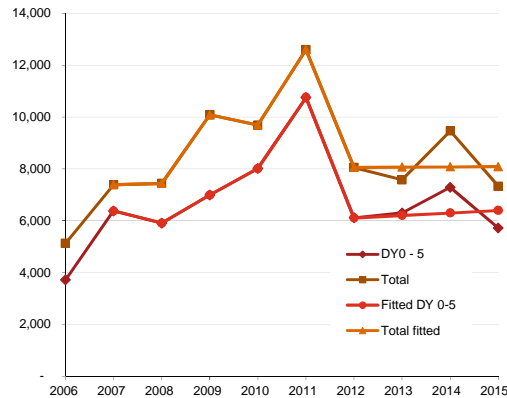


Redemptions and non-economic lump sum

PPCF



PPCI



The above graphs for *Redemptions and Non-Economic Lump Sum* payment group we have excluded payments over \$1 million in an individual payment year. This has been done to try and 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, Vocational Rehabilitation, Non-Compensation Payments (Other), Death	Other Goods And Services	Legals	Redemptions And Non-Economic Lump Sum	Total
PPAC/PPCF	1.5%	1.3%	0.0%	0.0%	2.6%	1.7%	
PPCI	1.5%	1.3%	0.0%	0.0%	2.3%	1.5%	
30 Jun 15	1.5%	1.3%	0.0%	0.0%	2.5%	1.6%	1.5%
30 Jun 14	1.6%	0.6%	0.0%	0.0%	3.7%	1.1%	1.2%

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 weekly benefits and medical hospital we adopted the PPCI superimposed inflation for the PPAC method.

In total, our superimposed inflation estimate of 1.5% is 0.3% higher than the 1.2% adopted for the previous valuation. Our estimate of superimposed inflation is higher than the previous valuation for *'Redemptions and Non-Economic Lump Sum'* and *'Medical and Hospital'* and lower for *'Legals'* and *'Weekly benefits'*.

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

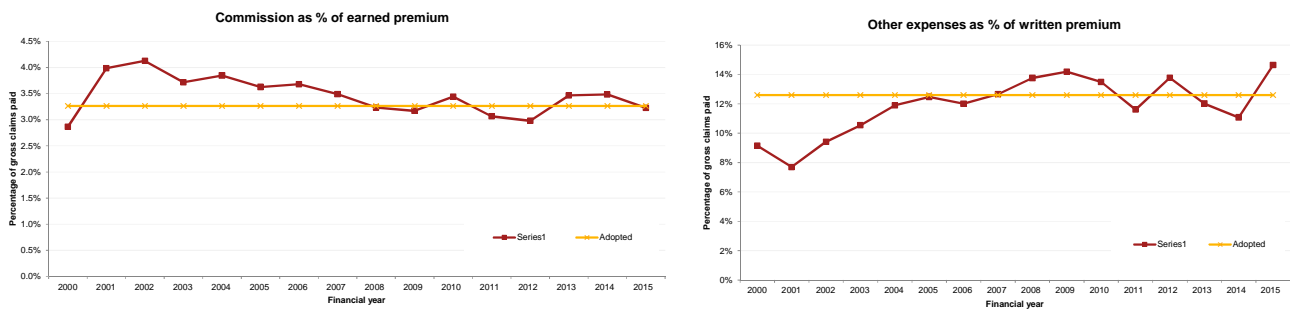
We have reviewed the allowances made for claims handling expenses in the insurers' and self-insurers' returns provided to us, and used our knowledge and experience of other workers compensation schemes in Australia to set the following claims handling expense assumptions for use in the outstanding claims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

- 6% of projected future claim payments for insurers
- 7% of projected future claim payments for self-insurers.

These are the same as the previous valuation.

Commission and other expenses (includes 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 2008, after which it has become more stable. Over 2001 to 2009 other expenses are a percentage of written premium increased significantly and has been more stable since then.

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					Adopted
	2015	2014	2013	2012	2011	
Gross written premium (a)	140,232	156,328	126,743	104,221	105,664	
Earned premium (b)	141,354	137,054	106,715	96,150	93,450	
Commission paid (c)	4,558	4,775	3,697	2,864	2,863	
Other expenses (d)	20,537	17,314	15,224	14,345	12,264	
Commission rate (e)	3.2%	3.5%	3.5%	3.0%	3.1%	3.4%
Other expense rate (f)	14.6%	11.1%	12.0%	13.8%	11.6%	12.5%

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

(e) = (c) / (b)

(f) = (d) / (a)

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

Compared to the previous valuation, the adopted commission rate has decreased (from 3.5% to 3.4%), and the other expense rate has increased (from 12.1% to 12.5%). The increase in the other expense rate is mainly due to a high expense ratio for 2014/15.

In total, the commission and other expense rate make up 15.9% of the break-even premium rate, which is higher than the 15.6% adopted for the 30 June 2014 valuation.

B 4 Reinsurance

We have allowed for a 100% reinsurance recovery on the separate large claims valuation, adjusted for known non-reinsurance recoveries. This is equivalent to 13% of all claims. We compared the reinsurance recoveries based on the large claims with insurers' total reinsurance recoveries and they were similar so we did not feel it was necessary to allow for any further reinsurance recoveries on the smaller claims.

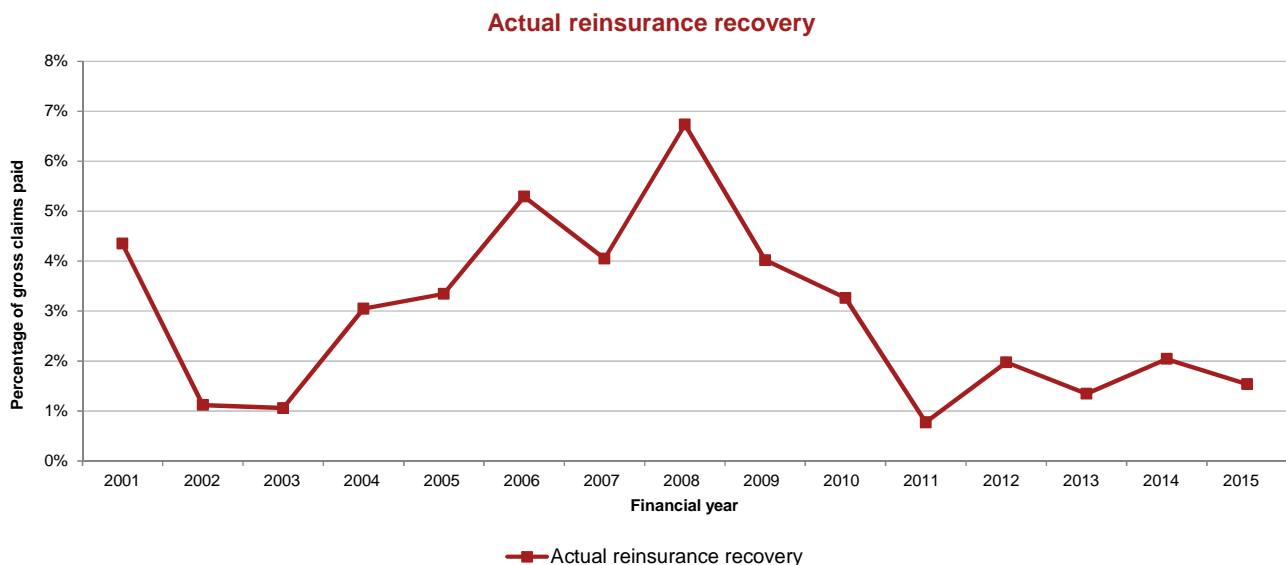
For our previous valuation we used the same method and it was equivalent to 11% of all claims.

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%

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 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.

The estimated cost of the two changes above was a 2.8% reduction. This has been allowed for in the 2015/16 break even premium rate. There is no allowance for the 2015 legislative changes in the outstanding claims liability as at 30 June 2015 as the act changes relate to claims incurred from 1 July 2015.

As the scheme changes were broader than covered by our report the actual impact could be different to estimated. We recommend WorkSafe NT and insurers closely monitor the experience after the legislation is promulgated to ensure that there aren't any unintended consequences.

Appendix C Insurer outstanding claim valuation

C1 Data used in the valuation

C1.1 Number of claims reported

Accident Year	Number of claims reported (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10	
2003	2,599	298	12	1	4	2	4	2	0	1	1	2,924
2004	2,338	248	5	4	1	0	0	0	1	0	2	2,599
2005	2,481	213	7	6	1	1	0	2	1	1	1	2,714
2006	2,483	254	9	6	0	0	0	0	0	2	4	2,758
2007	2,224	214	10	6	1	3	0	1	0	0	4	2,463
2008	2,463	229	10	3	3	4	2	0	0	0	0	2,714
2009	2,361	248	10	3	2	2	1	1	0	0	5	2,633
2010	2,257	230	9	4	1	0	1	0	0	0	19	2,521
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

Note: From summary of Form B returns up to 30 June 2015.

C1.2 Cumulative claims reported

Accident Year	Cumulative number of claims reported (a) for development year:											
	0	1	2	3	4	5	6	7	8	9	10	
2003	2,599	2,879	2,859	2,961	2,920	2,829	2,494	2,451				
2004	2,338	2,847	2,884	2,863	2,962	2,920	2,829	2,494	2,452			
2005	2,481	2,551	2,854	2,890	2,864	2,963	2,920	2,831	2,495	2,453		
2006	2,483	2,735	2,560	2,860	2,890	2,864	2,963	2,920	2,831	2,497	2,457	
2007	2,224	2,697	2,745	2,566	2,861	2,893	2,864	2,964	2,920	2,831	2,501	
2008	2,463	2,453	2,707	2,748	2,569	2,865	2,895	2,864	2,964	2,920	2,831	
2009	2,361	2,711	2,463	2,710	2,750	2,571	2,866	2,896	2,864	2,964	2,925	
2010	2,257	2,591	2,720	2,467	2,711	2,750	2,572	2,866	2,896	2,864	2,983	
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	

Note: Cumulative claim reports from table above.

C1.3 Active claims

Accident Year	Active claims (a) at the end of development year:											Total
	0	1	2	3	4	5	6	7	8	9	10	
2003	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	760	241	132	74	46	34	28	22	14	19	81	1,451
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

Note: From summary of Form B returns up to 30 June 2015. Active claims were provided for the first time at 30 June 2010.

C1.4 Claim payments

Accident Year	Claim payments (a) for development year:											Total	
	0	1	2	3	4	5	6	7	8	9	10		
2003	7,984,551	10,249,364	5,878,289	0	0	0	0	0	0	0	0	0	24,112,204
2004	9,087,492	9,957,632	5,769,111	5,417,686	0	0	0	0	0	0	0	0	30,231,921
2005	9,858,912	9,677,242	6,937,839	7,692,627	3,081,977	0	0	0	0	0	0	0	37,248,597
2006	10,363,788	12,115,605	5,163,317	4,971,769	2,660,565	2,188,860	0	0	0	0	0	0	37,463,904
2007	10,102,365	12,554,562	7,357,405	5,580,705	5,574,465	3,396,669	1,173,293	0	0	0	0	0	45,739,464
2008	12,608,274	12,975,879	7,252,566	8,178,633	4,471,555	3,692,352	2,849,974	1,428,384	0	0	0	0	53,457,617
2009	13,724,871	17,159,161	10,609,326	6,702,333	5,625,251	3,113,442	3,122,130	1,584,032	1,137,936	0	0	0	62,778,482
2010	14,495,563	17,060,816	11,437,717	10,415,786	6,032,324	3,518,201	1,703,210	5,409,604	1,243,142	1,327,112	0	0	72,643,475
2011	15,313,906	18,855,435	13,740,163	9,561,917	7,328,115	7,049,722	1,694,760	1,446,148	3,003,305	2,297,435	3,723,179	84,014,085	
2012	16,960,483	19,044,457	12,650,098	9,217,009	6,022,860	6,525,306	2,405,882	2,349,617	1,203,869	2,306,512	4,373,533	83,059,626	
2013	18,506,708	22,429,674	11,431,248	7,733,037	16,149,119	3,793,530	2,518,938	661,075	725,507	1,123,966	4,349,835	89,422,637	
2014	19,248,602	24,270,659	9,758,328	10,607,899	6,811,906	5,760,135	3,423,569	4,773,217	1,957,920	475,523	5,034,107	92,121,865	
2015	19,192,151	24,971,679	15,570,969	9,385,017	3,892,169	4,147,547	3,316,682	2,833,983	1,704,126	1,545,954	5,963,423	92,523,700	

Note: Data extracted from the WIMS system up to 30 June 2015.

C1.5 Case estimates

Accident Year	Claim payments (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10	
2014	41,908,759	30,987,172	25,229,308	11,474,382	13,212,881	7,831,700	18,376,131	10,869,608	3,623,710	4,127,728	33,757,765	201,399,143
2015	49,147,726	25,815,997	20,696,041	16,393,631	10,023,461	7,330,137	9,703,764	15,150,829	8,164,141	2,211,999	32,363,969	197,001,695

Note: From summary of Form B returns up to 30 June 2015. Case estimates were provided for the first time at 30 June 2014.

C 2 Actual and projected claims experience during 2014/15

This section compares the actual experience over the 2015 financial year with the expected experience based on the previous scheme valuation as at 30 June 2014.

C2.1 Number of claims reported

Accident year ended 30 June	Number of claims reported		
	Combined total	Actual / expected (c)	
	Actual (a)	Projected (b)	
2014	335	288	116%
2013	21	15	143%
2012	4	8	53%
2011	2	3	77%
2010	3	1	395%
2009	2	1	337%
2008	0	0	0%
2007	0	0	0%
2006	0	1	0%
2005 and earlier	2	5	42%
Total	369	320	115%

Notes: (a) Extracted from the WIMS database to 30 June 2015

(b) Derived using the reporting rates in Appendix C3.1 of our previous scheme report dated 5 June 2015

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

C2.2 Proportion of claims finalised

Accident year ended 30 June	Proportion of claims finalised (a) during 2014/15		
	Actual	Projected (b)	Actual / expected (c)
2014	78%	77%	101%
2013	54%	54%	100%
2012	45%	48%	95%
2011	31%	36%	86%
2010	27%	29%	93%
2009	14%	26%	53%
2008	18%	29%	61%
2007	24%	25%	94%
2006	9%	23%	39%
2005 and earlier	32%	23%	139%
Total	65.0%	63.8%	102%

Note: (a) Defined as:

number of claims finalised during the year

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

(b) According to claim finalised per handled rate in appendix C3.1 of previous scheme report dated 5 June 2015. Total is weighted average using the current year's actual number of claims handled by occurrence year as the weights.

C2.3 Claim payments

Accident year ended 30 June	Amount of claim payments during 2014/15		
	Combined total Actual (a)	Projected (b)	Actual / expected (c)
2014	24,971,679	25,633,268	97%
2013	15,570,969	13,683,863	114%
2012	9,385,017	12,176,569	77%
2011	3,892,169	7,340,988	53%
2010	4,147,547	5,169,763	80%
2009	3,316,682	1,572,010	211%
2008	2,833,983	4,713,025	60%
2007	1,704,126	3,269,389	52%
2006	1,545,954	968,882	160%
2005 and earlier	5,963,423	7,646,750	78%
Total	73,331,549	82,174,507	89%

Notes: (a) Extracted from the WIMS database to 30 June 2015

(b) From previous scheme report dated 5 June 2015, in 30 June 2015 values

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

C3 Analysis and projection models

C3.1 All payment types

Claim notification pattern

Accident Year	Chain ladder ratio (a) for development year:									
	1	2	3	4	5	6	7	8	9	0 onwards
2003	1.115	1.004	1.000	1.001	1.001	1.002	1.001	1.000	1.071	1.091
2004	1.095	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.133
2005	1.091	1.002	1.002	1.000	1.000	1.000	1.001	1.000	1.000	1.056
2006	1.102	1.004	1.002	1.000	1.000	1.000	1.000	1.000	1.001	1.002
2007	1.086	1.004	1.002	1.000	1.001	1.000	1.000	1.000	1.000	1.002
2008	1.103	1.004	1.001	1.001	1.001	1.001	1.000	1.000	1.000	1.000
2009	1.101	1.004	1.001	1.001	1.001	1.000	1.000	1.000	1.000	1.002
2010	1.097	1.003	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.006
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
Adopted (b)	1.136	1.007	1.002	1.001	1.001	1.000	1.000	1.000	1.000	1.001

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

(b) Calculated using a two year weighted average for development years (DY) 1 to 3 and a five year average for all other development years.

Numbers of claims incurred

Accident Year	Number of claims		
	Reported to 30 June 2015 (a)	IBNR at 30 June 2015 (b)	Incurred (c)
2003	2,868	0	2,868
2004	2,578	0	2,578
2005	2,754	0	2,754
2006	2,714	2	2,716
2007	2,472	3	2,475
2008	2,730	3	2,733
2009	2,617	3	2,620
2010	2,523	4	2,527
2011	2,660	6	2,666
2012	2,623	8	2,631
2013	2,764	14	2,778
2014	2,720	32	2,752
2015	2,335	349	2,684

- 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

Accident 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
Adopted (b)	0.639	0.775	0.538	0.471	0.354	0.285	0.235	0.264	0.250	0.206	0.231

- Notes:** (a) Defined as: Number of claims finalised / number of claims handled
 (b) Calculated using a 4 year weighted average for all development years.

C3.2 Weekly benefits

Claim payments

Accident Year	Claim payments (a) for development year:											
	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2003	3,586,184	4,016,030	1,707,376	0	0	0	0	0	0	0	0	9,309,590
2004	3,750,913	4,140,602	1,942,588	1,367,331	0	0	0	0	0	0	0	11,201,434
2005	4,648,838	3,782,442	2,407,078	2,072,924	890,009	0	0	0	0	0	0	13,801,291
2006	4,772,881	5,000,913	1,552,571	1,730,175	883,068	605,665	0	0	0	0	1,271,685	15,816,958
2007	4,621,258	5,522,676	2,312,112	1,299,739	1,642,490	672,462	632,222	0	0	0	876,164	17,579,123
2008	5,922,879	5,883,407	2,769,084	1,656,662	1,318,783	1,132,900	773,494	597,426	0	0	1,013,506	21,068,141
2009	6,228,835	6,655,731	3,960,452	1,258,278	832,907	604,411	884,027	399,102	380,034	0	2,109,673	23,313,450
2010	6,456,241	6,550,456	3,445,777	2,485,146	1,484,384	465,078	531,917	801,976	407,221	613,423	1,438,268	24,679,887
2011	7,027,860	8,365,356	2,792,467	2,222,666	1,470,556	1,455,385	512,217	523,367	686,608	257,529	1,044,124	26,358,135
2012	7,653,496	7,579,813	3,964,698	1,803,241	1,270,971	1,584,552	642,719	349,971	409,600	551,010	1,226,509	27,036,580
2013	8,827,497	8,890,485	3,561,915	2,734,261	1,115,920	1,368,720	967,895	4,494	372,833	302,744	1,219,863	29,366,627
2014	8,106,862	10,388,834	3,403,994	2,381,386	2,125,933	1,102,380	1,214,201	678,973	358,515	389,871	1,411,759	31,562,708
2015	8,221,067	11,119,998	5,613,892	2,512,465	1,283,333	1,156,355	573,282	819,162	922,606	332,210	1,672,376	34,226,746

- Notes:** (a) Data extracted from the WIMS system up to 30 June 2015. DY10+ using the Report 4 payments

Average real payment per active claim

Accident Year	Weekly Benefits PPAC (a) for development year:									
	1	2	3	4	5	6	7	8	9	10 onwards
2011	13,192	13,887	20,181	23,817	37,919	18,055	22,402	37,404	22,046	12,514
2012	10,768	18,411	17,794	20,067	41,696	22,914	13,337	23,826	27,681	13,692
2013	11,958	17,836	23,710	17,765	29,793	30,363	218	26,511	24,839	13,142
2014	13,048	15,621	22,949	31,300	26,559	34,787	27,683	25,336	29,520	16,092
2015	12,366	19,837	26,013	25,552	26,605	21,983	30,290	38,209	31,269	20,371
Adopted (b)	12,464	17,938	24,150	24,987	27,722	25,995	28,920	31,339	26,997	16,351

Notes: (a) In 30 June 2015 values

(b) Calculated using a three year weighted average for DYs 1 to 5 and DY 10 and a five year weighted average for all other DYs, adjusting for outliers where necessary.

Average real payment per claim incurred

Accident Year	Weekly Benefits PPCI (a) for development year:											
	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2003	2,210	2,449	1,052	0	0	0	0	0	0	0	0	5,711
2004	2,417	2,398	1,113	792	0	0	0	0	0	0	0	6,720
2005	2,640	2,295	1,313	1,119	486	0	0	0	0	0	0	7,852
2006	2,642	2,730	905	907	458	318	0	0	0	0	778	8,737
2007	2,767	3,013	1,244	747	849	344	327	0	0	0	519	9,810
2008	3,042	3,338	1,431	844	718	555	375	293	0	0	503	11,097
2009	3,185	3,262	2,144	621	405	314	413	184	178	0	966	11,672
2010	3,260	3,190	1,609	1,281	697	215	263	357	179	273	615	11,940
2011	3,160	3,967	1,277	975	712	642	223	243	287	107	436	12,029
2012	3,215	3,143	1,734	761	514	708	262	140	176	212	468	11,331
2013	3,390	3,604	1,425	1,154	454	534	417	2	144	125	454	11,703
2014	3,123	3,965	1,371	947	892	446	471	291	140	150	581	12,376
2015	3,171	4,184	2,092	989	498	474	227	310	386	127	629	13,086
Adopted (b)	3,229	3,922	1,584	1,028	611	485	319	245	225	145	552	12,345

Notes: (a) In 30 June 2015 values

(b) Calculated using a three year average for DYs 0, 1, 3 to 5 and 10 and a five year average for all other DYs, adjusting for outliers where necessary. A decay factor of 79% has been assumed after DY9. The aggregate for DY10 onwards is shown.

Estimates from models

Accident Year	Weekly Benefits				
	Estimated outstanding claims			Weighting	
	claims at 30 June 2015 (\$000s) (a)			PPAC	PPCI
	PPAC	PPCI	Adopted		
2015	26,479	25,534	25,912	40%	60%
2014	16,351	15,073	15,584	40%	60%
2013	11,711	10,618	11,055	40%	60%
2012	5,920	7,223	6,310	70%	30%
2011	4,278	5,592	4,278	100%	0%
2010	3,978	4,005	3,978	100%	0%
2009	2,780	3,262	2,780	100%	0%
2008	2,468	2,687	2,468	100%	0%
2007	1,825	1,845	1,825	100%	0%
2006 & earlier	5,456	7,818	7,818	0%	100%
Total	81,244	83,656	82,008		

Notes: (a) From models described above, in 30 June 2015 values and includes superimposed inflation

C3.3 Medical and hospital

Claim payments

Accident Year	Claim payments (a) for development year:											Total	
	0	1	2	3	4	5	6	7	8	9	10 onwards		
2003	2,052,605	1,610,123	321,710	0	0	0	0	0	0	0	0	0	3,984,438
2004	2,406,951	1,542,861	447,390	186,476	0	0	0	0	0	0	0	0	4,583,678
2005	2,614,630	1,570,099	802,613	331,488	175,175	0	0	0	0	0	0	0	5,494,005
2006	2,749,613	2,074,713	419,634	386,572	296,048	62,150	0	0	0	0	344,441	0	6,333,171
2007	2,585,463	1,646,653	687,767	394,179	316,294	147,263	83,368	0	0	0	237,312	0	6,098,299
2008	3,579,319	2,209,555	540,753	606,722	187,383	220,673	65,565	69,104	0	0	274,512	0	7,753,586
2009	3,741,213	2,808,425	909,690	424,545	117,673	143,441	118,315	55,304	46,632	0	571,413	0	8,936,651
2010	4,113,780	2,539,692	1,039,031	655,342	466,859	170,986	145,452	112,152	150,648	66,583	389,560	0	9,850,085
2011	4,550,058	2,722,397	723,139	478,082	334,251	318,953	124,344	65,743	323,875	142,187	282,805	10,065,834	0
2012	4,665,246	3,373,704	927,818	474,053	269,961	250,060	137,885	60,493	51,395	158,574	332,205	10,701,394	0
2013	4,669,584	3,604,570	1,043,761	442,068	197,289	183,961	255,237	28,860	19,463	157,285	330,405	10,932,483	0
2014	5,378,155	3,842,937	762,501	632,195	315,116	213,159	121,281	185,779	39,070	17,751	382,381	11,890,325	0
2015	6,203,017	4,186,789	1,173,952	354,038	439,869	252,593	149,173	174,159	296,992	34,874	452,970	13,718,426	0

Note: Data extracted from the WIMS system up to 30 June 2015. DY10+ using the Report 4 payments

Average real payment per active claim

Accident Year	Medical And Hospital PPAC (a) for development year:									
	1	2	3	4	5	6	7	8	9	10 onwards
2011	4,293	3,596	4,341	5,413	8,310	4,383	2,814	17,644	12,172	3,389
2012	4,793	4,308	4,678	4,262	6,580	4,916	2,305	2,990	7,966	3,709
2013	4,848	5,227	3,833	3,141	4,004	8,007	1,399	1,384	12,905	3,560
2014	4,827	3,499	6,092	4,639	5,135	3,475	7,574	2,761	1,344	4,359
2015	4,656	4,148	3,666	8,758	5,812	5,720	6,440	12,300	3,282	5,517
Adopted (b)	4,771	4,136	4,515	4,394	5,334	5,256	4,163	5,763	7,680	4,061

Notes: (a) In 30 June 2015 values

(b) Calculated using a three year weighted average for DY0, and a five year weighted average in all other DYs, adjusting for outliers where necessary.

Average real payment per claim incurred

Accident Year	Medical And Hospital PPCI (a) for development year:											
	0	1	2	3	4	5	6	7	8	9	10 onwards	Total
2003	1,265	982	198	0	0	0	0	0	0	0	0	2,445
2004	1,551	894	256	108	0	0	0	0	0	0	0	2,809
2005	1,485	953	438	179	96	0	0	0	0	0	0	3,150
2006	1,522	1,133	245	203	154	33	0	0	0	0	211	3,499
2007	1,548	898	370	227	163	75	43	0	0	0	141	3,466
2008	1,838	1,253	279	309	102	108	32	34	0	0	136	4,092
2009	1,913	1,376	492	209	57	75	55	26	22	0	262	4,487
2010	2,077	1,237	485	338	219	79	72	50	66	30	167	4,820
2011	2,046	1,291	331	210	162	141	54	31	135	59	118	4,577
2012	1,960	1,399	406	200	109	112	56	24	22	61	127	4,475
2013	1,793	1,461	418	187	80	72	110	11	8	65	123	4,327
2014	2,072	1,467	307	251	132	86	47	80	15	7	157	4,621
2015	2,393	1,575	438	139	171	103	59	66	124	13	170	5,252
Adopted (b)	2,082	1,501	380	198	130	103	64	42	41	41	138	4,721

Notes: (a) In 30 June 2015 values

(b) Calculated using a three year weighted average DYs 0 and 1 and a five year weighted average for all other DYs, adjusted for outliers where necessary. A decay factor of 77% has been assumed after DY9. The aggregate for DY10 onwards is shown.

Estimates from models

Medical And Hospital					
Accident Year	Estimated outstanding claims claims at 30 June 2015 (\$000s) (a)			Weighting	
	PPAC	PPCI	Adopted	PPAC	PPCI
2015	7,316	7,297	7,305	40%	60%
2014	3,344	3,279	3,305	40%	60%
2013	2,264	2,217	2,236	40%	60%
2012	1,166	1,556	1,283	70%	30%
2011	875	1,210	875	100%	0%
2010	828	874	828	100%	0%
2009	586	727	586	100%	0%
2008	579	635	579	100%	0%
2007	468	468	468	100%	0%
2006 & earlier	1,344	1,747	1,747	0%	100%
Total	18,769	20,011	19,211		

Notes: (a) From models described above, in 30 June 2015 values and includes superimposed inflation

*C3.4 Allied health, vocational rehabilitation, non-compensation (other) and death**Claim payments*

Accident Year	Claim payments (a) for development year:										
	0	1	2	3	4	5	6	7	8	9 10 onwards	Total
2003	1,555,676	2,528,628	957,799	0	0	0	0	0	0	0	5,042,103
2004	1,663,436	2,280,112	962,185	420,617	0	0	0	0	0	0	5,326,350
2005	1,358,925	1,890,566	1,041,944	479,728	240,606	0	0	0	0	0	5,011,769
2006	1,326,485	2,025,411	873,541	573,235	263,167	148,520	0	0	0	226,886	5,437,245
2007	1,589,128	1,942,786	927,530	397,675	336,791	243,939	136,410	0	0	156,320	5,730,579
2008	1,799,554	2,127,851	652,592	479,144	189,028	258,609	145,286	79,879	0	0	5,912,766
2009	2,353,552	3,397,234	983,622	480,839	325,118	106,012	225,114	86,876	60,346	0	8,395,108
2010	2,414,948	2,698,696	1,323,850	673,720	415,171	157,705	116,269	183,296	126,476	382,779	8,749,517
2011	1,620,121	2,841,896	969,159	764,929	342,332	321,059	136,660	81,571	145,650	70,965	7,480,628
2012	2,535,409	2,496,469	1,294,941	403,986	640,432	507,062	102,063	41,001	58,384	93,257	8,391,830
2013	2,451,007	2,843,698	1,134,594	511,538	298,929	216,879	143,948	94,135	33,874	30,464	7,976,706
2014	3,359,857	3,618,115	1,485,619	866,555	353,159	214,183	243,243	65,783	62,260	39,744	10,560,395
2015	2,555,927	4,058,830	2,105,819	991,669	455,415	385,097	139,082	192,738	166,531	116,635	11,466,118

Note: Data extracted from the WIMS system up to 30 June 2015. DY10+ using the Report 4 payments

Average real payment per active claim

Accident Year	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death PPAC (a) for development year:									
	1	2	3	4	5	6	7	8	9 10 onwards	
2011	4,482	4,820	6,945	5,544	8,365	4,817	3,491	7,935	6,075	2,233
2012	3,546	6,013	3,986	10,111	13,343	3,639	1,563	3,396	4,685	2,443
2013	3,825	5,681	4,436	4,759	4,721	4,516	4,564	2,409	2,499	2,345
2014	4,544	6,817	8,351	5,200	5,160	6,969	2,682	4,400	3,009	2,871
2015	4,514	7,441	10,267	9,068	8,860	5,333	7,127	6,897	10,978	3,634
Adopted (b)	4,528	7,166	9,263	6,814	7,975	5,104	3,855	5,350	5,182	2,675

Notes: (a) In 30 June 2015 values

(b) Calculated using a two year weighted average for DYs 1 to 3, and a five year average for all other DYs.

Average real payment per claim incurred

Accident Year	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death PPCI (a) for development year:											Total	
	0	1	2	3	4	5	6	7	8	9	10 onwards		
2003	959	1,542	590	0	0	0	0	0	0	0	0	0	3,091
2004	1,072	1,321	551	244	0	0	0	0	0	0	0	0	3,187
2005	772	1,147	568	259	131	0	0	0	0	0	0	0	2,877
2006	734	1,106	509	300	137	78	0	0	0	0	0	139	3,003
2007	952	1,060	499	229	174	125	71	0	0	0	0	93	3,201
2008	924	1,207	337	244	103	127	70	39	0	0	0	90	3,141
2009	1,203	1,665	533	237	158	55	105	40	28	0	0	172	4,197
2010	1,219	1,314	618	347	195	73	58	82	56	170	110	4,242	
2011	728	1,348	443	335	166	142	59	38	61	29	78	3,428	
2012	1,065	1,035	566	170	259	226	42	16	25	36	83	3,525	
2013	941	1,153	454	216	122	85	62	37	13	13	81	3,176	
2014	1,294	1,381	599	345	148	87	94	28	24	15	104	4,119	
2015	986	1,527	785	390	177	158	55	73	70	44	112	4,377	
Adopted (b)	1,142	1,454	694	367	175	138	63	39	38	28	91	4,229	

Notes: (a) In 30 June 2015 values

(b) Calculated using a two year weighted average for DYs 0 to 3, a five year average for all other DYs. A decay factor of 77% has been assumed after DY9. The aggregate for DY10 onwards is shown.

Estimates from models

Accident Year	Allied Health, Vocational Rehabilitation, Non-Compensation Payments (Other), Death				
	Estimated outstanding claims			Weighting	
	claims at 30 June 2015 (\$000s) (a)	PPAC	PPCI	Adopted	PPAC
2015	8,481	8,286	8,364	40%	60%
2014	4,866	4,495	4,643	40%	60%
2013	3,018	2,608	2,772	40%	60%
2012	1,223	1,504	1,308	70%	30%
2011	808	1,057	808	100%	0%
2010	639	653	639	100%	0%
2009	425	514	425	100%	0%
2008	402	430	402	100%	0%
2007	297	294	297	100%	0%
2006 & earlier	840	1,072	1,072	0%	100%
Total	20,999	20,913	20,729		

Notes: (a) From models described above, in 30 June 2015 values and includes superimposed inflation

C3.5 Other goods and services

Claim payments

Accident Year	Claim payments (a) for development year:											Total	
	0	1	2	3	4	5	6	7	8	9	10 onwards		
2003	642,307	765,815	236,398	0	0	0	0	0	0	0	0	0	1,644,520
2004	941,109	825,270	248,210	128,442	0	0	0	0	0	0	0	0	2,143,031
2005	869,796	757,593	352,912	141,350	59,290	0	0	0	0	0	0	0	2,180,941
2006	868,463	920,704	217,433	237,431	39,375	30,087	0	0	0	0	0	156,688	2,470,181
2007	1,073,145	800,665	358,966	160,880	185,147	44,076	46,077	0	0	0	0	107,955	2,776,911
2008	1,109,871	827,823	275,410	182,574	85,722	183,976	20,278	23,488	0	0	0	124,877	2,834,019
2009	1,234,445	1,149,196	468,962	165,602	170,877	66,805	103,871	31,142	22,987	0	0	259,939	3,673,826
2010	1,119,411	1,914,284	577,979	294,112	114,282	56,387	44,834	191,069	30,123	19,473	177,213	4,539,167	
2011	1,362,902	1,419,516	1,774,413	370,817	199,111	85,453	59,446	48,905	211,722	15,125	128,650	5,676,060	
2012	1,626,314	1,493,324	538,824	1,014,463	182,189	779,617	49,111	41,856	18,135	118,795	151,122	6,013,750	
2013	1,568,276	1,464,769	610,914	294,071	630,061	166,282	509,228	22,570	12,114	7,029	150,303	5,435,617	
2014	1,741,919	1,402,521	430,785	347,657	149,912	187,116	156,222	-13,833	12,821	19,453	173,947	4,608,520	
2015	1,546,507	1,685,404	452,596	202,359	316,201	119,758	154,664	240,214	135,516	14,040	206,058	5,073,317	

Note: Data extracted from the WIMS system up to 30 June 2015. DY10+ using the Report 4 payments

Average real payment per active claim

Accident Year	Other Goods And Services PPAC (a) for development year:									
	1	2	3	4	5	6	7	8	9 10 onwards	
2011	2,239	8,824	3,367	3,225	2,226	2,095	2,093	11,534	1,295	1,542
2012	2,121	2,502	10,011	2,876	20,515	1,751	1,595	1,055	5,968	1,687
2013	1,970	3,059	2,550	10,030	3,620	15,975	1,094	861	577	1,619
2014	1,762	1,977	3,350	2,207	4,508	4,476	-564	906	1,473	1,983
2015	1,874	1,599	2,095	6,296	2,755	5,931	8,882	5,612	1,321	2,510
Adopted (b)	1,984	2,228	2,873	4,771	6,477	6,101	3,529	4,590	2,596	1,847

Notes: (a) In 30 June 2015 values

(b) Calculated using a five year weighted average in all DYs, adjusted for outliers where necessary.

Average real payment per claim incurred

Accident Year	Other Goods And Services PPCI (a) for development year:												
	0	1	2	3	4	5	6	7	8	9 10 onwards		Total	
2003	396	467	146	0	0	0	0	0	0	0	0	0	1,009
2004	606	478	142	74	0	0	0	0	0	0	0	0	1,301
2005	494	460	192	76	32	0	0	0	0	0	0	0	1,255
2006	481	503	127	124	20	16	0	0	0	0	0	96	1,367
2007	643	437	193	92	96	23	24	0	0	0	0	64	1,571
2008	570	470	142	93	47	90	10	12	0	0	0	62	1,495
2009	631	563	254	82	83	35	49	14	11	0	119	69	1,840
2010	565	932	270	152	54	26	22	85	13	9	76	58	2,204
2011	613	673	812	163	96	38	26	23	88	6	54	58	2,591
2012	683	619	236	428	74	348	20	17	8	46	58	58	2,536
2013	602	594	244	124	256	65	219	9	5	3	56	56	2,178
2014	671	535	174	138	63	76	61	-6	5	7	72	72	1,795
2015	597	634	169	80	123	49	61	91	57	5	77	77	1,942
Adopted (b)	633	610	205	127	123	112	75	27	33	14	63	63	2,021

Notes: (a) In 30 June 2015 values

(b) Calculated using a five year weighted average for all development years, adjusted for outliers where necessary. A decay factor of 82% has been assumed after DY9. The aggregate for DY10 onwards is shown.

Estimates from models

Other Goods And Services					
Accident Year	Estimated outstanding claims			Weighting	
	claims at 30 June 2015 (\$000s) (a)			PPAC	PPCI
	PPAC	PPCI	Adopted		
2015	3,871	3,726	3,784	40%	60%
2014	2,294	2,141	2,203	40%	60%
2013	1,759	1,592	1,659	40%	60%
2012	981	1,175	1,039	70%	30%
2011	686	863	686	100%	0%
2010	558	536	558	100%	0%
2009	318	359	318	100%	0%
2008	281	300	281	100%	0%
2007	186	190	186	100%	0%
2006 & earlier	580	956	956	0%	100%
Total	11,515	11,840	11,670		

Notes: (a) From models described above, in 30 June 2015 values and includes superimposed inflation

C3.6 Legals

Claim payments

Accident Year	Claim payments (a) for development year:											Total	
	0	1	2	3	4	5	6	7	8	9	10 onwards		
2003	104,378	561,954	559,963	0	0	0	0	0	0	0	0	0	1,226,295
2004	128,021	630,523	698,061	821,687	0	0	0	0	0	0	0	0	2,278,292
2005	156,955	445,754	720,803	640,892	296,808	0	0	0	0	0	0	0	2,261,212
2006	220,962	521,023	630,304	568,796	234,876	237,764	0	0	0	0	0	218,926	2,632,651
2007	101,442	499,512	688,390	786,769	365,276	216,776	139,945	0	0	0	0	150,835	2,948,945
2008	102,809	409,304	632,966	486,280	454,738	118,188	292,904	178,138	0	0	0	174,479	2,849,806
2009	104,263	553,131	459,063	465,487	473,244	166,346	146,740	72,882	86,698	0	0	363,189	2,891,043
2010	110,485	572,976	563,716	752,159	321,759	303,526	171,042	341,489	66,246	222,859	0	247,604	3,673,861
2011	119,748	435,187	911,353	435,657	327,544	296,488	143,894	73,735	73,122	116,630	179,750	0	3,113,108
2012	189,595	633,460	574,349	768,389	248,978	705,228	75,826	105,448	52,297	46,709	211,149	0	3,611,428
2013	192,251	592,132	775,905	604,921	1,139,497	588,270	216,238	139,320	58,533	56,996	210,004	0	4,574,067
2014	200,375	738,137	874,095	624,961	499,375	640,462	283,856	219,827	80,257	8,704	243,040	0	4,413,089
2015	143,327	946,655	883,162	498,420	661,760	358,953	345,851	349,078	114,010	181,815	287,906	0	4,770,937

Note: Data extracted from the WIMS system up to 30 June 2015. DY10+ using the Report 4 payments

Average real payment per claim finalised

Accident Year	Legals PPCF (a) for development year:										9 10 onwards	Total
	0	1	2	3	4	5	6	7	8			
2011	89	684	7,430	7,678	11,546	22,209	28,743	9,819	0	69,890	13,464	13,464
2012	135	855	5,078	16,984	11,465	77,942	8,380	8,324	8,257	8,604	12,282	12,282
2013	130	772	7,134	10,753	50,641	48,265	28,830	21,228	62,431	15,198	13,176	13,176
2014	146	898	6,347	10,351	17,076	39,937	33,434	116,515	17,015	4,613	10,305	10,305
2015	100	993	5,411	10,980	40,303	28,588	89,520	72,284	19,674	188,243	10,646	10,646
Adopted (b)	125	895	6,192	10,665	28,178	40,765	39,935	39,935	39,935	39,935	39,935	11,700

Notes: (a) In 30 June 2015 values

(b) Calculated using a three year weighted average for DYs 0 to 3, a four year weighted average for DY4, a five year weighted average for DYs 5 and 10 and a three year tail average for DYs 6 to 9.

Average real payment per claim incurred

Accident Year	Legals PPCI (a) for development year:											Total	
	0	1	2	3	4	5	6	7	8	9	10 onwards		
2003	64	343	345	0	0	0	0	0	0	0	0	0	752
2004	82	365	400	476	0	0	0	0	0	0	0	0	1,324
2005	89	270	393	346	162	0	0	0	0	0	0	0	1,261
2006	122	284	368	298	122	125	0	0	0	0	0	134	1,453
2007	61	273	370	452	189	111	72	0	0	0	0	89	1,617
2008	53	232	327	248	248	58	142	87	0	0	0	87	1,481
2009	53	271	249	230	230	86	69	34	41	0	0	166	1,428
2010	56	279	263	388	151	141	85	152	29	99	106	0	1,748
2011	54	206	417	191	159	131	63	34	31	48	75	0	1,408
2012	80	263	251	324	101	315	31	42	22	18	81	0	1,527
2013	74	240	310	255	464	230	93	55	23	24	78	0	1,845
2014	77	282	352	249	209	259	110	94	31	3	100	0	1,767
2015	55	356	329	196	257	147	137	132	48	69	108	0	1,835
Adopted (b)	69	293	330	233	311	213	114	94	33	32	95	1,818	

Notes: (a) In 30 June 2015 values

(b) Calculated using a three year weighted average for all DYs. A decay factor of 75% has been assumed after DY9. The aggregate for DY10 onwards is shown.

Estimates from models

Legals					
Accident Year	Estimated outstanding claims claims at 30 June 2015 (\$000s) (a)			Weighting	
	PPCF	PPCI	Adopted	PPCF	PPCI
2015	5,380	5,108	5,217	40%	60%
2014	4,674	4,319	4,461	40%	60%
2013	3,757	3,353	3,515	40%	60%
2012	2,146	2,497	2,252	70%	30%
2011	1,459	1,653	1,459	100%	0%
2010	1,221	999	1,221	100%	0%
2009	792	718	792	100%	0%
2008	621	479	621	100%	0%
2007	398	342	398	100%	0%
2006 & earlier	957	1,124	1,124	0%	100%
Total	21,405	20,592	21,058		

Notes: (a) From models described above, in 30 June 2015 values and includes superimposed inflation

C3.7 Redemptions and non-economic lump sum

Claim payments

Accident Year	Claim payments (a) for development year:											Total	
	0	1	2	3	4	5	6	7	8	9	10 onwards		
2003	43,401	766,814	2,095,043	0	0	0	0	0	0	0	0	0	2,905,258
2004	197,062	538,264	1,470,677	2,493,133	0	0	0	0	0	0	0	0	4,699,136
2005	209,768	1,230,788	1,612,489	4,026,245	1,420,089	0	0	0	0	0	0	0	8,499,379
2006	425,384	1,572,841	1,469,834	1,475,560	944,031	1,104,674	0	0	0	0	0	2,315,998	9,308,322
2007	131,929	2,142,270	2,382,640	2,541,463	2,728,467	2,072,153	135,271	0	0	0	0	1,595,673	13,729,866
2008	93,842	1,517,939	2,381,761	4,767,251	2,235,901	1,778,006	1,552,447	480,349	0	0	0	1,845,801	16,653,297
2009	62,563	2,595,444	3,827,537	3,907,582	3,705,432	2,026,427	1,644,063	938,726	541,239	0	0	3,842,146	23,091,159
2010	280,698	2,784,712	4,487,364	5,555,307	3,229,869	2,364,519	693,696	3,779,622	462,428	21,995	2,619,380	26,279,590	
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	1,901,564	31,320,320	
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	2,233,723	27,304,645	
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	2,221,620	31,137,137	
2014	461,434	4,280,115	2,801,334	5,755,145	3,368,411	3,402,835	1,404,766	3,636,688	1,404,997	0	2,571,102	29,086,827	
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	3,045,738	23,268,156	

Note: Data extracted from the WIMS system up to 30 June 2015. DY10+ using the Report 4 payments

Note that 90% to 95% of this category relates to Hopkins settlements.

Average real payment per claim finalised

Accident 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	472	4,830	53,562	93,231	164,063	342,496	143,459	86,934	0	1,015,717	142,437
2012	206	4,679	47,298	105,057	157,045	298,269	154,537	138,216	96,951	246,490	129,932
2013	539	6,564	39,576	55,928	567,404	104,151	56,849	56,636	243,920	151,843	139,387
2014	336	5,209	20,340	95,325	115,184	212,188	165,459	1,927,547	297,875	0	109,021
2015	365	3,120	32,724	106,313	44,800	149,314	505,935	219,212	11,815	897,013	112,622
Adopted (b)	386	4,815	38,231	90,124	209,979	221,320	221,320	221,320	221,320	221,320	123,773

Notes: (a) In 30 June 2015 values

(b) Calculated using a four year weighted average for DYs 0 to 4 and 10, and a five year tail average for DY 5 to DY 9.

Average real payment per claim incurred

Accident 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
2003	27	468	1,291	0	0	0	0	0	0	0	0	1,786
2004	127	312	843	1,444	0	0	0	0	0	0	0	2,726
2005	119	747	879	2,173	775	0	0	0	0	0	0	4,693
2006	235	859	857	773	490	579	0	0	0	0	1,417	5,211
2007	79	1,169	1,282	1,461	1,410	1,060	70	0	0	0	945	7,476
2008	48	861	1,231	2,430	1,218	870	752	235	0	0	915	8,561
2009	32	1,272	2,072	1,927	1,803	1,053	768	434	253	0	1,760	11,374
2010	142	1,356	2,095	2,865	1,517	1,096	343	1,682	204	10	1,120	12,429
2011	285	1,457	3,005	2,319	2,254	2,017	313	303	653	701	795	14,102
2012	122	1,438	2,340	2,005	1,379	1,205	569	703	263	516	852	11,390
2013	306	2,041	1,722	1,328	5,197	495	184	146	89	236	826	12,570
2014	178	1,633	1,129	2,289	1,413	1,377	545	1,558	548	0	1,057	11,726
2015	201	1,119	1,991	1,899	286	768	772	401	29	330	1,145	8,942
Adopted (b)	219	1,535	2,033	1,977	2,096	1,175	479	608	325	363	1,103	11,914

Notes: (a) In 30 June 2015 values

(b) Calculated using a five year weighted average for all DYs except 10 which uses a 2 year weighted average. A decay factor of 75% has been assumed after DY9. The aggregate for DY10 onwards is shown.

Estimates from models

Accident Year	Redemptions And Non-Economic Lump Sum Estimated outstanding claims claims at 30 June 2015 (\$000s) (a)			Weighting	
	PPCF	PPCI	Adopted	PPCF	PPCI
2015	33,834	33,433	33,594	40%	60%
2014	30,467	29,567	29,927	40%	60%
2013	25,116	23,790	24,320	40%	60%
2012	13,553	17,033	14,597	70%	30%
2011	8,677	11,451	8,677	100%	0%
2010	7,589	7,744	7,589	100%	0%
2009	5,198	6,662	5,198	100%	0%
2008	4,439	5,194	4,439	100%	0%
2007	3,265	3,833	3,265	100%	0%
2006 & earlier	9,727	12,912	12,912	0%	100%
Total	141,865	151,619	144,517		

Notes: (a) From models described above, in 30 June 2015 values and includes superimposed inflation

C3.8 Large claims

Large claims (\$000s)			
	Case estimates (a)	Development factor (b)	Current values (c)
2015	15,194	1.00	15,194
2014	0	0.00	0
2013	0	0.00	0
2012	5,628	1.00	5,628
2011	1,870	1.00	1,870
2010	0	0.00	0
2009	-917	1.00	-917
2008	6,653	1.00	6,653
2007	2,183	1.00	2,183
2006 & earlier	12,953	1.00	12,953
Total	43,563		43,563

- Notes:**
- (a) Provided by the insurers, the net recovery in 2009 relates to a non-reinsurance recovery from a third party
 - (b) We have adopted a development factor of 1 given the amount of time that has elapsed since the date of injury
 - (c) = (a) x (b)

C4 Adopted estimates of outstanding claims

C4.1 Gross central estimates from models in current values

Estimates of outstanding claims at 30 June 2015 (\$000s) (a) (b)									
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	Allowance for active large claims	Total	
2014	15,584	3,305	4,643	2,203	4,461	29,927	0	60,122	
2013	11,055	2,236	2,772	1,659	3,515	24,320	0	45,557	
2012	6,310	1,283	1,308	1,039	2,252	14,597	5,628	32,416	
2011	4,278	875	808	686	1,459	8,677	1,870	18,651	
2010	3,978	828	639	558	1,221	7,589	0	14,813	
2009	2,780	586	425	318	792	5,198	-917	9,181	
2008	2,468	579	402	281	621	4,439	6,653	15,442	
2007	1,825	468	297	186	398	3,265	2,183	8,623	
2006 & earlier	7,818	1,747	1,072	956	1,124	12,912	12,953	38,581	
Total	82,008	19,211	20,729	11,670	21,058	144,517	43,563	342,757	

- Notes:**
- (a) From models described in appendix C3
 - (b) In 30 June 2015 values and includes superimposed inflation

C4.2 Average claim sizes

Average claim size at 30 June 2015 (\$) (a)								
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	Allowance for active large claims	Adopted
2015	12,824	5,114	4,102	2,006	1,999	12,717		44,422
2014	12,969	4,848	4,509	2,105	2,054	12,172		38,657
2013	13,427	4,502	4,105	1,903	1,950	12,686		38,573
2012	11,578	4,355	3,704	1,925	1,724	10,738		36,163
2011	10,778	4,612	3,042	1,995	1,680	9,274		32,082
2010	13,055	4,524	3,908	1,931	1,608	10,450		35,477
2009	10,600	4,129	3,556	3,317	2,235	15,727		39,214
2008	11,619	4,415	4,201	1,958	1,578	10,179		36,384
2007	12,782	4,409	3,711	2,308	1,799	12,426		38,316

Note: (a) In 30 June 2015 values, from results in appendix C4.1, includes superimposed inflation

C4.4 Relationship to case estimates

Ratio of outstanding to case estimates at 30 June 2015 (\$) (a)									
Acc yr ending 30-Jun	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	Allowance for active large claims	Total	
2015	53%	15%	17%	8%	11%	68%	31%	202%	
2014	60%	13%	18%	9%	17%	116%	0%	233%	
2013	53%	11%	13%	8%	17%	118%	0%	220%	
2012	38%	8%	8%	6%	14%	89%	34%	198%	
2011	43%	9%	8%	7%	15%	87%	19%	186%	
2010	54%	11%	9%	8%	17%	104%	0%	202%	
2009	29%	6%	4%	3%	8%	54%	-9%	95%	
2008	16%	4%	3%	2%	4%	29%	44%	102%	
2007	22%	6%	4%	2%	5%	40%	27%	106%	
2006 & earlier	23%	5%	3%	3%	3%	37%	37%	112%	

C4.4 Gross adopted estimates excluding expenses in 30 June 2015 values

Gross estimates at 30 June 2015 excluding expenses (\$000s)			
Accident year ending 30 June	30 June 2015 values	Inflated values	Infl/disc values
2015	99,370	112,370	101,527
2014	60,122	67,487	61,395
2013	45,557	51,104	46,488
2012	32,416	36,428	33,114
2011	18,651	20,915	19,050
2010	14,813	16,626	15,119
2009	9,181	10,340	9,359
2008	15,442	17,169	15,767
2007	8,623	9,706	8,807
2006 & earlier	38,581	42,563	39,199
Total	342,757	384,709	349,827

Note: (a) In 30 June 2015 values, includes superimposed inflation.

C4.5 Net outstanding claims provision

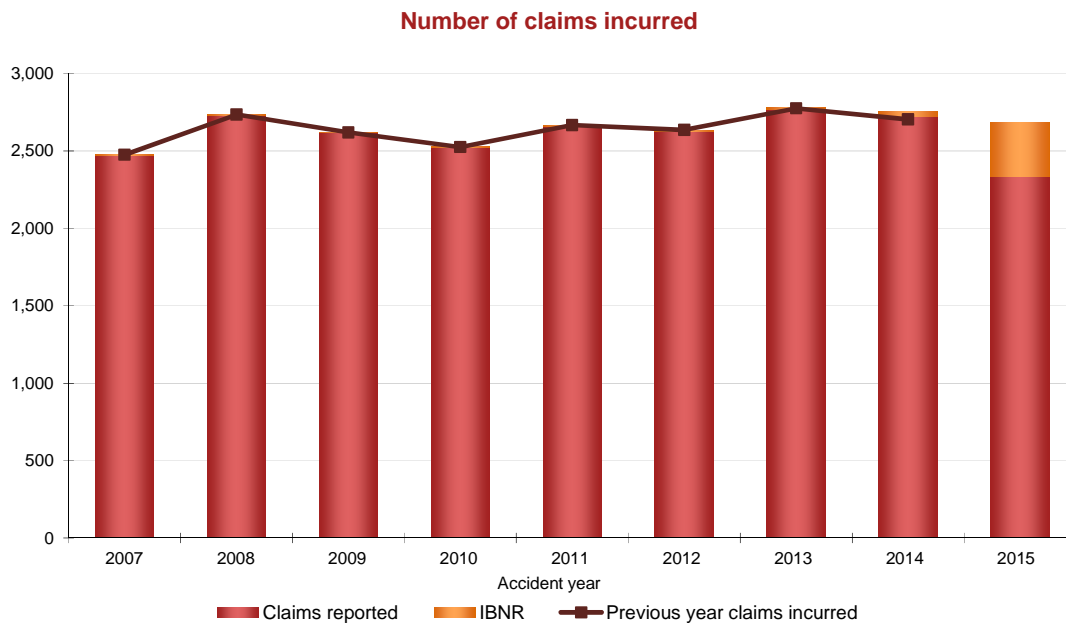
Estimates at 30 June 2015 (\$000s)							
	Gross o/s liability (a)	Reinsurance recoveries (b)	Net o/s liability (c)	Claims handling expenses (d)	Net central estimate (e)	Risk margin (f)	Net Provision (g)
Total	349,827	45,404	304,422	18,265	322,687	46,921	369,609

- Notes:**
- (a) from table above
 - (b) allows for 100% reinsurance recoveries on large claims, adjusted for non-reinsurance recoveries where applicable
 - (c) = (a) – (b)
 - (d) (c) x 6%
 - (e) = (c) + (d)
 - (f) = (e) x 14.5%
 - (g) = (e) + (f)

Appendix D Insurer claims statistics

D 1 Number of claims incurred

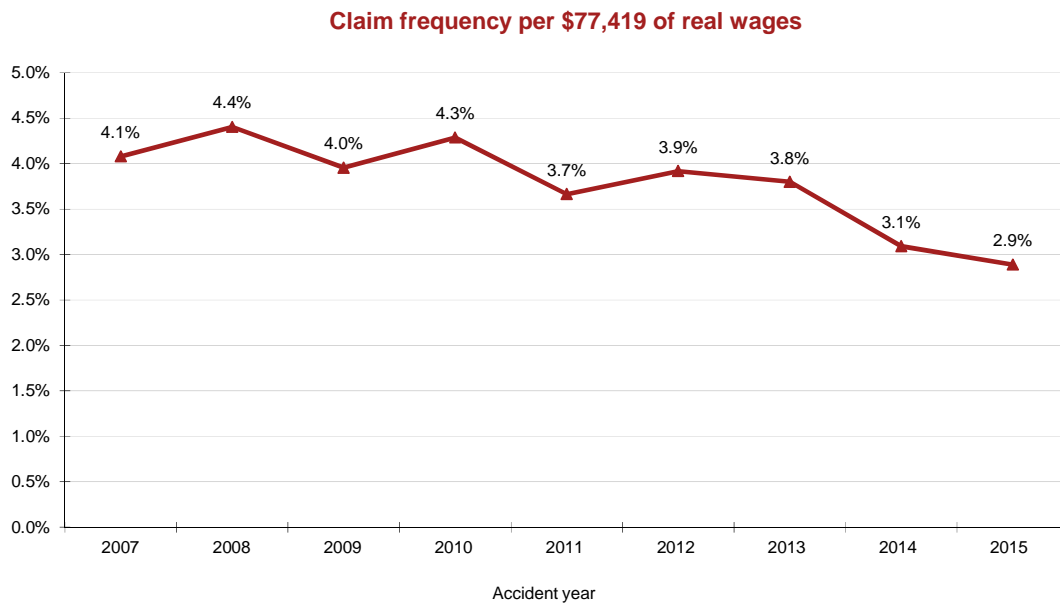
Generally stable experience between 2,500 and 2,800 incurred claims per annum



The main points to highlight from this chart are:

- Since 2007 the number of claims incurred has been volatile from one year to the next, but has generally exhibited a stable trend
- For the 2009 to 2012 accident years the number of claims incurred was between 2,500 and 2,700
- There was a spike in the number of claims incurred for the 2013 accident year to just under 2,800
- Incurred claims for the 2015 accident are 2,684, which is 68 (2.5%) fewer than 2014.

Declining claim frequency due to significant increases in wages with relatively stable number of claims



The claim frequency is calculated as:

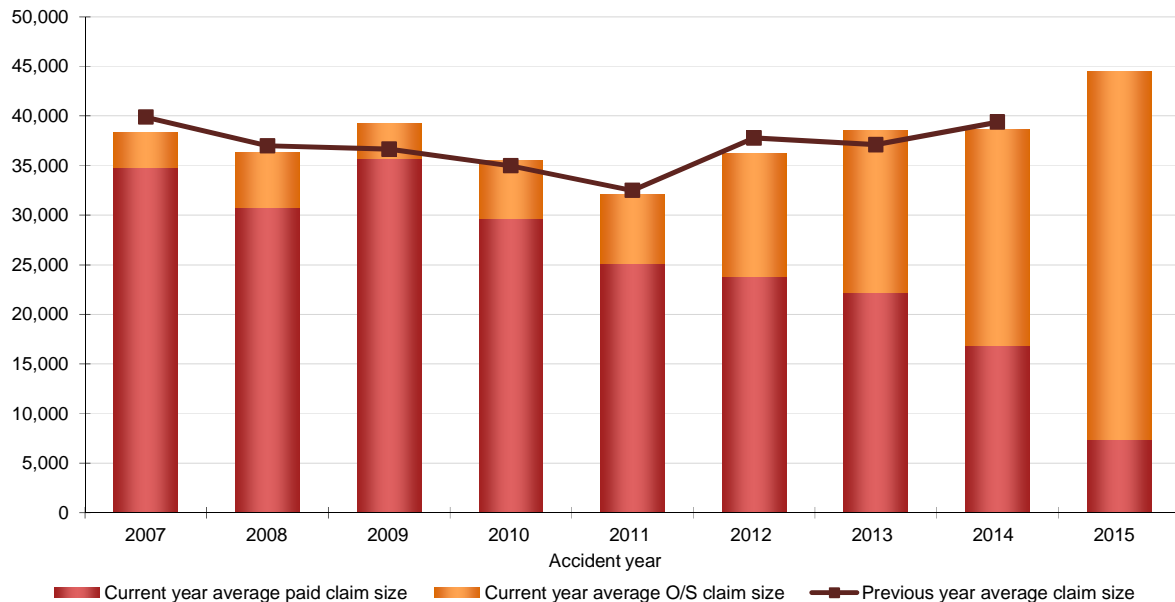
$$\frac{\text{the number of claims incurred}}{\text{estimated number of full time equivalent employees}}$$

To estimate the number of employees we have used the wages provided, inflated this to 2015 values and divided by \$77,419. \$77,419 is 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

Significant increase in 2015 average claim size compared to prior years due to unfavourable large claims experience

Gross average claim size in 30 June 2015 values



Since 2007 the average claim size (in 2015 values):

- Exhibited a decreasing trend from around \$38,500 in 2007 to around \$32,000 in 2011
- Exhibited a increasing trend from around \$32,000 in 2007 to around \$44,400 in 2015
- The significant increase in 2015 is caused by unfavourable large claims experience.

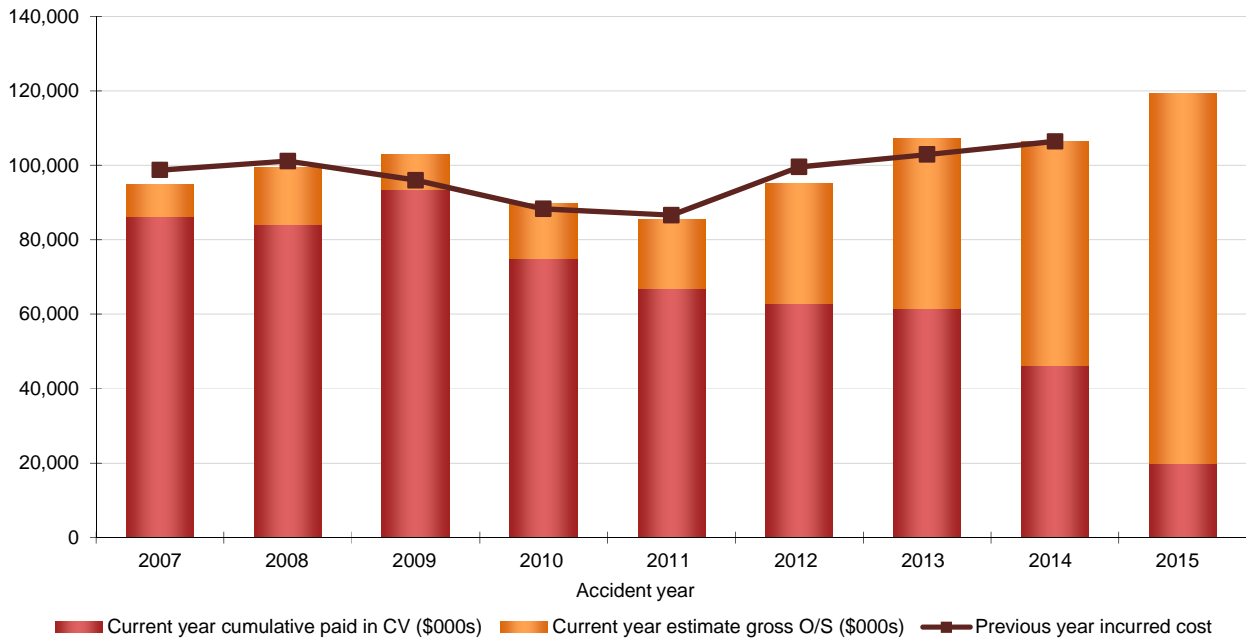
The uncertainty about the future development means that the ultimate level and our estimates may differ from that projected for recent accident years. This is especially true for the 2015 accident year where a high proportion (83%) of the average claim size relates to uncertain future claims development.

Since the previous valuation the gross average claim size is similar for most years with the exception of 2009 and 2013 where estimates increased due to higher than expected claims development, 2012 reduced due to lower than expected payments and development.

D 3 Gross incurred cost

Increasing trend since low in 2011. 2015 is 12.1% higher than 2014

Gross incurred cost in 30 June 2015 values



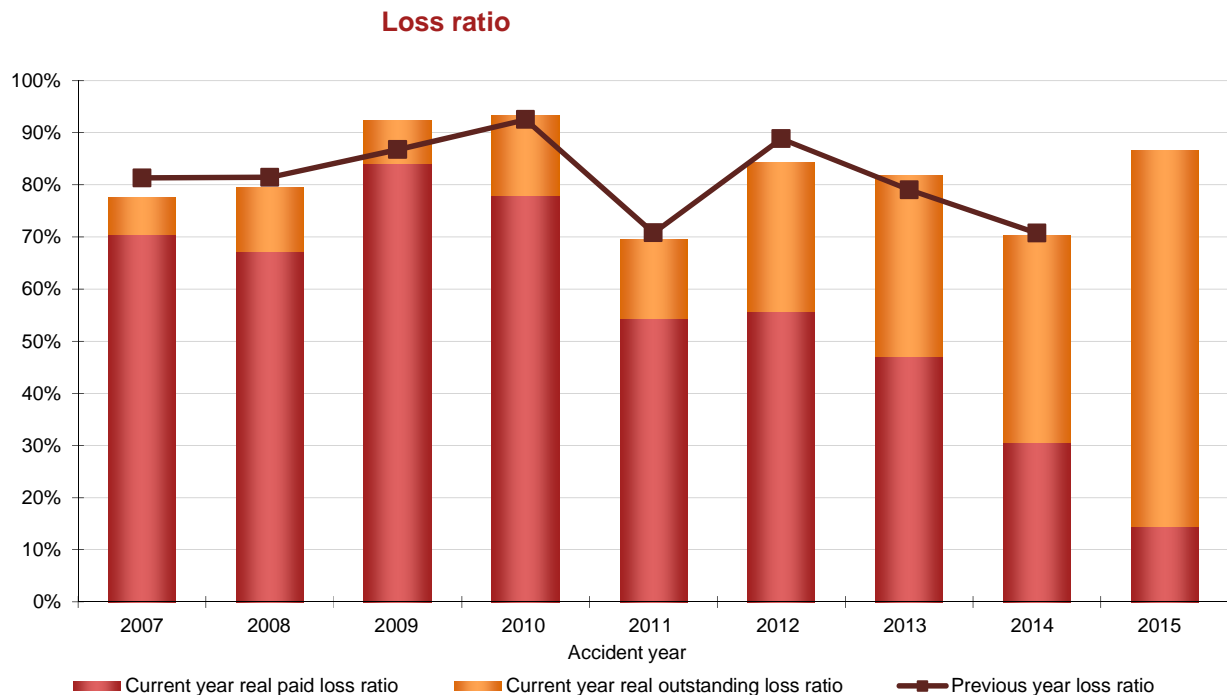
The gross incurred cost in 30 June 2015 values follows a similar pattern to the average claim size.

Over the period shown in the graph, the proportion outstanding increases from 9% of the total incurred cost to 83% of the total incurred cost for 2015.

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

D 4 Gross loss ratios

Increase in 2015 due to two large claims as well as 2014 being a very low incurred cost year



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

$$\frac{(\text{Past claim payments to 30 June 2015+ estimated outstanding liability at 30 June 2015})}{\text{Gross written premium}}$$

The past claim payments, estimated outstanding liability and gross written premium are all in 30 June 2015 values i.e. current values, and the estimated outstanding liability includes allowance for future superimposed inflation.

Ideally the loss ratios would be calculated using gross earned premium rather than gross written premium, however we only have net earned premium, not gross earned premium.

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.

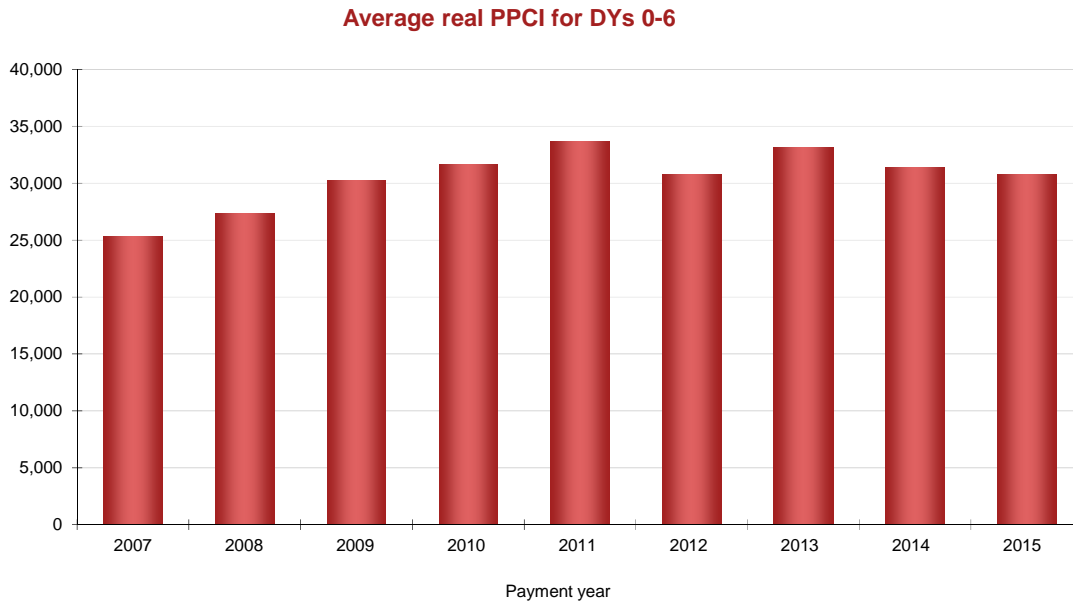
The chart shows:

- There was an increasing trend in the loss ratio from 78% in 2007 to 93% in 2010. This corresponds with the generally decreasing actual premium rate, as shown in section 4.1 of this report
- In 2011 there was a significant decrease in the loss ratio to 70%
- There was an increase to 84% in 2012, but decreases to 70% in 2014 due to premium and wages growth exceeding claims cost increases
- There was an increase to 87% in 2015, driven by the high incurred cost for 2015.

D 5 Payment per claim incurred

By payment year

Stable experience over most recent five payment years

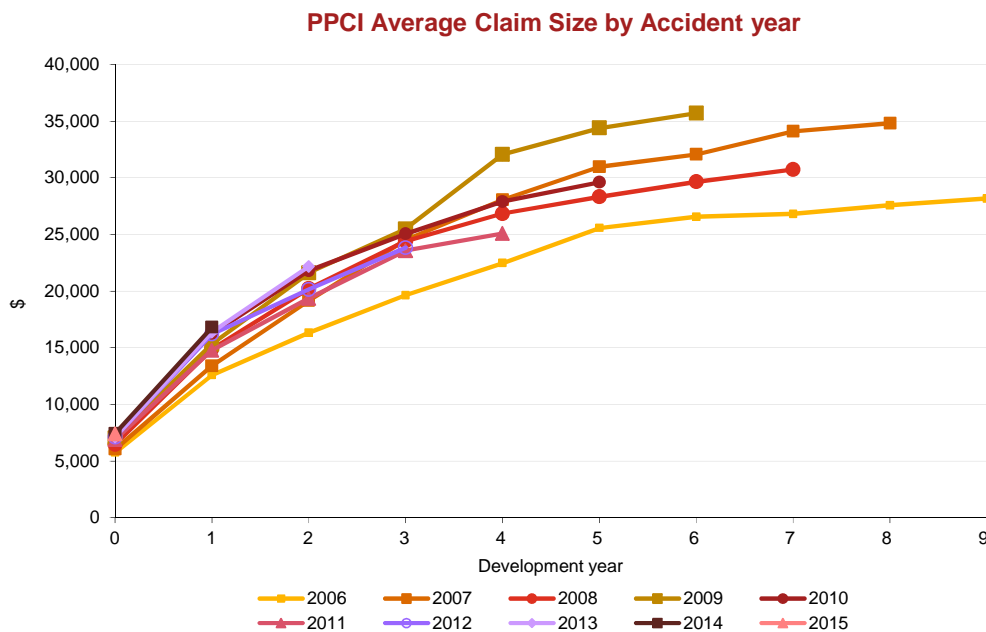


There was an increasing trend from \$25,300 in 2007 to \$33,700 in 2011. However since then it has been stable between \$30,000 and \$34,000.

The 2015 payment year is \$30,800, which is \$500 (1.7%) lower than 2014.

By accident year

Reducing evidence of superimposed inflation for recent accident years



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

$$\frac{\text{sum of claim payments by development year made to date (in 30 June 2015 values)}}{\text{number of claims incurred to date}}$$

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 no clear evidence of superimposed inflation over recent years.

The low year shown in the chart is the 2006 accident year, while the high over development years four to six is for the 2009 accident year.

Appendix E Insurer financial year claims experience

E1 Aggregate claims experience during 2014/15

E1.1 Summary of overall claim experience over 2014/15

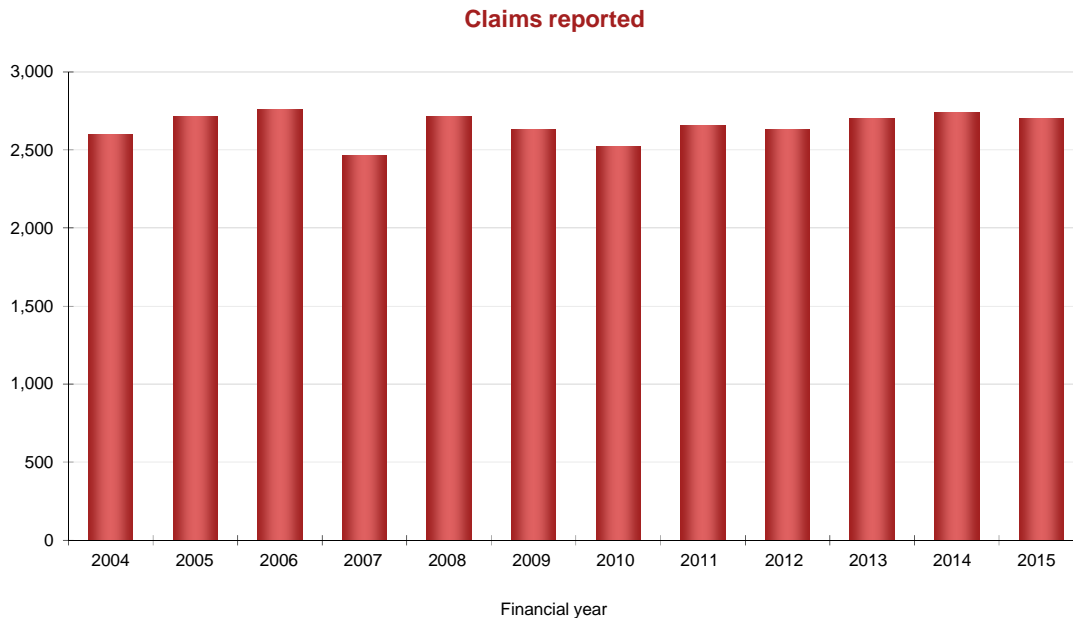
The overall claims experience over 2014/15 is generally favourable compared to 2013/14 with:

- A decrease (1.2%) in the number of claims reported
- An increase (0.4%) in the amount of claim payments
- A decrease (3.4%) in the number of active claims at the end of the year
- A faster finalisation rate (64.1% compared to 62.2%)
- A decrease (2.2%) in case estimates.

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

E1.2 Claim reports

Claim reports have been stable over the past three years



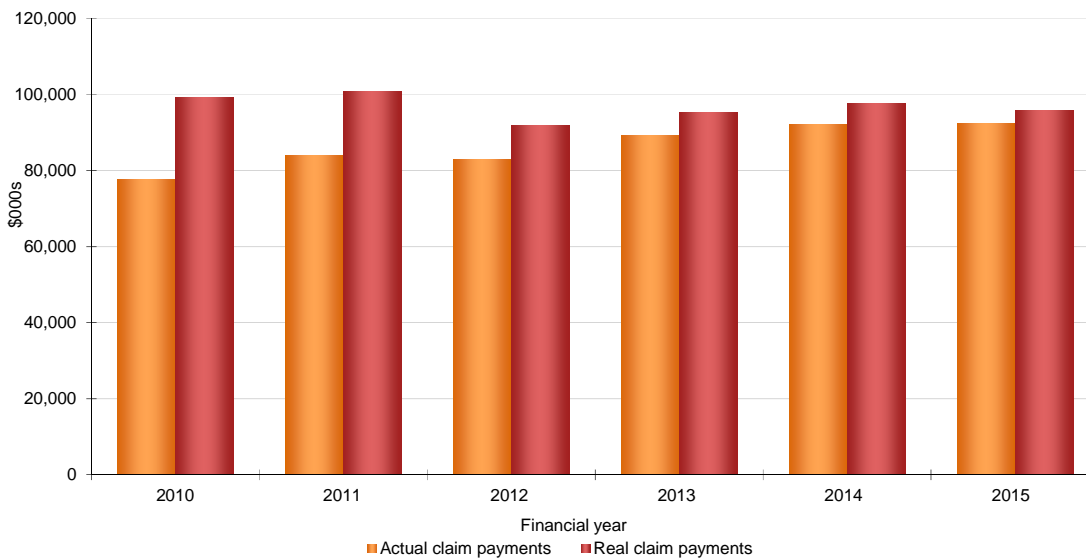
The number of claims reported in each financial year has been stable since 2004, with between 2,500 and 2,750 reported each year.

In 2015 there were 2,704 claims reported, which was 33 (1.2%) less than 2014.

E1.3 Claim payments

Real payments are relatively stable between \$92 million and \$101 million over the period shown

Total payments made each financial year, actual and in 30 June 2015 values



We have only included payments made from the 2010 financial year onwards as payments in our data prior to this have less payment years included so would give a misleading increasing trend. The red bars of payments have been adjusted for wage inflation to allow for comparison between the financial years.

Claim payments in 30 June 2015 values have varied between \$92 million and \$101 million over the period shown.

Total actual payments in 2014/15 were \$92.5 million, which is \$0.4 million (0.4%) higher than 2013/14.

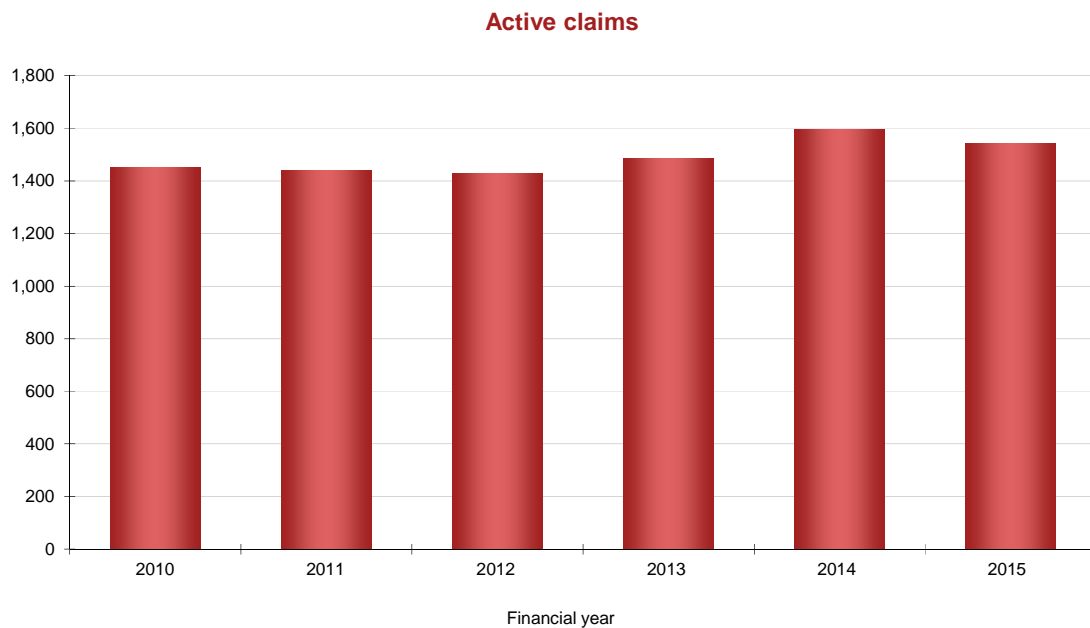
A breakdown of the change in payments by payment group is presented in the table below.

Payment group	Payments in 2014/15 (\$000s)	Payments in 2013/14 (\$000s)	Difference	Difference (%)
Weekly benefits	34,227	31,563	2,664	8.4%
Medical and hospital	13,718	11,890	1,828	15.4%
Allied health, vocational rehabilitation, non-compensation payments (other), death	11,466	10,560	906	8.6%
Other goods and services	5,073	4,609	465	10.1%
Legals	4,771	4,413	358	8.1%
Redemptions and non-economic lump sum	23,268	29,087	-5,819	-20.0%
Total	92,524	92,122	402	0.4%

There were increases for all payment groups except 'Redemptions and non-economic lump sum' which reduced by \$5.8 million (20.0%). The most significant increases were *weekly benefits* (\$3.7 million) and *medical and hospital* (\$1.8 million).

E1.4 Active claims

Active claim numbers decreased from 1,597 in 2014 to 1,543 in 2015

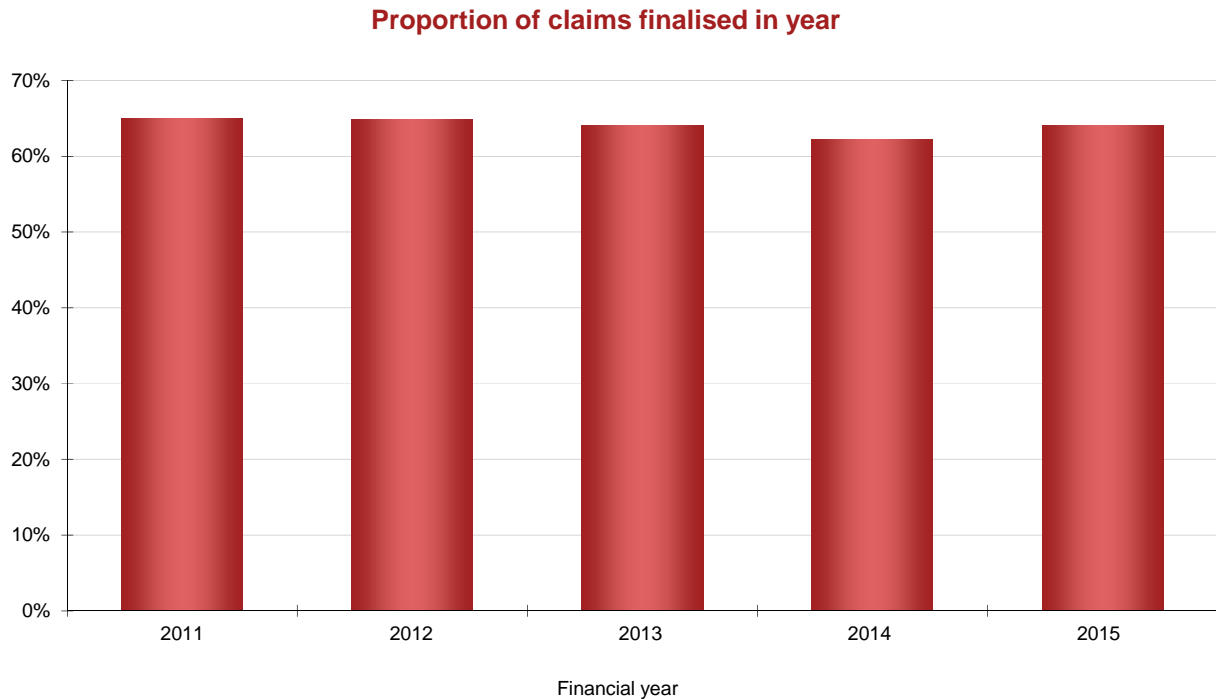


We have only received data on the number of active claims at the end of each year since 2010.

Since 2010 there has been no discernible trend in the number of active claims. Between 2010 and 2012 there were just over 1,400 active claims at the end of each financial year. There were increases in 2013 and 2014 to 1,600 claims, followed by a decrease at the end of 2015 to 1,543, which is 54 (3.4%) fewer than 30 June 2014, but still above 2013 and earlier.

E1.5 Proportion of claims finalised

2015 finalisation rate was 64% which is slightly higher than 62% in 2014 but in line with prior years



Probabilities of claim finalisation is defined as:

Number of claims finalised in year

(Number of outstanding at beginning of the year plus number reported during the year)

Since we only received data on active claims from the 2010 financial year we can only present the finalisation rate from 2011 onwards.

Since 2011 the finalisation rate has been stable between 64% and 65%, except for 2014 when the finalisation rate was 62%.

E1.6 Claims incurred in 2014/15

There were 2,335 claims reported to 30 June 2015 for the 2014/15 accident year and the projected number of incurred claims is 2,684. This is 2.5% lower than the 2,752 projected incurred for the 2013/14 accident year. This decrease is despite the increase in wages.

The expected number of open claims for the 2014/15 accident year at 30 June 2015 is $2,335 \times (1 - 0.6411) = 838$, which is 1.9% lower than the 854 active claims as at 30 June 2015.

The 30 June 2014 projection basis lead to an expected $6,965 \times (1.04^{0.5} \times 1.012) = \$7,192$ to be paid on each of the 2014/15 accident year claims in the year of claim. The actual amount paid per claim was \$7,403 i.e. \$211 (2.9%) more in real values.

The 2014/15 accident year shows favourable experience in relation to a lower number of claims incurred and fewer active claims compared to 2013/14, but unfavourable experience with higher than expected payments.

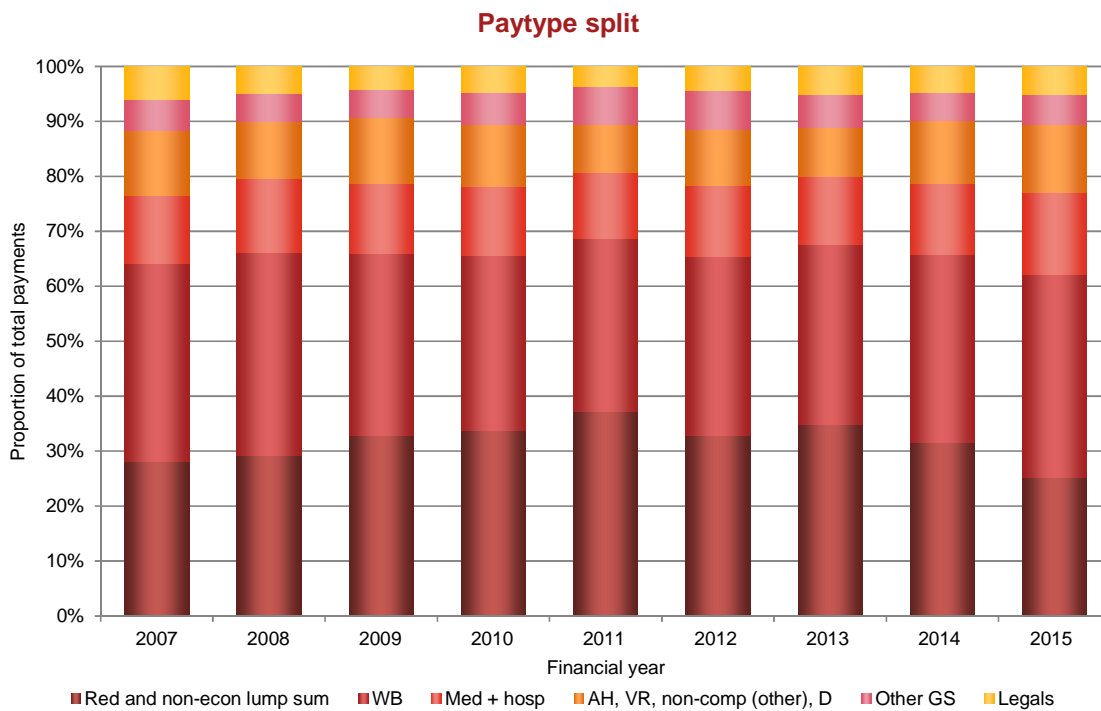
For details of the claims experience for claims incurred up to 30 June 2014 see appendix C2.

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.

E2.1 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	2007	2008	2009	2010	2011	2012	2013	2014	2015
Legals	6%	5%	4%	5%	4%	4%	5%	5%	5%
Other GS	6%	5%	5%	6%	7%	7%	6%	5%	5%
AH, VR, non-comp (other), D	12%	10%	12%	11%	9%	10%	9%	11%	12%
Med + hosp	12%	14%	13%	13%	12%	13%	12%	13%	15%
WB	36%	37%	33%	32%	31%	33%	33%	34%	37%
Red and non-econ lump sum	28%	29%	33%	34%	37%	33%	35%	32%	25%
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 had a notable increase between 2007 and 2011 from 28% to 37%. It has decrease to 32% in 2014 and a significant reduction to 25% in 2015

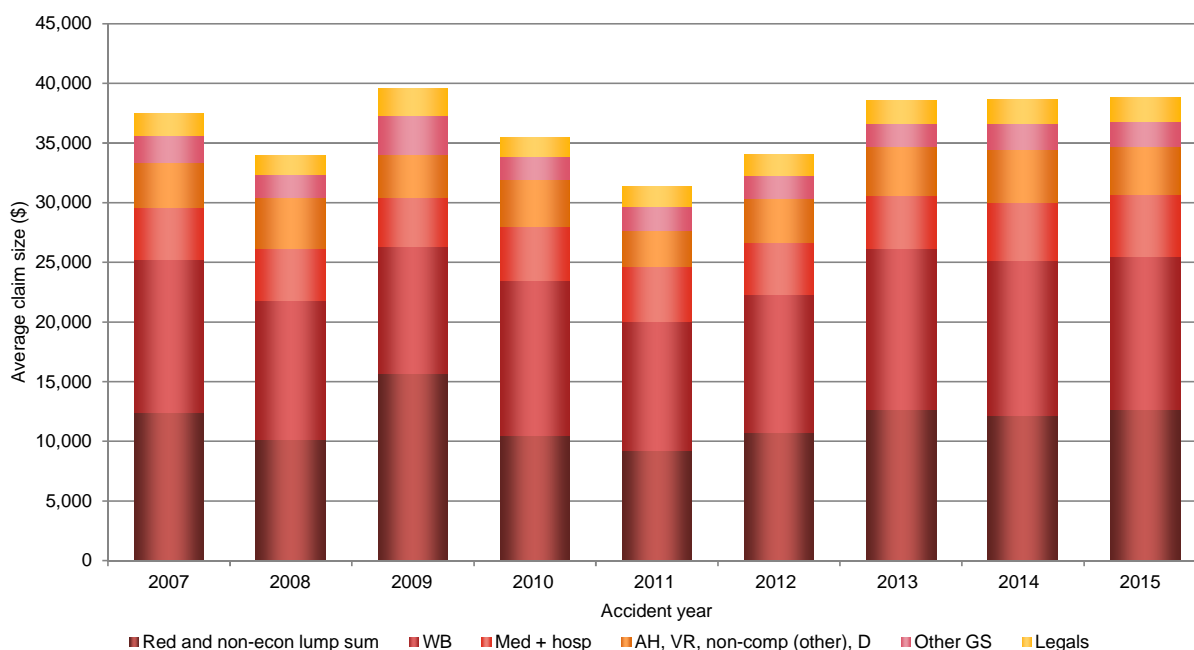
- Any increases or decreases in redemptions payments have been matched by decreases or increases in weekly benefits payments, such that in total the proportion of total payments which are weekly benefits or redemptions has been relatively stable between 64% and 66%, except 2015 which is lower at 62% and 2011 at 69%
- 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.

E2.2 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 around two thirds of the total

Average claim size in 30 June 2015 values by payment type



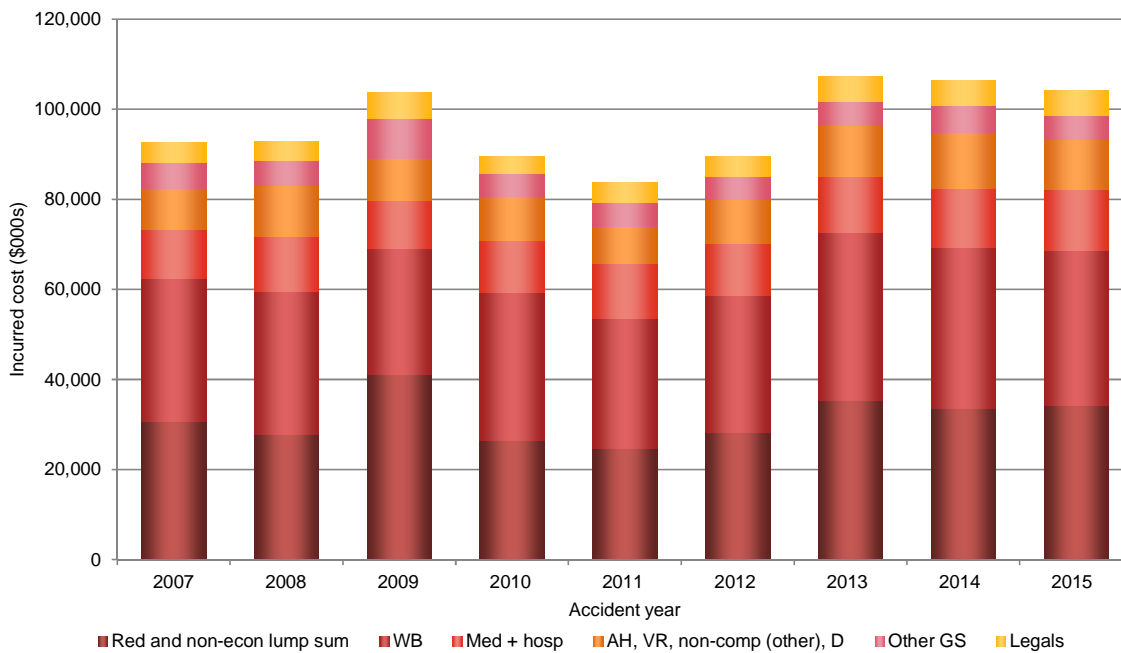
Average claim size (exclude explicit large claims) (\$)	2007	2008	2009	2010	2011	2012	2013	2014	2015
Legals	1,799	1,578	2,235	1,608	1,680	1,724	1,950	2,054	1,999
Other GS	2,308	1,958	3,317	1,931	1,995	1,925	1,903	2,105	2,006
AH, VR, non-comp (other), D	3,711	4,201	3,556	3,908	3,042	3,704	4,105	4,509	4,102
Med + hosp	4,409	4,415	4,129	4,524	4,612	4,355	4,502	4,848	5,114
WB	12,782	11,619	10,600	13,055	10,778	11,578	13,427	12,969	12,824
Red and non-econ lump sum	12,426	10,179	15,727	10,450	9,274	10,738	12,686	12,172	12,717
Total	37,434	33,950	39,564	35,477	31,380	34,024	38,573	38,657	38,762

The mix of payment types across the accident years has remained fairly stable. Redemptions and non-economic lump sums (90% to 95% are Hopkins settlements) and weekly benefits are the two largest payment types. These two groups combined account for two thirds of total payments.

E2.3 Gross incurred cost by payment group

Stable distribution by payment type across accident years

Incurring cost in 30 June 2015 values by payment type



Incurring cost in current values (exclude explicit large claims) (\$000s)	2007	2008	2009	2010	2011	2012	2013	2014	2015
Legals	4,451	4,313	5,856	4,065	4,478	4,535	5,417	5,654	5,365
Other GS	5,711	5,353	8,692	4,880	5,317	5,065	5,287	5,794	5,385
AH, VR, non-comp (other), D	9,183	11,482	9,319	9,877	8,109	9,744	11,402	12,407	11,010
Med + hosp	10,910	12,069	10,820	11,432	12,295	11,459	12,505	13,341	13,727
WB	31,631	31,760	27,775	32,991	28,730	30,461	37,296	35,691	34,424
Red and non-econ lump sum	30,749	27,822	41,210	26,407	24,721	28,253	35,239	33,495	34,134
Total	92,636	92,798	103,673	89,652	83,650	89,518	107,146	106,381	104,046

Percentage of incurred cost by payment type	2007	2008	2009	2010	2011	2012	2013	2014	2015
Legals	5%	5%	6%	5%	5%	5%	5%	5%	5%
Other GS	6%	6%	8%	5%	6%	6%	5%	5%	5%
AH, VR, non-comp (other), D	10%	12%	9%	11%	10%	11%	11%	12%	11%
Med + hosp	12%	13%	10%	13%	15%	13%	12%	13%	13%
WB	34%	34%	27%	37%	34%	34%	35%	34%	33%
Red and non-econ lump sum	33%	30%	40%	29%	30%	32%	33%	31%	33%
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, except for the high 40% for the 2009 accident year.

Appendix F Self-insurer outstanding claims valuation

F1 Data used in the valuation

F1.1 Numbers of claims reported

Year to 30 June	NT WorkSafe self-insurers - Incremental Claims Reported											Total	
	0	1	2	3	4	5	6	7	8	9	10		
2007	112	7	0	0	0	0	0	0	0	0	0	0	119
2008	106	10	1	0	0	0	0	0	0	0	0	0	117
2009	110	8	0	0	0	0	0	0	0	0	0	0	118
2010	139	6	0	1	0	0	0	0	0	0	0	0	146
2011	180	10	0	1	0	0	0	0	0	0	0	0	191
2012	153	23	1	1	0	0	0	0	0	0	0	0	178
2013	121	22	2	1	0	0	0	0	0	0	0	0	146
2014	114	26	0	0	0	0	0	0	0	0	0	0	140
2015	114	12	1	0	0	0	0	0	0	0	0	0	127

Note: Data extracted from the WIMS system up to 30 June 2015

F1.2 Cumulative claims reported

Year to 30 June	NT WorkSafe self-insurers - Cumulative Claims Reported											Total	
	0	1	2	3	4	5	6	7	8	9	10		
2007	112	122	117	92	102	89	23	0	0	0	0	0	657
2008	106	122	123	117	92	102	89	23	0	0	0	0	774
2009	110	114	122	123	117	92	102	89	23	0	0	0	892
2010	139	116	114	123	123	117	92	102	89	23	0	0	1,038
2011	180	149	116	115	123	123	117	92	102	89	23	23	1,229
2012	153	203	150	117	115	123	123	117	92	102	112	112	1,407
2013	121	175	205	151	117	115	123	123	117	92	214	214	1,553
2014	114	147	175	205	151	117	115	123	123	117	306	306	1,693
2015	114	126	148	175	205	151	117	115	123	123	423	423	1,820

Note: Cumulative claim reports from table above.

F1.3 Claim payments

Year to 30 June	NT WorkSafe self-insurers - Incremental Actual Claim Payments											Total	Total Cumulative	
	0	1	2	3	4	5	6	7	8	9	10			
2007	304,212	349,990	183,400	5,395	0	880	1,070	0	0	0	0	0	844,947	3,564,245
2008	308,509	337,200	131,420	305,692	0	0	0	200	0	0	0	0	1,083,021	4,647,266
2009	383,113	437,291	222,394	106,272	147,403	53	0	0	134	0	0	0	1,296,660	5,943,926
2010	357,753	255,645	138,041	169,507	92,187	470,368	0	1,235	634	0	0	0	1,485,370	7,429,296
2011	401,043	740,195	496,061	236,472	317,726	0	348,809	0	6,632	4,799	14,525	0	2,566,262	9,995,558
2012	645,980	753,502	80,062	189,104	204,954	0	0	0	0	81,725	0	0	1,955,327	11,950,885
2013	378,532	1,145,368	183,798	71,904	7,611	170,352	0	16,429	0	0	195,469	0	2,169,463	14,120,348
2014	333,951	1,028,993	564,939	99,475	0	61,317	24,062	0	2,258	0	0	0	2,114,995	16,235,343
2015	425,188	429,732	622,245	573,780	85,560	0	5,204	188,589	0	12,358	0	0	2,342,656	18,577,999

Note: Data extracted from the WIMS system up to 30 June 2015.

F1.4 Case estimates

Year to 30 June	NT WorkSafe self-insurers - Case Estimates Outstanding											
	0	1	2	3	4	5	6	7	8	9	10	Total
2013	332,800	405,700	373,400	4,000	40,000	199,000	14,000	0	0	0	0	1,368,900
2014	349,300	525,000	461,000	45,000	4,000	20,000	192,000	0	0	0	0	1,596,300
2015	340,050	216,000	482,226	238,855	50,000	4,000	58,000	0	0	0	0	1,389,131

Note: From the self-insurers' reports as at 30 June 2015.

F2 Actual and projected claims experience during 2014/15

F2.1 Numbers of claims reported

Accident year ended 30 June	Number of claims reported during 2014/15		Ratio of actual to projected number reported (%)
	Actual	Projected (a)	
2007	0	0	0.0%
2008	0	0	0.0%
2009	0	0	0.0%
2010	0	0	0.0%
2011	0	0	0.0%
2012	0	1	0.0%
2013	1	1	119.5%
2014	12	24	50.8%
Total	13.0	25.2	51.6%

Note: (a) From previous scheme report dated 5 June 2015.

F2.2 Claim payments (\$000s)

Accident year ended 30 June	Actual payments	Expected Payments	Actual / expected %
		(a)	
2007	0	11	0.0%
2008	189	28	678.0%
2009	5	19	28.0%
2010	0	57	0.0%
2011	86	98	87.5%
2012	574	134	427.6%
2013	622	296	210.2%
2014	430	862	49.9%
Total	1,917	1,512	126.8%

Note: (a) From previous scheme report dated 5 June 2015.

F 3 Analysis and projection models

F3.1 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
2007	1.06	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
2008	1.09	1.01	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
2009	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
2010	1.05	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.00
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
Adopted (b)	1.15	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) Calculated using a four year weighted average for development year (DY) 1, and a five year weighted average for DYs 2 to 11. It is assumed there is no more development for DY12+

Numbers of claims incurred

Accident year ending 30 June	Number of claims		
	Reported to 30 Jun 2015 (a)	IBNR at 30 Jun 2015 (b)	Incurred (c)
2007	123	0	123
2008	115	0	115
2009	117	0	117
2010	151	0	151
2011	205	0	205
2012	175	0	175
2013	148	1	149
2014	126	1	127
2015	114	18	132

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:											Total	
	0	1	2	3	4	5	6	7	8	9	10 onwards		
2007	3,665	4,217	2,323	87	0	15	69	0	0	0	0	0	10,375
2008	3,766	3,848	1,500	3,668	0	0	0	12	0	0	0	0	12,794
2009	4,387	5,094	2,422	1,158	1,688	1	0	0	8	0	0	0	14,757
2010	3,023	2,788	1,532	1,759	956	5,130	0	15	9	0	0	0	15,212
2011	2,345	5,875	5,081	2,464	3,096	0	3,573	0	78	65	757	0	23,334
2012	4,080	4,062	586	1,786	1,970	0	0	0	0	886	0	0	13,369
2013	2,717	6,981	956	508	69	1,580	0	142	0	0	2,044	0	14,998
2014	2,784	7,341	3,422	514	0	556	222	0	19	0	0	0	14,859
2015	3,339	3,500	4,336	3,395	432	0	46	1,698	0	104	0	0	16,849
Adopted (b)	3,038	5,550	2,248	1,520	550	667	311	246	195	155	575	575	15,055

Notes: (a) In 30 June 2015 values

(b) Calculated using a five year weighted average for DYs 0 and 1, a four year average for DYs 2 to 4, and a proportion of the insurers' average real PPCI, weighted by a factor of 29% to account for the size of the self-insurers compared to the insurers average claim size. A decay factor of 79% is applied from DY7 onwards.

F 4 Adopted estimates of outstanding claims**F4.1 Gross central estimates from models in current values**

Accident year ending 30 June	Estimates of Outstanding Claims (\$000s) at 30 June 2015 (a)(b)	
	PPCI	Case estimates
2006 & earlier	220	0
2008	113	0
2009	146	58
2010	238	4
2011	465	50
2012	500	239
2013	658	482
2014	859	216
2015	1,641	340
Total	4,935	1,389

Notes: (a) From models described in appendix F3

(b) In 30 June 2015 values and includes superimposed inflation

F4.2 Average claim sizes

Accident year ending 30 June	Average Claim Size (\$000s)	
	at 30 June 2015 (a)(b)	
	PPCI	Case estimates
2007	16	15
2008	19	18
2009	16	15
2010	12	10
2011	11	9
2012	21	19
2013	19	18
2014	13	8
2015	16	6

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

F4.3 Adopted estimates in 30 June 2015 values

Accident year ending 30 June	Estimate of o/s claims	Average claim size	Ratio to case
	(\$000s)(a)(b)	(\$000s)(a)	estimates
2006 & earlier	44		0%
2008	23	19	0%
2009	93	16	160%
2010	98	11	2438%
2011	216	9	432%
2012	448	20	187%
2013	658	19	136%
2014	859	13	398%
2015	1,641	16	483%
Total	4,098		295%

Notes: (a) in 30 June 2015 values, including superimposed inflation

(b) 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	Case estimates	Total
2006 & earlier	0.20	0.80	1.00
2008	0.20	0.80	1.00
2009	0.40	0.60	1.00
2010	0.40	0.60	1.00
2011	0.40	0.60	1.00
2012	0.80	0.20	1.00
2013	1.00	0.00	1.00
2014	1.00	0.00	1.00
2015	1.00	0.00	1.00

F4.4 Gross adopted estimates including expenses

NT WorkSafe self-insurers					
Estimates (\$000s) at 30 June 2015					
Accident year ending 30 June	30 June 2015 values (a)	Inflated values (b)	Inflated & discntd values (b)	Case estimates (c)	Ratio % (d)
2006 & earlier	44	50	45	0	-
2008	23	26	23	0	-
2009	93	107	95	58	160%
2010	98	113	100	4	2438%
2011	216	248	221	50	432%
2012	448	515	457	239	187%
2013	658	742	670	482	136%
2014	859	957	875	216	398%
2015	1,641	1,789	1,668	340	483%
Total	4,098	4,568	4,172	1,389	295%

- Note:**
- (a) In 30 June 2015 values, includes superimposed inflation
 - (b) includes 7% claims handling expenses
 - (c) as at 30 June 2015 as provided by the self-insurers
 - (d) = (a) / (c)

F4.5 Net outstanding claims provision

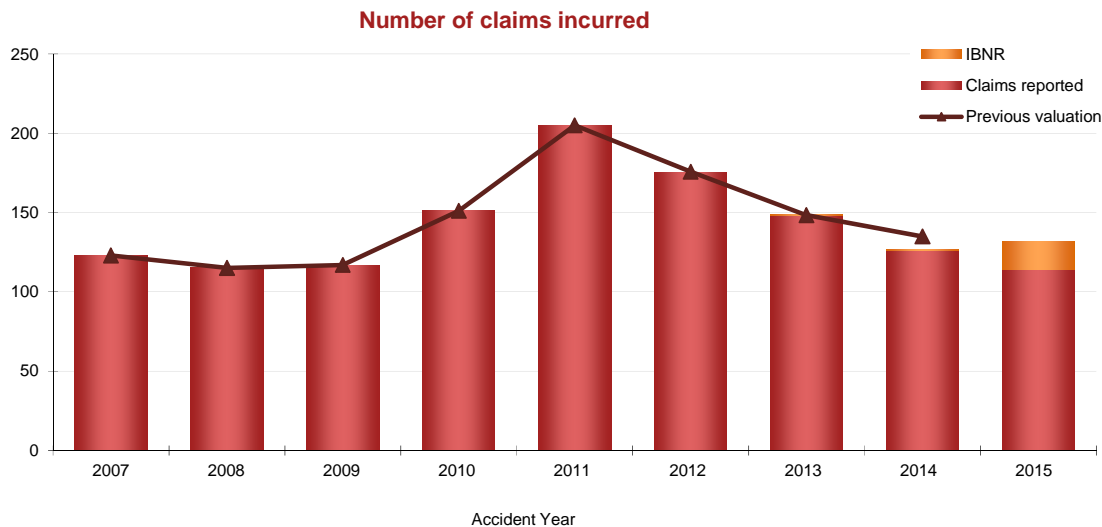
Estimates at 30 June 2015 (\$000s)							
Accident year ending 30 Jun	Gross o/s liability (a)	Reinsurance recoveries (b)	Net o/s liability (c)	Claims handling expenses (d)	Net central estimate (e)	Risk margin (f)	Net Provision (g)
Total	4,172	0	4,172	292	4,464	1,027	5,491

- 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 23.0%
 - (g) = (e) + (f)

Appendix G Self-insurer claims statistics

G 1 Number of claims incurred

Slight increase in 2015 following decreasing trend since 2011 peak

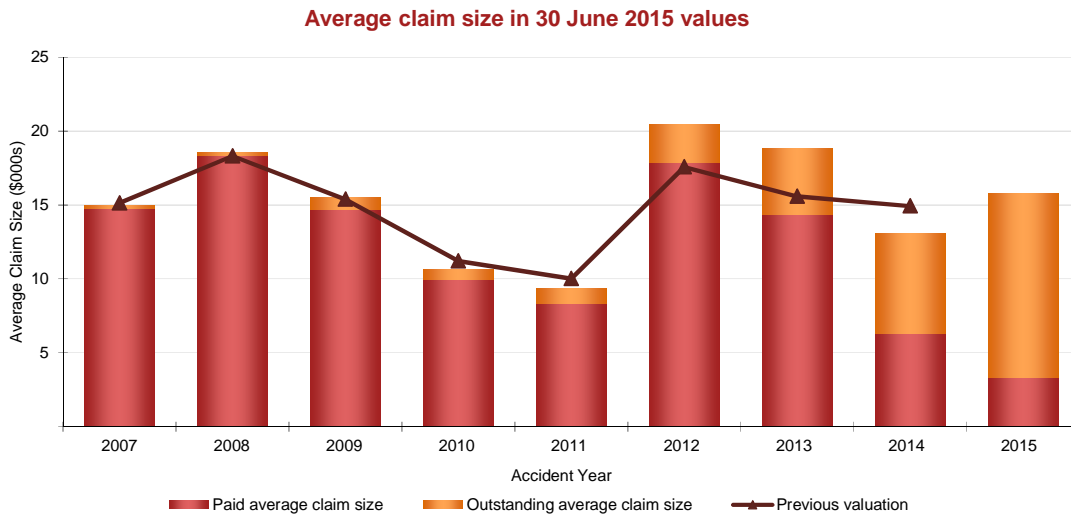


The main points to highlight from this chart are:

- The number of claims incurred was stable from 2007 to 2009, between 115 and 125
- There were strong increases in the number of incurred claims in the 2010 and 2011 accident years, to 151 and 205 respectively. We are unaware of what drove this increase
- Since the high in 2011 the number of claims have reduced each year to 127 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
- There was a slight increase in 2015 to 132 claims, 18 of which are IBNR
- The total claims for 2014 is lower than at the previous valuation due to fewer claims reported in 2015 than expected.

G 2 Gross average claim size

2015 average claim size is \$15,800 which is a \$2,700 (21%) increase from 2014

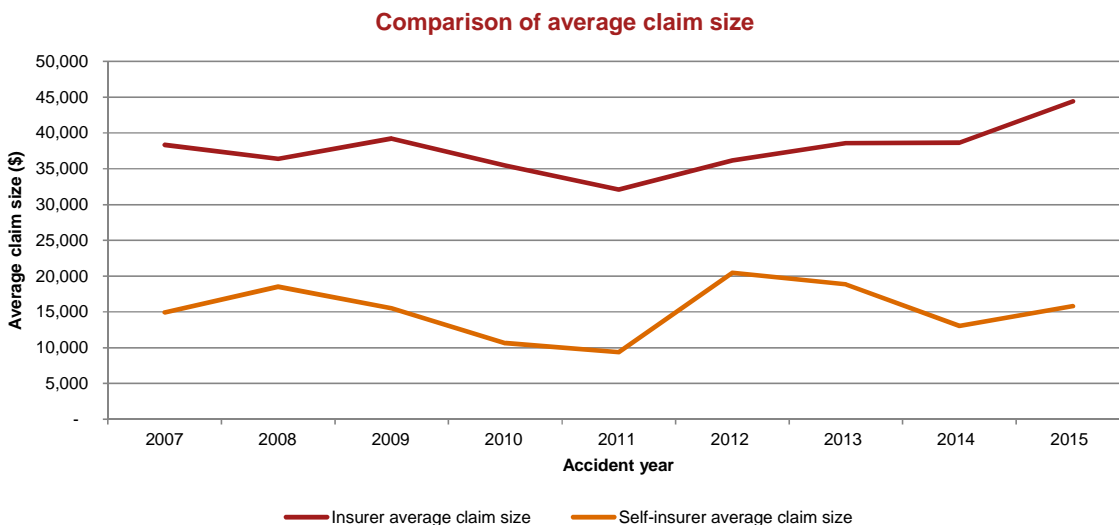


The average claim size has been volatile between accident years and there has been no discernible trend. Since 2007 the average claim size has typically been between \$12,000 and \$17,500, except for lows in 2010 and 2011 followed by highs in 2012 and 2013. This potentially implies that the increase in the incurred claim numbers in 2010 and 2011 shown in 3.2.1 is related to smaller claims.

Our projected average claim size for the 2012 to 2013 accident years is significantly higher than our previous valuation due to higher than expected payments and claims development for these accident years over the 2015 financial year.

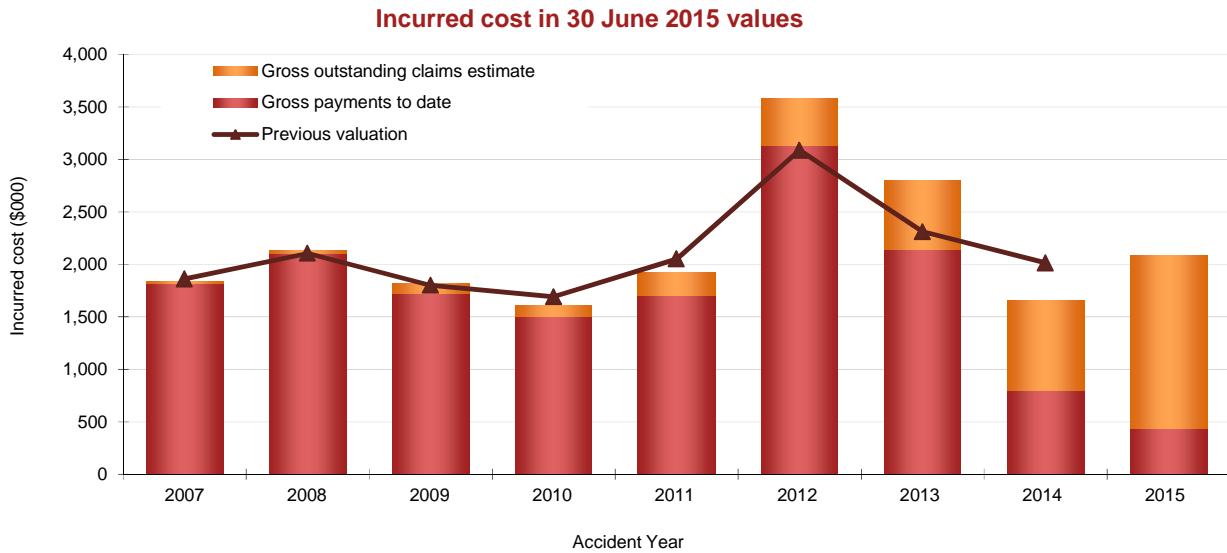
The uncertainty about the future development means that the ultimate level and our estimates may differ from that projected for recent accident years. This is especially true for the 2015 accident year where a high proportion (79%) of the average claim size consists of the uncertain future estimate.

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



G 3 Incurred cost

2015 incurred cost is \$2.1 million which has increased by \$0.4 million (26%) from \$1.7 million at 2014



Between 2007 and 2011 the gross incurred cost in 30 June 2015 values is less volatile than the average claim size graph and is between \$1.6 million to \$2.2 million for each accident year. For 2010 and 2011 the higher number of claims is offset by a lower average claim size. The increase in the incurred cost for 2012 is due to a higher average claim size compared to 2010 and 2011, and higher incurred claims relative to the 2009 and prior accident years.

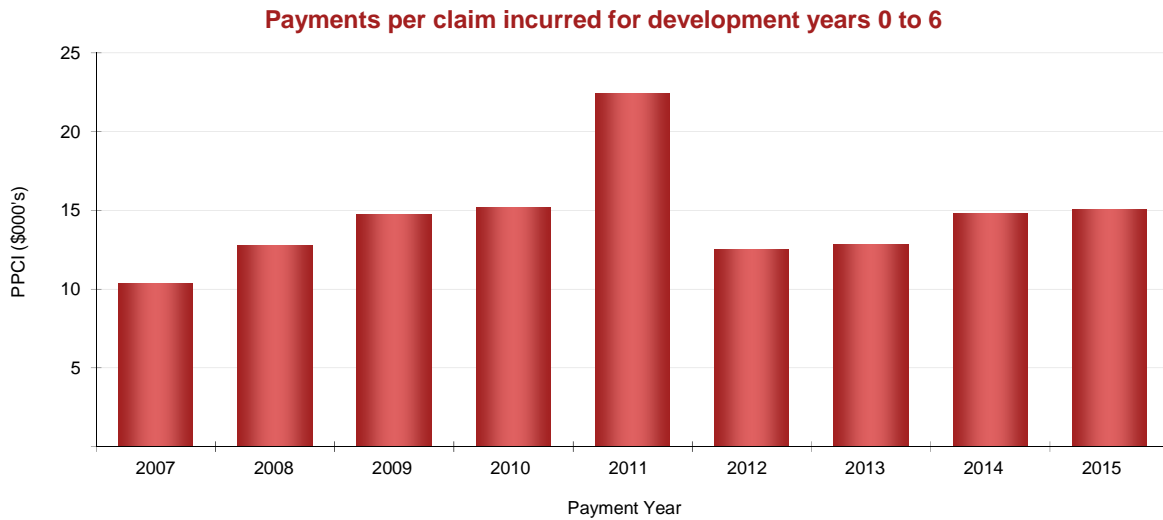
Compared to our previous valuation, there has been an increase in the incurred costs for the 2012 and 2013 accident years due to higher than expected payments and claim development.

The incurred cost for 2015 is \$2.1 million, which has increased by \$0.4 million (26%) from \$1.7 million at 2014

Over the period shown in the graph, the proportion outstanding increases from 1% of the total incurred cost to 79% of the total incurred cost for 2015.

G 4 Payment per claim incurred

2012 to 2015 is displaying a slightly increasing trend



Payments per claim incurred for development years 0 to 6 increased from \$10,300 in 2007 to \$15,200 in 2010. There was a spike to \$22,400 in 2011 due to multiple large claim payments.

After this spike there was a reduction to \$12,400 in 2012, but since then there has been an increasing trend, to \$15,000 in 2015.

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.

H1.1 Actual claim payments

Accident Year	Claim payments (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10	
2003	7,943,895	10,019,316	6,940,964	4,974,207	5,573,760	3,692,352	3,120,209	5,409,604	3,003,305	2,306,512	2,941,109	55,925,233
2004	9,070,426	9,670,704	5,117,576	5,529,674	4,037,250	3,113,442	1,703,210	1,446,148	1,203,869	1,123,966	1,670,419	43,686,684
2005	9,858,912	12,253,877	7,371,771	8,178,633	5,625,251	3,518,201	1,694,760	2,349,617	725,507	475,523	478,597	52,530,649
2006	10,363,788	12,609,619	7,252,566	6,702,333	6,033,562	7,049,722	2,405,882	661,075	1,957,920	1,545,954	0	56,582,421
2007	10,102,365	13,045,861	10,636,513	10,415,786	7,328,554	6,525,306	2,518,938	4,773,217	1,704,126	0	0	67,050,666
2008	12,608,274	17,178,226	11,437,717	9,561,917	6,022,860	3,793,530	3,423,569	2,833,983	0	0	0	66,860,076
2009	13,724,871	17,105,106	13,740,163	9,217,009	16,149,119	5,760,135	3,316,682	0	0	0	0	79,013,085
2010	14,495,563	18,976,054	12,680,364	7,733,410	6,811,906	4,147,547	0	0	0	0	0	64,844,844
2011	15,313,906	19,110,733	11,431,248	10,609,587	3,892,169	0	0	0	0	0	0	60,357,643
2012	16,960,483	22,437,459	9,759,022	9,385,292	0	0	0	0	0	0	0	58,542,256
2013	18,502,240	24,297,623	15,571,088	0	0	0	0	0	0	0	0	58,370,951
2014	19,232,072	25,138,393	0	0	0	0	0	0	0	0	0	44,370,465
2015	19,192,351	0	0	0	0	0	0	0	0	0	0	19,192,351

Notes : (a) from data extracted from the WIMS system as at 30 June 2015

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, ie 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.

H1.2 Historic one-year forward rates

	One year forward rate for the year to 30 June												
	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Forward rate	2.47%	2.54%	2.79%	4.76%	4.48%	3.44%	7.07%	6.50%	6.00%	5.32%	5.38%	4.44%	5.27%

These rates are the one year forward rate, projected from one year prior, eg the rate to 30 June 2015 is the one year forward rate from the Commonwealth Bond yield curve as at 30 June 2014.

H1.3 Discounted claim payments

Accident Year	Claim payments (a) for development year:											Total
	0	1	2	3	4	5	6	7	8	9	10	
2003	7,742,589	9,313,280	6,125,807	4,169,297	4,422,614	2,766,997	2,202,475	3,659,305	1,937,214	1,416,752	1,682,944	45,439,273
2004	8,875,376	9,019,917	4,551,039	4,673,518	3,235,275	2,359,362	1,241,749	1,009,322	803,272	723,789	1,016,693	37,509,312
2005	9,604,068	11,331,013	6,449,593	6,754,442	4,373,670	2,620,016	1,202,846	1,587,203	470,890	296,914	287,577	44,978,233
2006	10,098,602	11,628,573	6,315,110	5,495,751	4,739,915	5,279,633	1,715,363	452,993	1,291,019	981,243	0	47,998,201
2007	9,812,102	11,925,396	9,126,567	8,534,778	5,706,236	4,821,459	1,782,997	3,240,689	1,110,111	0	0	56,060,335
2008	12,217,369	15,588,041	9,888,436	7,836,958	4,673,417	2,813,286	2,429,549	1,925,154	0	0	0	57,372,210
2009	13,264,088	15,707,858	11,930,110	7,556,468	12,620,114	4,296,060	2,361,621	0	0	0	0	67,736,319
2010	14,252,402	17,947,506	11,520,997	6,813,949	5,827,786	3,446,505	0	0	0	0	0	59,809,145
2011	14,982,290	17,871,828	10,315,588	9,250,074	3,279,671	0	0	0	0	0	0	55,699,452
2012	16,570,873	21,125,379	8,865,403	8,228,994	0	0	0	0	0	0	0	54,790,649
2013	18,249,072	23,342,690	14,575,456	0	0	0	0	0	0	0	0	56,167,218
2014	18,992,417	24,218,401	0	0	0	0	0	0	0	0	0	43,210,818
2015	18,959,540	0	0	0	0	0	0	0	0	0	0	18,959,540

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

H1.4 Discounted gross incurred cost

Underwriting year	Discounted gross claim payments (a) (\$000s)	Discounted gross outstanding claims (b) (\$000s)	Discounted gross incurred cost (c) (\$000s)
2015	18,960	99,079	118,039
2014	43,211	58,431	101,642
2013	56,167	43,041	99,208
2012	54,791	29,266	84,057
2011	55,699	16,115	71,815
2010	59,809	12,365	72,174
2009	67,736	7,148	74,885
2008	57,372	11,308	68,680
2007	56,060	5,959	62,019

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 Calculated historic break-even premium rate

Underwriting year	Calculated break even premium					Actual premium		
	Actual wages (a) (\$000s)	Discounted gross incurred cost (b) (\$000s)	Commission in financial year (c) (\$000s)	Discounted other expenses in the fin year (d) (\$000s)	Premium (e) (\$000s)	Calculated premium rate (f)	Premium (g) (\$000s)	Actual premium rate charged (h)
2015	6,949,254	118,039	4,558	20,288	143,760	2.1%	133,072	1.9%
2014	6,501,801	101,642	4,775	17,098	124,292	1.9%	142,767	2.2%
2013	5,305,053	99,208	3,697	15,016	118,736	2.2%	122,776	2.3%
2012	4,704,972	84,057	2,864	14,015	102,116	2.2%	101,981	2.2%
2011	4,700,283	71,815	2,863	11,998	87,630	1.9%	102,688	2.2%
2010	3,576,580	72,174	2,624	10,680	86,204	2.4%	75,252	2.1%
2009	3,829,000	74,885	2,544	11,837	90,803	2.4%	83,089	2.2%
2008	3,423,000	68,680	2,658	11,713	84,369	2.5%	88,998	2.6%
2007	3,170,000	62,019	2,753	10,065	75,936	2.4%	82,420	2.6%

- Notes :**
- (a) from the consolidated ANZSIC data
 - (b) calculated above in Appendix H1
 - (c) actual commission, from the consolidated Form A returns
 - (d) other expenses, from the consolidated Form A returns, discounted by half a year
 - (e) = (b) + (c) + (d) 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
 - (f) = (e) / (a)
 - (g) from the consolidated ANZSIC data
 - (h) = (g) / (a)

H 3 Calculation of break-even premium rate for 2015/16

H3.1 Discounted incurred cost for 2015/16

We selected the number of incurred claims and average claim size for 2014/15 based on the experience over the last five years, 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					
	2015	2014	2013	2012	2011	Adopted
Number of claims incurred (a)	2,684	2,752	2,778	2,631	2,666	3,021
Claim frequency per \$77,419 of wages (b)	2.9%	3.1%	3.8%	3.9%	3.7%	3.3%
Average claim size (in 30 June 2015 values) (c)	44,422	38,657	38,573	36,163	32,082	36,938

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 three year average

(c) The adopted average claim size is a five year average, with a reduction of 2.8% due to the 2015 legislative amendments

Allowing for inflation of 3.25%, superimposed inflation of 1.50% and an inflation/discount factor to allow for the timing of payments of 0.9944 the discounted incurred cost for 2014/15 can be calculated as:

$$3,021 \times [36,938 \times (1+3.25\%) \times (1+1.50\%) \times 0.9944] = \$116.3 \text{ million.}$$

H3.2 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.

	Underwriting year					Adopted
	2015	2014	2013	2012	2011	
Gross written premiums (a)	140,232	156,328	126,743	104,221	105,664	
Earned premiums (a)	141,354	137,054	106,715	96,150	93,450	
Commission (a)	4,558	4,775	3,697	2,864	2,863	
Other expenses (a)	20,537	17,314	15,224	14,345	12,264	
Commission rate (b)	3.2%	3.5%	3.5%	3.0%	3.1%	3.4%
Expense rate (c)	14.6%	11.1%	12.0%	13.8%	11.6%	12.5%

- Notes :**
- (a) from the consolidated Form A returns
 - (b) commission / earned premium, the adopted value uses a three year average
 - (c) other expenses / gross written premium, the adopted value uses a three year average

H3.3 Projected break even premium for 2015/16

Using the analysis above, the projected break-even premium rate for 2015/16 is:

Underwriting year	Actual wages (a) (\$000s)	Discounted gross incurred cost (b) (\$000s)	Expenses (c) (\$000s)	Premium (d) (\$000s)	Calculated premium rate (e)
2016	7,175,105	116,256	22,015	138,945	1.9%

- Notes :**
- (a) 2015 actual wages, inflated for one year's wage inflation at 3.25%
 - (b) from H3.1 above
 - (c) = (b) / (1 – commission rate (3.4%) – other expense rate (12.5%)) – (b)
 - (d) = (b) / (1 – commission rate (3.4%) – other expense rate (12.5%)) x (1 + interest rate (2.0%)) ^ (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.

H 4 Historical rates by industry

The following tables show the historical premium rates charged by industry (excluding self-insurers). The first table shows the rates charged based on the processed wages and premium provided by insurers. The second table shows the information on an underwriting year basis, taken from the new data template.

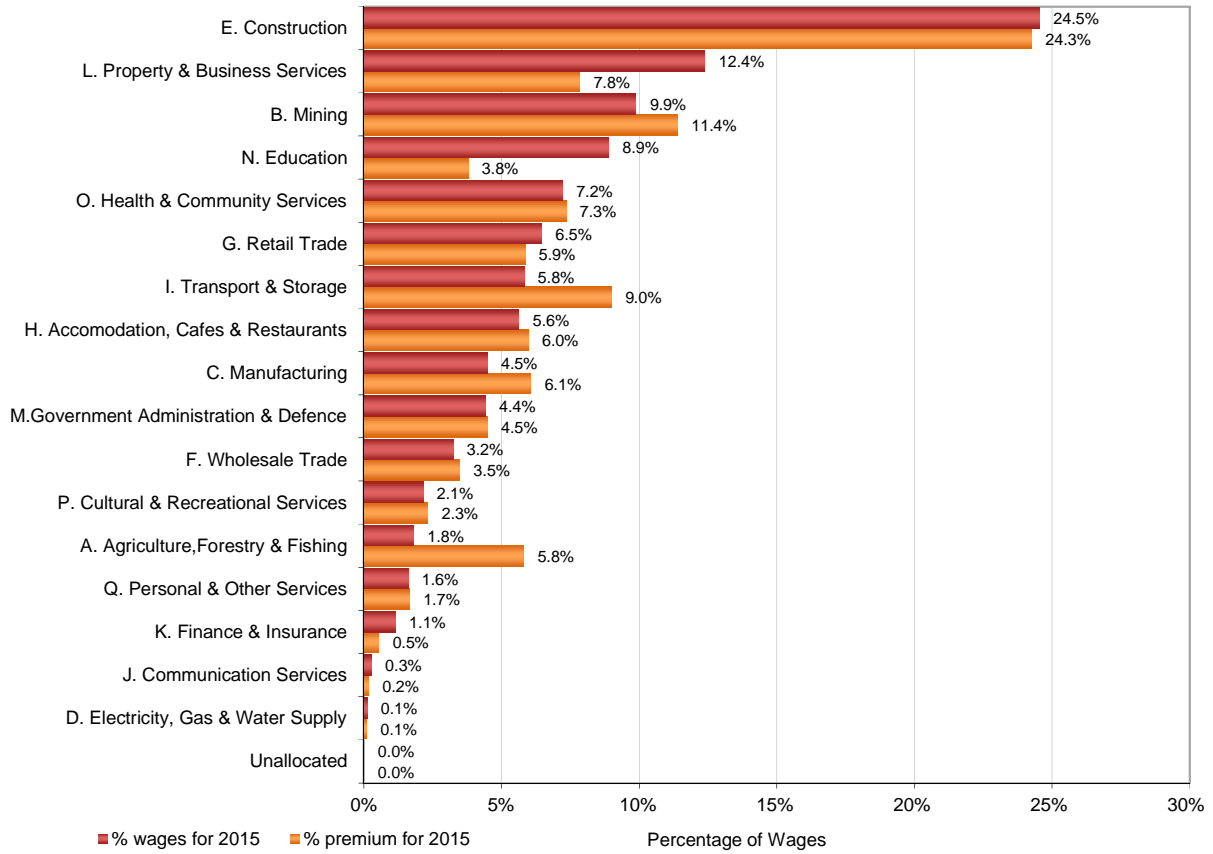
The underwriting year basis should be more accurate as it aligns with the claims data and the data on a processed year basis includes premium and wages adjustments for historical years, which may distort the results.

Processing year basis						Difference
Premium rate by ANZSIC division	2011	2012	2013	2014	2015	2015 / 2014
A. Agriculture, Forestry & Fishing	5.62%	6.17%	6.19%	6.66%	7.13%	7.1%
B. Mining	2.14%	1.56%	1.93%	1.75%	2.69%	53.6%
C. Manufacturing	2.65%	2.78%	2.95%	2.88%	2.45%	-15.2%
D. Electricity, Gas & Water Supply	1.27%	3.28%	2.62%	1.01%	1.71%	70.3%
E. Construction	2.67%	2.70%	2.92%	2.59%	2.07%	-20.0%
F. Wholesale Trade	1.95%	2.06%	2.12%	2.08%	2.08%	0.2%
G. Retail Trade	1.85%	1.90%	2.08%	2.11%	1.75%	-17.1%
H. Accommodation, Cafes & Restaurants	2.04%	2.09%	2.16%	2.16%	2.02%	-6.6%
I. Transport & Storage	3.53%	3.42%	3.62%	3.04%	3.01%	-0.9%
J. Communication Services	2.01%	2.30%	1.86%	1.82%	1.17%	-35.8%
K. Finance & Insurance	1.13%	0.93%	0.90%	1.13%	0.88%	-22.7%
L. Property & Business Services	1.36%	1.35%	1.37%	1.35%	1.30%	-3.8%
M. Government Administration & Defence	1.94%	2.02%	2.20%	2.36%	1.98%	-16.2%
N. Education	1.21%	0.91%	0.97%	1.16%	0.81%	-30.2%
O. Health & Community Services	2.40%	2.44%	2.47%	2.47%	1.93%	-21.5%
P. Cultural & Recreational Services	3.01%	4.31%	2.20%	3.80%	2.11%	-44.5%
Q. Personal & Other Services	2.89%	2.67%	2.66%	2.58%	1.99%	-22.8%
Unallocated	2.77%	5.99%	1.65%	0.00%	0.00%	0.0%
Total	2.18%	2.17%	2.31%	2.20%	2.01%	-8.6%

Underwriting year basis						Difference
Premium rate by ANZSIC division	2011	2012	2013	2014	2015	2015 / 2014
A. Agriculture, Forestry & Fishing	5.95%	6.17%	6.24%	5.17%	6.17%	19.4%
B. Mining	1.60%	1.89%	2.59%	2.22%	1.60%	-27.9%
C. Manufacturing	2.65%	2.76%	3.04%	3.09%	2.65%	-14.2%
D. Electricity, Gas & Water Supply	1.20%	1.21%	1.19%	1.07%	1.04%	-2.6%
E. Construction	2.59%	2.67%	2.94%	2.69%	2.12%	-21.4%
F. Wholesale Trade	2.11%	2.01%	2.10%	2.11%	2.10%	-0.4%
G. Retail Trade	1.84%	1.90%	2.07%	2.09%	1.94%	-7.0%
H. Accommodation, Cafes & Restaurants	2.01%	2.02%	2.34%	2.28%	2.08%	-8.6%
I. Transport & Storage	2.99%	3.26%	3.54%	3.65%	3.06%	-16.2%
J. Communication Services	2.63%	2.10%	2.00%	1.87%	1.64%	-12.0%
K. Finance & Insurance	1.09%	0.94%	0.84%	1.11%	0.82%	-25.5%
L. Property & Business Services	1.44%	1.32%	1.50%	1.49%	1.11%	-25.5%
M. Government Administration & Defence	1.94%	1.93%	2.08%	2.14%	2.08%	-3.2%
N. Education	1.19%	1.02%	1.03%	1.10%	1.06%	-3.6%
O. Health & Community Services	2.15%	2.35%	2.43%	2.36%	2.13%	-9.5%
P. Cultural & Recreational Services	3.59%	3.27%	2.85%	2.60%	2.05%	-21.2%
Q. Personal & Other Services	2.74%	2.59%	2.50%	2.59%	2.37%	-8.4%
Unallocated	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	2.10%	2.16%	2.40%	2.33%	1.98%	-15.0%

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

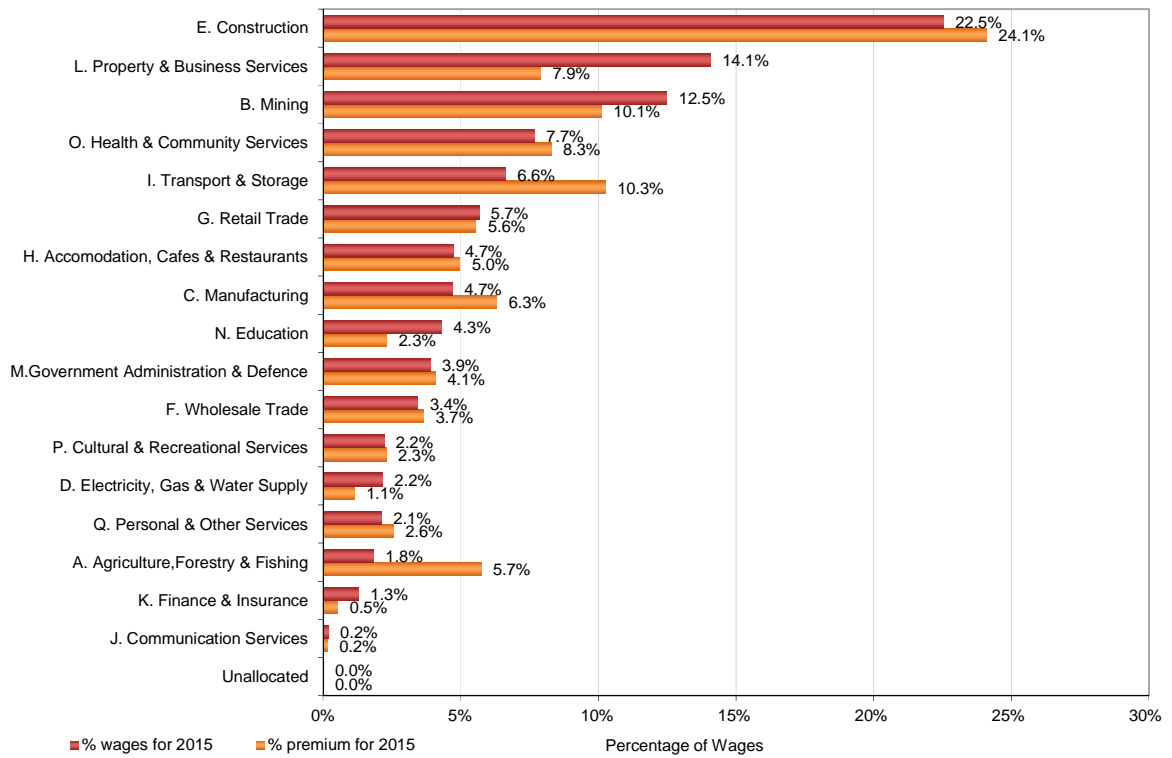
Percentage of wages and premium by industry for the 2014/15 accident year only



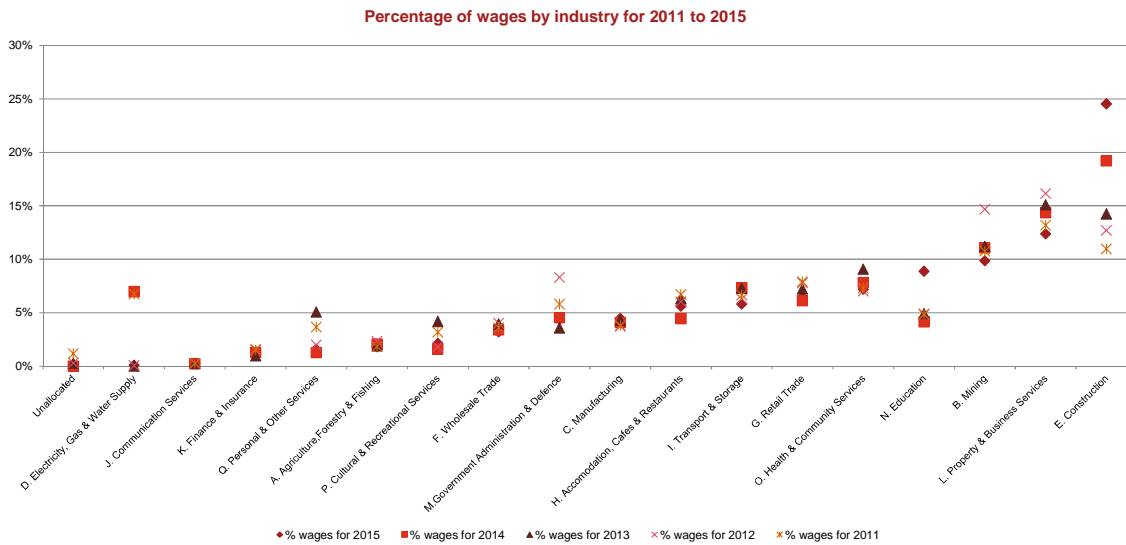
This shows that mining, transport and storage, manufacturing, and agriculture, forestry and fishing all have significantly higher premium rate than the scheme average, while property and business services, education, and finance and insurance all have a significantly lower premium rate than the scheme.

The equivalent chart on an underwriting year basis is shown below:

Percentage of wages and premium by industry for the 2014/15 accident year only

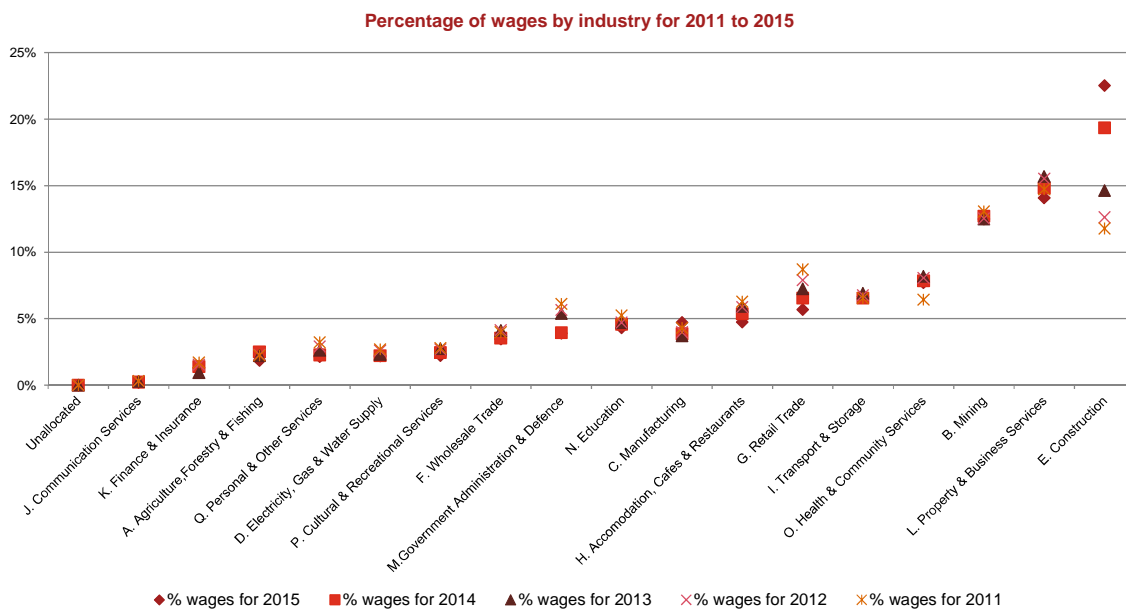


The percentage of wages for the previous five processing years is:



The percentage of wages for electricity, gas and water supply varies significantly over the five years and may be due to a multiple year policy where all of the wages and premium are allocated to one year rather than split across the years to which they relate.

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, which is evident for the electricity, gas and water division. Of note is the strong increase in Construction over the last five years, driven by the Inpex project.

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.

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: bank guarantee provision (1.5 x central estimate)
inflated and discounted central estimate (excluding risk margin)

Hopkins settlements

These settlements are contained in the redemption and non-economic lump sum payment category and represent between 90% to 95% of the payments in that category.

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 2015 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.

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 ie of the claims with
dates of occurrence in the risk/cover period

= number of claims x average claim size

