Scheme Actuarial Valuation as at 31 December 2018

ReturnToWorkSA

March 2019

At ReturnToWorkSA's request we have consented to the release of this report to the public, subject to the reliances and limitations noted in the report.

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While due care has been taken in preparation of the report Finity accepts no responsibility for any action which may be taken based on its contents.

finity
Actuarial and Insurance Consultants

6 March 2019

Mr Greg McCarthy
Chair
ReturnToWorkSA
400 King William Street
ADELAIDE SA 5000

Dear Mr McCarthy

Scheme Actuarial Valuation as at 31 December 2018

Enclosed is our report on the 31 December 2018 scheme actuarial valuation.

As has been the case at recent valuations, there continues to be a high level of unresolved disputation, particularly in relation to WPI assessments and related issues, and this continues to create considerable uncertainty about the ultimate number of Serious Injury claims that will eventuate each year. These uncertainties will not resolve until key legal precedent is established in relation to a number of the RTW Act provisions, and it is likely to be at least another year, perhaps longer, before the real-world operation of the Act is known with more confidence.

We emphasise that all of our valuation work has been undertaken on the basis that the *Mitchell* decision will be overturned on appeal. This means there is no allowance for *Mitchell*-related costs in the central estimate projection, other than legal costs. If *Mitchell* is not overturned then the scheme's outstanding claims liability will be significantly higher than the estimates in this report, and we expect would exceed the provision recommended for a 75% probability of sufficiency.

We would be pleased to discuss our review and findings with your executive and Board as required.

Yours sincerely

Andrew McInerney　　Tim Jeffrey　　Gae Robinson

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Glossary

Actuarial Release	A 'like with like' measure of how claims management activity has impacted on scheme financial performance since the previous valuation. See Section 11.3 for additional information.
APR	Average Premium Rate – the premium charged by ReturnToWorkSA to registered employers, on average, as a percentage of leviable wages.
BEP	Break Even Premium – the estimated cost of running the scheme for a year, including all future payments for claims incurred in the year after allowing for investment earnings, expressed as a percentage of leviable wages.
Development Quarter or DQ	The number of quarters between the injury date of a claim and the relevant activity (whether a claim report or claim payment).
ER	Incentives for early reporting of claims, introduced in 2008.
IBNER	Incurred But Not Enough Reported – an allowance for cost growth on known claims in addition to the reported cost.
IBNR	Incurred But Not Reported – claims where the accident has occurred, but ReturnToWorkSA is yet to be notified.
IS	Income Support (also known as weekly benefits) payments.
NWE	Notional Weekly Earnings.
OSC	Outstanding claims liability.
PPAC	Payments per active claim.
PPCI	Payments per claim incurred.
RTW	Return to work.
RTW Act	The Return to Work Act 2014, which governs the scheme.
Serious Injury or Serious Injury claim	A claim that meets the definition of a "Serious Injury" under the RTW Act.
Short Term claim	A claim that does not meet the Serious Injury threshold.
WRCA ('old Act')	Workers Rehabilitation and Compensation Act 1986, the previous Act which governed the scheme.
WPI	Whole Person Impairment.

Part I Executive Summary

1 Introduction

Finity Consulting Pty Limited ("Finity") has been engaged by ReturnToWorkSA to undertake an actuarial review of the Return to Work Scheme ("the scheme") as at 31 December 2018.

Our previous actuarial review was as at 30 June 2018, and was documented in a report dated 28 August 2018.

2 Scope of the Review

The scope of the review is specified in our contract with ReturnToWorkSA.

The primary purpose of the mid-year review is to provide ReturnToWorkSA with an independent estimate of the liability for outstanding claims and projected claim costs for registered (non self-insured) employers. These estimates are used by ReturnToWorkSA to update its financial position, and as an input in determining the average premium rate for the coming year.

The actuarial review also aims to provide analysis of the major features of the recent scheme claims experience, and a projection baseline against which ReturnToWorkSA can manage outcomes and monitor emerging experience in the coming year.

3 Valuation Approach

Our estimate of the outstanding claims liability is a central estimate of the liabilities. This means that the valuation assumptions have been selected such that our estimates contain no deliberate bias towards either overstatement or understatement.

Our estimates of the outstanding claims liabilities allow for the expected impacts of the Return to Work Act 2014 ("RTW Act") which governs the scheme, and separately project future benefits for Serious Injury claims and for Short Term claims, reflecting the differences in benefit structure between the two groups.

As has been the case at the last three half-yearly valuations, and following discussion and agreement with ReturnToWorkSA's Board and management, all of our valuation work has been undertaken on the assumption that the *Mitchell* decision will be overturned on appeal. This means there is no allowance for *Mitchell*-related costs in the central estimate projection, other than legal costs. If *Mitchell*, and potentially other key decisions that are in the dispute resolution system, are not overturned on appeal then the liability will be higher than is shown in this report.

We have also provided a recommended provision for outstanding claims which increases the central estimate to a level intended to achieve 75% probability of sufficiency. While legal precedent uncertainty has been considered in setting the risk margin loading at this valuation, particularly in the context of the high number of decisions on appeal to the Supreme Court, the risk margin has *not* been set at a level that would cover the increased costs if these adverse precedents are maintained. For example, if the *Mitchell* decision were to be upheld, the revised central estimate would likely exceed the current recommended provision at the 75% probability of sufficiency level.

4 Scheme Environment

Recent developments which affect the scheme's operating environment and/or the liability estimate include:

- **Legal precedent**: key sections of the RTW Act continue to be tested through the scheme's dispute resolution processes, and legal precedent on a number of key issues is yet to emerge. Of particular importance to our assessment are the provisions about how and when a claim is determined to be a Serious Injury (the *Mitchell* case is an example). It appears that it is likely to take at least another 6 to12 months until key precedent is established.
- **Dispute resolution and appeals**: related to the above point, the number of open disputes has continued to rise, and the delay to resolution is increasing. Further, more claims are appealing dispute decisions, following changes in the RTW Act that mean legal costs are no longer at risk on an appeal. This is both lengthening disputes and increasing legal costs, and is leading to higher than expected non-claimant related costs (e.g. medico-legal costs) in the periods after the RTW Act benefits are payable.
- **South Australia's economy**: unemployment rates have reduced and wages growth has been higher than expected, with 2017/18 growth being revised upward to the highest level in 10 years. In some areas where wages growth has been strong, such as in the construction industry, this has coincided with deterioration in claims frequency

5 Recent Claim Experience

The key features of the claims experience in the six months to 31 December 2018 were:

- For claims managed entirely under the RTW Act:
  - New claim numbers have increased by around 8% in the last year. While the growth in wages noted above explains some of this increase, claim numbers are estimated to have grown by more than the exposure. Our analysis suggests this is the result of deterioration in claim frequencies for some industries, including construction and manufacturing.
  - Over the last six months there has been some deterioration in the RTW experience. ReturnToWorkSA has identified where this has occurred and is working to improve the experience in line with that seen 6-12 months ago, which was the best in the scheme's history.
  - Lump sum payments continue to be at low levels, due to a slowdown in WPI assessments. Most claims reaching two years on Income Support benefits are yet to have had a WPI assessment.
  - The number of disputes per month is running about 25% lower than pre-reform levels, which has favourable implications if maintained. That said, we expect dispute numbers will increase, at least somewhat, as the number of WPI assessments increases.
- For transition claims, there continues to be a much higher than anticipated level of disputation, with some 1,500 disputes still open on claims from the transition cohort. Following implementation of the final time-cap boundary under the RTW Act (cessation of medical benefits at June 2018 for claims whose Income Support ceased at June 2017), there are relatively few transition claims on direct benefits at the current time.

- The level of Serious Injury activity (applications, disputes and additional numbers) continues to be higher than expected.
  - For transitional periods there continues to be a ‘tail’ of late emerging new Serious Injury claims, which is surprising, as we (and ReturnToWorkSA) had expected that most applications from these transitional claims would have been completed shortly after the cessation of Income Support in June 2017.
  - For fully RTW Act claims, ‘likely’ Serious Injury claims are now being identified earlier following changes in the claims management approach. While this early identification is a positive step, there is still uncertainty about how many more Serious Injury claims will emerge for these cohorts given the slowdown in WPI assessments.

    With the increased maturity of the first fully RTW Act accident year (2016), where most claims have now crossed the 104 week Income Support boundary, we have worked with the operational team at ReturnToWorkSA to more directly assess the post-reform serious injury claim numbers (and as such, to place less reliance on ‘old Act’ experience and expectations about how numbers would differ under the RTW Act); this assessment indicates that RTW Act Serious Injury numbers are likely to be higher than previously estimated.

Total net claim payments in the six months were $7.8 million (4%) lower than expected. Payments were , $16.6 million lower due to lump sums taking longer to be paid than anticipated, which means that other payments were $8.8 million (7%) higher than expected.

6 Liability Valuation Results

Summary of Results

Our central estimate of the scheme’s outstanding claims liability for registered employers as at 31 December 2018 is $2,430 million. This is a discounted (present value) estimate, net of recoveries and including allowance for future expenses. Adding a risk margin of 15.0% to produce a provision with a 75% probability of sufficiency, consistent with ReturnToWorkSA’s reserving policy, gives an outstanding claims provision of $2,795 million, as shown in Table 1. The provision includes an allowance for future claims handling expenses equivalent to 10% of gross claim costs.

Table 1 – Recommended Balance Sheet Provision

	Central Estimate	Risk Margin	Recommended Provision
	$m	$m	$m
Gross Claims Cost - Serious Injuries	1,610		
Gross Claims Cost - Short Term Claims	655		
Claims Handling Expenses	219		
Gross Outstanding Claims Liability	2,484	373	2,856
Recoveries	-54	-8	-62
Net Outstanding Claims Liability	2,430	365	2,795

Table 1 also demonstrates that the majority of the OSC liability relates to Serious Injuries. The balance will continue moving toward Serious Injury liabilities over time.

Movement in Liability

Our central estimate is $94 million higher than projected at the previous valuation. We have attributed the change in central estimate to two components:

- Movement in liability due to claims performance – this covers the components that are due to claim outcomes (such as changes in the number and mix of claims), as well as the impact of revisions to our valuation assumptions. This step also includes the impact of changes in the timing of lump sum payments; slower than expected lump sums lead to an increase in the remaining liability.
- Impact of changes in economic assumptions – this component is mandated by accounting standards, and therefore outside ReturnToWorkSA's control.

This split also allows calculation of the 'actuarial release', where we add the difference between actual and expected payments to the movement in the liability due to claims experience, to give a measure of the 'profit' impact of claims management performance relative to the previous valuation, as shown in Table 2 below.

Table 2 – December 2018 Central Estimate and Determination of Actuarial Release/(Strengthening)

	Central Estimate		
	Liability Estimate[1]	AvE Payments in 6 mths to Dec-18	Actuarial Release [2]
	$m	$m	$m
Liability at Jun-18 Valuation	2,275		
Projected Liability at Dec-18 (from Jun-18 valuation)	2,336		
Claims Movement - Short Term Claims	37	4	-41
Claims Movement - Serious Injury	-11	-12	23
Impact of Change in economic assumptions	68		
Recommended Liability at Dec-18	2,430		
Total Actuarial Release			-18

[1] Net central estimate of outstanding claims liability, including CHE

[2] Includes change in OSC and Act vs Exp payments.

There is an actuarial **strengthening** (negative release) of $18 million for the period, which is an unfavourable result for the scheme. Changes to economic assumptions further increase the central estimate by $68 million. Each of these items is discussed briefly below.

Components of the Actuarial Release/(Strengthening)

Table 3 shows the actuarial strengthening by entitlement group, and split between Short Term claims and Serious Injuries.

Table 3 – Actuarial Release/(Strengthening) by Entitlement Group

Entitlement Group	Short Term Claims[3]	Serious Injury Claims[3]	Total Actuarial Release [3]	Release as %
			$m	%
Income & Related	-20	-5	-25	-5%
Lump Sums	0	-7	-7	-2%
Legals	-3	-2	-5	-6%
Treatment Related [1]	-16	16	0	0%
Rehabilitation	2	22	24	46%
Other Costs [2]	-1	0	-1	-7%
Recoveries	0	-1	-1	-2%
Total Claim Costs	-37	22	-15	-1%
Expenses	-4	1	-3	-2%
Net Central Estimate	-41	23	-18	-1%

[1] Medical, hospital, physical therapy, travel, other
[2] Investigation, common law , commutation, LOEC
[3] Includes change in OSC and Act vs Exp payments.

The movements which contribute to the $18 million actuarial strengthening are:

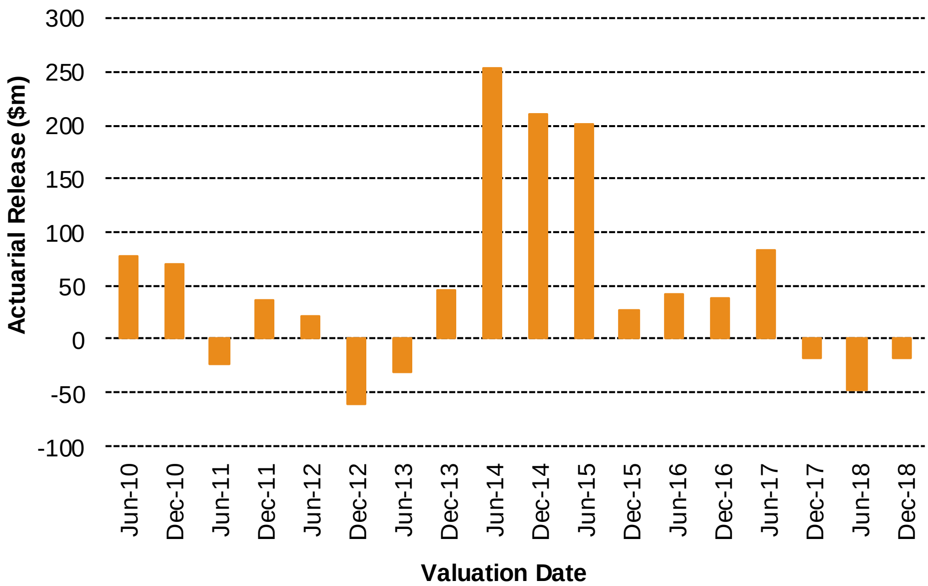
- For **Short Term claims**, the $41 million actuarial strengthening comprises
  - An increase of $12 million due to the higher than expected exposure growth (including the ending of a large self-insurance licence), which we expect will largely be matched by additional premium collections. This increase explains about half of the Income Support growth and some of the treatment related costs.
  - An increase of $12 million due to the slower than expected run-off of transitional claims, including higher legal, medico-legal (which is included in 'treatment related') and surgery related costs. Given the large number of open disputes and slow resolution, as well as the large number of legal matters outstanding in the Full Bench of SAET and the Supreme Court, it is possible that there will be further increases in cost for transition claims.
  - A remaining increase of $13 million due mainly to higher than expected active claim numbers, which suggests there has been some slippage in return to work outcomes.
  - A $4 million strengthening on claims handling expenses due to the slower than expected run off of transition claims and disputes and higher new claim numbers.
- For **Serious Injury claims**, there was an overall release of $23 million, due to:
  - The removal of claims previously (incorrectly) valued as Serious Injuries that are reliant on the *Mitchell* decision, decreasing the liability by $24 million
  - Net changes in Serious Injury claim numbers (including IBNR claims) increasing the liability by $24 million. With the continued late emergence of new Serious Injury claims, we have reassessed the likely level of RTW Act Serious Injury numbers using a ground-up approach to setting IBNR for the 2016 accident year. This has led to an overall increase to expected Serious Injury claim numbers
  - Revision of individual claim estimates set by ReturnToWorkSA for Severe Traumatic Injuries, particularly for Rehabilitation and Physiotherapy costs reducing the liability by $28 million

- Other changes in valuation basis changes increasing the liability by $17 million; predominantly this is due to an increased additional Care loading on Severe Traumatic Injuries for accident years 2011 to 2014, where a very high proportion of Care costs for this group are currently provided by family members (almost 100% of the Care for this group is currently provided by family members, compared to around 25% across the rest of the Severe Traumatic Injury cohort), which added $13 million to the liability.
- Payments in the six months were $12 million lower than expected, most of which is due to slower than expected lump sums.

Our projections for the remaining entitlement types were also reviewed and updated, although none of the movements are significant in relation to the overall scheme liability.

Figure 1 shows the actuarial release/(strengthening) at each valuation over the last nine years. There have been three consecutive strengthenings following a series of larger releases over the four years before that. The main driver for the last three valuation strengthenings is the cost of transitional claims, where there have been more late claims determined as Serious Injuries, high levels of dispute, and slow resolution of disputes. As mentioned earlier, we expect that some of the latest strengthening will be offset by increased premium collections as a result of the higher exposure growth and a large self-insurance transfer back into the scheme, and so this component does not adversely impact the funding position.

Figure 1 – History of Actuarial Releases/(Strengthenings)



Impacts of Economic Assumption Changes

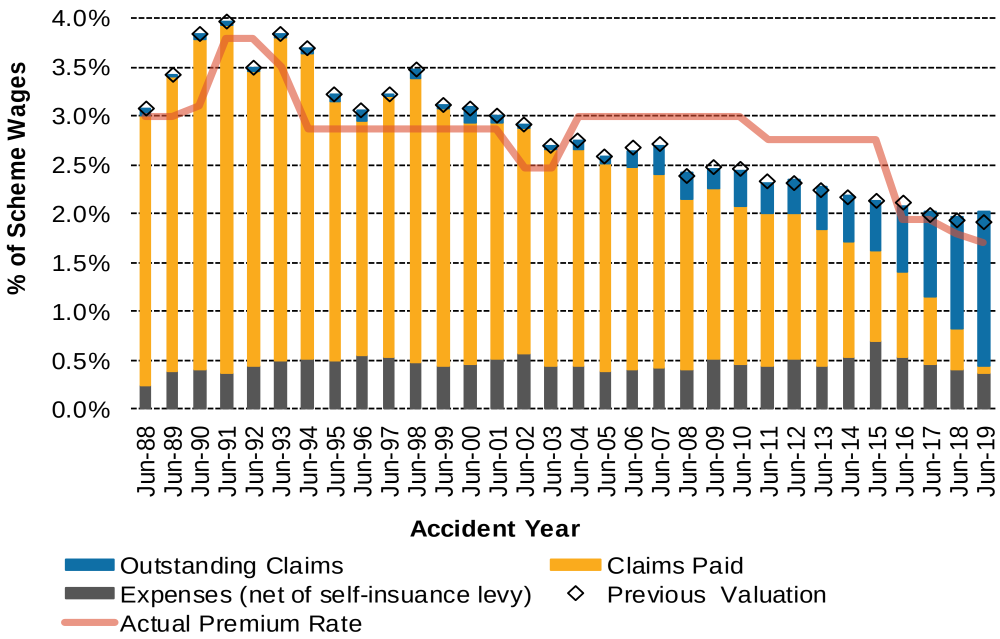
Changes to inflation and discount rate assumptions increased the central estimate by $68 million. As discussed in Section 10.1, decreases in discount rates at most durations, which are outside ReturnToWorkSA's control, have led to this increase. These decreases have been partially offset by reductions in projected wages growth.

7 Historical Scheme Costs

We have estimated the 'historical premium rate', otherwise known as the Break Even Premium rate (BEP), for each past accident year; this is the amount that would have been sufficient to fully cover claim costs, expenses and recoveries, assuming the scheme achieved risk free investment returns each year and that the current actuarial valuation is an accurate forecast of future payments. The BEP is calculated by dividing the total projected costs for the accident year (discounted to the start of that year at risk free rates) by the total scheme leviable remuneration in that year. We present the costs on this basis, using risk free discount rates, so that a like with like comparison can be made over the history of the scheme, allowing current scheme performance to be assessed in a long term context.

Figure 2 shows a summary of the estimated BEPs, including a comparison with the estimates at our previous valuation and the scheme's actual average premium rate charged for each year.

Figure 2 – Break Even Premium Rate* and Actual Premium Rate Charged



* The Break Even Premium Rate in this Figure is calculated using the risk free rate, so that a like with like comparison can be made over the history of the scheme. For clarity, this is not the same as the scheme's pricing basis, as the scheme targets a higher than risk free rate of return when premiums are set.

The main points to note are:

- The introduction of the RTW Act reduced the BEP for accident years between 2008 and 2010 to just under 2.5% of wages
- For accident years since 2011 the costs are progressively lower again, as claims have had less opportunity to remain on long term benefits
- The current estimate of the BEP for the 2019 accident year is 2.02%, up from 1.97% for the 2018 year. The increase is driven by a high number of claimants with severe traumatic injuries; in recent years the experience for this group has been favourable, so for now we are treating this as a 'one-off''.
- Scheme expenses have reduced year-on-year since 2015 when they were particularly high as a result of additional transition related requirements. Expenses for the 2019 year are expected to be around 0.38% of wages, which is below the target post-reform rate of 0.40% of wages.

We note that these calculations assume past and future investment earnings at the risk free rate. All else being equal, any above risk free earnings or additional sources of income would act to reduce the required premium rate.

We emphasise that (as seen in the graph) the BEP estimates for recent accident years include a significant outstanding claims estimate and are therefore likely to change as experience emerges. We also note that the adopted wages figure for 2019 still involves some estimation.

8 Key Uncertainties

There is considerable uncertainty in the projected future claim costs, in particular around how and when claims are determined to be Serious Injuries. Section 12 details some of the uncertainties and sensitivities of our advice, in order to place our estimates in their appropriate context.

The main areas of uncertainty in our current estimates of the liabilities are:

- **Legal precedent risk** – risks here relate to the possibility of decisions which are unfavourable to the scheme or the culture and behaviours of its participants. In particular, a number of decisions have gone against ReturnToWorkSA's interpretation of the WPI assessment rules and if maintained would lead to increases in the liability; these decisions are currently under appeal. On current timing, this risk is likely to remain for at least another year, and perhaps longer.

  As noted, all of our valuation work has been undertaken on the basis that the *Mitchell* decision will be overturned on appeal. This means there is no allowance for *Mitchell*-related costs in the central estimate projection, other than legal costs. More information on this uncertainty is found in Section 12.3. Importantly, we note that if the *Mitchell* decision were to be upheld, the revised central estimate would likely exceed the current recommended provision at the 75% probability of sufficiency level.

- **WPI assessments** – under the RTW Act, there are significant differences between the compensation available to claims above the 30% WPI threshold and those below. This factor, combined with the new lump sum for future economic loss payable to Short Term claims, means there will be increasing pressure on WPI assessments. The scheme will face significant financial consequences if this leads to either extra claims getting over the 30% WPI threshold or 'WPI creep'. The robustness of the 'once and for all' WPI assessment rules under the RTW Act is an important area of risk.

- **Serious Injury claim costs** – these claims are entitled to benefits for life, and the risks for this group relate to factors that are common across most claims, and deviations from our assumptions that compound across multiple years. For the current valuation the key uncertainties are:

  - **Life expectancy** – the future life expectancy of Serious Injury claimants has a significant impact on future cost projections.

  - **Cost escalation** – the potential for future cost escalation in a number of medical, care and treatment related items poses a risk. One example is the extent to which care costs that are currently not compensated by the scheme may become compensable in future, as family-based carers age and claimants increasingly require paid attendant care and/or residential care facilities. Another example is the potential increase in costs for care related specialists and facilities, due to wage pressures and/or market demand pressures for these specialists as the National Disability Insurance Scheme, continues to scale up.

- **Ultimate numbers of claims** – there are several areas of uncertainty in relation to claim numbers, including: the ultimate number of top-ups that are yet to emerge due to legislation changes, the impact of claimants delaying their lump sum assessments, and the number of outstanding Serious Injury application disputes and other WPI disputes that ultimately meet the 30% WPI threshold.

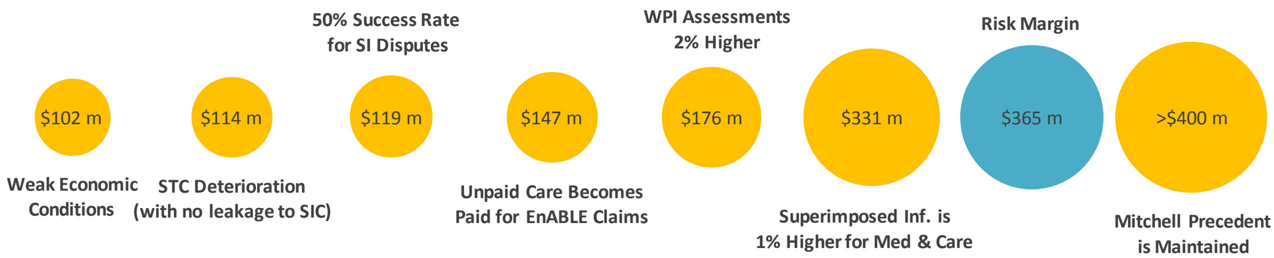
- **Return to work** – in the last six months there has been deterioration in return to work outcomes for claims managed entirely under the RTW Act. In addition, there continues to be significant legal involvement on transitional claims, and if this carries through to the RTW Act cohort the sustainability of recent improvements (prior to the last six months) could be at risk.

- **Outcomes for claims with current disputes** – risks here include the possibility of decisions which are unfavourable to the scheme, as well as the behavioural consequences of so many disputes remaining. Open dispute numbers are again increasing, and more claims are moving into the later stages of the dispute resolution process.

Even though the RTW Act provisions commenced on 1 July 2015, there are still key areas of the Act being tested in the Courts, and there is as yet only limited information on the number of Serious Injury claims which will emerge from these cohorts. The current valuation basis reflects our best estimate of how this experience will eventuate, based on our and ReturnToWorkSA's interpretation of the intent of the Act. Over time, our basis will further reflect the developing post-reform experience, and it is possible that the experience could differ materially from our current expectations.

To place these uncertainties and risk in context, Figure 3 shows some of the key risks and uncertainties in the projections, as summarised in Section 12 of the report, relative to the risk margin adopted in the liability reserves (in blue).

Figure 3 – Comparison of Reserving Risk Margin to Key Risks and Uncertainties



As this shows, there is a range of plausible scenarios that could see the liability move by multiple hundreds of millions of dollars. The larger scenarios all depend primarily on Serious Injury claims numbers and/or costs. While most of the larger uncertainties would emerge over the long term, the *Mitchell* decision stands out as a risk that could lead to a very significant step change in the liability reserves.

9 Reliances and Limitations

Our results and advice are subject to a number of important limitations, reliances and assumptions. This executive summary must be read in conjunction with the full report and with reference to the reliances and limitations set out in Section 13 thereof.

This report has been prepared for the sole use of ReturnToWorkSA's board and management for the purpose stated in Section 1. At ReturnToWorkSA's request, we consent to the release of our report to the public, subject to the reliances and limitations noted in the report.

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

While due care has been taken in preparation of the report Finity accepts no responsibility for any action which may be taken based on its contents.

This report, including all appendices, should be considered as a whole. Finity staff are available to answer any queries, and the reader should seek that advice before drawing conclusions on any issue in doubt.

Part II Detailed Findings

1 Introduction and Scope

1.1 Introduction

Finity Consulting Pty Limited ("Finity") has been requested by ReturnToWorkSA to undertake an actuarial review of the Return to Work scheme as at 31 December 2018.

We have carried out half-yearly actuarial reviews since June 2003; the most recent was as at 30 June 2018, as documented in a report dated 28 August 2018.

1.2 Scope of the Review

The scope of the review is specified in our contract with ReturnToWorkSA.

The primary purpose of the mid-year review is to provide ReturnToWorkSA with an independent estimate of the liability for outstanding claims and projected claim costs for registered (non self-insured) employers. These estimates are used by ReturnToWorkSA to update its financial position, and as an input in determining the average premium rate for the coming year.

The actuarial review also aims to provide analysis of the major features of the recent claims experience, and a projection baseline against which ReturnToWorkSA can manage outcomes and monitor emerging experience in the coming year.

1.3 Compliance with Standards

Professional Standard 300 issued by the Institute of Actuaries of Australia sets out the expectations of actuaries preparing estimates of the liability for outstanding claims of statutory authorities involved in general insurance activities. This valuation report has been prepared in accordance with this professional standard (refer to Appendix L).

We understand that Australian Accounting Standard 1023 (AASB1023) is adopted by ReturnToWorkSA in preparing its financial statements, and we have prepared our estimate of the outstanding claims to be consistent with our understanding of AASB1023's requirements.

1.4 Control Processes and Review

Our valuation and this report have been subject to Technical and Peer Review as part of Finity's standard internal control process:

- Technical review focuses on the technical work involved in the project. The technical reviewer reviews the data, models, calculations and results, and also reviews our written advice from a technical perspective.
- Peer review is the professional review of a piece of work. The peer reviewer reviews the approach, assumptions and judgements, results and advice.

1.5 Structure of this Report

Section 2	Describes the approach we have taken to the valuation, and provides a brief overview of the information provided to us.
Section 3	Summarises the current operational landscape impacting on the scheme.
Section 4	Summarises high level recent claims experience.
Sections 5 to 9	Detail our analysis of scheme experience and valuation assumptions.
Section 10	Sets out other valuation assumptions, including the economic assumptions of inflation and discount rates, and the risk margins and claim handling expenses adopted in setting accounting provisions.
Section 11	Shows detailed tabulations of the outstanding claims valuation results.
Section 12	Provides sensitivity analysis of the valuation to key assumptions and highlights some of the key uncertainties in our projections.
Section 13	Sets out important reliances and limitations.
Section 14	Summarises the key events and changes in the South Australian scheme over time.

The appendices include detailed specifications of the valuation models and results.

Figures in the tables in this report have been rounded. There may be instances where the rounded information does not calculate directly to the total shown.

In this report, we use the current titles "ReturnToWorkSA" and "RTW scheme" to include the previous authority (WorkCoverSA) and scheme (WorkCover scheme), where relevant.

2 Approach and Information

2.1 Approach

The Return to Work Act 2014 ("RTW Act") made significant changes to entitlements and to the scheme operations, with all of the new features having commenced on or before 1 July 2015. Our estimates of the outstanding claims liabilities allow fully for the expected impacts of the RTW Act, and for the emerging experience to date, other than in relation to a number of recent SAET decisions which are under appeal, as discussed below.

Under the RTW Act, Serious Injury claims have very different entitlements from other claims. We have modelled these claims separately, with the remaining claims modelled as 'Short Term claims'. Serious Injury claims are valued using an individual claim based approach by payment type, and Short Term claims are valued using aggregate methods, by payment type.

Table 2.1 summarises where the entitlement and claim cohorts are documented in this report.

Table 2.1 - Report Structure by Claim Cohort

	Short Term Claims	Serious Injury Claims	Other Assumptions	Overall Results
Valuation Basis and Results	Sections 5 to 8	Section 9	Section 10	Section 11
Economic Impacts	Section 10 (basis) and Section 11 (results)			
BEP	Section 12			

2.1.1 Basis of the Valuation

Our estimate of outstanding claims is a central estimate of the liabilities. This means that the valuation assumptions have been selected such that our estimates contain no deliberate bias towards either overstatement or understatement. The estimates are shown discounted to allow for the time value of money using a risk free discount rate, consistent with accounting standards.

As has been the case at the last two half-yearly valuations, and following discussion and agreement with ReturnToWorkSA's Board and management, all of our valuation work has been undertaken on the assumption that the *Mitchell* decision will be overturned on appeal. This means there is no allowance for *Mitchell*-related costs in the central estimate projection, other than legal costs. More information on this uncertainty is found in Section 12.3.

We have also provided information on the recommended provision for outstanding claims which increases the central estimate to a 75% probability of sufficiency, in accordance with ReturnToWorkSA's reserving policy.

Importantly, we note that if the *Mitchell* decision were to be upheld, the revised central estimate would likely exceed the current recommended provision at the 75% probability of sufficiency level.

2.2 Information

2.2.1 Standard Data Extracts

Claims data was provided in the form of a transaction file with complete scheme history to 31 December 2018. We have not independently verified or audited the data, but we have reviewed it for general reasonableness and consistency, including reconciliations to the previous actuarial review information and to information from ReturnToWorkSA's financial statements. The claims data appears to be of high quality and contains extensive detail.

As for previous valuations, our experience analysis excludes all claims related to employers who have become self-insurers (including claims before they became self-insured).

Appendix B shows summaries of the claims data, including data reconciliations.

2.2.2 Qualitative and Additional Information

In addition to the standard data extracts, we obtained additional information from ReturnToWorkSA and its claims agents EML and Gallagher Bassett. This included briefing sessions on 18 December 2018 and operational information that was provided separately.

The additional information we received included:

- Tableau-based monthly monitoring reports showing:
  - Claim reports
  - Payments by benefit type
  - Open, closed and lodged disputes by month
  - Income Support continuance rates and numbers
- Serious Injury claim list containing:
  - All claims that are currently included in our ultimate claims, with the information as to why they have been included
  - Flags to indicate whether they should be valued for Income Support and medical benefits
  - General information pertinent to Serious Injury claims such as determination status and WPI
  - Information on any disputes relating to Serious Injury applications
- EnABLE case estimates covering:
  - Estimated half-yearly costs by payment type
  - The level of care that is currently unpaid (that is, where there is gratuitous care that is generally provided by a family member)
  - Description of the injury and current condition
- Information on WPI assessments including:
  - Completed and in-progress assessments by accident period
  - Disputed assessments by accident period
  - Lump sum payment status of completed disputes

- Information on disputes including:
  - Number of open and finalised disputes by accident year and latest disputation phase
  - Aggregate worker legal cost of finalised disputes by claim
- Additional information including:
  - List of Transitional Regulation 5 applications and their current status
  - List of pre-approved surgeries and current status
  - Summary of claims activity including surgery, disputation and communication for claims relating to 2014/15 injury dates
  - Remuneration projection for 2018/19 and onwards
  - Wages and reported claims costs by industry.

3 Scheme Environment

This section summarises changes in the scheme's legislative and operational landscape which are considered in our valuation.

3.1 Legislation

There have been no changes to the scheme's legislation or Regulations which impact on our valuation since the June 2018 valuation.

3.1.1 Legal Precedent under the RTW Act

Key sections of the RTW Act are being tested through the scheme's dispute resolution processes. In the last six months a number of these key cases have completed the various appeal processes, although the case that presents the greatest financial risk to the scheme (*Mitchell*) is still to be finalised. There remains a higher than usual number of cases on appeal to the Supreme Court, and until these are resolved there will be uncertainty as to the financial costs which eventuate under the RTW Act benefit package.

Mitchell

Under the current operational implementation of the RTW Act, injuries are not allowed to be combined for a WPI assessment, including any secondary injuries that arise from medication use. This approach was rejected by SAET in *Mitchell*[1], where the assessed WPI of 26% on the primary back injury was increased to 70% (an increase of 44%) by SAET. This appeal was heard after our technical valuation work was undertaken, but prior to completion of this report.

If this decision is maintained on appeal it would materially increase the number of claims that can access Serious Injury benefits; *Mitchell* also has implications for other areas of the scheme, but its impact on Serious Injury claim numbers is the most important for the scheme's claim costs.

As noted in Section 2.1.1, our assessment of the outstanding claims liability assumes the *Mitchell* precedent is overturned on appeal. If this is not the case, the outstanding claims liability would be materially higher than shown in this report.

Other Cases

There are other cases that are key to the long term operation of the Return To Work scheme and are still to be resolved. These cover a wide range of areas including:

- Combining of injuries for WPI assessment and lump sum purposes
- Whether employment is the significant cause of secondary injuries or injuries away from the workplace
- The reviewability of decisions and past agreements.

It is likely that in the next 12 months there will be more decisions that give clarity as to the application of the various RTW Act legislative provisions. In some areas it may take longer for precedent to emerge.

[1] Return to Work Corporation of South Australia v Mitchell [2017] SAET 81

3.2 Scheme Boundaries

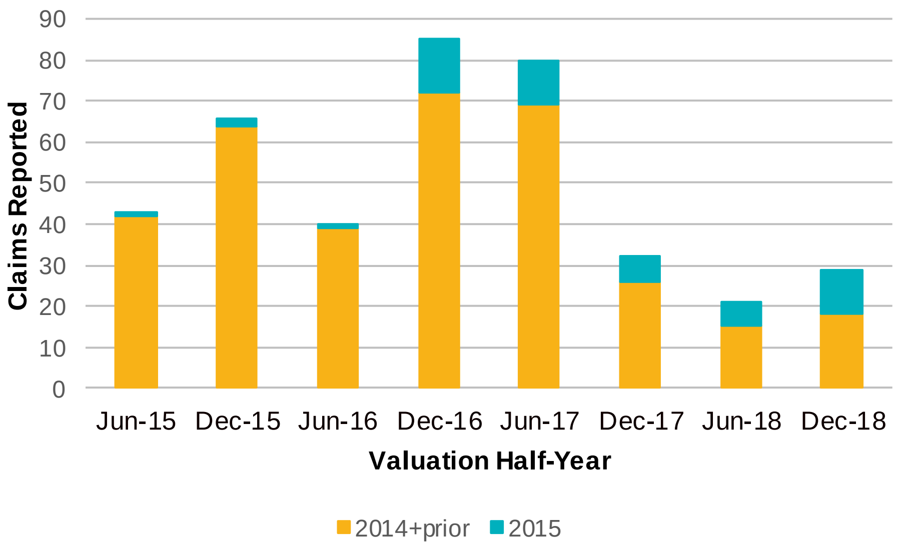
3.2.1 Management of Serious Injury Claim Scheme Boundaries

Serious Injury applications and assessment of 30% WPI is the most material scheme boundary from a financial perspective. We are now over three years into the RTW Act, and the emergence of Serious Injury claims from the transition cohort has continued for longer than expected; this is primarily due to the degree of disputation in relation to decisions and the slowness of key legal precedent to emerge.

It was initially believed the cessation of Income Support benefits on 30 June 2017 (and to a lesser extent Medical benefits on 30 June 2018) for 'old Act' Short Term claims would act as an incentive for claims from these periods to confirm their Serious Injury eligibility, leaving few, if any, new Serious Injury claims continuing to emerge from this cohort. Despite this, transitional Serious Injury claims continue to emerge and the number of open Serious Injury application disputes remains high, suggesting that there will continue to be uncertainty around Serious Injury claim numbers for accident years beyond when claims hit the two year Income Support boundary.

Figure 3.1 shows the emergence of the current cohort of Serious Injury claims (excluding Severe Traumatic injuries as these tend to be identified quickly) for transitional periods.

Figure 3.1 – Newly Identified Serious Injury Claims (Transition claims only)



Although new Serious Injury claims for transitional periods have reduced since 30 June 2017, there has been no clear run-off since this point, as shown by the slight increase in claims identified over the last six months, relative to the prior six months. Given the number of new Serious Injury claims identified over the last six months has not eroded our IBNR allowance set at the previous valuation, the continued activity on transitional periods has led to an upward assessment of the ultimate number of Serious Injury claims from this period, particularly for the 2014 and 2015 accident years.

For RTW Act periods, the length of time it has taken Serious Injury numbers to emerge means there continues to significant uncertainty around the ultimate numbers of Serious Injury claims. To support our estimates, in conjunction with ReturnToWorkSA we have undertaken a ground-up estimation of the level of IBNR for the 2016 accident year, similar to that used to set the IBNR for transitional periods. This approach, along with consideration of the continued emergence of claims for transitional periods, suggests that our previous allowance for RTW Act periods is likely to be too low, so we have increased our projections accordingly.

There is still a large number of disputes in relation to WPI assessments and Serious Injury applications, so there is still material uncertainty about how many claims will access the Serious Injury benefit package – even before considering the potential for adverse legal precedent to emerge.

Our allowances for Serious Injury claims are discussed further in Section 4.2 and Section 9.

3.2.2 Management of Short Term Claim Scheme Boundaries

At June 2018 the scheme moved beyond the last of the transition boundaries, with all the Short Term claim boundaries now being 'business as usual' processes.

So far the scheme's experience has been a smooth implementation of these processes.

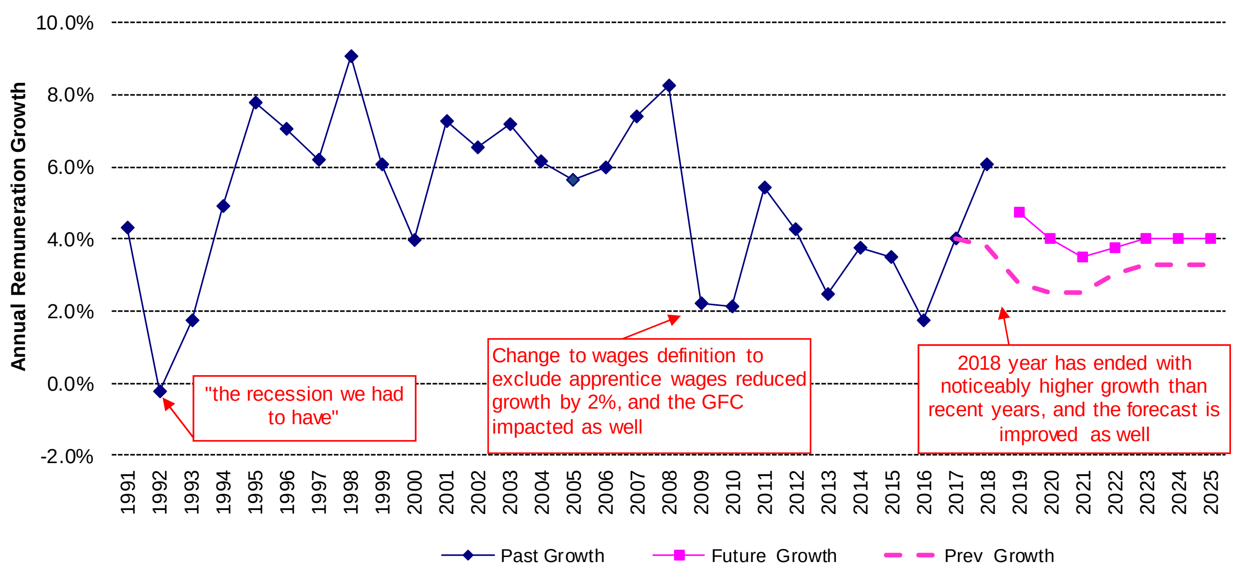
3.3 Operational and Environmental Changes

This section describes recent trends in the scheme environment. Section 14 provides an overview of earlier operational and legislative changes which are useful in understanding the scheme's historical experience.

3.3.1 Increasing Exposure and Claim Numbers

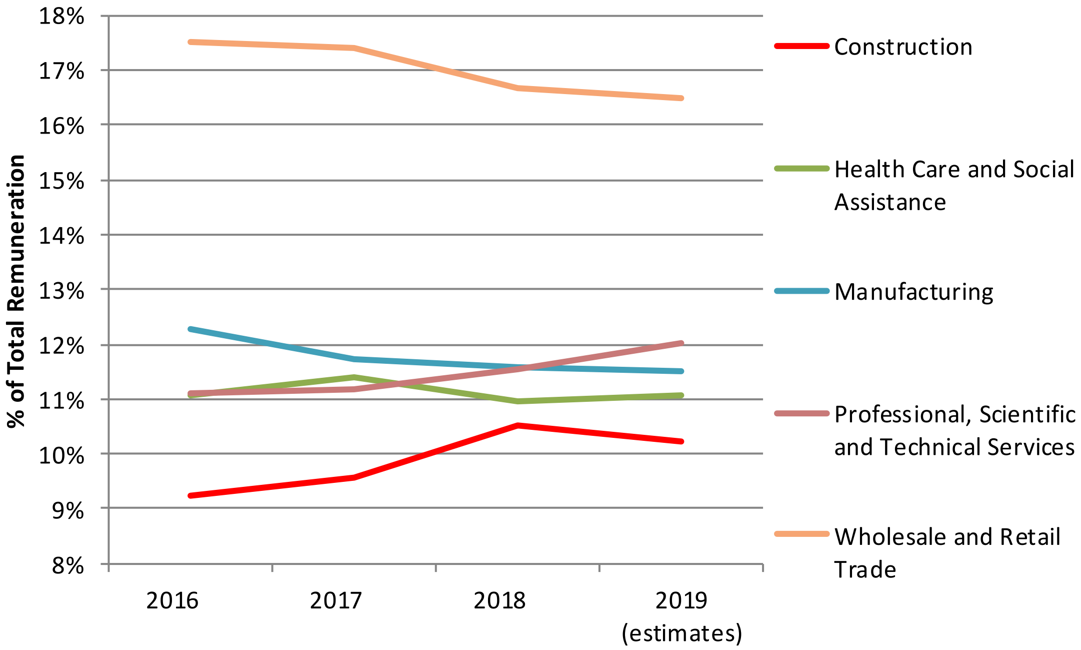
After an extended period of low wages growth, the SA economy has experienced significant growth in 2018 and 2019. Figure 3.2 shows the actual and projected annual remuneration growth. The 2018 year has ended with noticeably higher growth than recent years and the forecast for 2019, (which is supported by employer estimates) has also been revised upward.

Figure 3.2 - Annual Remuneration Growth



For the 2018 and 2019 (estimate) years, there has been relatively strong exposure growth for the Construction, and Professional, Scientific and Technical Services, industry groups, as shown in Figure 3.3.

Figure 3.3 – Large Industry Sectors as a % of total Remuneration



In addition to exposure growth, the scheme has experienced a deterioration in claim frequency. Table 3.1 shows the expected ultimate claim frequency by accident year (which is discussed further in Section 4) and the change from our June 2018 valuation projection. The 2018 and 2019 years are emerging higher than the 2017 year, and higher than the June 2018 projection.

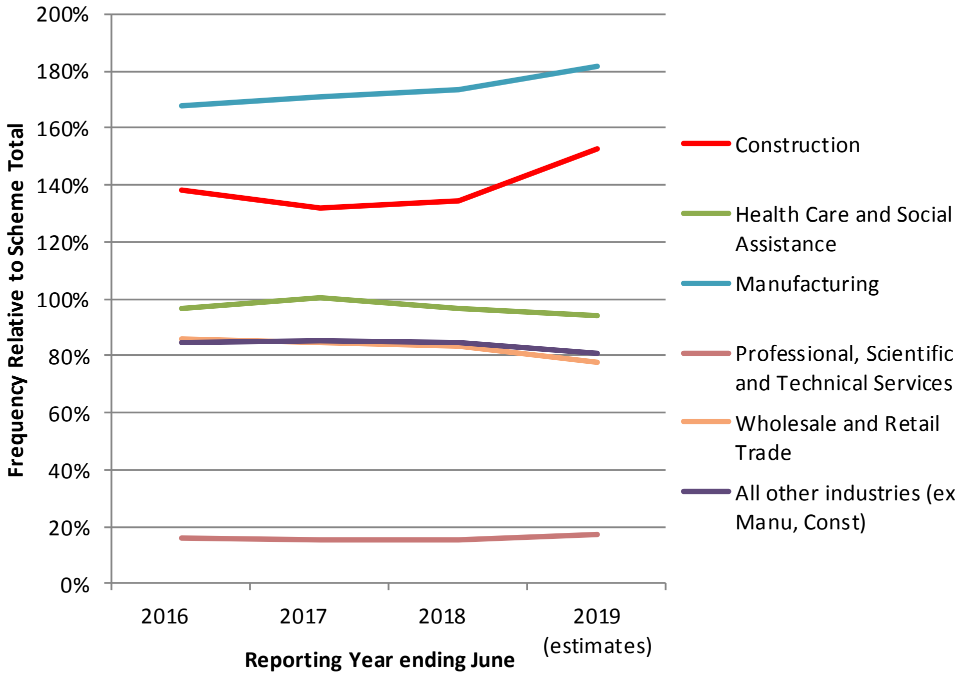
Table 3.1 - Project Ultimate Claim Frequency: Comparison to previous

Accident Year	Claim Freq (per $m of wages)	Year on Year % Change	Prev. Freq	Change from Prev
Jun-16	0.49	-3%	0.50	-2%
Jun-17	0.49	-1%	0.48	1%
Jun-18	0.50	3%	0.50	1%
Jun-19	0.51	1%	0.50	3%

Given that the change in claim frequency coincides with an increase in exposure, we have tested whether this change is explainable by a change in the mix of employers being insured. We assessed that, even though the Construction industry is a relatively high risk industry, the change in mix of insured industries is not enough to explain the claim frequency deterioration that has been seen in the last 18 months.

Figure 3.4 shows the reported claim frequency by industry relative to the scheme total frequency. For example, a relativity of 200% indicates an industry with frequency twice the scheme average.

Figure 3.4 – Reported Claim Frequency by Industry relative to the scheme total



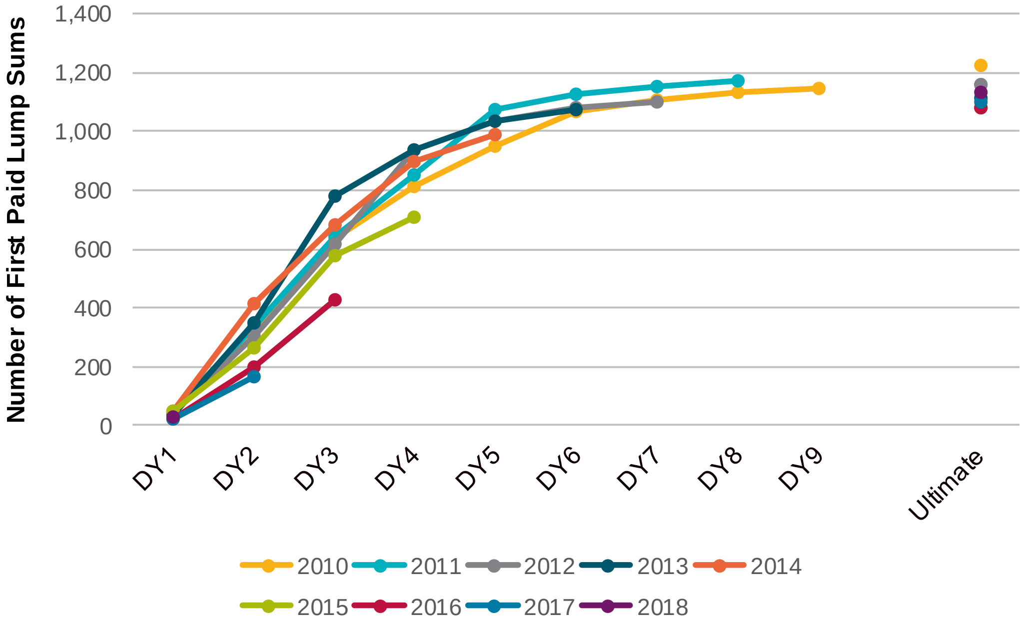
This shows that the deterioration in the claim frequency is driven by deterioration in the Construction and Manufacturing industries' frequencies, with all other industries having had minor reductions over the same period.

Early information on the injury types for recent reported claims suggests higher numbers of musculoskeletal claims (See Figure 4.3), which is consistent with the profile of the industry segments that are driving the higher claim numbers.

3.3.2 Slow Lump Sum Activity

Lump sum payments have remained reasonably flat over recent periods, and are well below our projections (as per the previous and recent valuation bases). While we expected lump sum payments to speed up under the RTW Act, the contrary has been observed with the numbers of claims receiving lump sum payments reducing since the introduction if the RTW Act. Figure 3.5 shows the cumulative numbers of claims getting a first lump sum payment by accident year cohort (this excludes death benefits and deafness lump sums, as these were not impacted by the reforms).

Figure 3.5 – Cumulative Number of Lump Sum Claims
(Short Term Claims only, excluding death and deafness payments)



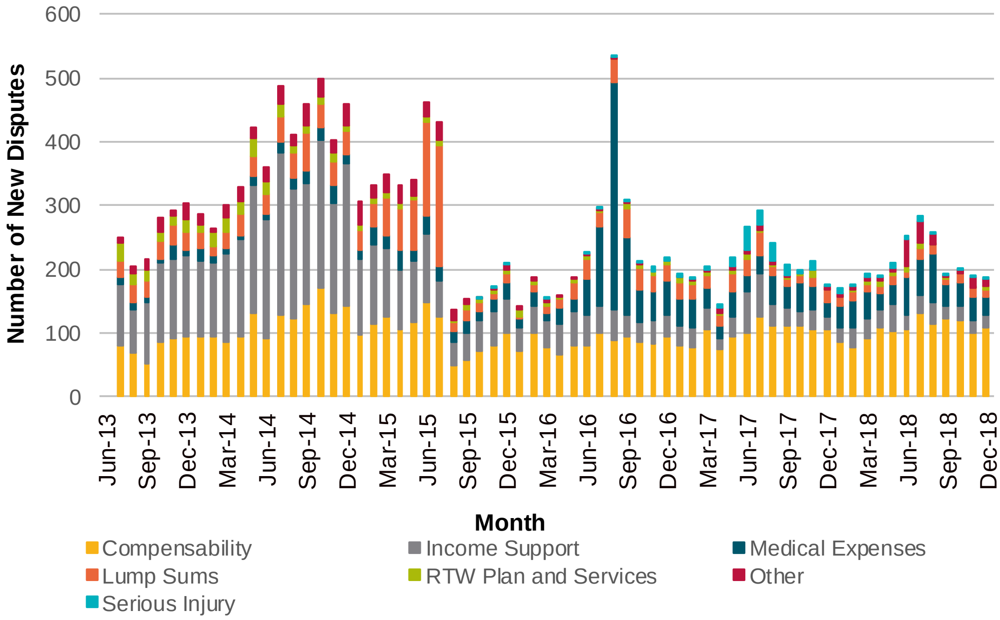
The number of claims who have received a lump sum has reduced each year since 2015. The two main reasons we have identified for the slow lump sum payments are: (1) high levels of disputation and delays in key legal precedent emerging, which have slowed the WPI assessment process, and (2) anecdotally, we are advised that some claimants are seeking to delay their WPI assessment due to concerns that they could 'deteriorate' in future, and the 'once and for all' assessment rules would preclude them from having a further assessment.

Using additional data sources we have analysed the potential sources of future lump sum payments. This suggested that the lower than expected lump sum payments can be explained by delays in completing WPI assessments, rather than a reduction in the number of claims eligible for lump sums. The lump sum valuation basis is discussed further in Section 6.

3.3.3 Dispute Numbers and Dispute Resolution

Dispute numbers were high during 2013, 2014, and the first part of 2015, due to greater numbers of claim rejections and Work Capacity decisions (under the old Act; these provisions no longer exist under the RTW Act). Dispute numbers then fell dramatically after 1 July 2015 under the RTW Act, although there have been a number of 'spikes' as key boundaries commenced: medical expenses disputes spiked after June 2016, due to a significant number of disputes around future surgery applications, and Serious Injury disputes increased around June 2017, as shown in Figure 3.6.

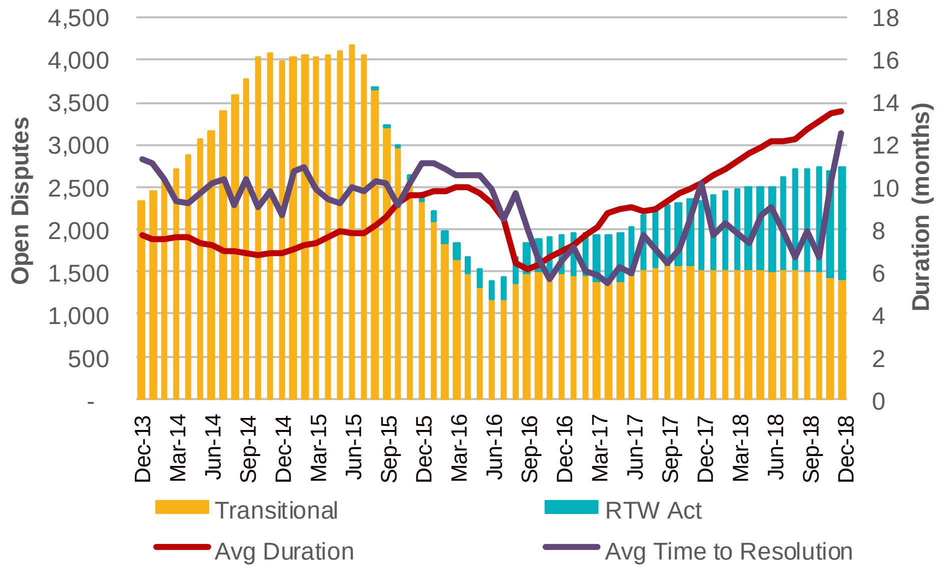
Figure 3.6 – New Disputes by Dispute Type (monthly)



Since October 2016, dispute numbers have averaged just over 200 per month, which is similar to the 'Old Act' experience prior to 2013. While it appears that current dispute numbers are more or less in line with earlier historical levels in aggregate, there continue to be favourable signs that disputes have reduced for claims managed entirely under the RTW Act – we do caution, however, that with the recent slowdown in WPI assessments, it is likely that RTW Act dispute numbers will increase somewhat over the coming year.

Figure 3.7 shows the number of open disputes over time, and the duration of open and finalised disputes.

Figure 3.7 – Open Dispute and Duration



Our observations are:

- The level of open disputes continues to grow, driven by RTW Act claims. This indicates the new scheme is not yet at a 'steady state' for disputes. There is still uncertainty as to the ongoing level of disputes under the RTW Act and the impact of these disputes on claim outcomes.
- There are still around 1,500 disputes open for transitional claims, and this number has barely reduced since August 2016; new dispute numbers continue to offset the number closing. We consider this to represent a material risk to our liability estimate (as context, the IBNR allowance for future Serious Injury claims from the transitional claim cohort is only 45 claims).
- The duration for open disputes has almost doubled since July 2016, from around seven months to over 13 months. The duration for finalised disputes has grown at a more modest pace, suggesting the more complex and costlier disputes have yet to settle.
- Since Income Support benefits for most claims are capped under the RTW Act, even a five-month dispute resolution timeframe is considered slow.

3.3.4 Potential New Silicosis Claims

Following interstate reports of a 'significant spike' in new silicosis claims from the benchtop industry (where silica is a key component of the benchtops), a project is underway in conjunction with SafeWork to assess the potential for these types of claims to occur in South Australia.

At this stage no such claims have been reported to ReturnToWorkSA and there is only preliminary information on the potential number of employers who will need to be reviewed. As such, we have not made any allowance for potential new sources of silicosis claims at this time, given it is unclear what impact there could be in SA, if any.

4 Recent Claims Experience

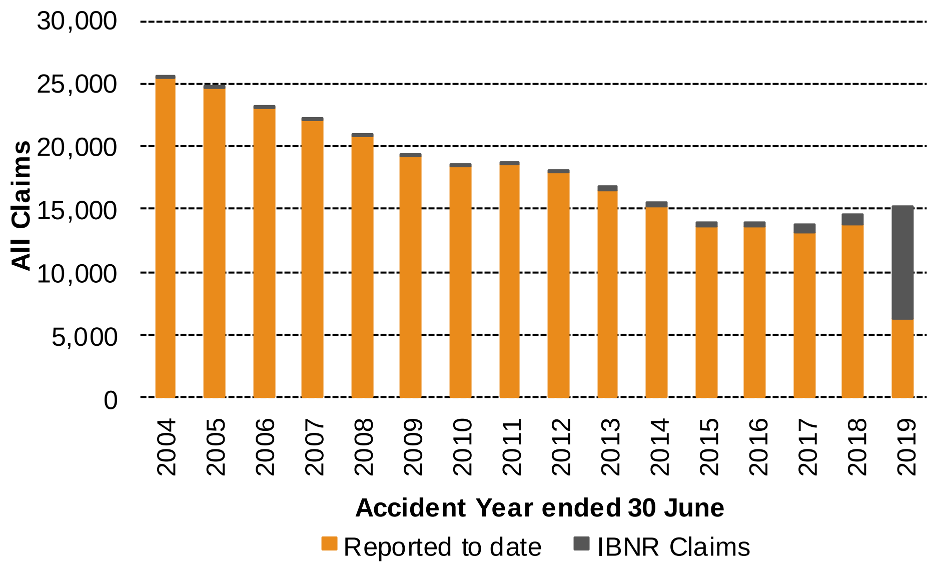
This section provides a high level analysis of scheme experience, including the numbers of new claims and overall payment trends.

4.1 Claim Incidence

4.1.1 All Claims

Figure 4.1 shows the estimated numbers of claims incurred in recent accident years (excluding reports which are determined as 'incidents'). The graph separates the actual numbers reported to date and our projection of claims incurred but not yet reported (IBNR).

Figure 4.1 – Ultimate Number of Claims (All Claims)



The most important feature of the recent experience is an increasing trend in claim numbers since 2017 after a general downward trend which began in the 1990s. There are two reasons for the recent higher claim numbers:

- Exposure growth: after an extended period of reasonably flat employee numbers, the SA economy has experienced significant growth in wages in 2018 and 2019.
- Claim frequency deterioration: the construction and manufacturing industries in particular, have experienced an increasing claim frequency over the past 12 months.

Our estimates for years 2015 to 2017 are similar. The 2018 estimate has seen an increase in the last six months to 14,555; this represents an increase of 7.7% from 2017. Our estimate for 2019 is 4.5% higher than 2018 at 15,205.

4.1.2 Income Support Claims

Income Support (IS) claims are those who receive more than 10 days of lost time benefits.

Figure 4.2 shows our projected ultimate numbers of IS claims, split into those who have already received an IS payment and those who are expected to receive their first IS payment in future (IBNR).

Figure 4.2 - Ultimate IS Claim Numbers

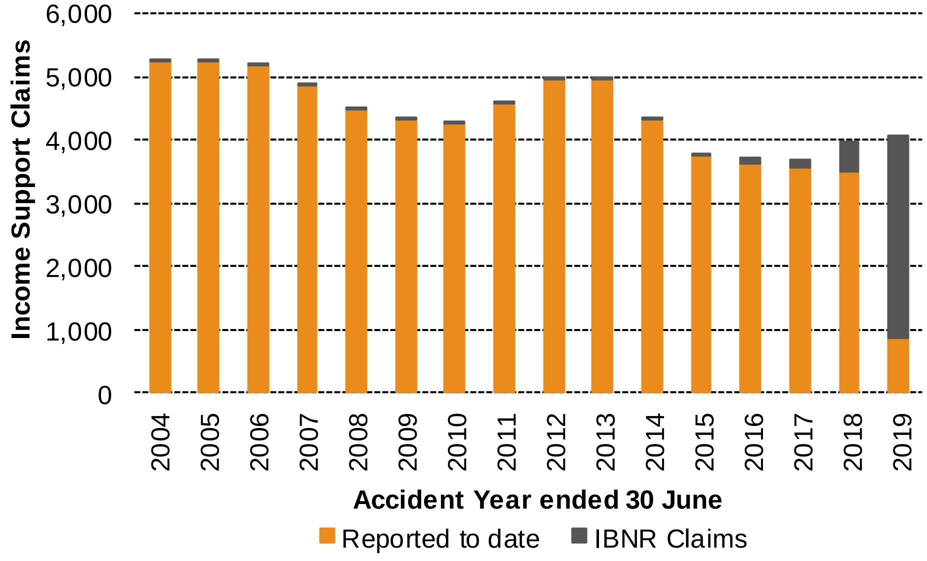


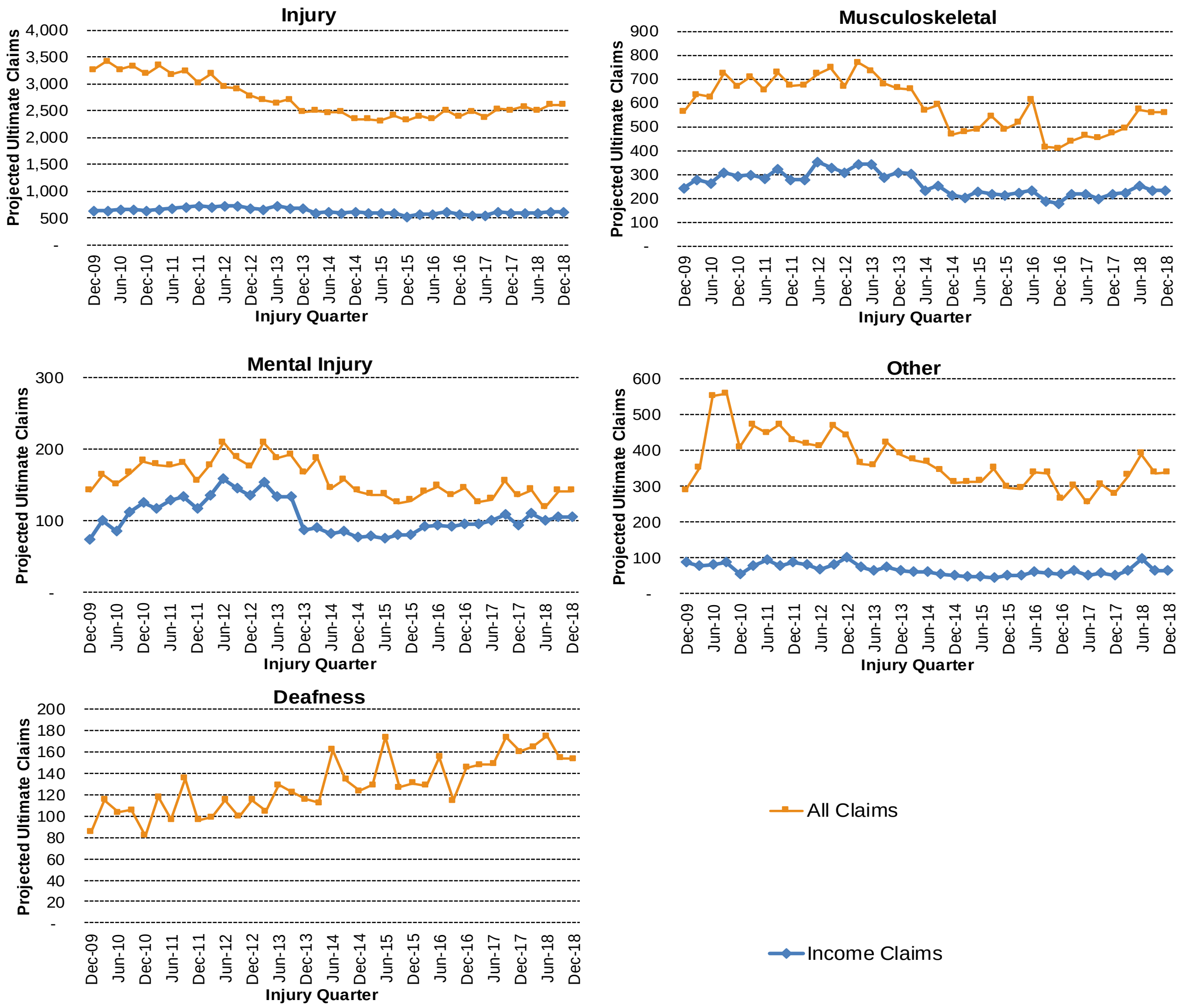
Figure 4.2 shows:

- Prior to 2007 IS claim numbers were reasonably stable, at around 5,200 claims per annum.
- IS claim numbers dropped by 17% between 2006 and 2010, and then rose again over the next two years to reach around 5,000 claims per annum in 2012 and 2013
- Our current projection shows IS claim numbers are expected to reduce materially in 2014 and again in 2015 (a 13% reduction each year). Our projection of IS claims for accident years 2015 to 2017 show the numbers stabilising at below 4,000 (3,664 for 2017), which is at the lowest level since the scheme commenced.
- The wages growth and frequency deterioration seen in the total claim numbers is also impacting the IS claim numbers for 2018 and 2019. The 2018 estimate of IS claim numbers is 7.9% higher than 2017, and the 2019 estimate is 2.8% higher again.

As shown in the graph, considerable development of claim numbers is still expected for the latest accident year, and there is therefore significant uncertainty around the ultimate outcomes for this year.

In order to better understand the trends in IS claim numbers, we separately model claim numbers by type of injury. Figure 4.3 shows, by injury type, the total numbers of claims as well as the numbers that reach 10 days' lost time (IS claims).

Figure 4.3 – All Claims and IS Claims by Type of Injury

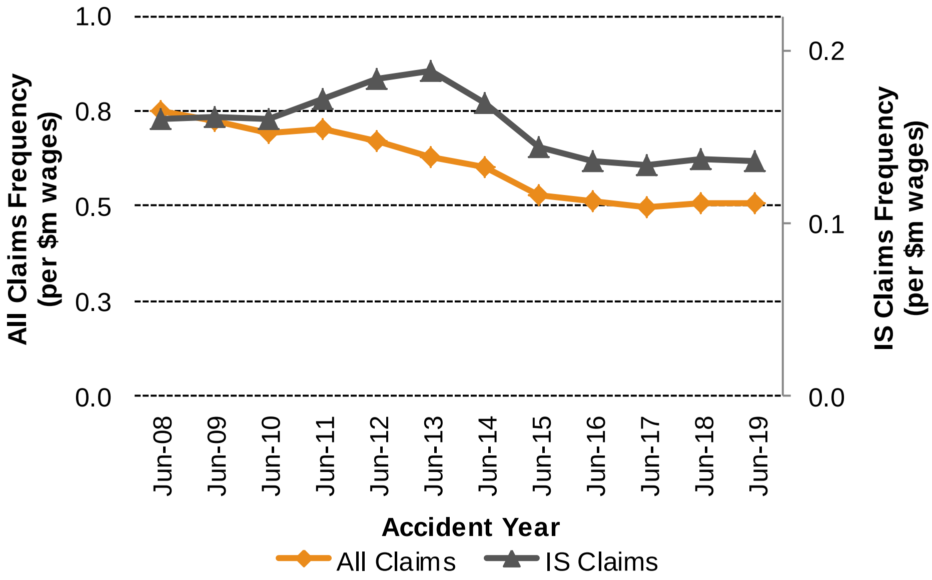


The most notable change in IS claim numbers in the last six months is the increase in musculoskeletal claims. It can take up to two quarters for injury coding to be locked in, and it is possible that the last two data points will be revised. The mix of claims by injury type has important implications for long term IS claim costs, as musculoskeletal claims have a longer average duration than the average IS claim. This suggests that the higher IS claim numbers are not coming from lower cost claim cohorts.

4.1.3 Claims Frequency – All Claims and IS Claims

Figure 4.4 compares the trends in (1) total claim frequency ('all claims' numbers from Section 4.1.1) and (2) IS claim frequency (IS numbers from Section 4.1.2); the frequencies are expressed relative to covered scheme wages (in current values). The two series are shown on different scales so the trends can be directly compared.

Figure 4.4 – Claim Frequency (Claims per $m wages)



The IS claim frequency was on a similar trend to the all claims frequency between 2007 and 2009, before diverging between 2010 and 2013. After the improvement in the IS claim frequency between 2013 and 2015, the trends in IS claim and all claims frequencies have been in line again. Both measures have flattened off in the last four years, but the 2018 and 2019 years are emerging higher than 2017 for both IS and all claims frequencies, as shown in Table 4.1.

Table 4.1 – Project Ultimate Claim Frequency: Comparison to previous

Accident Year	Claim Freq (per $m of wages)	Year on Year % Change	Prev. Freq	Change from Prev
Jun-16	0.49	-3%	0.50	-2%
Jun-17	0.49	-1%	0.48	1%
Jun-18	0.50	3%	0.50	1%
Jun-19	0.51	1%	0.50	3%

All other things equal, the increase in claim frequency creates a pressure on the BEP.

4.2 Serious Injury Claims

As discussed in Section 3.2.1, higher than expected numbers of new Serious Injury claims have been identified over the last 18 months for transitional periods. At the previous valuation, we worked with ReturnToWorkSA to identify all possible sources of future Serious Injury claims, based on known claimant activity. This led to a material increase in the level of IBNR held for transitional periods.

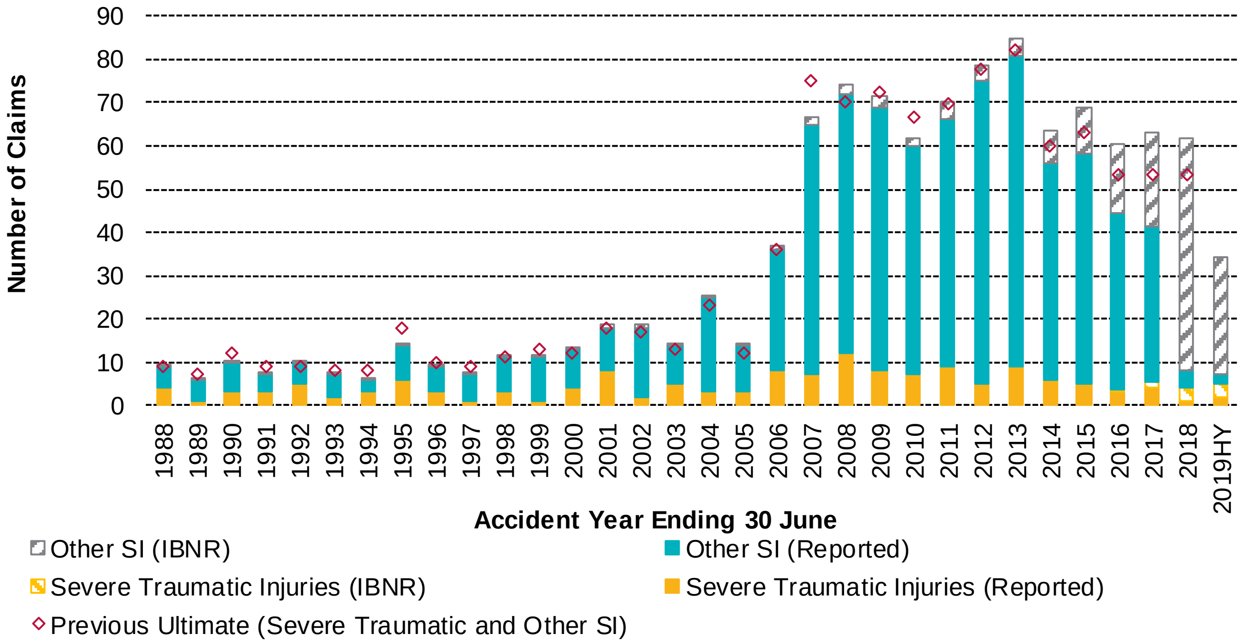
Our approach to setting IBNR allowances for 2016 and prior accident periods is to make an explicit allowance based on the likelihood of claims becoming Serious Injury, where a Serious Injury application or WPI activity has been initiated.

At the current valuation, we have re-assessed the additional transitional Serious Injury claims that were identified over the last six months to test if this approach to setting our IBNR claims at the previous valuation is still appropriate. This showed that while the pool of claims that were used to set the IBNR allowance was a better predictor of additional Serious Injury claims than the previous approach, additional unexpected activity on transitional periods continued (largely driven by late Serious Injury applications). As a result we have again had to increase our view of ultimate claims, predominantly for the 2014 and 2015 accident years.

Given the immaturity of RTW Act periods, at previous valuations we have limited the ground-up assessment of IBNR claims to transitional periods. However, with the majority of claims from the 2016 accident year having now passed the Income Support cut-off, we have extended the ground-up approach to the 2016 accident year for the first time. While there is still considerable uncertainty around the level of claims for RTW Act periods, this provides a better indication of ultimate Serious Injury numbers than at previous valuations. This assessment, along with consideration of the continued tail of activity on transitional periods, has led us to increase expected Serious Injury numbers for RTW Act periods.

Figure 4.5 shows our estimated numbers of Serious Injury claims by accident year.

Figure 4.5 – Serious Injury Claim Numbers by Accident Year



The key features we note from this are:

- The number of recognised Serious Injury claims prior to 2007 is low, which is a result of past redemption activity removing such claims from the scheme.
- For accident years prior to 2014, there has been a slight reduction in estimated ultimate claim numbers since the previous valuation. However, this is explained by the removal of 11 claims that were previously included as Serious Injury claims, despite being reliant on the *Mitchell* decision. Excluding these claims the net movement is essentially neutral.
- For 2014 and 2015 accidents, our projected ultimate numbers have increased, largely due to continued Serious Injury applications and dispute activity; the numbers are still lower than 2007-2013 due to less ‘topping up’. There is still reasonable uncertainty in the ultimate number of claims for this group.
- For RTW Act claims, the ground-up assessment of IBNR for the 2016 accident year along with the continued emergence of new Serious Injury claims for transitional periods has led to an increase in our view of RTW Act Serious Injury numbers. Our revised ultimate Serious Injury claim numbers for RTW Act periods is now 7 to 10 claims per annum higher than previously projected.

- For the 2018 and 2019 years, this also includes a small allowance for higher claim numbers as a result of the recent exposure growth, given much of the growth has occurred in known higher risk industries.

Overall we have allowed for 172 IBNR claims in our projections, which equates to 2.7 injury years' worth of claims.

To put our allowances for Serious Injury claim numbers into context we make the following observations:

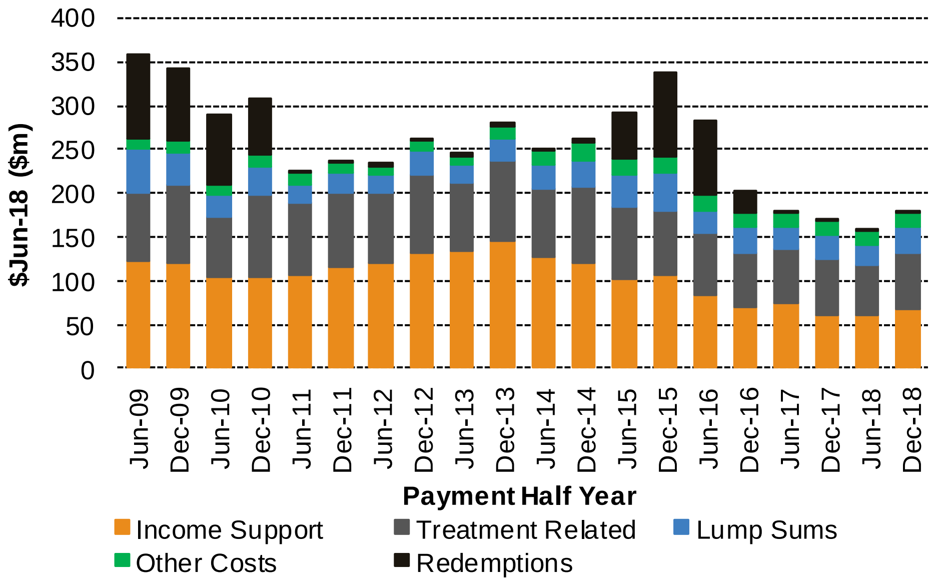
1. There is limited experience on which to base conversion rates for these groups, particularly for claims that fall into the "WPI Activity" group. Given the large number of transitional claims still in dispute (there are 1,544), small deviations between actual and expected conversion rates would have a material impact on Serious Injury numbers
2. Our approach assumes that no further transitional claims will submit a Serious Injury application or initiate the WPI process. While we would not expect significant numbers of claims from these groups, given how Serious Injury numbers have emerged on transitional periods over the last 12-18 months, it is possible that some claims may still come from unexpected sources.
3. Accident years after 2016 are set to have ultimate Serious Injury numbers in line with 2016, with an allowance for some exposure growth. While we assess that this is the best approach, given the limited information to date, it places a high level of reliance on an individual accident year and does not take into account any differences in the profile or management of claims from different periods.

As discussed in Section 3.1, a number of adverse legal decisions are currently subject to appeal, and if these are not overturned they could lead to more claims getting higher WPI scores. This has the potential to materially increase Serious Injury claim numbers. Given the high value of Serious Injury benefits, higher than expected Serious Injury claims would materially increase the liability.

4.3 Overall Payment Experience

Figure 4.6 shows gross claim payments (before recoveries) in half-yearly periods over the last ten years, inflated to current values.

Figure 4.6 - Gross Claim Payments ($Dec18)



Gross payments of $174 million in the last six months were 14% higher in real terms than the previous period. This reflects some mixed experience by payment type:

- IS payments have increased by 12% in the last six months, after steadily reducing since 2013
- Treatment related costs also increased by around 13%, largely due to higher hospital and medical spend
- Lump sum payments have been relatively low over the last five half-years. As discussed in Section 3.3.1, we expect lump sums to increase under the RTW Act provisions at some point
- Redemption activity has now essentially ceased under the RTW Act.

After allowing for recoveries of $5 million in the last six months, net claim payments of $172 million were $7.8 million (4%) lower than projected at the previous valuation. Table 4.2 shows the breakdown.

Table 4.2 - Payments: Actual vs Expected

Entitlement	Six Months to Dec-18				Split by Category	
Group	Actual	Expected	Act - Exp	Act/Exp	Short Term	Serious Inj
	$m	$m	$m		$m	$m
Income support	67.1	61.9	5.2	108%	6.7	-1.5
Redemptions	0.0	0.0	0.0	n/a	0.0	0.0
Lump sums	29.1	45.8	-16.6	64%	-7.1	-9.5
Worker legal	6.6	6.6	0.1	101%	-0.2	0.3
Corporation legal	9.1	9.9	-0.8	92%	-0.4	-0.4
Medical	33.7	30.3	3.3	111%	5.0	-1.6
Hospital	9.7	8.5	1.1	113%	1.3	-0.2
Travel	2.8	2.6	0.2	107%	0.3	-0.1
Rehabilitation	5.4	6.3	-1.0	85%	-0.7	-0.3
Physical therapy	5.1	4.6	0.4	110%	0.6	-0.1
Investigation	1.1	0.9	0.1	114%	0.2	0.0
Other	6.9	7.2	-0.3	96%	-0.4	0.1
Common law	0.0	0.2	-0.2	0%	-0.2	0.0
LOEC	0.1	0.1	0.0	100%	0.0	0.0
Commutation	0.7	0.2	0.4	284%	0.4	0.0
Gross Payments	177.2	185.1	-7.9	96%	5.4	-13.4
Recoveries	-4.7	-4.8	0.1	98%	-1.1	1.2
Net Payments	172.5	180.3	-7.8	96%	4.3	-12.2

The key features of the last six months' payment experience are:

- Lump sum payments were materially lower than expected in the last six months (only 64% of expected); once this slowdown is adjusted for, 'underlying' payments were higher than expected.
- IS payments were $5 million (8%) higher than expected; this was driven by accident years 2018 and 2019, where the number of active claims has been higher than expected.
- Treatment costs tended to be higher than expected, driven by higher medical and hospital payments for Short Term claims.

Our valuation basis for Short Term claims is discussed in the following sections: IS and related expenditure in Section 5; Lump sums in Section 6; treatment related expenditure in Section 7 and all other entitlements in Section 8. Section 9 discusses our valuation of Serious Injury claims.

5 Income Support – Short Term Claims

This section describes our valuation of Income Support (IS) payments for Short Term Claims (STC) only.

5.1 Summary of Results

Table 5.1 summarises the movements in our liability estimates for IS payments since the June 2018 valuation.

Table 5.1 – Valuation Results: Income Support

Jun-18 Valuation	$m	$m	$m
Estimated Liab at Jun-18	119.6		
Projected Liab at Dec-18	120.2		
Dec-18 Valuation		AvE pmts	Actl Release
Impact of experience/OSC - valuation release	12.9	6.7	(19.6)
Estimated Liab at Dec-18 (Jun-18 eco assumptions)	**133.1**		
Impact of change in eco assumptions	0.6		
Estimated Liab at Dec-18 (Dec-18 eco assumptions)	**133.6**		

At December 2018 there is an actuarial strengthening of $19.6 million, reflecting the claims experience since June 2018 and our valuation response. The actuarial strengthening comprises an increase of $12.9 million from the liability estimate and higher than expected claim payments in the six months (by $6.7 million).

The impact of economic assumptions is negligible for the Short Term claim (STC) IS payments; the impact of economic assumptions is discussed in Section 11.3.2.

5.2 Experience vs Expectations

5.2.1 Payments

Table 5.2 compares the IS payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 5.2 - Actual vs Expected Payments: IS

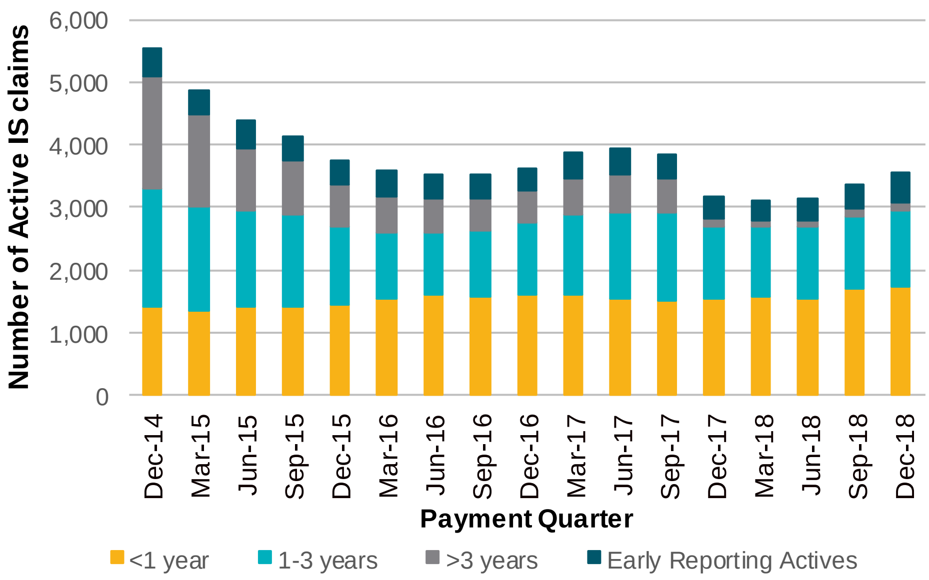
Accident	Payments in Six Months to Dec 18			
Period	Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.3	0.3	(0.0)	95%
2005/06 - 2013/14	1.7	1.3	0.4	126%
2014/15 - 2015/16	3.0	1.8	1.2	165%
2016/17 - 2017/18	45.0	40.6	4.4	111%
2018/19	7.5	6.7	0.8	112%
Total	57.5	50.8	6.7	113%

IS payments were around 13% higher than expected across the accident periods from 2005/06. This level of difference is unusual, and indicates changes in claims performance.

5.2.2 Active Claims and Exits

Figure 5.1 shows the numbers of (quarterly) active IS claims, by duration, over the last three years.

Figure 5.1 – Numbers of Active IS Claims



Active claim numbers have fallen by around 40% since late 2014, as a result of the impacts of the RTW Act and ReturnToWorkSA's claim management strategies. During calendar year 2016, medium-duration actives (1-3 years) were low, as many transitional claims exited the scheme via redemption in the lead up to the RTW Act. With IS redemptions no longer being used, the numbers of 1-3 year actives increased up to June 2017; active claim numbers then declined notably in December 2017 (and similarly for >3 years claims) as a result of claims exiting due to the 104 week boundary on IS payments. Since September 2018, active claim numbers have increased, driven by both higher exposure (higher new IS claim numbers) and deteriorating claim frequency and claim durations.

In Table 5.3 we compare the numbers of active IS claims at December 2018 with our June 2018 valuation projection. This has been done only for periods where we projected future active claims at the June 2018 valuation (accident quarter September 2016 and later).

Table 5.3 – AvE Active Claims

Accident Year	Proj from Jun-18 Val	Actual Actives	Act *less* Proj	Diff as % Proj
Jun-16	38	46	8	23%
Jun-17	623	632	10	2%
Jun-18	1,274	1,454	181	14%
Dec-18	796	827	32	4%
Total	2,729	2,960	231	8%

Overall, active claim numbers at December 2018 for these accident periods were higher than expected, particularly for claims six to 18 months post injury. At this early stage, the 2018/19 numbers are also higher than expected, but the experience for this year (and particularly the latest quarter) is very immature.

5.3 Modelling of STC IS Payments

Our modelling approach for IS payments includes:

- **For all IS payments in the first three years after injury (development years 1 to 3) – a PPAC model** which models all IS entitlements at these durations; this includes IS payments to dependants, and IS payments made following surgery where the claimant would not otherwise have been entitled to IS.

- **For all IS payments more than three years after injury (development years 4 and later) – a PPCI model**, once again valuing all IS entitlements together. This PPCI model uses total claim numbers (not just IS claims) as the base.

This is unchanged from our June 2018 valuation.

5.4 Valuation Basis

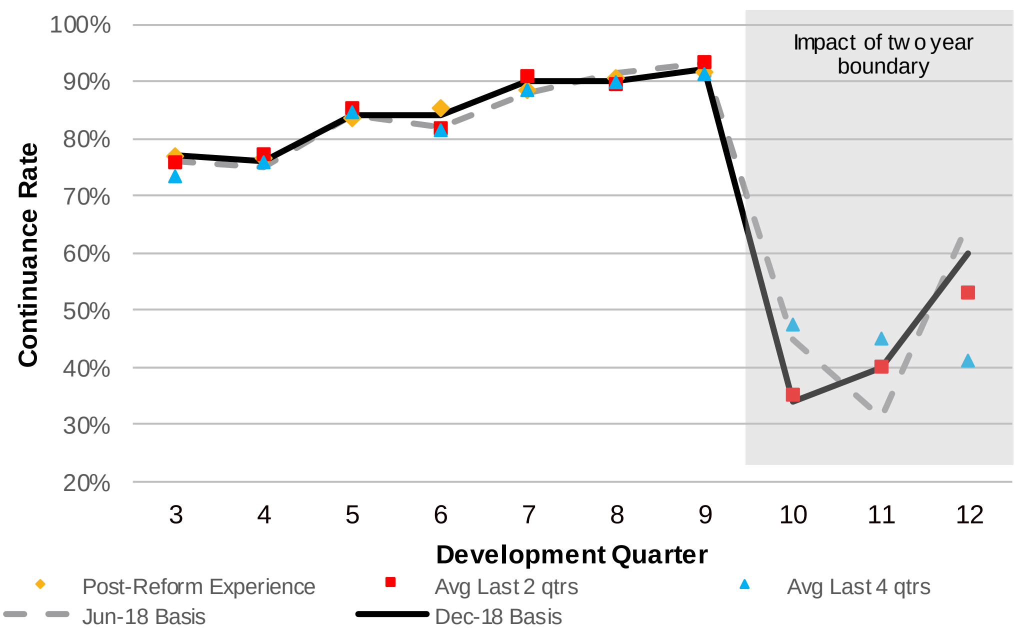
5.4.1 IS Payments in Years 1-3: PPAC Model

Claims from post-30 June 2015 accidents have been managed under the RTW Act since their inception. The PPAC basis for these claims is being updated at each valuation as further post-RTW Act experience emerges.

Projection of Active Claims

Figure 5.2 below shows the recent continuance experience relating to post-reform claims, and our adopted bases at the previous and current valuations.

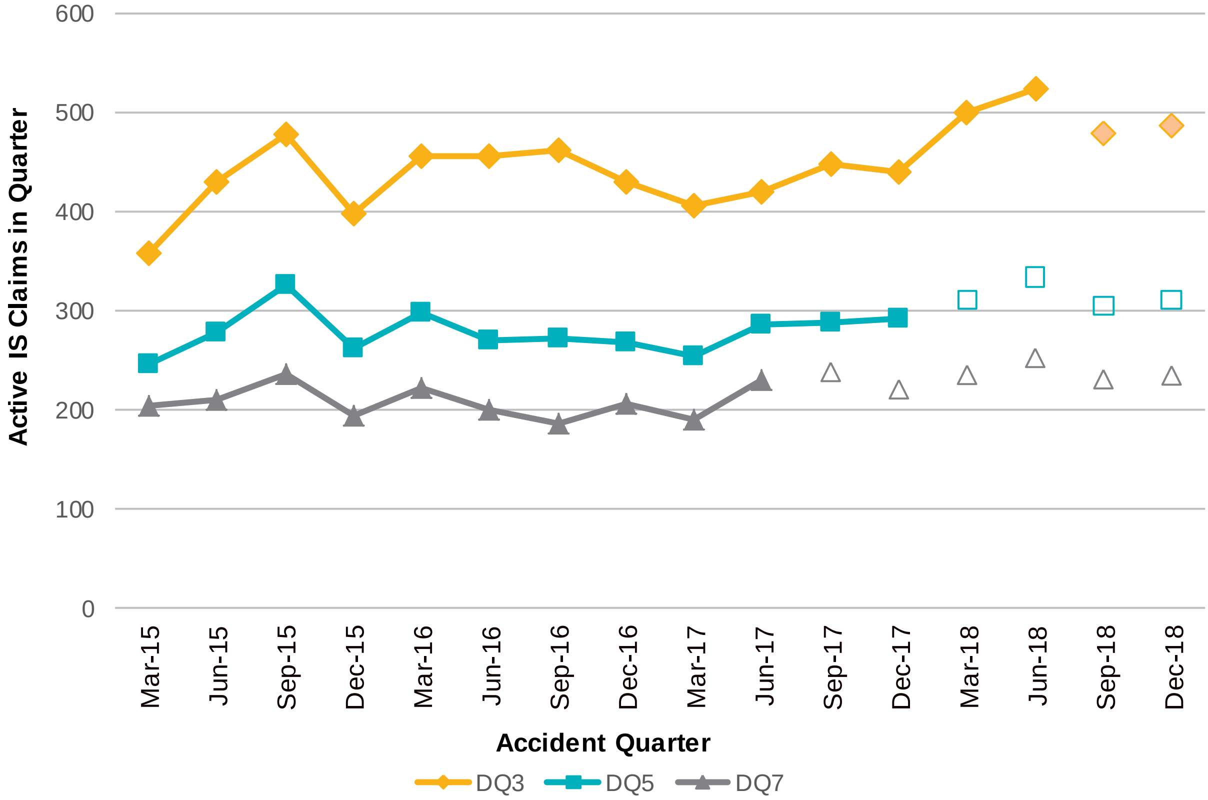
Figure 5.2 - Continuance Rates



We have made only minor adjustments to continuance rates, increasing them for the second year post injury; that said, we have not fully responded to the recent deterioration. All else equal, the impact of the changes to continuance rates is an increase in the estimated liability. We note that the post-reform experience from DQ 9 onwards is very immature, although it is emerging similar to expectations.

Figure 5.3 below shows the outworking of our projection of active claims. At development quarters 3, 5 and 7 the solid lines show the actual number of active claims and the dots show our projection.

Figure 5.3 – Income Support Claims reaching specified durations

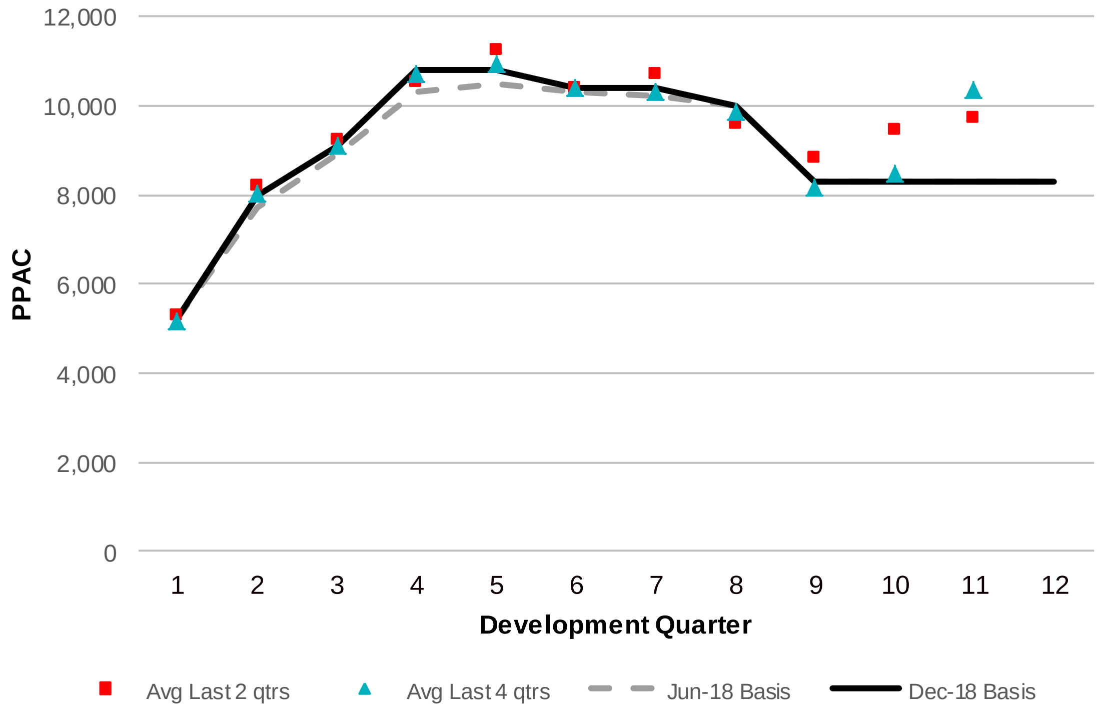


The higher actual active claim numbers in development quarter 3 are expected to flow through to higher active claims in development quarters 5 and 7. At this stage we have not anticipated that the deteriorating experience for accident periods to June 2018 will be fully reflected in the September and December 2018 quarters; we have taken this approach because ReturnToWorkSA and its agents have identified the causes of active claim deterioration and have a project in place to improve performance.

Payments per Active Claim

Figure 5.4 below shows the recent PPAC experience relating to post-reform claims, and our adopted bases at the previous and current valuations.

Figure 5.4 - Payments per Active Claim



The most recent PPAC experience is emerging higher than our June 2018 basis. We have increased our adopted PPACs marginally, particularly in the first two development years. The overall impact of the changes to average claim size is an increase in the estimated liability.

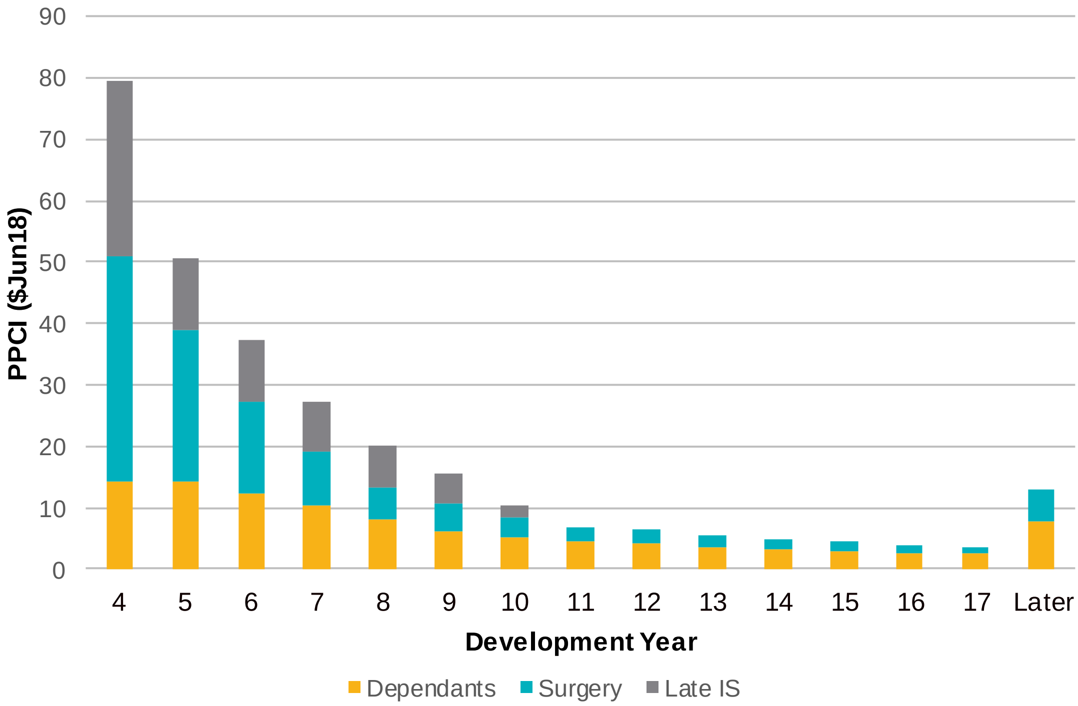
5.4.2 IS Payments after Year 3: PPCI Model

The overall adopted average PPCI size of about $289 per reported claim is made up of three components:

- The allowance for ongoing dependant claim benefits, which remains unchanged at around $102 per reported claim
- The PPCI for post-surgery IS payments is also unchanged at around $114 per reported claim
- An allowance for claims with ‘late starting incapacity’ of about $72 per reported claim. It allows for about 5-10 claims per accident quarter to commence IS payments after the two-year mark, and to receive about one year’s IS benefits on average.

These assumptions are unchanged, except for inflation, since the previous valuation. Figure 5.5 shows the adopted PPCI basis and its components.

Figure 5.5 – Adopted IS PPCI Basis (Average IS Cost per Reported Claim)



5.5 Valuation Results and Actuarial Release

Table 5.4 sets out the components of the actuarial release for IS payments.

Table 5.4 – Components of Actuarial Release: IS and Medical Redemptions

Release (strengthening) due to		
	$m	$m
AvE payments in six months		(6.7)
Difference from projected liability		
Experience	(5.2)	
IS Numbers	(4.0)	
IS Size	(1.6)	
ASC Shipbuilding	(2.1)	
		(12.9)
Total		(19.6)

The actuarial strengthening of $19.6 million is made up of payments in the six months being $6.7 million higher than expected, and a $12.9 million increase in the projected liability from June 2018, composed of the following changes:

- A $9.2 million increase due to the IS active claim numbers being higher than expected and our valuation response
- A $1.6 million increase due to the scheme's poorer return to work experience being reflected in the adopted average payments
- A $2.1 million increase due to additional exposure due to ASC Shipbuilding joining the scheme.

Table 5.5 summarises these movements by accident period. The exposure growth impacts the last 18 months, with claim outcome deterioration being around half the increase for the 2016/17-2017/18 cohort.

Table 5.5 - Actuarial Release for Income Support

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation	Dec 18 Estimate on Jun 18 Eco Assumps	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	2.5	2.5	(0.0)	(0.0)	0.0	1%
2005/06 - 2014/15	11.0	11.0	(0.0)	0.4	(0.3)	-3%
2015/16 - 2016/17	6.5	6.5	(0.0)	1.2	(1.2)	-18%
2016/17 - 2017/18	56.4	63.8	7.4	4.4	(11.7)	-21%
2018/19	43.7	49.3	5.6	0.8	(6.4)	-15%
Total	120.2	133.1	12.9	6.7	(19.6)	-16%

6 Lump Sums – Short Term Claims

This section describes our valuation of lump sum payments for Short Term claims. A lump sum is payable to a worker who suffers a compensable disability that results in at least 5% whole person impairment (WPI). Separate Lump Sums compensate claimants for non-economic loss and future economic loss, although compensation for future economic loss is only available to claims with injuries from 1 July 2015.

Introduction

We value lump sums in five segments:

- “Death” and funeral claims
- “Deafness” claims
- “First Paid” lump sums – where a claimant receives their first lump sum payment for the relevant claim (excluding Death and Deafness claims); this is for non-economic loss only
- “Economic Loss” lump sums – Short Term claims may receive an additional payment for loss of future earning capacity. This is a new benefit under the RTW Act and is available to new injuries from 1 July 2015
- “Top Up” lump sums – where a claimant receives an additional payment in a half-year after they received their first lump sum payment (excluding Death and Deafness claims). These are now only allowable for claimants with injury dates prior to 1 July 2015 who lodged an application prior to 30 June 2016.

Appendix A specifies the complete definitions for the lump sum valuation.

6.1 Summary of Results

Table 6.1 summarises the movements in our liability estimates for lump sum payments since the June 2018 valuation.

Table 6.1 – Valuation Results: Lump Sums

Jun18 Valuation	$m	$m	$m
Estimated Liab at Jun-18	252.8		
Projected Liab at Dec-18	261.8		
Dec-18 Valuation		AvE pmts	Release
Impact of experience/OSC - Movement in liab	6.9	(7.1)	0.1
Estimated Liab at Dec-18 (Jun-18 eco assumptions)	**268.7**		
Impact of change in eco assumptions	2.2		
Estimated Liab at Dec-18 (Dec-18 eco assumptions)	**270.9**		

The December 2018 liability shows an actuarial release of just $0.1 million since June 2018, reflecting an increase of $6.9 million in the liability, and $7.1 million of lower claims payments – this reflects our view that the lower payments are largely due to a slowdown, as opposed to a reduction in claims eligible for a lump sum. The remainder of this section deals with this impact while the impact of the change in economic assumptions is discussed in Section 11.3.2.

6.2 Payment Experience

Table 6.2 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 6.2 – Actual vs Expected Payments: Lump Sums

Accident Period	Payments in Six Months to Dec 18 Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.8	0.6	0.3	147%
2005/06 - 2012/13	2.4	3.7	(1.3)	66%
2013/14 - 2014/15	4.1	6.0	(1.9)	69%
2015/16 - 2018/19 [1]	18.7	22.9	(4.2)	82%
Total	26.1	33.2	(7.1)	79%

[1] Accidents to Dec18

Payments were around 20% lower than expected in the six months to 31 December 2018. This was due to lower than expected payments for 2005/06 and later accident periods partially offset by higher than expected payments for prior accident periods. The recent payment experience reflects the ongoing slowdown in the WPI assessment process over the last three years and the current high number of WPI disputes as discussed in Section 3.3.3.

6.3 Valuation Basis

Valuation Basis for First Paid Lump Sums

Our valuation basis adopts a combination of the chain ladder approach for more mature accident periods and a frequency based approach for more recent accident periods where there is less experience. Table 6.3 below compares the actual and expected number of First Paid lump sums paid in the six months to December 2018.

Table 6.3 – Actual vs Expected Payments: First Paid Lump Sums

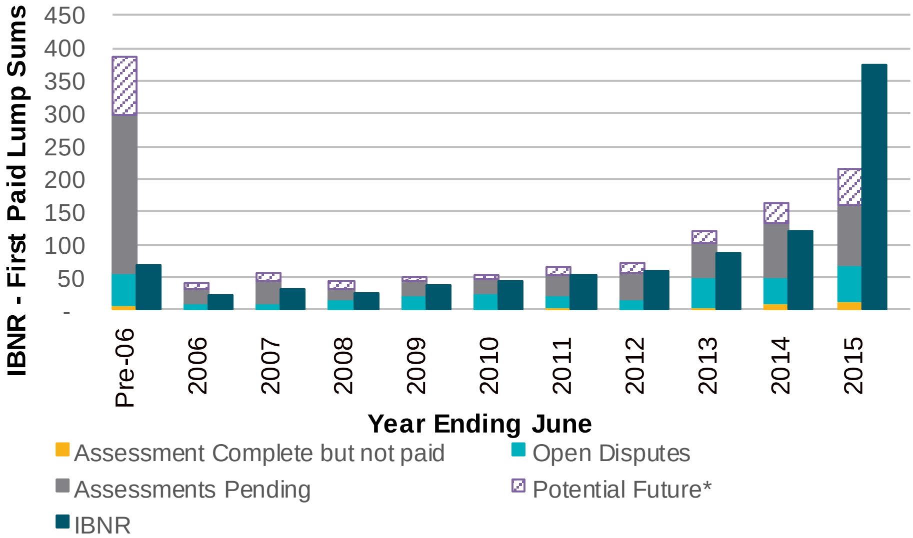
Accident Period	Number of Payments in Six Months to Dec 18 Actual	Expected	Act - Exp	Act/Exp
To 30 Jun 05	19	3	16	678%
2005/06 - 2012/13	45	65	-20	69%
2013/14 - 2014/15	90	187	-97	48%
2015/16 - 2018/19 [1]	236	292	-56	81%
Total	390	547	-157	71%

[1] Accidents to Dec18

The number of First Paid lump sums paid in the last six months was around 30% lower than expected. This was due to a combination of lower than expected payments in 2005/06 and later accident periods offset by higher number of payments for accidents older than 15 years. This is the fourth consecutive valuation where we have observed more first paid lump sums in old periods, albeit on small expected numbers.

At this valuation, we have reviewed our IBNR allowance for accident periods up to June 2015. Figure 6.1 below compares the most likely sources of future lump sum payments (left-side bar) with the IBNR allowance for First Paid lump sums (right-side bar) in each accident year.

Figure 6.1 – Comparison of Potential Future Lump Sum Claims and Model IBNR Allowance (Transitional Claims only)



*Includes Not at MMI, Not Stable and Agent Review (not appropriate to proceed)

The above figure shows:

- Pre-2006 accident periods have a high number of WPI assessments in progress. We understand this is linked to activity by ReturnToWorkSA to undertake WPI assessments for all 'prior claims' on workers currently having a WPI assessment. Most of these assessments are expected to end up with a WPI lower than 5% and therefore not be entitled to a lump sum payment. Our adopted IBNR allowance is unchanged for these accident periods and allows for around 50% of open disputes and 20% of pending assessments to be successful.
- For accident years 2006 to 2013 which are initially based on the chain ladder approach, there are a large number of claims with pending WPI assessments, open disputes or potential future assessments. At our previous valuation, an additional IBNR allowance was added to our chain ladder projections to reflect pending assessments and open disputes. We have updated this analysis to allow for the 'Potential Future' assessments group, which slightly increases the additional lump sum projection compared to our chain ladder projection. This allows for around 50% of open disputes and 75% of pending and future assessments to receive a lump sum.

For the 2015 accident year, we analysed all remaining claims that have had no lump sum activity as yet and concluded that our current IBNR allowance remains reasonable, despite being noticeably higher than the number of claims with some indication of assessment activity. The main reason for this view is that there are around another 250 claims which have received a surgery related payment in the last 12 months that are not included in the potential sources of future lump sum payments in the figure above. Surgery activity has historically been a good indicator of a claim likely to receive a subsequent lump sum payment; in light of this information we have only marginally reduced our projection.

For the more recent accident years where we have seen growth in exposure and overall claim numbers, we have increased the ultimate lump sum selection by 20 claims for 2017/18 and 50 claims for 2018/19 to 1,100 and 1,130 claims respectively.

Figure 6.2 shows the ultimate number of First Paid lump sums, split into paid and IBNR claims.

Figure 6.2 – Ultimate Number of First Paid Lump Sums

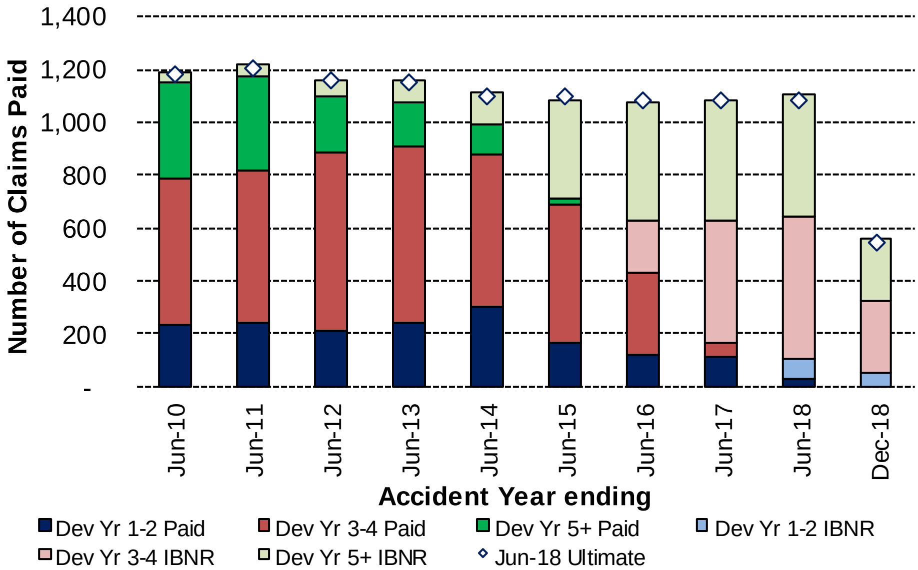
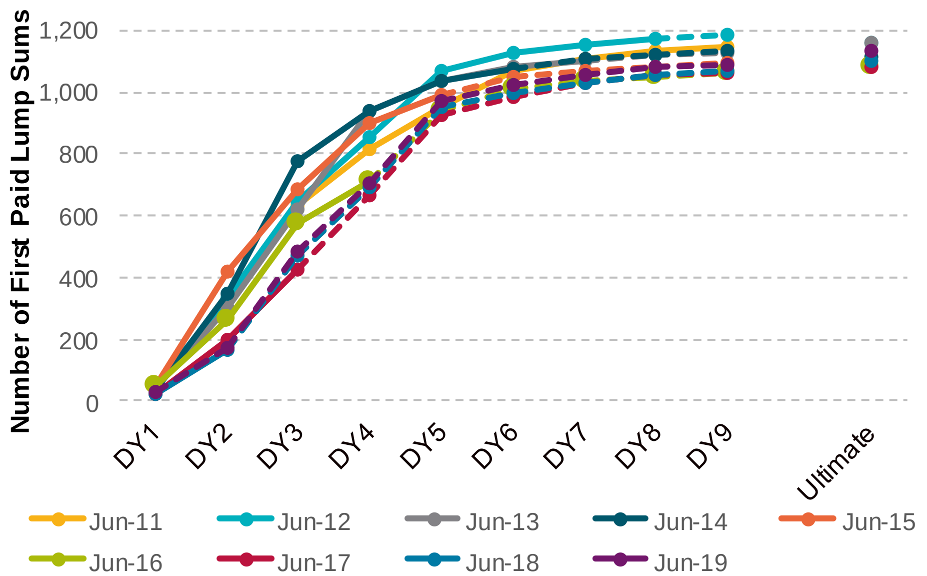


Figure 6.3 shows the cumulative number of First Paid lump sums by development year for accident years 2010 to 2019. The dotted line represents the projected development based on our selected payment pattern.

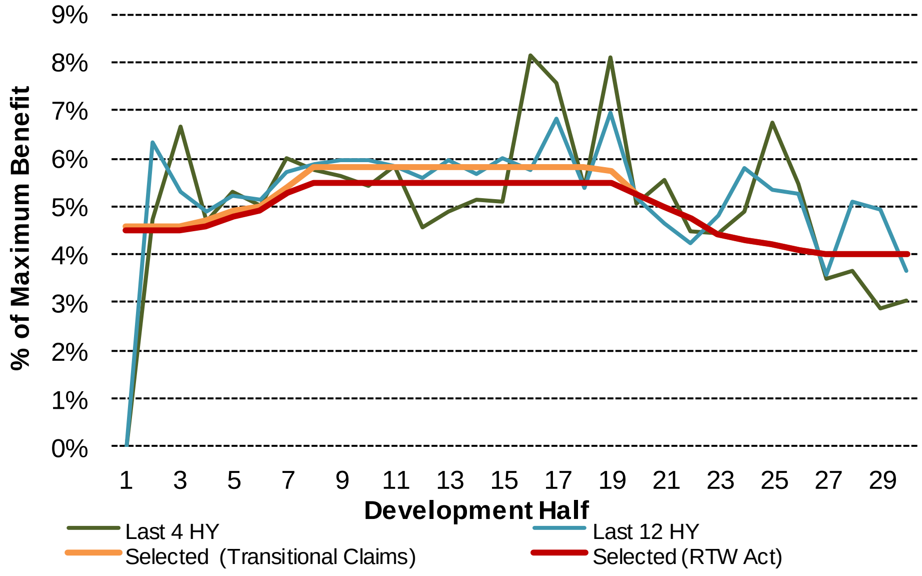
Figure 6.3 – First Paid Lump Sums Development



WPI assessments, and consequently lump sum payments, have been materially slower to emerge than expected and we anticipate it will take another two to three years before the WPI assessment process can speed up and get to the level originally expected for claims under the RTW Act. In fact, as Figure 6.3 shows, lump sum payments for all RTW Act accident years are currently sitting below pre-reform years. At this valuation, we have maintained a slow payment pattern up to development year 5 in line with the emerging experience.

Figure 6.4 shows the average size of First Paid claims as a percentage of the maximum benefit available, by duration from injury.

Figure 6.4 – First Paid Lump Sums by Development Half-Year (as a percentage of the maximum benefit)



For this valuation we have adopted a different size selection for RTW Act accident periods in line with the slower emergence of payments compared to prior accident periods. At an overall level, the average First Paid lump sum is expected to be 5.3% of the prescribed maximum benefit, or around $26,000.

Valuation Basis for Top Up Lump Sums

The number of Top Up lump sums is projected as a percentage of the ultimate number of First Paid lump sums. Top Up lump sum payments were initially removed under the RTW Act changes, but following a Regulation change in December 2015, they were added back in a restricted form, with a requirement that any applications for a Top Up lump sum had to be made by 30 June 2016 (although the assessments can still take place at a later date).

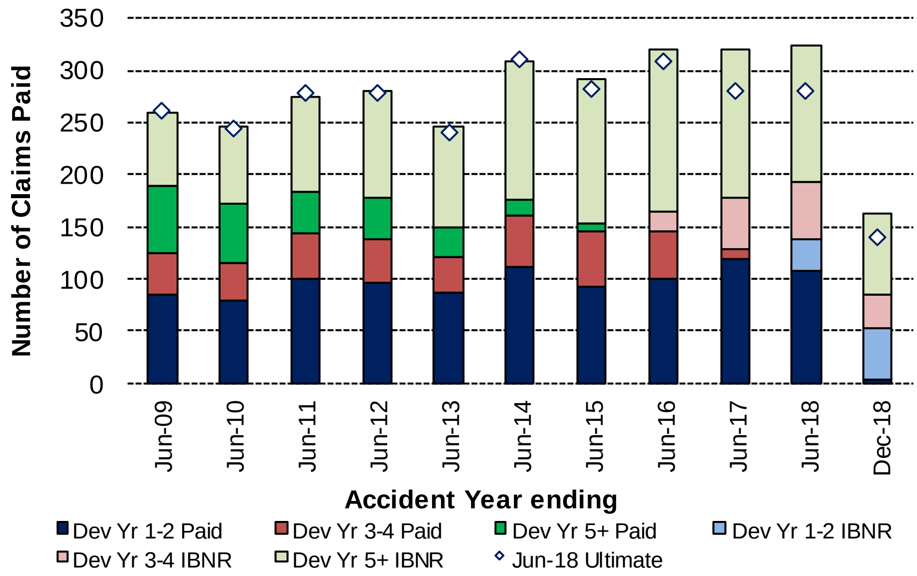
Top Up lump sums payments were significantly lower than expected in the last six months across all accident periods. We have partly attributed this to a slowdown in payments due to the slow resolution of disputes. At the current valuation, we have reduced our Top Up lump sums allowance to around 135 payments, down from 165 in our previous basis. Our selected basis reflects the latest number of pending and approved Top Up applications, with a small allowance for extra claims to emerge from disputed applications. While there is uncertainty around the success rate of the current applications and the lump sum payments, the value is not large.

Details are included in Appendix G.

Valuation Basis for Deafness Lump Sums

When estimating the number of future Deafness lump sums, there is no differentiation between First Paid and Top Ups. Figure 6.5 shows the projected numbers of Deafness lump sums by accident year. The tail of Deafness IBNR claims is considerably longer than for First Paid lump sums, with claims still occurring many years after the injury (as is for common Deafness claims).

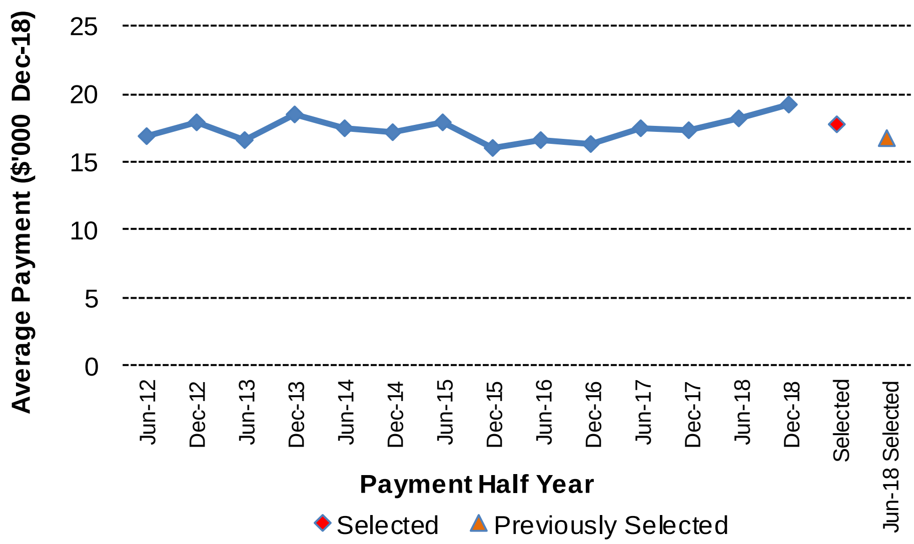
Figure 6.5 – Ultimate Number of Deafness Lump Sums



Deafness lump sum payments over the last six months were around 42% higher than expected due to recent accident periods. At the current valuation, we adopt a frequency approach for accident periods after December 2016 to allow for changes in payment speeds, consistent with the "lumpy" nature of deafness lump sum payments. We have increased our selected ultimates for these periods by 44 claims per annum consistent with the emerging experience of new deafness reports. Periods prior to June 2016 adopt a chain ladder approach. We have slightly increased the development factors in the front-end to reflect the emerging experience.

Figure 6.6 shows the overall average benefit paid for a Deafness lump sum claim. The selected average Deafness benefit has been increased at this valuation to around $17,500. The increase partly reflects the increasing trend in the recent payment experience.

Figure 6.6 – Average Lump Sum Deafness Payment



Valuation Basis for Death Lump Sums

Experience for Death (and funeral) lump sums were favourable over the last six months with the number and amount of payments being 68% and 38% lower than expected respectively. Death lump sums experience tends to be volatile and at this valuation, we have maintained our underlying projection basis consistent with the longer term experience.

In addition to the underlying projection, our basis has allowed for one-off ex-gratia dependent benefit payments to occur in line with changes introduced with the RTW Act; these ex-gratia payments were available only to a small number of past part-death benefit recipients, but to date there has been very little activity and so we continue to reduce the IBNR allowance by one half-year to recognise that not all potentially entitled dependents will claim this benefit.

Figure 6.7 shows the numbers of Death lump sums by accident year.

Figure 6.7 – Ultimate Number of Death Lump Sums

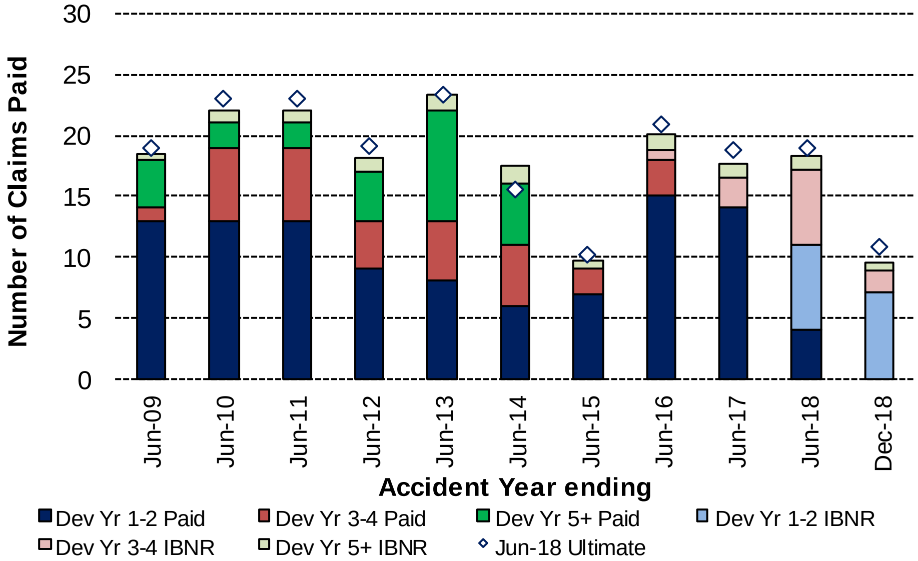
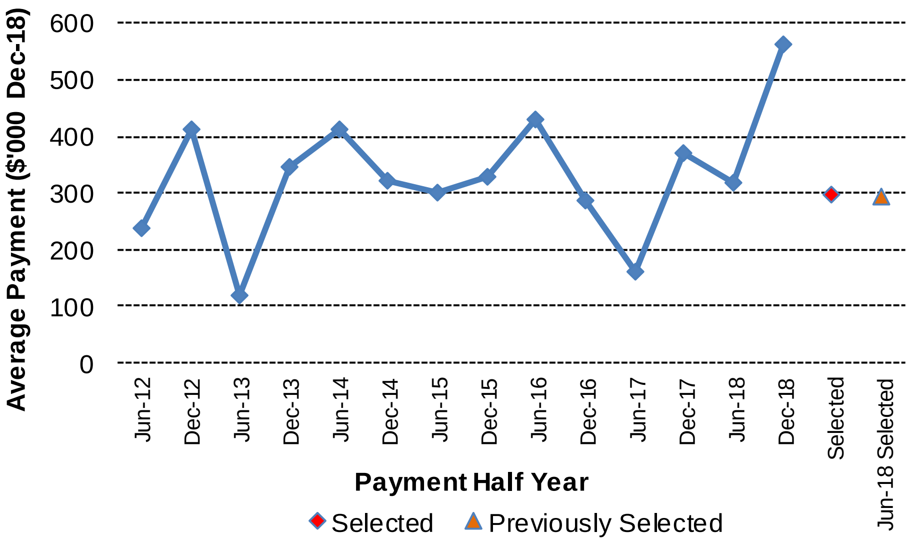


Figure 6.8 shows the average benefit paid to a Death lump sum claim, by payment half year.

Figure 6.8 – Average Lump Sum Death Payment



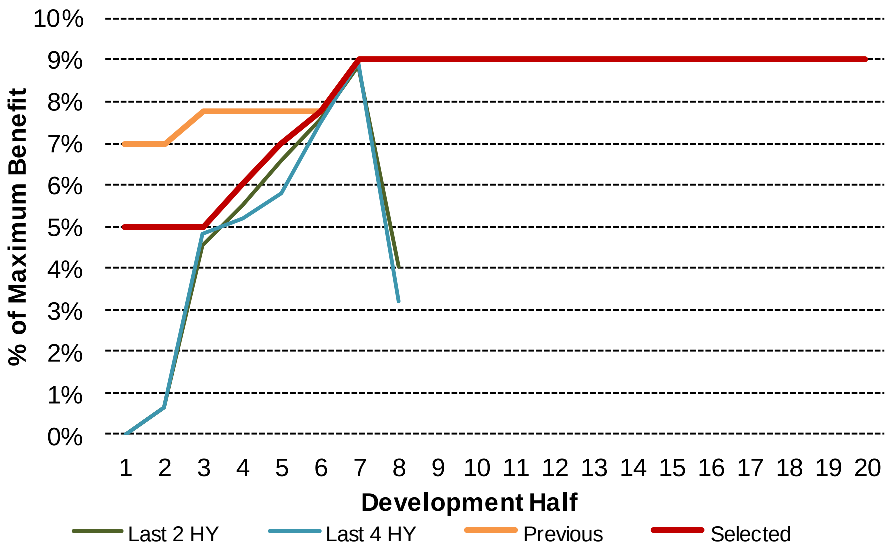
Due to the volatility of the experience, we have not responded to the most recent experience and our adopted size is unchanged after adjusting for CPI inflation.

Valuation Basis for Economic Loss Lump Sums

Economic Loss lump sums are paid to a worker for loss of future earning capacity. This is a new benefit under the RTW Act and is available to injuries from 1 July 2015. Payments have emerged in line with First Paid lump sums. We have continued to align the ultimate number of Economic Loss lump sum payments with First Paid lump sums.

Figure 6.9 shows the average size of Economic Loss lump sum payments as a percentage of the maximum benefit available.

Figure 6.9 – Economic Loss Lump Sum Size by Development Half-Year (as a percentage of the maximum benefit)



At this valuation, we have reduced our size selection for development halves 1 to 5 in line with the emerging experience.

6.4 Valuation Results and Actuarial Release

Table 6.4 sets out the actuarial release resulting from our valuation of lump sum payments. The first column represents our projection from the June 2018 valuation.

Table 6.4 – Actuarial Release for Lump Sums

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	5.1	5.0	(0.1)	0.3	(0.2)	-3%
2005/06 - 2012/13	16.0	16.6	0.7	(1.3)	0.6	4%
2013/14 - 2014/15	16.0	18.2	2.2	(1.9)	(0.3)	-2%
2015/16 - 2018/19 [1]	224.6	228.8	4.2	(4.2)	0.0	0%
Total	261.8	268.7	6.9	(7.1)	0.1	0%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The $6.9 million increase in projected liability offsets payments being $7.1 million less than expected in the six months, resulting in a small actuarial release of $0.1 million.

Table 6.5 breaks down the actuarial release by source.

Table 6.5 – Components of Actuarial Release: Lump Sums

Release (strengthening) due to		
	$m	$m
AvE payments in six months		7.1
Changes to Valuation Basis		
First Paid and Eco Loss Numbers	(8.9)	
Higher Top Up Size	(0.1)	
Lower Death IBNR numbers	1.4	
Higher Deafness IBNR	(1.2)	
Higher Deafness Size	(0.7)	
Lower Economic Loss Size	2.4	
Subtotal		(6.9)
Total		0.1

Slower than expected payments in the six months to December 2018 contribute a saving of $7.1 million, which is offset by changes to the First Paid and Economic Loss lump sum numbers resulting in an increase of $8.9 million; this is largely the result of payments being held back in the outstanding claims liability due to our interpretation that it is the result of slower payments rather than a reduction in the number of lump sums. Increases in the Deafness lump sum basis add $1.9 million to the liability, while reductions in the ex-gratia dependent benefit Death allowance and lower Economic Loss sizes reduce the liability by $3.8 million.

7 Treatment and Related Costs – Short Term Claims

Workers who suffer a compensable injury are entitled to be compensated for a range of medical and other treatment related costs. For the valuation we split these entitlements into the following groups: Medical, Physical Therapy, Hospital, Rehabilitation (Vocational Rehabilitation), Travel and 'Other'. Medical payments are the most significant of these entitlements.

7.1 Summary of Results

Table 7.1 summarises the movements in our liability estimates for treatment and related cost payments since the June 2018 valuation.

Table 7.1 - Valuation Results: Treatment Costs

	Medical	Hospital	Travel	Rehab	Physical Therapy	Other	Total Treatment
Jun18 Valuation	$m	$m	$m	$m	$m	$m	$m
Estimated Liab at Jun-18	107.3	18.4	4.3	13.7	6.8	9.4	159.9
Projected Liab at Dec-18	108.4	18.8	4.4	14.0	6.8	9.6	162.1
Dec-18 Valuation							
Impact of experience/OSC - Movement in liab	7.1	1.3	0.4	(0.9)	0.6	0.0	8.6
Estimated Liab at Dec-18 (Jun-18 eco assumptions)	**115.5**	**20.1**	**4.8**	**13.2**	**7.5**	**9.6**	**170.7**
Impact of change in eco assumptions	1.0	0.1	0.0	0.0	0.0	0.0	1.2
Estimated Liab at Dec-18 (Dec-18 eco assumptions)	**116.6**	**20.2**	**4.8**	**13.2**	**7.5**	**9.6**	**171.9**
AvE Payments - six months to Dec-18	5.0	1.3	0.3	(0.7)	0.6	(0.4)	6.1
Actuarial Release at Dec-18	(12.1)	(2.6)	(0.7)	1.6	(1.2)	0.4	(14.6)

The main movements from our June 2018 projection of the December 2018 liability are:

- An increase of $8.6 million in the liability, reflecting the recent experience and valuation response. This produces an actuarial strengthening of $14.6 million when combined with actual payments in the period being $6.1 million more than expected.
- Movements in economic assumptions, increasing the treatment related liabilities by $1.2 million.

The remainder of this section deals with the payment experience and valuation basis. The impact of the change in economic assumptions is discussed in Section 11.3.2.

7.2 Valuation Approach

Under the RTW Act most treatment and related costs cease 12 months after Income Support ends. The two exceptions to this are payments for medical aids and appliances, and payments related to approved surgeries. Our modelling approach captures these features using:

- Active claim model (PPAC) – this is used for the valuation of Medical liabilities (excluding Aids and Appliances) for claims that are also receiving Income Support (IS) payments; for up to three years from the date of injury.
- Long term model (PPCI) – this is a quarterly model used for the valuation of all other treatment related liabilities, namely:
  - For Medical payments (excluding Aids and Appliances): to claims that are not receiving IS payments.

- For claimants receiving Medical payments (excluding Aids and Appliances) alongside IS payments more than three years from the date of injury (generally due to long delay to first IS incapacity).
- For other treatment related costs: this is used to value the total future cost of that entitlement, without differentiating between claims receiving Income Support.

- In most cases, we have shown two sets of valuation assumptions, namely:
  - "RTW Act claims" – claims occurring after the RTW Act provisions commenced on 1 July 2015, that is where the new rules apply from day one of the claim: for these claims, it will typically take around four to five years before payments reduce to zero, due to a combination of (1) claimants who do not commence their incapacity until sometime after their injury, and (2) payment delays.
  - "Transitional claims" – those that occurred prior to 30 June 2015: for these claims, the duration boundaries will commence on 1 July 2015 and so payments will generally cease soon after 30 June 2018. The "Transitional claims" selections shown in this section relate to our projections up to this date. The "RTW Act claims" selections are used for our payment projections past this date.

Detailed descriptions of the projection models and details of all projection assumptions are included in Appendix A and H.

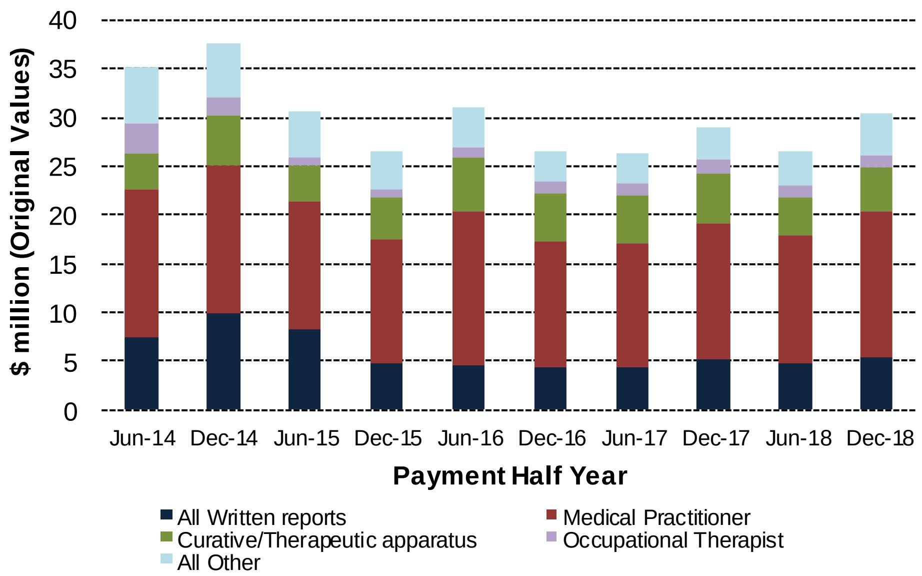
7.3 Medical

Medical payments includes payments for treating doctors, written medical reports, therapeutic devices, pharmaceuticals, psychologists, dentists and other allied health (except for physiotherapy costs which are separately modelled in Section 7.7), including medico-legal costs.

Payments vs Expectations

Figure 7.1 below shows medical payments by six month period, split by the type of service.

Figure 7.1 - Medical Half-Yearly Payments



Medical payment levels have been lower since December 2014, due to:

- Lower written report activity post-June 2015 following the removal of Work Capacity Assessments under the RTW Act.
- Lower other medical expenses including psychologist and chemist costs.
- Offset by higher medical apparatus costs.

Table 7.2 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 7.2 – Actual vs Expected Payments: Medical

Accident Period	Payments in Six Months to Dec 18			
	Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	1.2	1.2	0.1	105%
2005/06 - 2012/13	1.7	1.2	0.5	139%
2013/14 - 2014/15	1.6	0.7	0.9	216%
2015/16 - 2018/19 [1]	26.0	22.4	3.6	116%
Total	30.5	25.6	5.0	119%

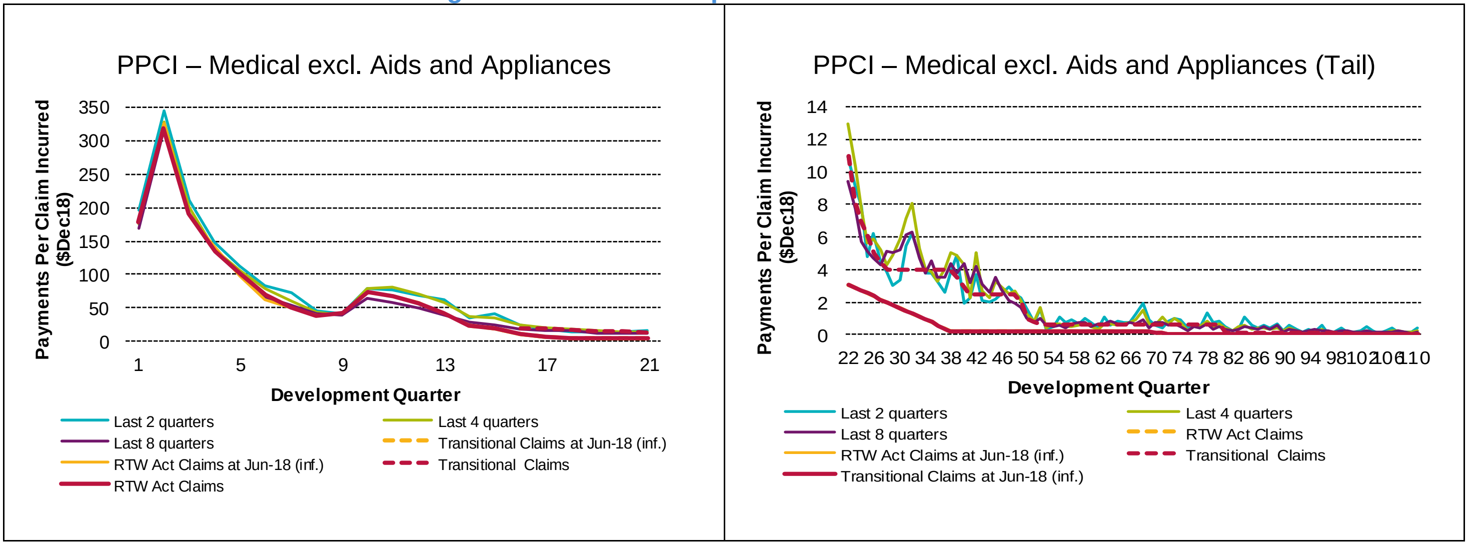
[1] Accidents to Dec18

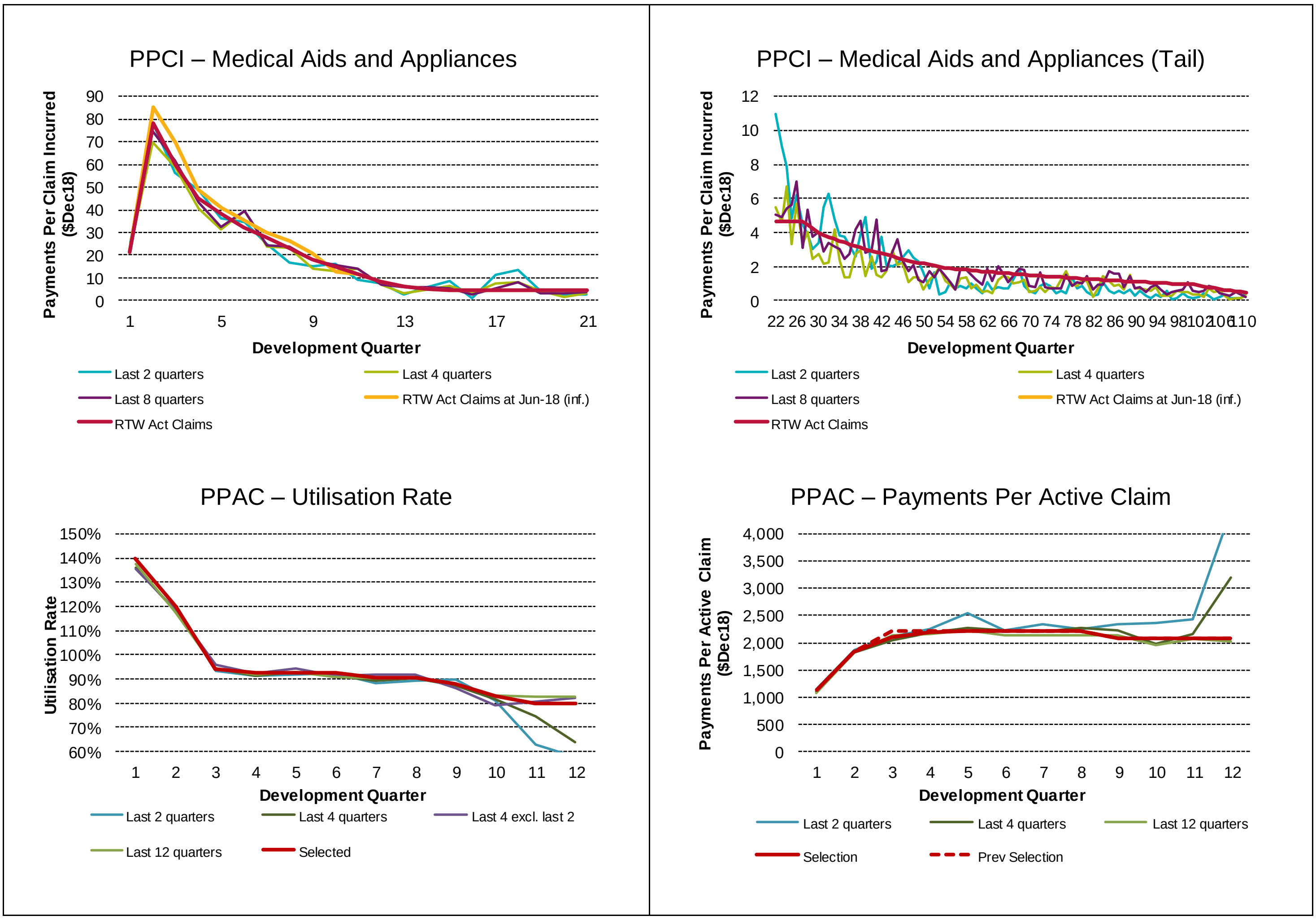
Overall, payments were around 20% higher than expected in the six months to December 2018. In dollar terms, this was driven predominantly by post-reform accident periods, although payments were also proportionately very high across old accident periods. The years immediately pre-reform had the highest percentage difference to what was expected. Higher payments in these older periods are linked to increases in medical reports linked to WPI assessment activity. For more recent accident periods, some of the higher payments can be explained by the recent claim numbers growth as discussed in Section 4.1.1. There has also been a speed up in the processing of medical payments in the last six months which contributes an estimated 8% of the increase.

Valuation Basis

Figure 7.2 below shows the recent experience and selected basis for medical payments.

Figure 7.2 - Medical Experience and Selections





Our comments on the experience and selected assumptions are:

- PPCI (Medical, excluding aids and appliances):
  - We have partly reflected the higher PPCIs for RTW Act claims emerging in the recent experience at early durations. As noted above, there has been a speed up in medical payments in the last six months and we have excluded this impact when considering our selections.
  - We have added a temporary allowance in our valuation basis for transitional claims to have additional payments over the next two payment years in light of the emerging experience. The experience is higher than our previous basis due to high levels of written report activity, which is a continuation of the experience seen since December 2017. We attribute this to the slowdown in WPI assessments and related dispute activity, which are resulting in medical assessments being done beyond the boundary on treatment benefits.
- PPCI (Medical aids and appliances)
  - We adopt the same PPCI pattern for transitional claims and RTW Act claims.
  - We have reduced out selections at this valuation for development quarters 2 to 9 in line with the emerging experience.
- PPAC:

- We have revised our modelling approach at this valuation by analysing the utilisation of medical payments as proportion of Income Support actives excluding claims which receive only IS payments due to the employer's early reporting (less than two weeks of IS payments). Our selected basis is consistent with the longer-term average.
- We have reduced the PPAC selection at development quarters 3 and 4 in line with the emerging experience.

- PPCI (late medical payments for claimants also receiving IS)
  - Payments have been projected at 20% of the level of late IS payments, this is unchanged from the previous valuation.

Valuation Results and Actuarial Release

Table 7.3 sets out the actuarial release resulting from our valuation of medical payments. The first column represents our projection from the June 2018 valuation.

Table 7.3 – Actuarial Release for Medical

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	15.8	16.2	0.4	0.1	(0.4)	-3%
2005/06 - 2012/13	21.9	23.7	1.8	0.5	(2.3)	-10%
2013/14 - 2014/15	8.1	9.2	1.1	0.9	(2.0)	-24%
2015/16 - 2018/19 [1]	62.6	66.4	3.8	3.6	(7.4)	-12%
Total	108.4	115.5	7.1	5.0	(12.1)	-11%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The $7.1 million increase in the projected liability combined with actual payments being $5.0 million higher than expected results in an actuarial strengthening of $12.1 million.

Table 7.4 breaks down the actuarial strengthening by source.

Table 7.4 - Components of Actuarial Release: Medical

Release (strengthening) due to		
	$m	$m
AvE payments in six months		(5.0)
Changes to Valuation Basis		
Ultimate claims	(1.4)	
IS active projection changes	(1.8)	
Utilisation Change	(0.4)	
PPAC Decrease	0.1	
PPCI Changes	(3.1)	
ASC Actives	(0.4)	
Subtotal		(7.1)
Total		(12.1)

The main drivers of change are:

- Higher Income Support actives increase the liability by $1.8 million.

- Higher ultimate claim numbers result in an actuarial increase of $1.4 million.
- Changes to PPAC and utilisation increase the liability by $0.3 million
- Changes to PPCI assumptions for other medical payments have resulted in a $3.1 million increase in the liability; this is due to higher medical report costs at later durations.
- A $0.4 million increase due to additional exposures from ASC Shipbuilding joining the scheme.

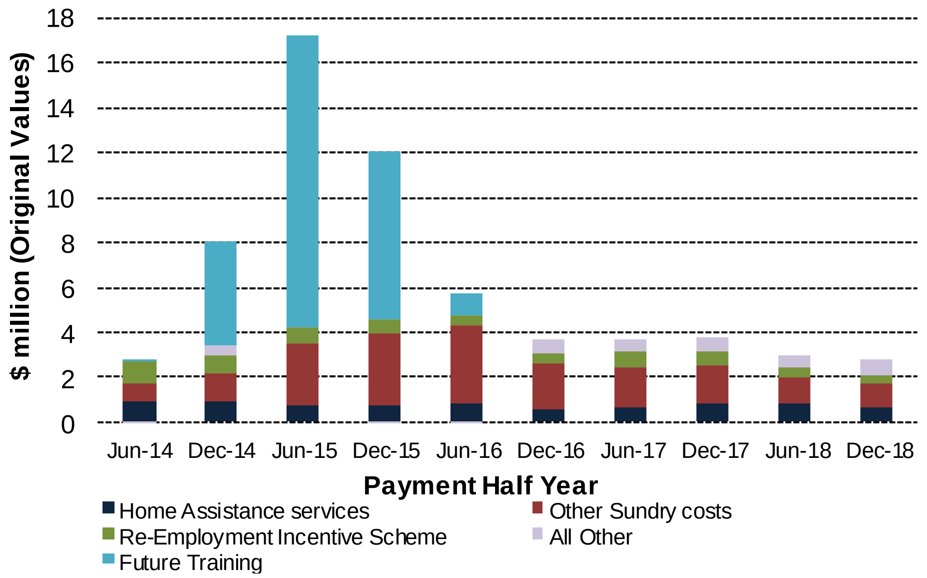
7.4 Other

The Other payment type includes payments on home assistance and modifications, Re-Employment Incentive Scheme (RISE), future retraining costs and other sundry costs.

Payments vs Expectations

Figure 7.3 below shows 'other' payments by six month period.

Figure 7.3 - Other Half-Yearly Payments



After a period of high payments peaking with the June 2015 half-year, Other payments have reduced in the last 3 years following reductions in Other Sundry Costs. 'Future training and education' benefits are no longer paid to workers.

Table 7.5 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 7.5 - Actual vs Expected Payments: Other

Accident	Payments in Six Months to Dec 18			
Period	Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	n/a
2005/06 - 2012/13	0.1	0.0	0.1	3240%
2013/14 - 2014/15	0.1	0.1	0.0	117%
2015/16 - 2018/19 [1]	2.6	3.1	(0.5)	83%
Total	2.8	3.2	(0.4)	88%

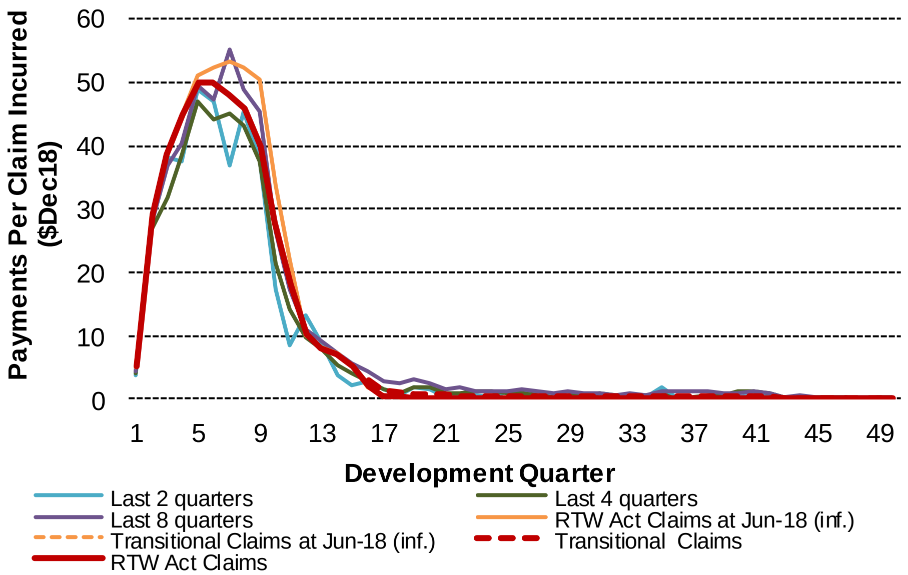
[1] Accidents to Dec18

Overall, payments were 12% lower than expectations. This is largely driven by the RTW Act accident periods with some smaller offsetting differences in older accident periods.

Valuation Basis

Figure 7.4 below shows the recent experience and selected basis for 'other' payments.

Figure 7.4 - PPCI Experience and Selections: Other



We have decreased our front end PPCI assumptions in line with the recent level of payments observed for these accident periods. We have increased the PPCI slightly for transitional claims reflecting the experience observed over the last six months, which is consistent with surgery and dispute related costs.

Valuation Results and Actuarial Release

Table 7.6 sets out the actuarial release resulting from our valuation of 'other' payments. The first column represents our projection from the June 2018 valuation.

Table 7.6 - Actuarial Release for Other

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	0.0	(0.0)	
2005/06 - 2012/13	0.0	0.3	0.3	0.1	(0.4)	-8765%
2013/14 - 2014/15	0.0	0.3	0.3	0.0	(0.3)	-949%
2015/16 - 2018/19 [1]	9.6	9.0	(0.6)	(0.5)	1.1	11%
Total	9.6	9.6	0.0	(0.4)	0.4	4%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The actuarial release of $0.4 million is due to lower than expected payments in the last six months.

Table 7.7 breaks down the actuarial release by source.

Table 7.7 - Components of Actuarial Release: Other

Release (strengthening) due to		
	$m	$m
AvE payments in six months		0.4
Changes to Valuation Basis		
Ultimate claims	(0.4)	
PPCI Changes	0.4	
Subtotal		(0.0)
Total		0.4

Higher claim numbers increase the liability by $0.4 million. This is offset by reductions to our PPCI basis for RTW Act claims.

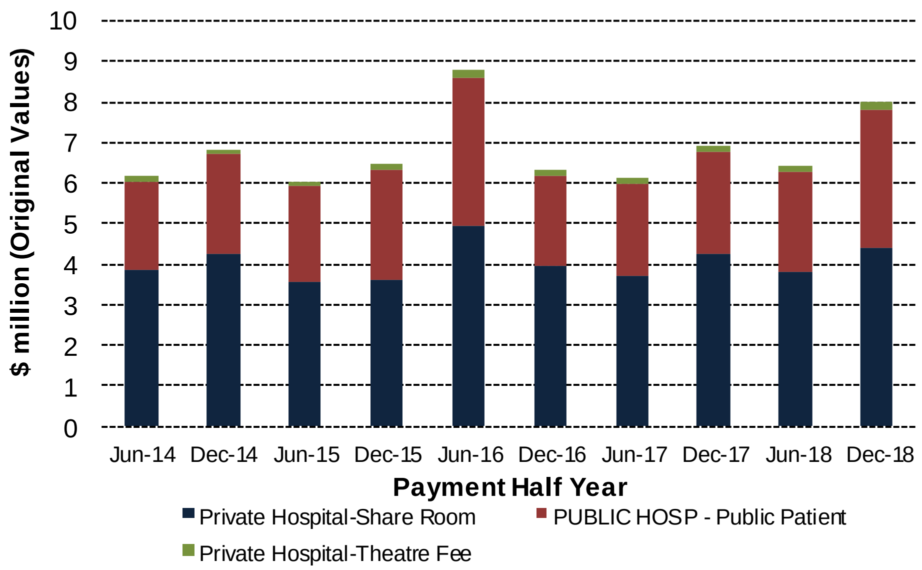
7.5 Hospital

Hospital payments include payments made to public and private hospitals.

Payments vs Expectations

Figure 7.5 below shows hospital payments in each six month period.

Figure 7.5 - Hospital Half-Yearly Payments



Hospital payments in the last six months have been significantly higher than the last two financial years. This follows a spike in payments in the June 2016 half-year which we have largely been treating as a one-off feature of the experience.

Table 7.8 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 7.8 - Actual vs Expected Payments: Hospital

Accident Period	Payments in Six Months to Dec 18			
	Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.0	0.1	(0.0)	44%
2005/06 - 2012/13	0.1	0.3	(0.1)	58%
2013/14 - 2014/15	0.2	0.2	0.0	108%
2015/16 - 2018/19 [1]	8.6	7.1	1.5	120%
Total	9.0	7.6	1.3	117%

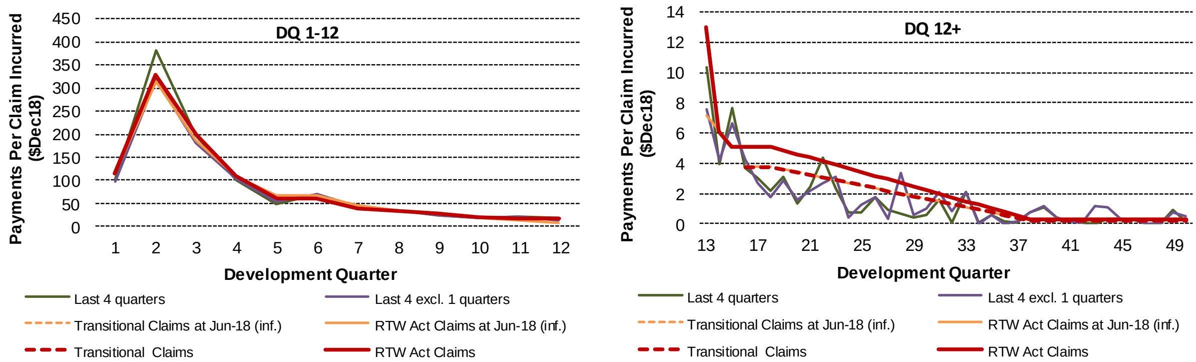
[1] Accidents to Dec18

The bulk of hospital payments are made in the first year or two after injuries occur. Payments in the last six months were higher than expected mainly due to RTW Act accidents.

Valuation Basis

Figure 7.6 below shows the recent experience and selected basis for hospital payments.

Figure 7.6 - Hospital Experience and Selections



We have reshaped the RTW Act claims basis for the first two development years to reflect the recent experience exclusive of the latest quarter, which has been distorted by one large interstate claim with payments of $230,000. We have also observed an increase in hospital expenditure due to higher utilisation of non-inpatient services. It is unclear whether this is a one-off feature of the experience, so we have not responded fully at this valuation. We will revise our basis accordingly at the next valuation if the higher utilisation is a permanent feature of the experience.

The basis for transitional claims is unchanged at this valuation given payments for accident years 2015 and prior are running off close to expectation. Additionally, there have been no material changes in the number of applications made for future surgeries and the proportions of these applications that have been accepted or rejected. Hence, we have not adjusted the allowance for future surgery costs for both transitional claims and RTW Act claims in our existing PPCI patterns; the expected surgery cost for RTW Act claims is higher, as redemptions have not removed claims from the scheme as they did for pre-reform periods.

Valuation Results and Actuarial Release

Table 7.9 sets out the actuarial release resulting from our valuation of hospital payments. The first column represents our projection from the June 2018 valuation.

Table 7.9 - Actuarial Release for Hospital

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	0.7	0.7	(0.0)	(0.0)	0.0	6%
2005/06 - 2012/13	1.9	1.9	(0.0)	(0.1)	0.1	6%
2013/14 - 2014/15	1.4	1.4	(0.0)	0.0	(0.0)	-1%
2015/16 - 2018/19 [1]	14.8	16.2	1.3	1.5	(2.8)	-19%
Total	18.8	20.1	1.3	1.3	(2.6)	-14%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The $1.3 million increase in the projected liability combined with actual payments being $1.3 million higher than expected results in an actuarial strengthening of $2.6 million.

Table 7.10 breaks down the actuarial strengthening by source.

Table 7.10 - Components of Actuarial Release: Hospital

Release (strengthening) due to		
	$m	$m
AvE payments in six months		(1.3)
Changes to Valuation Basis		
Ultimate claims	(0.7)	
PPCI Changes	(0.6)	
Subtotal		(1.3)
Total		(2.6)

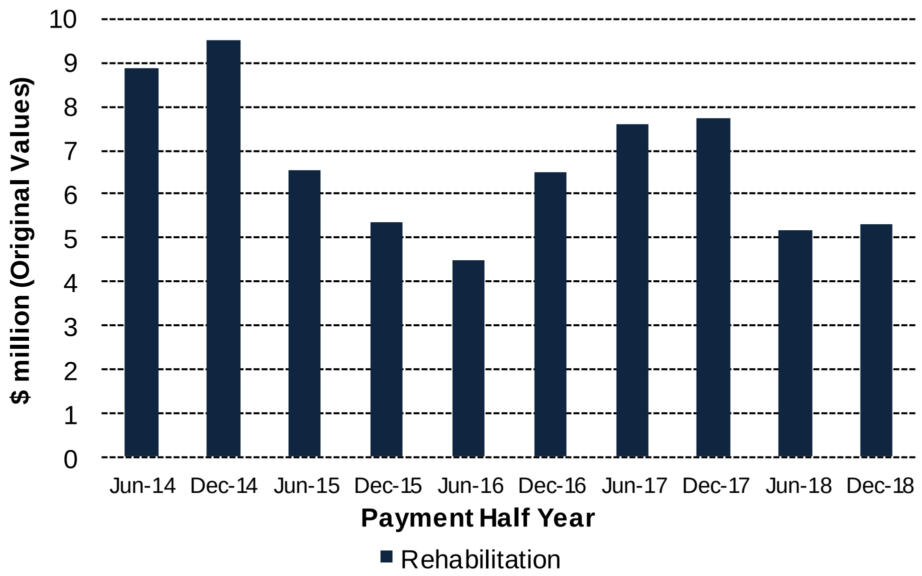
7.6 Rehabilitation

The rehabilitation payment type includes payments made to approved vocational rehabilitation providers and job search agencies.

Payments vs Expectations

Figure 7.7 below shows rehabilitation payments by six month period.

Figure 7.7 - Rehabilitation Half-Yearly Payments



From 2013 to June 2016 rehabilitation payments reduced considerably. Since then however, there had been an increase in rehabilitation spending by agents as part of new strategies to achieve better return to work outcomes, before a significant reduction occurred in the last year as new operational directives to reduce rehabilitation spend were implemented.

Table 7.11 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 7.11 - Actual vs Expected Payments: Rehabilitation

Accident Period	Payments in Six Months to Dec 18 Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	n/a
2005/06 - 2012/13	0.0	0.0	0.0	208%
2013/14 - 2014/15	0.0	0.0	(0.0)	81%
2015/16 - 2018/19 [1]	5.3	5.9	(0.7)	89%
Total	5.3	6.0	(0.7)	89%

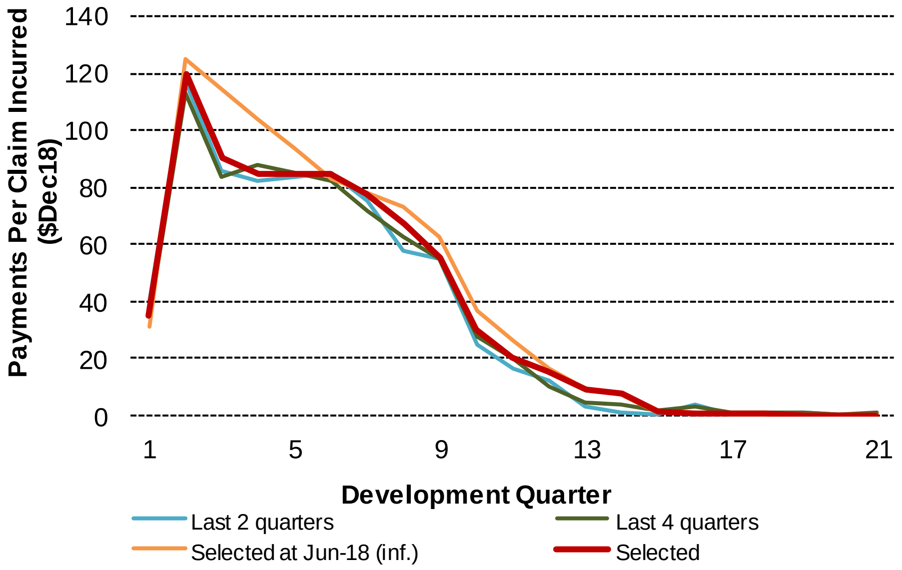
[1] Accidents to Dec18

Overall, payments were $0.7 million less than expected, driven almost entirely from RTW Act accident years.

Valuation Basis

Figure 7.8 below shows the recent experience and selected basis for rehabilitation payments.

Figure 7.8 - Rehabilitation Experience and Selections



We have decreased the selected PPCI pattern at this valuation to reflect the recent lower utilisation of rehabilitation services in the experience. We have also removed the previous superimposed inflation allowance, since there is now increased control over rehabilitation spending.

Valuation Results and Actuarial Release

Table 7.12 sets out the actuarial release resulting from our valuation of rehabilitation payments. The first column represents our projection from the June 2018 valuation.

Table 7.12 - Actuarial Release for Rehabilitation

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	0.0	0.0	
2005/06 - 2012/13	0.0	0.0	(0.0)	0.0	(0.0)	-76%
2013/14 - 2014/15	0.0	0.0	(0.0)	(0.0)	0.0	33%
2015/16 - 2018/19 [1]	14.0	13.1	(0.9)	(0.7)	1.6	11%
Total	14.0	13.2	(0.9)	(0.7)	1.6	11%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The $0.9 million decrease in the projected liability combined with actual payments being $0.7 million less than expected results in an actuarial release of $1.6 million.

Table 7.13 breaks down the actuarial release by source.

Table 7.13 - Components of Actuarial Release: Rehabilitation

Release (strengthening) due to		
	$m	$m
AvE payments in six months		0.7
Changes to Valuation Basis		
Ultimate claims	(0.7)	
PPCI Changes	1.4	
Reduction in Superimposed Inflation	0.2	
Subtotal		0.9
Total		1.6

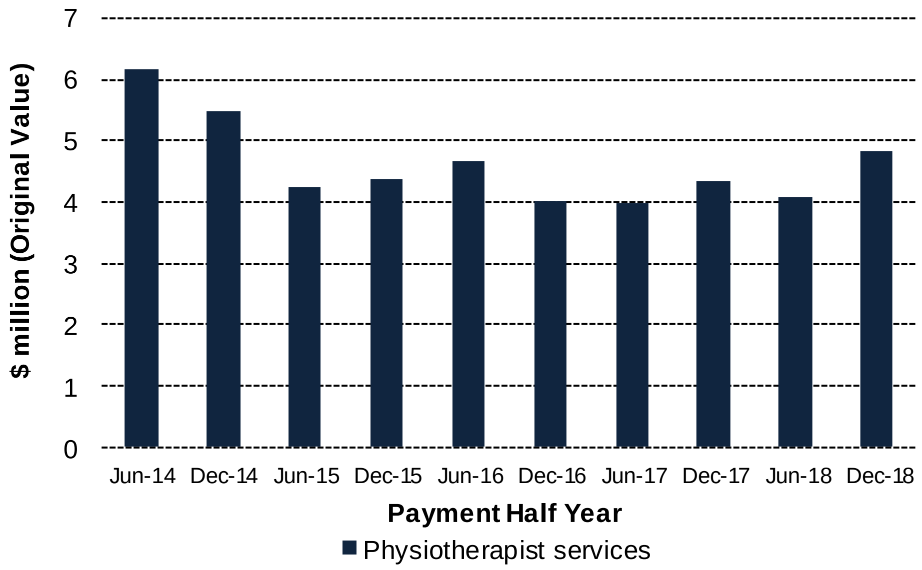
7.7 Physical Therapy

Physical therapy payments are payments made to physiotherapists.

Payments vs Expectations

Figure 7.9 below shows physical therapy payments by six month period over the last five years.

Figure 7.9 - Physical Therapy Half-Yearly Payments



Payments for the December 2018 half-year have been higher than the previous two years. Over the longer term, physical therapy payments have remained relatively stable since June 2015.

Table 7.14 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection. Overall, payments were $0.6 million (13%) higher than expected.

Table 7.14 - Actual vs Expected Payments: Physical Therapy

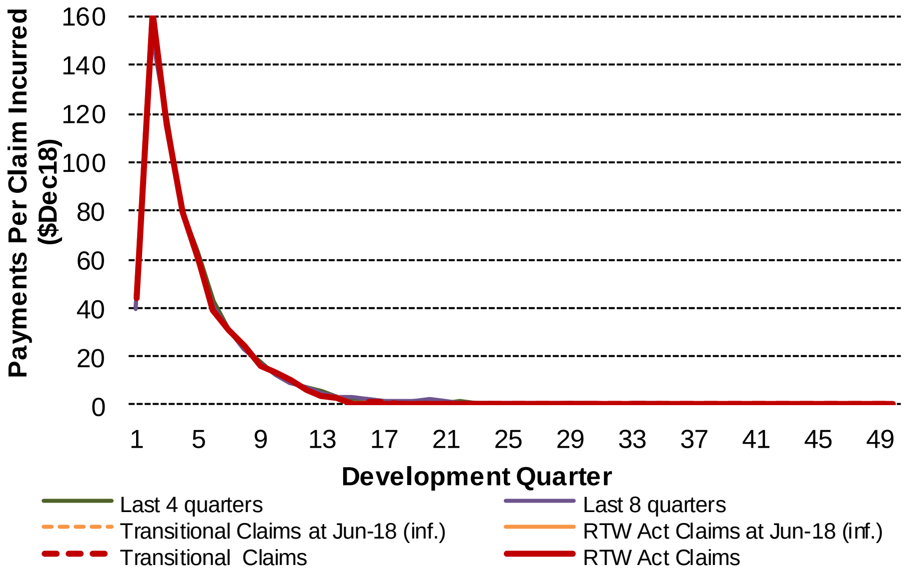
Accident Period	Payments in Six Months to Dec 18 Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	n/a
2005/06 - 2012/13	0.0	0.0	0.0	1810%
2013/14 - 2014/15	0.1	0.0	0.0	322%
2015/16 - 2018/19 [1]	4.7	4.2	0.5	111%
Total	4.8	4.2	0.6	113%

[1] Accidents to Dec18

Valuation Basis

Figure 7.10 below shows the recent experience and selected basis for physical therapy payments.

Figure 7.10 - Physical Therapy Experience and Selections



We have increased our PPCI assumptions for transitional claims at this valuation to reflect the continuing cost of physical therapy payments related to pre-approved surgeries. Our PPCI assumption for RTW Act claims is unchanged from our June 2018 basis.

Valuation Results and Actuarial Release

Table 7.15 sets out the actuarial release resulting from our valuation of physical therapy payments. The first column represents our projection from the June 2018 valuation.

Table 7.15 - Actuarial Release for Physical Therapy

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	0.0	(0.0)	
2005/06 - 2012/13	0.0	0.1	0.1	0.0	(0.2)	-4581%
2013/14 - 2014/15	0.0	0.1	0.1	0.0	(0.2)	-927%
2015/16 - 2018/19 [1]	6.8	7.2	0.4	0.5	(0.9)	-13%
Total	6.8	7.5	0.6	0.6	(1.2)	-18%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The $0.6 million increase in the projected liability combined with actual payments being $0.6 million higher than expected results in an actuarial strengthening of $1.2 million at December 2018.

Table 7.16 breaks down the actuarial change by source.

Table 7.16 - Components of Actuarial Release: Physical Therapy

Release (strengthening) due to		
	$m	$m
AvE payments in six months		(0.6)
Changes to Valuation Basis		
Ultimate claims	(0.4)	
PPCI Changes	(0.2)	
Subtotal		(0.6)
Total		(1.2)

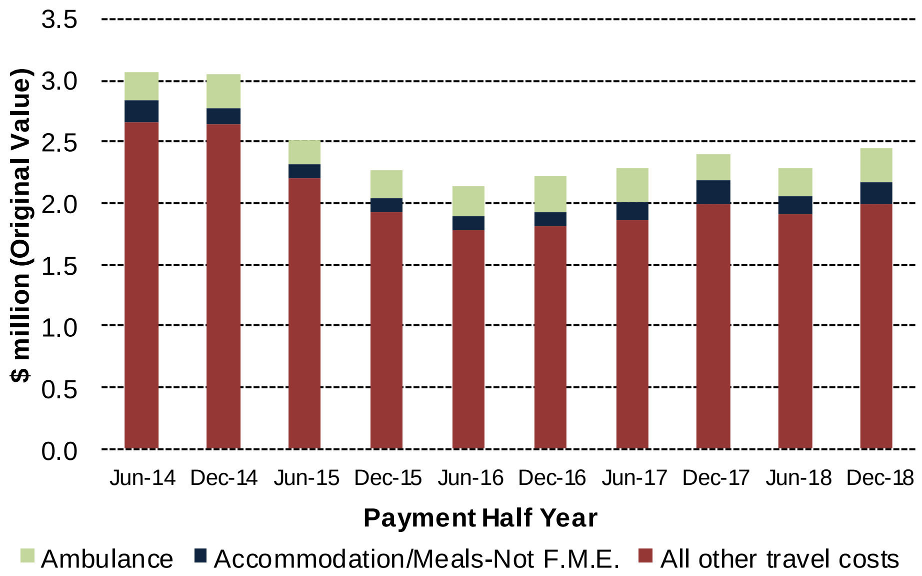
7.8 Travel

Travel payments include payments made for claimant related travel and accommodation.

Payments vs Expectations

Figure 7.11 below shows travel payments by six month period over the last five years.

Figure 7.11 - Travel Half-Yearly Payments



Travel payments in the half year to December 2018 are the highest they have been since June 2016.

Table 7.17 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 7.17 – Actual vs Expected Payments: Travel

Accident	Payments in Six Months to Dec 18			
Period	Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	n/a
2005/06 - 2012/13	0.1	0.0	0.1	4154%
2013/14 - 2014/15	0.1	0.0	0.1	339%
2015/16 - 2018/19 [1]	2.3	2.1	0.1	106%
Total	2.5	2.2	0.3	113%

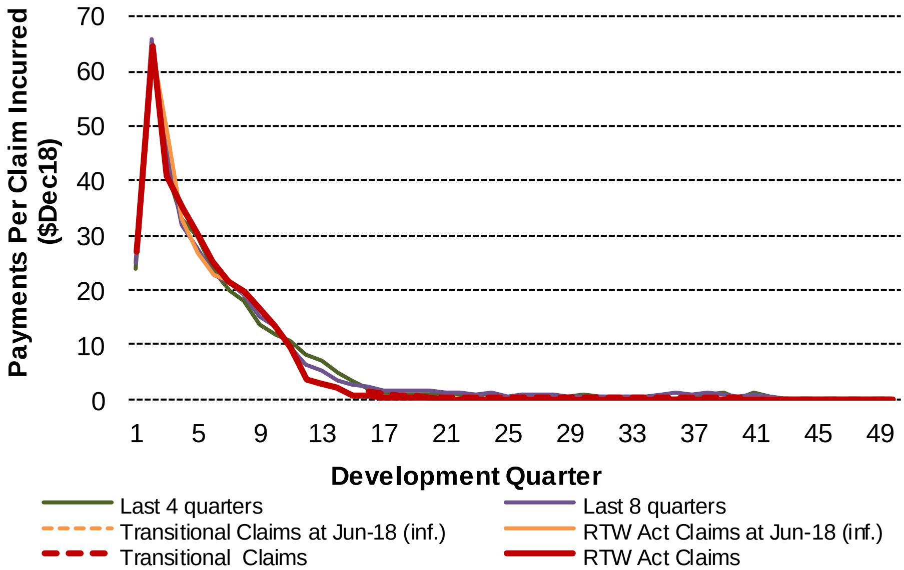
[1] Accidents to Dec18

Overall, payments in the last six months were $0.3 million more than expected.

Valuation Basis

Figure 7.12 below shows the recent experience and selected basis for travel payments.

Figure 7.12 - Travel Experience and Selections



We have increased our PPCI assumptions for transitional claims at this valuation to reflect the ongoing travel costs related to surgeries beyond the boundary on treatment benefits. We have also reshaped the PPCI selections for RTW Act claims at development quarters 3 to 6 in line with the recent experience.

Valuation Results and Actuarial Release

Table 7.18 sets out the actuarial release resulting from our valuation of travel payments. The first column represents our projection from the June 2018 valuation.

Table 7.18 - Actuarial Release for Travel

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	0.0	(0.0)	
2005/06 - 2012/13	0.0	0.1	0.1	0.1	(0.1)	-4747%
2013/14 - 2014/15	0.0	0.1	0.1	0.1	(0.1)	-699%
2015/16 - 2018/19 [1]	4.4	4.6	0.3	0.1	(0.4)	-9%
Total	4.4	4.8	0.4	0.3	(0.7)	-16%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The $0.4 million increase in the projected liability combined with actual payments being $0.3 million higher than expected results in an actuarial strengthening of $0.7 million at December 2018.

Table 7.19 breaks down the actuarial change by source.

Table 7.19 - Components of Actuarial Release: Travel

Release (strengthening) due to		
	$m	$m
AvE payments in six months		(0.3)
Changes to Valuation Basis		
Ultimate claims	(0.2)	
PPCI Changes	(0.2)	
Subtotal		(0.4)
Total		(0.7)

8 Other Entitlements – Short Term Claims

This section presents results for the remaining entitlements. These include legal and investigation costs, recoveries, common law, LOEC, and commutations.

8.1 Summary of Results

Table 8.1 summarises the movements in our liability estimates for the remaining entitlement groups since the June 2018 valuation.

Table 8.1 - Valuation Results: Other Payment Types

	Worker Legal	Corporation Legal	Invest-igation	Common Law	LOEC	Commu-tation	Recoveries	Total
Jun18 Valuation	$m	$m	$m	$m	$m	$m	$m	$m
Estimated Liab at Jun-18	35.6	33.4	2.0	2.5	0.7	2.3	(24.7)	51.9
Projected Liab at Dec-18	34.0	33.0	2.0	2.6	0.7	2.3	(25.1)	49.5
Dec-18 Valuation								
Impact of experience/OSC - Movement in liab	3.7	0.1	0.4	0.0	(0.0)	(0.2)	0.6	4.6
Estimated Liab at Dec-18 (Jun-18 eco assumptions)	**37.7**	**33.1**	**2.4**	**2.6**	**0.7**	**2.0**	**(24.5)**	**54.1**
Impact of change in eco assumptions	0.2	0.1	0.0	0.0	0.0	0.0	(0.1)	0.2
Estimated Liab at Dec-18 (Dec-18 eco assumptions)	**37.9**	**33.2**	**2.4**	**2.6**	**0.7**	**2.1**	**(24.6)**	**54.3**
AvE Payments - six months to Dec-18	(0.2)	(0.4)	0.2	(0.2)	0.0	0.4	(1.1)	(1.3)
Actuarial Release at Dec-18	(3.5)	0.3	(0.5)	0.2	0.0	(0.2)	0.5	(3.3)

The movements from our June 2018 projection of the December 2018 liability are:

- An increase of $4.6 million in the liability, reflecting the claims experience since June 2018 and our valuation response. Combined with payments being $1.3 million lower than expected, this produces an actuarial increase (strengthening) of $3.3 million.
- The change in economic assumptions at the current valuation has little impact overall on Other Entitlements.

8.2 Worker Legal

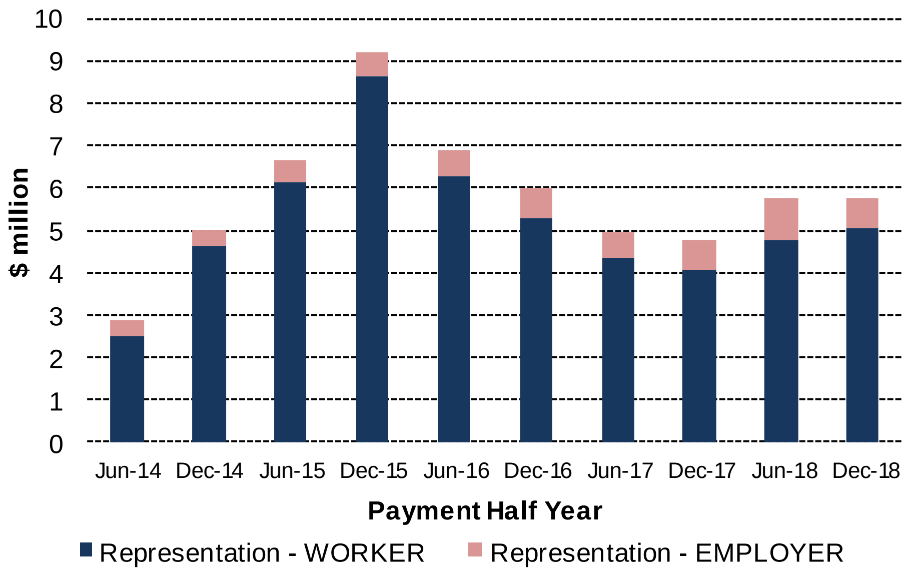
Our valuation of legal costs separately models legal fees paid to ReturnToWorkSA's contracted legal advisers (Minter Ellison and Sparke Helmore), which we call 'corporation legal', and legal fees paid to workers' representatives and employers, which we call 'worker legal'. This section describes the Worker Legal results, with Section 8.3 discussing ReturnToWorkSA's legal results.

Disputes are the main driver of expenditure for both worker and corporation legal fees, and were discussed in Section 3.3.3. Worker legal accounts are generally only submitted upon completion of the dispute and therefore any changes in dispute numbers will usually involve a delay before they are translated into changes in worker legal costs. Corporation legal fees on the other hand are paid at commencement of the dispute and will usually reflect changes in underlying dispute numbers without delay.

8.2.1 Experience

Figure 8.1 below shows worker legal payments in each six month period over the last five years.

Figure 8.1 - Worker Legal Half Yearly Payments



Worker legal payments peaked in the December 2015 half-year and then reduced over the two years to December 2017. This reduction in payments follows the reduction in dispute numbers during the 2015/16 year, reflecting the long delay between lodgement of disputes and payment of worker legal fees. That said, worker legal payments are still well higher than they were in 2013 and have increased in the last twelve months. As shown in Section 3.3.3, there remains a large number of open disputes in the scheme.

Disputes being lodged for RTW Act accidents have been relatively stable at around 150 per month over the past year. This is lower than the longer-term average level of around 200 disputes per months for pre-RTW Act periods. However it remains to be seen if the lower level of disputes can be maintained going forward as the eventual speed up in WPI assessments will likely lead to some increase from current levels; that said, dispute numbers should still remain below 200 per month for RTW Act claims.

Table 8.2 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 8.2 – Actual vs Expected Payments: Worker Legal

Accident	Payments in Six Months to Dec 18			
Period	Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.2	0.1	0.2	459%
2005/06 - 2012/13	1.2	1.6	(0.4)	76%
2013/14 - 2014/15	1.4	1.4	(0.0)	98%
2015/16 - 2018/19 [1]	2.9	2.9	0.0	100%
Total	5.7	6.0	(0.2)	96%

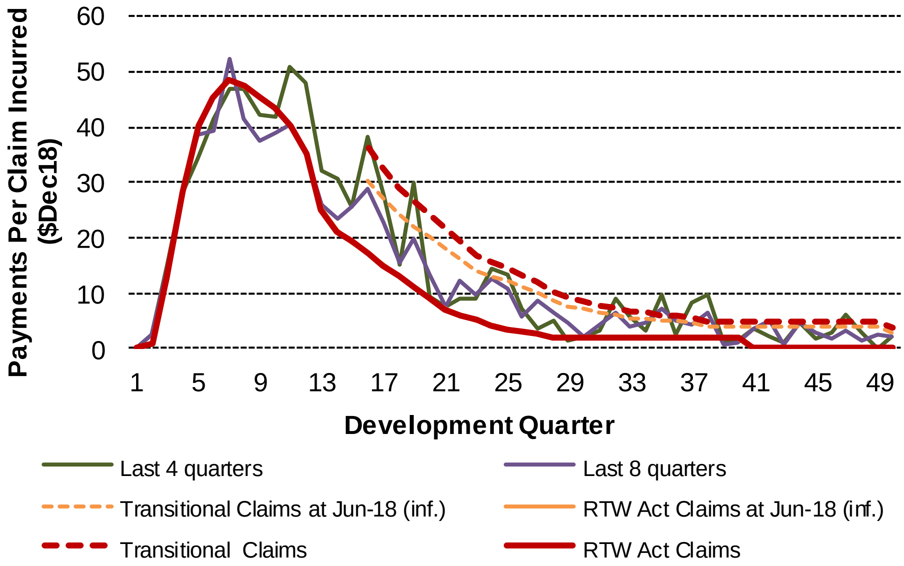
[1] Accidents to Dec18

Overall, payments in the six months to December 2018 were slightly lower than expected. This was due to a combination of higher than expected payments for pre June 2005 claims offset by lower payments for more recent transitional claims.

8.2.2 Valuation Basis

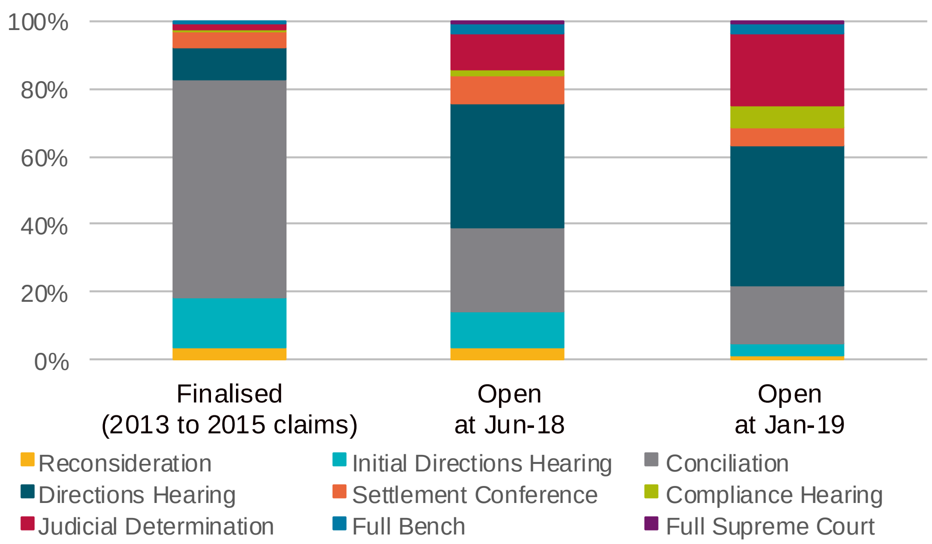
A PPCI model is used to value Worker Legal fees. Figure 8.2 below shows the recent experience and selected basis for worker legal payments.

Figure 8.2 - Worker Legal Experience and Selections



For transitional claims, we have increased our valuation basis by around $3 million (discounted) at this valuation to reflect the high number of open disputes currently in the scheme and their progression through to the later dispute resolution process. While the number of open disputes have remained relatively stable in the six months to December, the open disputes have progressed further into higher cost phases resulting in higher costs per dispute. This is illustrated in Figure 8.3 below.

Figure 8.3 – Movement in Open Transitional Claim Disputes



We selected costs per dispute (for worker legal payments) for each dispute phase based on an analysis of finalised disputes over the last four years, and this is unchanged from our June 2018 basis. The implied size for open transition disputes is currently around $11,700 per dispute, based on the split of open disputes and the selected dispute size; this compares with an average size of $9,300 per dispute based on the split of disputes at June 2018. The significant increase in average cost reflects higher proportion of claims moving beyond Conciliation and into Judicial Determination.

Our revised valuation basis of around $19.1 million (discounted) for transitional worker legal costs allows for some progression of currently open disputes, along with a further 250 new disputes to be lodged (at a lower cost).

Our valuation basis is unchanged for RTW Act periods and implies RTW Act claims will cost around 20% less in worker legal costs than pre-RTW Act claims.

8.2.3 Valuation Results and Actuarial Release

Table 8.3 sets out the actuarial release resulting from our valuation of worker legal payments. The first column represents our projection from the June 2018 valuation.

Table 8.3 - Actuarial Release for Worker Legal

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	0.0	0.1	0.0	0.2	(0.2)	-425%
2005/06 - 2012/13	8.7	10.4	1.7	(0.4)	(1.3)	-15%
2013/14 - 2014/15	7.1	8.5	1.4	(0.0)	(1.4)	-19%
2015/16 - 2018/19 [1]	18.2	18.7	0.6	0.0	(0.6)	-3%
Total	34.0	37.7	3.7	(0.2)	(3.5)	-10%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The actuarial increase of $3.5 million is due to liability increases of $3.7 million partially offset by actual payments being $0.2 million lower than expected.

Table 8.4 breaks down the actuarial release by source.

Table 8.4 - Components of Actuarial Release: Worker Legal

Release (strengthening) due to		
	$m	$m
AvE payments in six months		0.2
Changes to Valuation Basis		
Ultimate claims	(0.5)	
PPCI increase for Transitional Claims	(3.2)	
Subtotal		(3.7)
Total		(3.5)

8.3 Corporation Legal

Corporation Legal refers to the legal fees paid to ReturnToWorkSA's contracted legal advisers. Since 1 January 2013 there have been two legal service providers, Minter Ellison and Sparke Helmore, who were originally paid fees based on the number of matters handled and the complexity of these matters.

Beginning in 2016, an annual contract was agreed upon whereby the contracted legal advisers would be paid a pre-determined fixed fee each month throughout the contract period. Fees for advice and representation pertaining to complex cases are paid at the same rate outlined in the previous contract in addition to the fixed fee each month. This contract has been extended each year since with revised fixed fees.

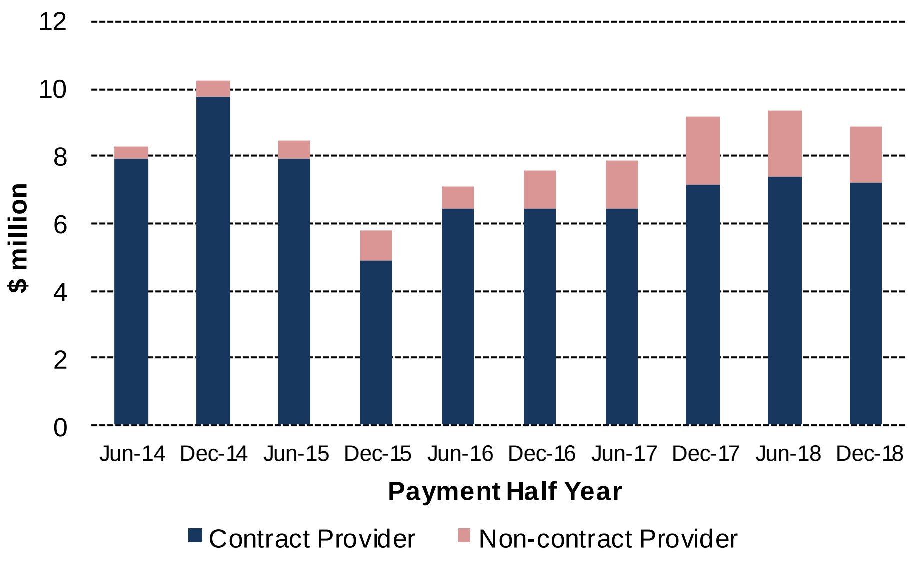
A performance fee is also payable at the end of each contract year based on the achievement of certain performance outcomes. This fee is unchanged for the FY2019 contract.

In addition to the two main legal service providers, ReturnToWorkSA also pay additional providers legal fees related to third party recoveries, staff claims and extra-ordinary matters. These providers are referred to as “non-contract” providers in the remainder of this section of the report.

8.3.1 Experience

Figure 8.4 below shows Corporation Legal payments in each six month period over the last five years.

Figure 8.4 - Corporation Legal Half Yearly Payments



Corporation Legal expenditure in the six months to December 2018 has reduced slightly compared with the June 2018 half-year but remains higher than recent periods due to higher contract and “non-contract” fees. The high amount of “non-contract” fees reflect the high number of legal matters in the Supreme Court as discussed in Section 3.1.1.

Table 8.5 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 8.5 - Actual vs Expected Payments: Corporation Legal

Accident	Payments in Six Months to Dec 18			
Period	Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
Total	8.9	9.3	(0.4)	96%

Overall, actual payments were $0.4 million (4%) lower than expected driven by lower “non-contract” payments as matters have been slow to resolve and remain open in the Supreme Court. A breakdown by accident period is not possible as Corporation Legal payments are not allocated to individual claims.

8.3.2 Valuation Basis

Under the current contract, a fixed amount is paid to both legal providers each month regardless of the number of non-complex matters referred. Table 8.6 below summarises the payments applicable under the current contract.

Table 8.6 - Corporation Legal Contract Components

Matter Type	Contract Terms Current
Advice only	Fixed Fee per month
Dispute representation	Fixed Fee per month
Complex matters	Paid per matter
Performance Fee	Paid at the end of year

To project the future costs of Corporation Legal we have:

- Adopted the fixed monthly fees payable to each provider under the contract
  - The fixed fee per month is unchanged for the June 2019 half-year and reflects the terms of the FY2019 contract. Beyond the current contract, the fees are estimated to remain at a similar level reflecting the recent stability in the number of new disputes in the scheme.
- Estimated the number of complex matters that will be referred each year for the duration of the contract and multiplied this by the relevant fees as specified in the contract terms
  - We have made an allowance for payment of 25 complex matters per month due to the high number of complex matters currently open for transitional claims.
- Allowed for payment of additional performance fees as specified in the terms of the contract as well as outstanding performance fees payable under the previous contract
- Allocated the cash flows in each payment year across accident periods
- Estimated a separate allowance for matters handled by “non-contract” providers.
  - Our base allowance of $1.1 million per half year is unchanged from the previous valuation
  - We have extended our temporary allowance of $1 million per half-year until December 2019 (additional half-year) for Supreme Court matters reflecting the current delay in resolving these matters.

Beyond the current contract, payments for Corporation Legal are projected to increase in line with inflation.

The allocation of cash flows across accident periods is based on the observed experience in Worker Legal costs, with an adjustment to reflect the quicker payment pattern of Corporation Legal costs. As transition claims run-off, dispute lodgements are expected to occur earlier due to the shorter duration of claims under the RTW Act.

8.3.3 Valuation Results and Actuarial Release

Table 8.7 sets out the actuarial release resulting from our valuation of corporation legal payments. The first column represents our projection from the June 2018 valuation.

Table 8.7 - Actuarial Release for Corporation Legal

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
Total	33.0	33.1	0.1	(0.4)	0.3	1%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

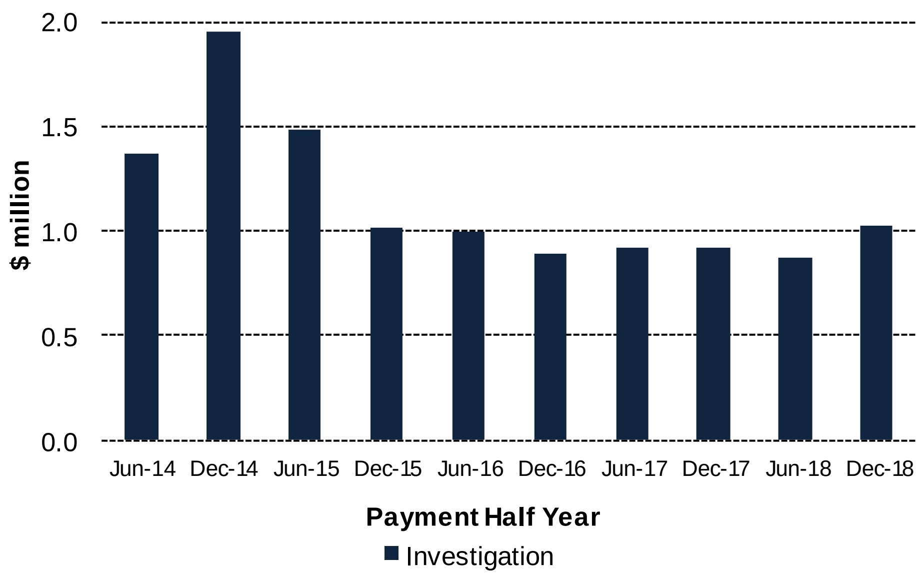
The $0.1 million increase in the projected liability combined with actual payments being $0.4 million lower than expected results in an actuarial release of $0.3 million.

8.4 Investigation

8.4.1 Experience

Figure 8.5 below shows investigation payments in each six month period over the last five years.

Figure 8.5 - Investigation Half Yearly Payments



Investigation spending in the six months to December 2018 was above $1 million per half-year for the first time in two years. The increase coincides with ReturnToWorkSA insourcing the ‘Mobile Insurance Loss Adjusters’ fees which was previously paid to claims agents as part of the agent remuneration.

Table 8.8 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 8.8 - Actual vs Expected Payments: Investigation

Accident Period	Payments in Six Months to Dec 18 Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	n/a
2005/06 - 2012/13	0.0	0.0	(0.0)	88%
2013/14 - 2014/15	0.0	0.0	(0.0)	63%
2015/16 - 2018/19 [1]	1.0	0.8	0.2	122%
Total	1.0	0.9	0.2	118%

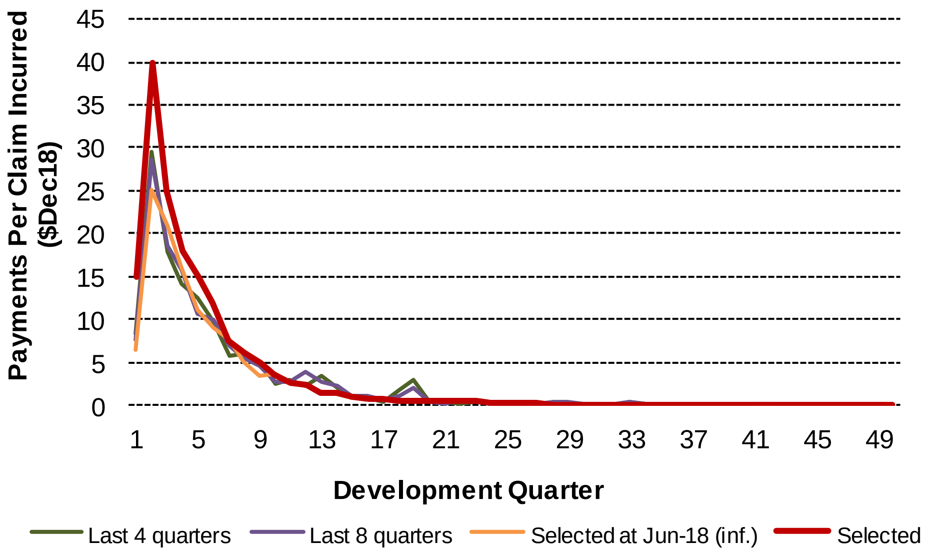
[1] Accidents to Dec18

Overall, actual payments were 18% higher than expected, with higher spending for RTW Act claims.

8.4.2 Valuation Basis

A PPCI model is used to value investigation payments. Figure 8.6 below shows the recent experience and selected basis.

Figure 8.6 - PPCI Experience and Selections: Investigation



We have increased the adopted PPCIs at this valuation to reflect the shift in 'Mobile Insurance Loss Adjustors' fees from claims agents into investigation payments. We have increased our basis by around $50,000 per month, consistent with the amounts previously paid to claims agents. We have not allowed for a different PPCI pattern for transitional claims up to 30 June 2015 on materiality grounds.

8.4.3 Valuation Results and Actuarial Release

Table 8.9 sets out the actuarial release resulting from our valuation of investigation payments. The first column represents our projection from the June 2018 valuation.

Table 8.9 - Actuarial Release for Investigation

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	0.0	(0.0)	
2005/06 - 2012/13	0.1	0.1	0.0	(0.0)	0.0	4%
2013/14 - 2014/15	0.1	0.1	0.0	(0.0)	0.0	12%
2015/16 - 2018/19 [1]	1.8	2.2	0.4	0.2	(0.6)	-30%
Total	2.0	2.4	0.4	0.2	(0.5)	-26%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The $0.4 million increase in the projected liability combined with actual payments being $0.2 million higher than expected results in an actuarial strengthening of $0.5 million.

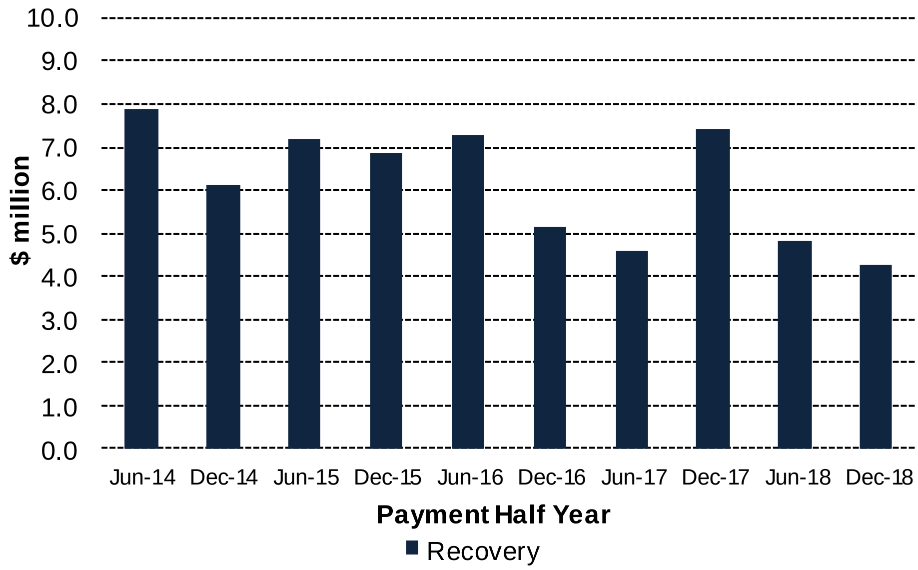
8.5 Recoveries

Recoveries can be made by ReturnToWorkSA from overpayments to workers, from the Motor Accidents Commission (MAC) and private insurers for CTP claims, or from third parties for recoveries relating to negligence claims. Third parties for negligence claims will often be companies engaged in labour hire and owners or head contractors on construction sites, as ReturnToWorkSA cannot recover money from an employer for negligence.

8.5.1 Experience

Figure 8.7 below shows recovery payments in each six month period over the last five years.

Figure 8.7 - Recovery Half Yearly Payments



Recovery payments have generally been lower since 2014 in line with reducing gross payment levels.

Table 8.10 compares the payments in the six months to 31 December 2018 with the expected payments from our June 2018 valuation projection.

Table 8.10 - Actual vs Expected Payments: Recoveries

Accident Period	Payments in Six Months to Dec 18 Actual	Expected	Act - Exp	Act/Exp
	$m	$m	$m	
To 30 Jun 05	(0.0)	0.0	(0.0)	n/a
2005/06 - 2012/13	(1.4)	(0.8)	(0.6)	167%
2013/14 - 2014/15	(2.0)	(1.3)	(0.7)	151%
2015/16 - 2018/19 [1]	(0.8)	(1.0)	0.2	80%
Total	(4.3)	(3.2)	(1.1)	134%

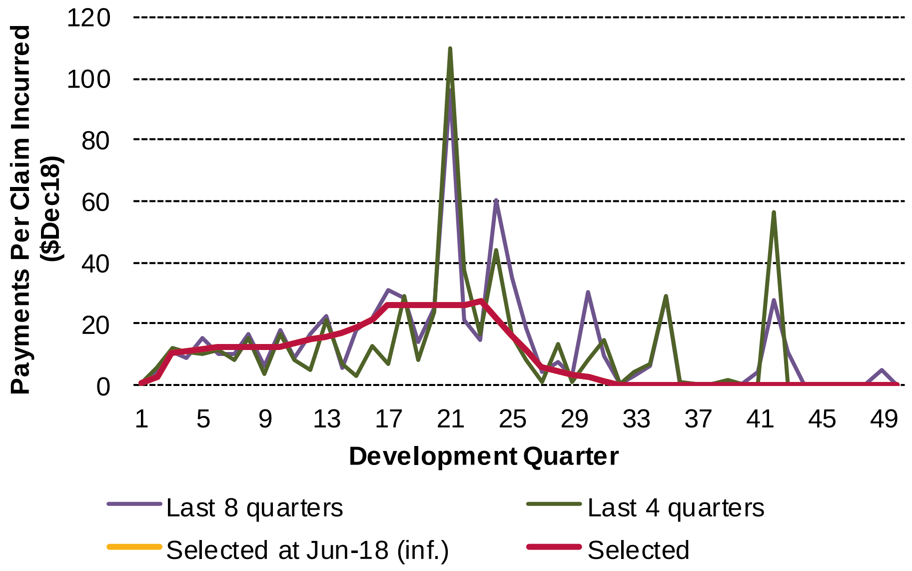
[1] Accidents to Dec18

Overall, actual recovery payments were higher than expected ($1.1 million more than expected) due to recoveries from transitional claims.

8.5.2 Valuation Basis

A PPCI model is used for recovery payments. Figure 8.8 below shows the recent experience and selected basis.

Figure 8.8 - PPCI Experience and Selections: Recoveries



Our selected recovery PPCI assumptions are unchanged at this valuation and is in line with the experience at early durations. Our selection is lower than the experience at longer durations and reflects our expectation of the lower recoverability of costs going forward under the RTW Act (where gross payments are lower), and following CTP reforms in 2014. We have also removed the previous superimposed inflation allowance, to align with more stable and shorter tail recoveries projected in future.

8.5.3 Valuation Results and Actuarial Release

Table 8.11 sets out the actuarial release resulting from our valuation of recovery payments. The first column represents our projection from the June 2018 valuation.

Table 8.11 - Actuarial Release for Recoveries

Accident Period	Projected Liab at Dec 18 from Jun 18 Valuation[1]	Dec 18 Estimate on Jun 18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 mths to Dec 18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	0.0	0.0	0.0	(0.0)	0.0	
2005/06 - 2012/13	(0.7)	(0.7)	0.0	(0.6)	0.6	-80%
2013/14 - 2014/15	(5.2)	(5.1)	0.1	(0.7)	0.6	-11%
2015/16 - 2018/19 [1]	(19.2)	(18.7)	0.5	0.2	(0.7)	4%
Total	(25.1)	(24.5)	0.6	(1.1)	0.5	-2%

[1] Accidents to Dec18

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The overall actuarial release of $0.5 million is a combination of actual recoveries being $1.1 million above expectations partially offset by a reduction in recoveries due to the removal of the superimposed inflation allowance at the current valuation.

8.6 LOEC, Commutations, and Common Law

LOEC, Commutations, and Common Law are small entitlements with little outstanding claims liability.

8.6.1 LOEC

Loss of Earning Capacity (LOEC) claims are a legacy feature of the portfolio, and are valued together with Short Term claims. At 31 December 2018, there are only five remaining claims. The basis is largely unchanged from our previous valuation.

8.6.2 Commutations

Commutation payments relate to claims receiving dependant benefits. Payments in the last six months were around $0.4 million higher than expected driven by one large commutation.

We have reduced our basis at this valuation consistent with the payment experience over the last five years.

8.6.3 Common Law

There were no common law payments in the last six months. The common law entitlement for short term claims relates to a small number of infrequent but relatively large claims related to other jurisdictions, and needs to be considered over long time horizons. Having taken this into consideration we have left the valuation basis unchanged.

Common law entitlements for some Serious Injury claims are considered in Section 9.

9 Serious Injury Claims

9.1 Overall Results

Table 9.1 shows the central estimate of Serious Injury claims costs at 31 December 2018, and the movement in our liability estimates since the June 2018 valuation.

Table 9.1 – Serious Injury claims Valuation Results (excluding CHE)

	Income Support	Medical	Other (Care)	Hospital	Travel	Rehabilitation	Physical Therapy	Investigation	Legal - Non-Contract	Legal Contract	Lump sums	Recoveries	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Jun-18 Valuation													
Estimated Liab at Jun-18	350	494	367	95	52	38	39	1	9	9	59	-28	1,486
Projected Liab at Dec-18	358	516	380	100	55	39	41	1	9	10	53	-29	1,532
Dec18 Valuation													
Impact of experience/basis change	7	5	0	-3	-6	-22	-10	0	1	1	17	0	-10
Estimated Liab at Dec18 (Jun18 ecos)	**365**	**521**	**381**	**97**	**49**	**17**	**30**	**1**	**10**	**11**	**70**	**-29**	**1,522**
Impact of change in ecos	8	24	17	4	2	1	1	0	0	0	1	0	59
Estimated Liab at Dec18 (Dec18 ecos)	**372**	**545**	**397**	**101**	**52**	**18**	**32**	**1**	**11**	**11**	**71**	**-29**	**1,581**
AvE Payments - six months to Dec-18	-1	-2	0	0	0	0	0	0	0	0	-10	1	-12
Actuarial Release at Dec-18	-5	-3	-1	3	6	22	10	0	-1	-1	-7	-1	22

The outstanding claims cost for Serious Injury claims (excluding CHE), is $1,581 million at 31 December 2018. The main movements from our June 2018 projection of the December 2018 liability are:

- Claims experience and basis changes reducing the liability by $10 million, as a result of:
  - The removal of claims previously included which are reliant on the *Mitchell* decision, reducing the liability by $24 million
  - Net changes to claim numbers (including IBNR claims) increasing the liability by $24 million
  - A wholesale review of the ongoing cost of EnABLE claims reducing the liability by $28 million (this is discussed further below)
  - Other basis and assumption changings leading to an increase of $17 million, predominantly related to an increase to the level of Care for accident years 2011 to 2014 based on the high proportion of Care needs that are currently unpaid for this cohort
- The change in economic assumptions at the current valuation – principally the decrease in the long term discount rate assumption, increases the estimated liability by $59 million. The impact of the change in economic assumptions is discussed in Section 11.3.2.

The remainder of this section deals with the claims experience and basis changes.

9.2 Background

"Serious Injury" claims are those with WPI of 30% or more, who are eligible to receive Income Support to retirement and other benefits for life under the RTW Act.

As Serious Injury claims were not identified before the RTW Act commenced, there is uncertainty as to the precise number and characteristics of the now Serious Injury cohort. Our Serious Injury cohort includes:

- Known Serious Injury claims, comprising:

  - Claims managed internally by ReturnToWorkSA in the EnABLE group, which generally are more like Severe Traumatic Injuries (i.e. they require significant levels of care and support, or else have other special needs)
  - Other Serious Injuries with a confirmed WPI assessment of 30% of more, but not internally managed by ReturnToWorkSA
- Other 'potential' Serious Injury claims – these are claims who have not yet been formally assessed as Serious Injury, but who are considered likely to do so at some point in future.
  - Over the last six months ReturnToWorkSA have moved towards a more formal process for assessing claims' Serious Injury likelihood prior to an official assessment date. This has resulted in a speeding up of emergence patterns for Serious Injury claims; this can be seen in the high number of claims from 2017 already identified, relative to earlier accident years at the same point. We expect that this early identification will continue at future valuations, meaning there is a material number of claims in the 'potential' group at any point in time.
  - For older accident years, there is a pool of claims that have features that indicate they would have likely been a Serious Injury claim, but have ceased interaction with the Scheme before a formal assessment took place (for reasons such as redemptions). As there is no future liability associated with these claims, there is no onus on ReturnToWorkSA to make a clear determination on their Serious Injury status and as such remain 'potential' Serious Injury claims. However, we continue to count them as a Serious Injury claims for valuation purposes in order to understand potential numbers.
- IBNR claims that will be identified in future.

9.3 Valuation Approach

As Serious Injury claims are essentially entitled to lifetime benefits, it is important to consider the characteristics of individual claims when projecting future costs. Our valuation approach therefore projects future claim costs individually for each claim by payment type.

Due to significant differences in the level of incapacity and associated treatment and care costs, we have separately modelled 'Severe Traumatic Injury' claims and 'Other Serious Injury' claims, and our assumptions have been set as described in Appendix A and summarised in the following table.

Table 9.2 – Approach to Setting Valuation Assumptions for Serious Injury claims[1]

	Severe Traumatic Injuries	Other Serious Injury
Life expectancy	Mortality improvement of 1.5% p.a. Mortality loadings for claims with high care needs (reducing life expectancy by 19 years) and for moderate care needs (reducing life expectancy by 7 years).	Mortality improvement of 1.5% p.a.
Income Support	To retirement age on all operationally active claims. Based on historical experience and estimates provided by ReturnToWorkSA.	To retirement age on all operationally active claims. Based on historical experience.
Treatment Related Costs and Other[2]	Paid for life. Based on historical experience and estimates provided by ReturnToWorkSA, with the exception of Hospital, which is based on selected payment per active	Paid for life. Early duration claims (in the treatment and recovery phase) based on payment per active claim curves selected from this

	Severe Traumatic Injuries	Other Serious Injury
	claim curves for this cohort. Allowed for IBNER on Other and Medical costs above identified costs.	cohort. Mid-to-long duration claims (in the maintenance phase) based on historical experience.
Lump sums[3]	Paid to claimants who have not already had a lump sum, based on assessed WPI, or an assumed average WPI if no assessment has been undertaken as yet.	
Legal and Investigation	Legal costs are modelled as a percentage of IS costs, net of payments to date. An average ultimate investigation cost is made per claim, net of payments to date.	Modelled as payment per claim incurred.
Recoveries	Projected on claims identified by ReturnToWorkSA as having recovery potential.	Applied a recovery as a proportion of gross payments for future periods.
Common Law	Not available to pre-1 July 2015 claims, and included in the cost of statutory entitlements for post-1 July 2015 claims.	
Future cost escalation	WCI: IS AWE: Recoveries, Treatment and Other, Legal and Investigation Superimposed: 2% p.a. on Treatment and Other Needs Utilisation: 75% loading applied at age 65 on Treatment and Other.	WCI: IS AWE: Recoveries, Treatment and Other, Legal and Investigation Superimposed: 2% p.a. on Treatment and Other
IBNR Assumptions	IBNR claims in the latest four accident years only. Claim size based on historical experience on current claims.	IBNR claims on all accident years, reflecting outstanding Serious Injury applications and WPI disputes (for older accident periods) and the delay from injury to WPI assessment (for newer accidents). Claim size based on historical experience on current known and potential claims.

[1] Projected costs are those paid after the claim has been identified as Serious Injury.

[2] Treatment related costs relate to Medical (including Aids and Appliances), Hospital, Rehab, Physio and Travel. Other costs have been split into “Care” and “Other” for the purposes of the valuation. Care relates to services such as attendant, respite and/or nursing care. The remaining payments in ‘Other’ mainly relate to home and vehicle modifications and domestic services.

[3] Impairment lump sum only. Serious Injury claims are not entitled to the Future Economic Loss lump sum.

The Severe Traumatic valuation is reliant on estimates provided by ReturnToWorkSA. At the previous valuation it was identified that the approach recently taken to calculate these estimates had changed (unintentionally) and that estimates were more short term focused and not necessarily appropriate for a lifetime valuation.

Over the last six months ReturnToWorkSA has undertaken a review of all current Severe Traumatic claims, with updated estimates focussed on long-term needs of these claims. This has been a comprehensive process with initial estimates provided by claims officers and disability support consultants within the EnABLE unit and all significant movements reviewed by claims services.

This has resulted in material movements in estimates at both an individual claim and aggregate level. Therefore, before adopting these revised estimates we have investigated their appropriateness for valuation purposes, concentrating on the implied future aggregate cashflows compared to historical payments and by discussing individual claim movements with ReturnToWorkSA.

Overall we are satisfied that the updated estimates capture recurrent costs and for some payment types (e.g. rehabilitation and physiotherapy) the revised cashflows appear much more aligned to historical levels. However, intermittent or one off costs remain difficult to estimate on an individual claim basis. As such, we continue to apply our Medical IBNER loading which takes into account costs that are hard to accurately estimate and this allowance serves to offset some of the reduction to the valuation due to changes to individual estimates.

The approach to modelling Other Serious Injuries smooths out volatility seen early in the life of many Serious Injury claims, to reflect the general reduction in medical and related costs as claims move from the initial ‘recovery’ phase in the first few years to a longer term ‘maintenance’ level. The key features are:

- Aggregate models were built for all payment types, with the exception of Lump Sums
- The models selected for each payment type are as follows:
  - Income Support, Treatment and Other – Payments per Active Claim. The only decrement for Treatment and Other payments is mortality, while Income Support payments have an additional decrement for retirement.
  - Legal and Investigation – Payments per Claim Incurred
  - Recoveries – Proportion of Gross Payments
- These models were adopted for the following:
  - All IBNR claims and future accident years
  - All Legal, Investigation and Recovery payments
  - All Treatment and Other payments for claims less than five years old. The utilisation of these benefits tends to be heightened at early durations, making it difficult to select future payment levels based on a claimant’s historical experience. When aggregated across all claims the shape to this utilisation can be captured and applied up to a point (that has been selected as five years), where the Treatment and Other needs have stabilised.

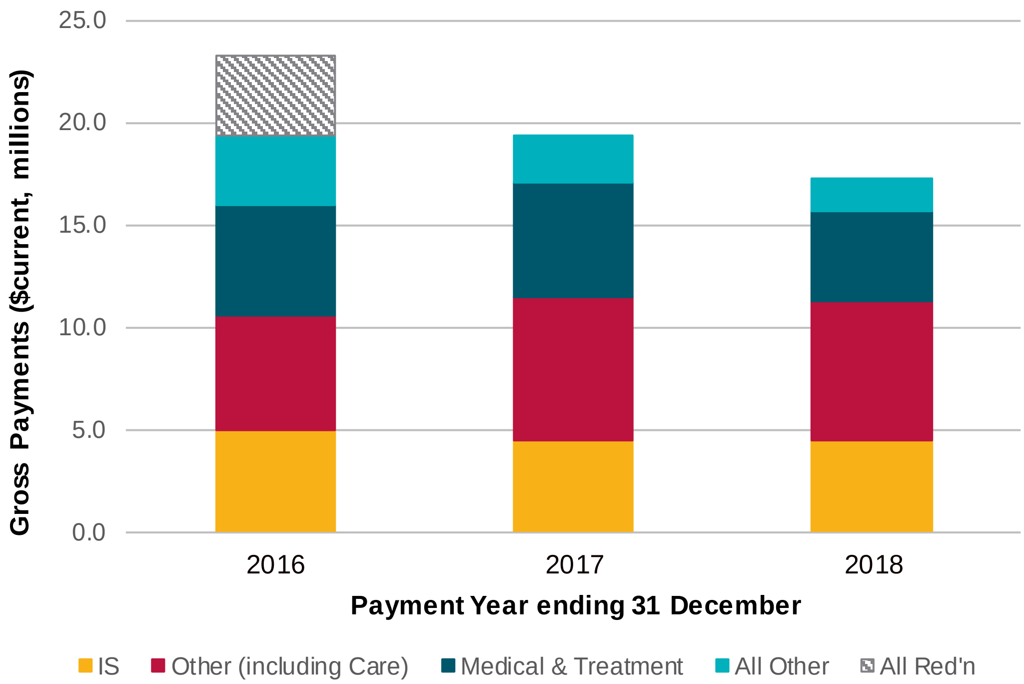
One of the key determinants of very long term costs will be how much, if any, of the costs associated with ageing are compensated out of the compensation scheme. For example, whether ReturnToWorkSA will fund the full costs of living in a nursing home for an elderly claimant or just the additional care costs associated with the original injury is at this stage still in the early stages of being worked through, but will become increasingly important as the Severe Traumatic Injury claimants age. Our basis does not attempt to capture the full costs for age related care and support, which is consistent with the current understanding of the approach to aged care related costs being funded.

9.4 Valuation of Severe Traumatic Injury claims

9.4.1 Payments by Type

Figure 9.1 shows claim payments over the past three years for Severe Traumatic Injury claims.

Figure 9.1 – Severe Traumatic Injury Claim Payments ($Dec-18)



$60 million has been paid to Severe Traumatic Injury claims in the last three years. After allowing for recoveries of almost $9 million over this same period and excluding redemptions, this equates to an average of around $16 million per annum in net claim payments (inflated to 31 December 2018 values), comprising around:

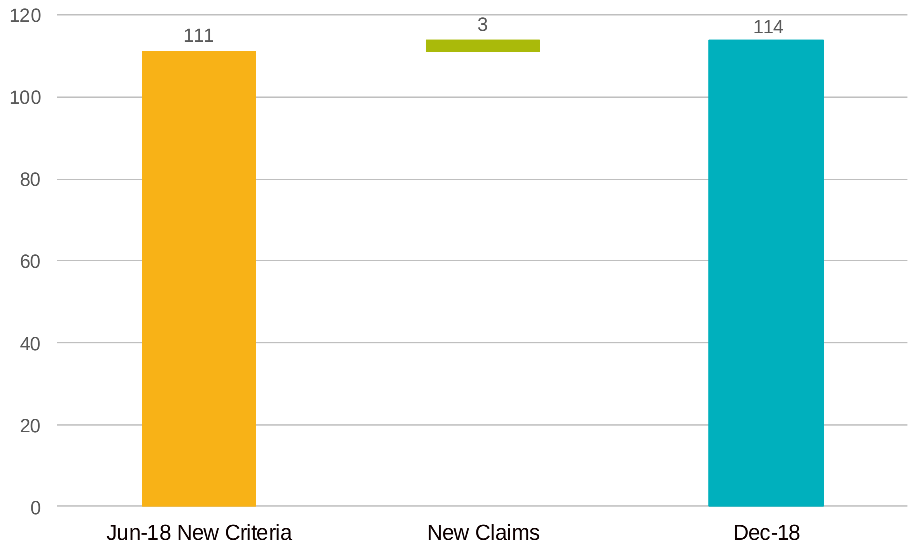
- $6 million per annum in care and other costs
- $5 million per annum in medical, treatment and related benefits
- $5 million per annum in Income Support
- $2 million per annum in lump sums
- Small amounts of legal and investigation payments ($0.4 million per annum)
- $3 million per annum in recoveries.

As Figure 9.1 shows, there were a number of redemption payments on this group, which relate to negotiations commenced prior to introduction of the RTW Act and IS only redemptions. It is not expected that redemptions will be an ongoing feature for Serious Injury claims.

9.4.2 Claimant Profile

Figure 9.2 shows the number of active Severe Traumatic Injury claims (i.e. those being valued) at the current and previous valuations, along with the reasons for movement in the number of claims being valued.

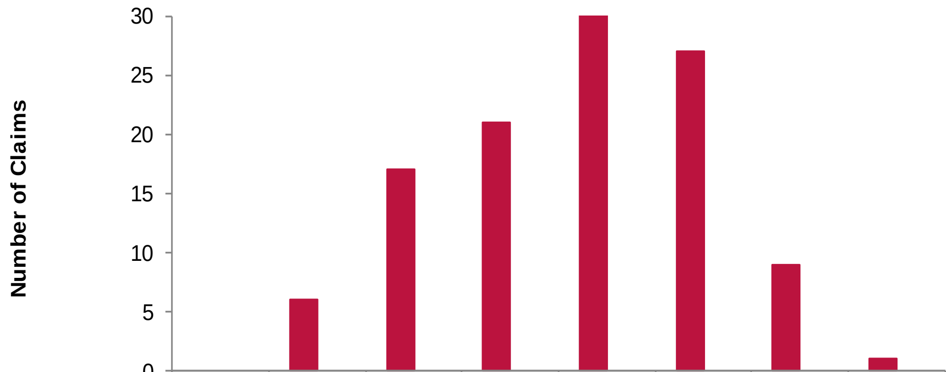
Figure 9.2 – Movement in Severe Traumatic Injury Claim Numbers



There are 114 active (i.e. with expected ongoing benefits) Severe Traumatic Injury claims at December 2018, compared to 111 at the previous valuation. This increase was due to three new claims, one of which was valued in the Other Serious Injury cohort at June 2018. New claim numbers continue to be lower than expected for this group of the most seriously injured claimants, although we have been advised of five additional claims that have recently been identified, three of which are currently part of the Other Serious Injury cohort.

Figure 9.3 shows the age and life expectancy of the current Severe Traumatic Injuries.

Figure 9.3 – Age Distribution and Life Expectancy (in years) of Severe Traumatic Injuries



	<20	20s	30s	40s	50s	60s	70s	Older
Number of Claims	0	6	17	21	33	27	9	1
Loaded Life Expectancy	0	62	47	38	28	19	12	5

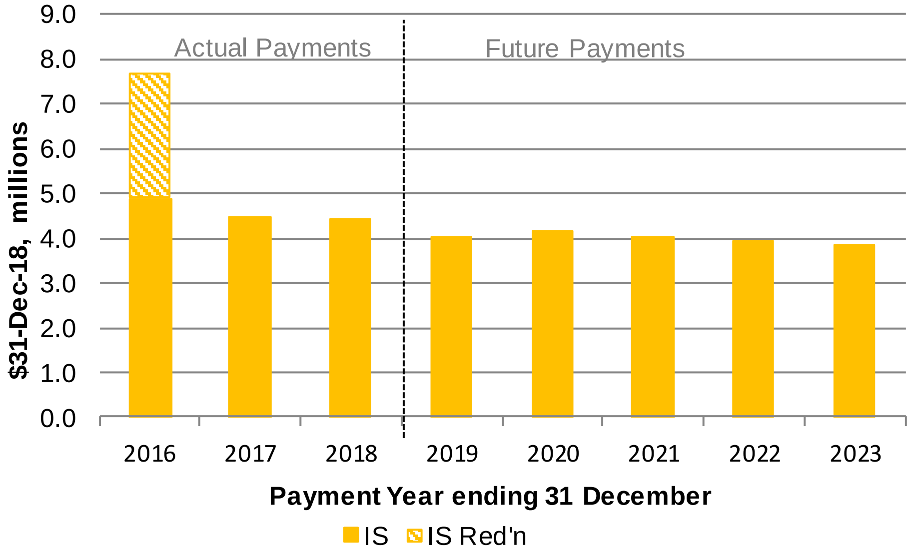
Severe Traumatic Injury claimants are currently around 54 years old on average, with an expected future life expectancy of around 31 years (after allowing for mortality, mortality improvements and mortality loadings). The average age at injury was about 40 years.

Over half of the current Severe Traumatic Injuries have a WPI assessment, with an average WPI of around 53%; the relatively low completion rate is partly explained by older claims being paid their lump sum prior to the introduction of WPI assessments in 2009. At this valuation, there were 12 claims with recorded WPI assessments less than 30%; ignoring these claims, the average assessed WPI is close to 60%.

9.4.3 Income Support

Figure 9.4 shows historic and projected Income Support payments for Severe Traumatic Injury claims (including IBNR claims, but only on existing accident years).

Figure 9.4 – IS Payments – Severe Traumatic Injury claims ($Dec-18)

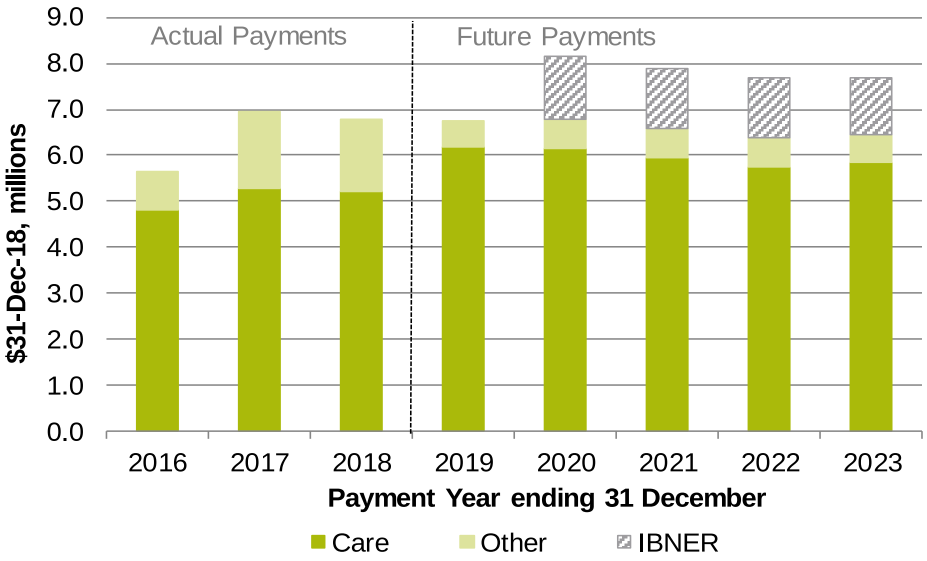


We estimate around $4.0 million will be paid in Income Support to Severe Traumatic Injury claims in 2019. Future payments reduce over time in line with changes in replacement ratios, expected mortality and retirement, with the outstanding claim projection equivalent to 16 years of the 2019 payments (for known claims).

9.4.4 Care and Other Costs

Figure 9.5 shows historic and projected care and other payments for Severe Traumatic Injury claims (including IBNR claims).

Figure 9.5 – Other (incl. Care) Payments – Severe Traumatic Injury claims ($Dec-18)

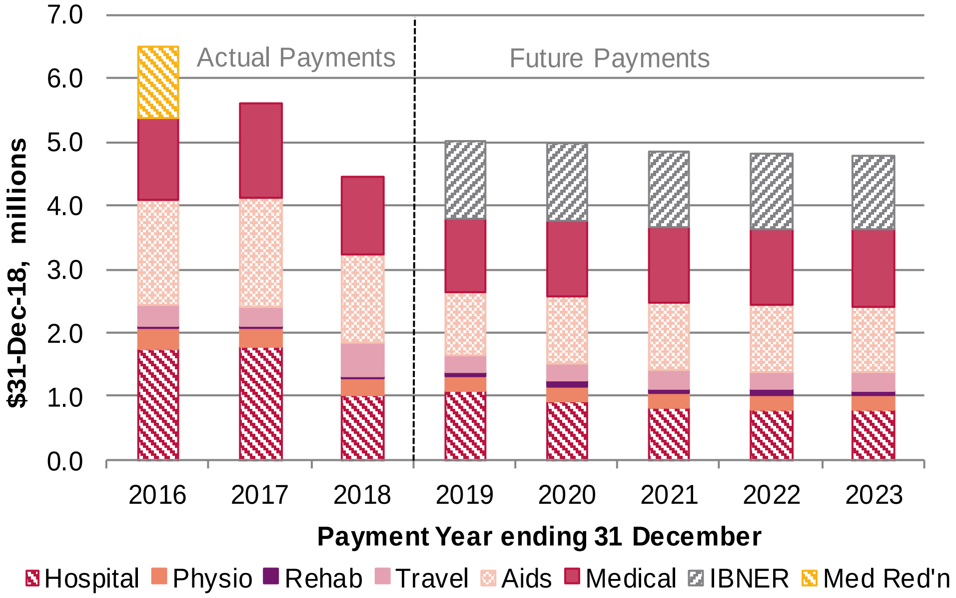


We expect $6.8 million of other and care payments in 2019, which is similar to the 2018 year. Payments then increase in the short term due to allowance for new Severe Traumatic (IBNR) claims and our IBNER allowance which is intended to capture an annualised contribution for other benefits (primarily modifications and transfers from initial hospital care into home care). These increases are slowly offset by reductions due to mortality, with the outstanding claims projection equivalent to 32 years of the 2019 payments, including the IBNER allowances.

9.4.5 Treatment and Related Costs

Figure 9.6 shows historic and projected treatment and related costs for Severe Traumatic Injury claims (including IBNR claims).

Figure 9.6 – Treatment and Related Payments – Severe Traumatic Injury claims ($Dec-18)

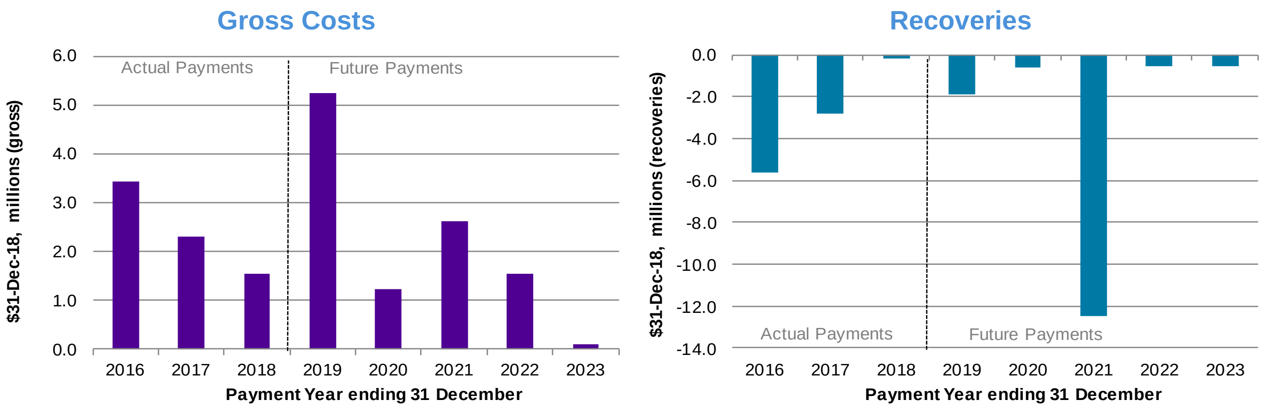


We expect future treatment and related payments of $5.0 million in 2019, similar to the average of 2017 and 2018. The outstanding claims projection is equivalent to 33 years of the 2019 payments.

9.4.6 All Other Payments

The following graph shows historic and projected other benefits for Severe Traumatic Injury claims – this includes one-off payments such as permanent impairment lump sums and recoveries, and smaller payments such as legal and investigation costs.

Figure 9.7 – All Other Payments – Severe Traumatic Injury claims ($Dec-18)



In the three years to 31 December 2018, a net amount of -$0.4 million of other benefits was received for Severe Traumatic Injury claims. Our future projections for claims occurring prior to 31 December 2018 include:

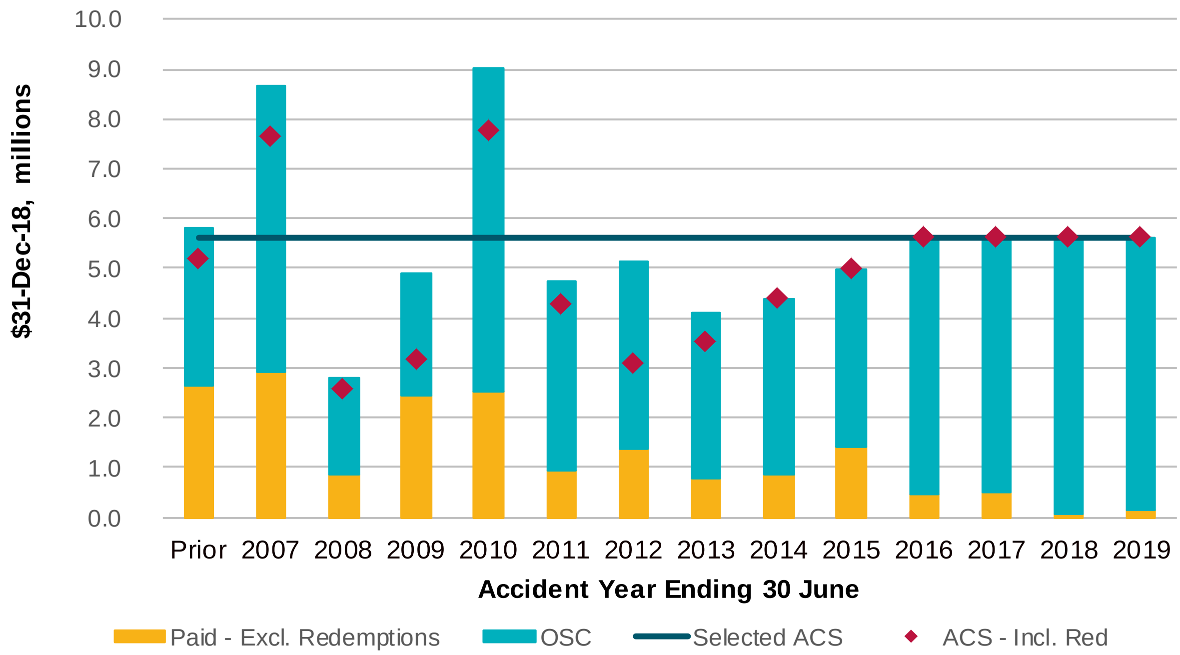
- Lump sum benefits of $9.7 million paid to Serious Injury claims who have not yet had a lump sum paid
- Legal and investigation costs of $1.7 million
- Recoveries of $16.1 million, for those claims where ReturnToWorkSA has identified recovery potential.

Due to the one-off nature of most of these payments, the outstanding liability is a much lower multiple of 2019 expenditure.

9.4.7 Overall Results and Implications

Figure 9.8 shows the net ultimate average claim size across current Severe Traumatic Injury claims. There is still a large share of the cost that is due to projected future payments, and so there is greater uncertainty about ultimate costs than in other areas of the valuation.

Figure 9.8 – Average Claim Size – Reported Severe Traumatic Injury Claims ($Dec-18)



The average claim size across current Severe Traumatic Injury claims is around $4.9 million in current dollar values; however, this includes claims that have been redeemed at less than the full lifetime value. Excluding redeemed claims the average claim size is $5.4 million, which is similar to the projected average size ($5.6m) for recent accident years where injuries are yet to stabilise. This is similar to the previous valuation.

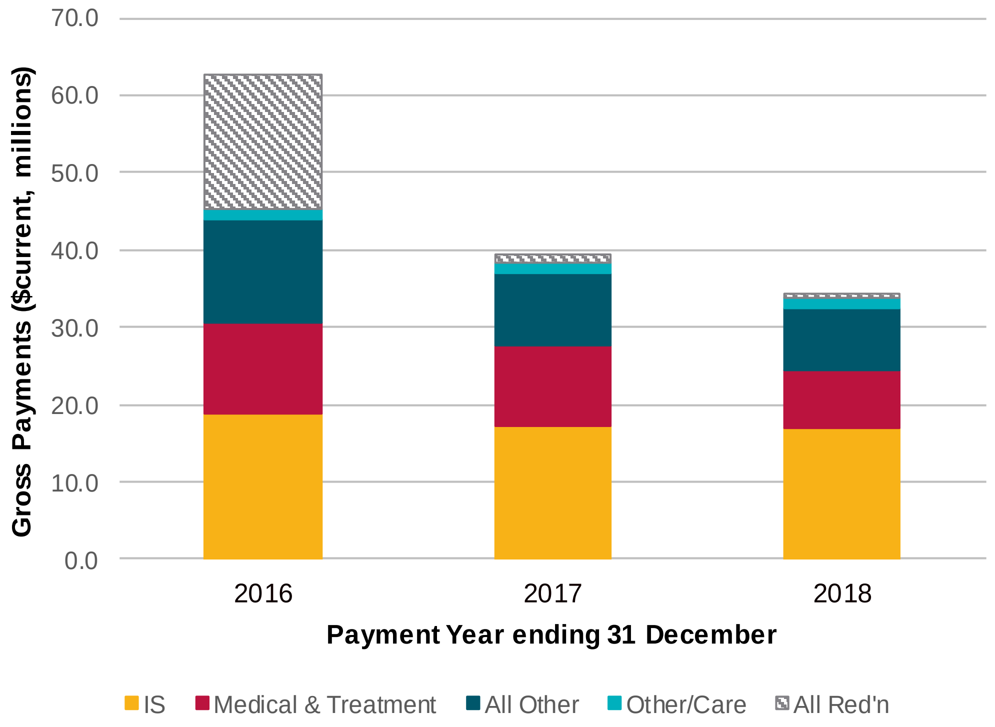
In aggregate we have reduced claim numbers for Severe Traumatic Injury claims in recognition of consistently lower than expected new claims coming into the EnABLE group over the last few valuations, which reduces the ultimate costs for the last few accident years. Discussions with ReturnToWorkSA indicate that the reduction in Severe Traumatic Injury claims is due to a more consistent criteria being introduced for claims that will be accepted into EnABLE.

9.5 Valuation of Other Serious Injury claims

9.5.1 Payments by Type

Figure 9.9 shows claim payments over the past three years for the Other Serious Injury claims (i.e. excluding the Severe Traumatic Injuries).

Figure 9.9 – Other Serious Injury Claim Payments ($Dec-18)



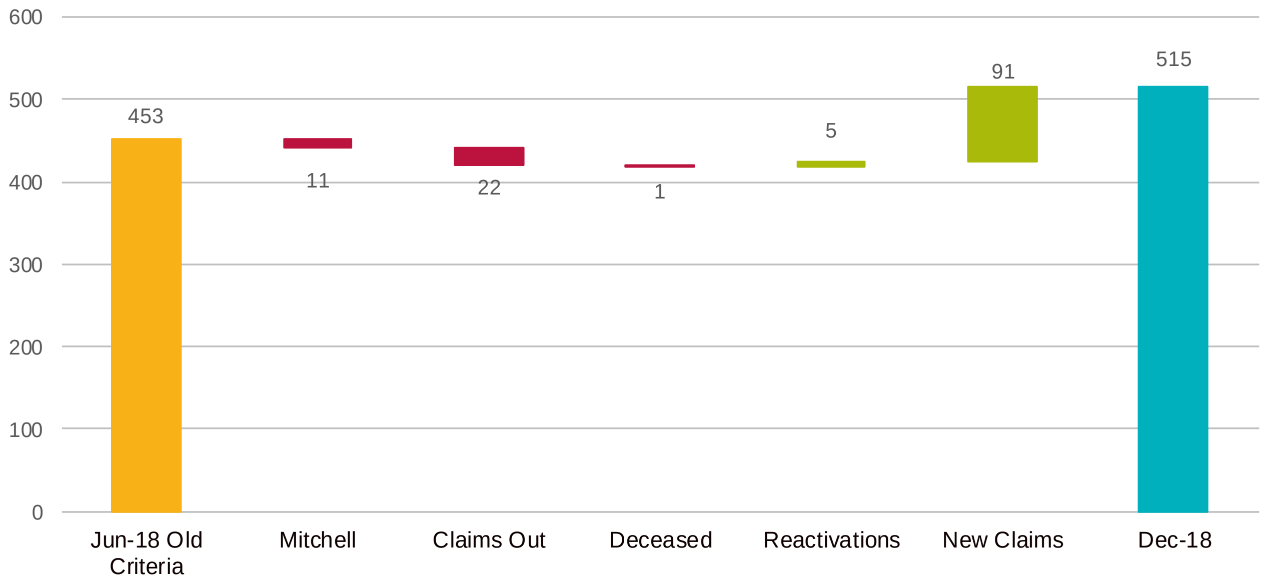
Around $136 million has been paid to Other Serious Injury claims in the last three years. After allowing for recoveries of around $1 million over this same period and removing redemptions, this equates to an average of around $38 million per annum in net claim payments (inflated to 31 December 2018 values), comprising:

- $18 million per annum in Income Support
- $10 million per annum in medical, treatment and related benefits
- $8 million per annum in lump sums
- Small amounts of other benefits ($3 million)
- $1 million per annum in recoveries.

9.5.2 Claimant Profile

Figure 9.10 shows the number of active Other Serious Injury claims (i.e. those being valued) at the current and previous valuation.

Figure 9.10 – Movement in Other Serious Injury Claim Numbers



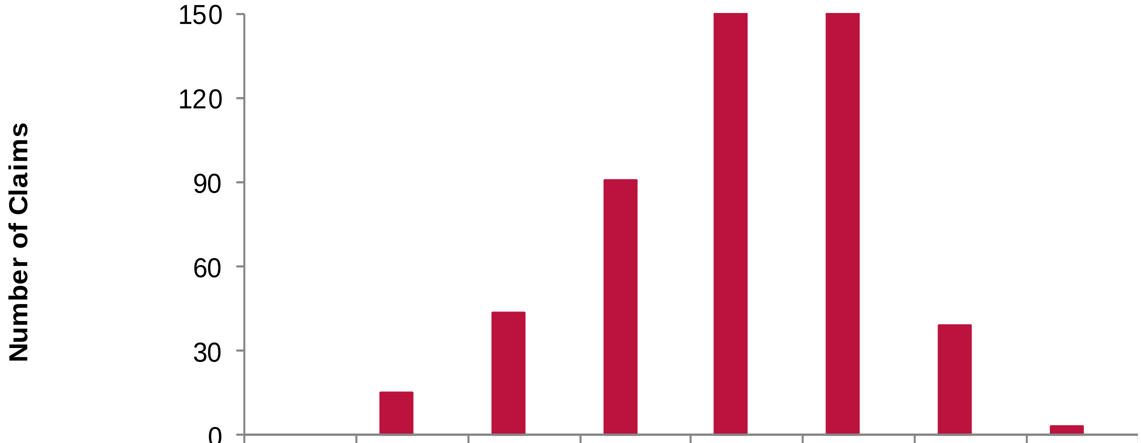
There are 515 active (i.e. with expected ongoing benefits) Other Serious Injury claims at December 2018, compared to 453 at the previous valuation. The major reasons for this change are:

- *Mitchell* – reduction of 11 claims. These are claims that were valued at June 2018, despite being reliant on the *Mitchell* decision. In order to comply with the SAET decision to continue payments for these claims, ReturnToWorkSA had to flag them as Serious Injury claims on their system, which resulted in them being picked up for valuation purposes. Once this issue was identified, ReturnToWorkSA identified the affected claims and we manually removed them from our serious injury valuation. Controls and system processes are now in place to ensure claims temporarily considered Seriously Injured as a result of the *Mitchell* decision are appropriately identified and not incorrectly included in future valuations.
- Claims Out – reduction of 22 claims. This largely refers to claims from the 'potential' cohort which were either reviewed and found to not meet the eligibility criteria for a Serious Injury claim, have low likelihood of being assessed as a Serious Injury claim or additional information has meant that their likelihood of becoming a Serious Injury claim has been revised.
- Deceased – one claimant
- Reactivations – increase of five claims. This increase is due to claims that at June 2018 had been closed for more than 12 months but have been reopened sometime in the last six months, suggesting that there is a low level of underlying churn in claim status for these claims.
- New Claims – increase of 92 claims. This level of increase is far higher than we would usually anticipate over a six month period; however ReturnToWorkSA has formalised their approach to assessing the 'potential' cohort of claims which appears to have led to earlier identification of claims.

With the portfolio still maturing we would generally expect the number of Other Serious Injury claims to increase, broadly in line with the number of new claims each year, as discussed in Section 4.2).

Figure 9.11 shows the current age and life expectancy of the known and potential Other Serious Injury claims.

Figure 9.11 – Age Distribution and Life Expectancy (in years) for Other Serious Injury claims



	<20	20s	30s	40s	50s	60s	70s	Older
Number of Claims	0	15	44	91	168	156	39	3
Life Expectancy	0	62	52	41	31	23	14	8

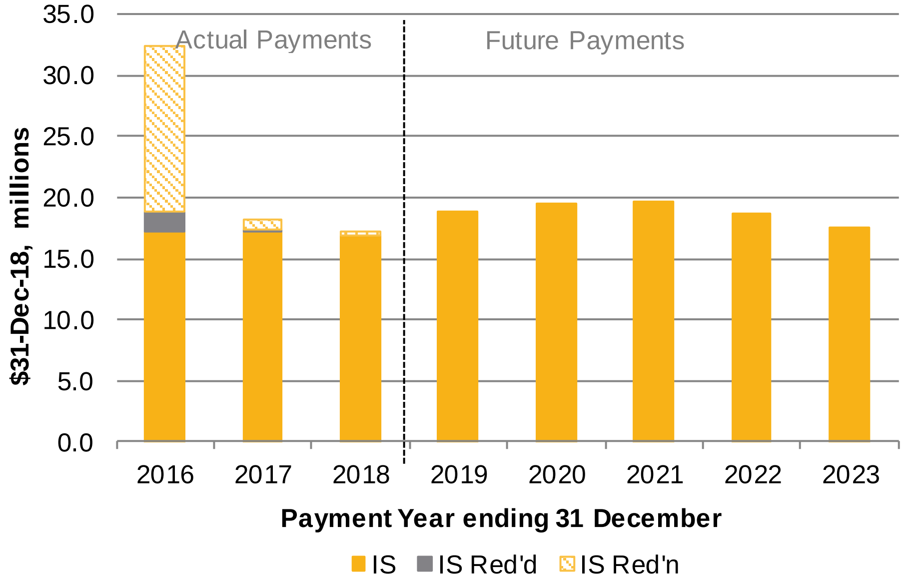
The Other Serious Injury claims are currently around 56 years old on average, with an expected future life expectancy of 31 years (after allowing for mortality, including mortality improvements). The average age at injury was 46 years.

Around 64% of the current Other Serious Injuries have had a WPI assessment, averaging around 36% WPI. At this valuation, there were 54 claims with recorded WPIs below 30%. The average impairment level excluding these low assessments is around 38%.

9.5.3 Income Support

Figure 9.12 shows historic and projected Income Support payments for Other Serious Injury claims (including IBNR claims). The grey bars indicate Income Support payments for claims who have since been redeemed.

Figure 9.12 – IS Payments – Other Serious Injury claims ($Dec-18)

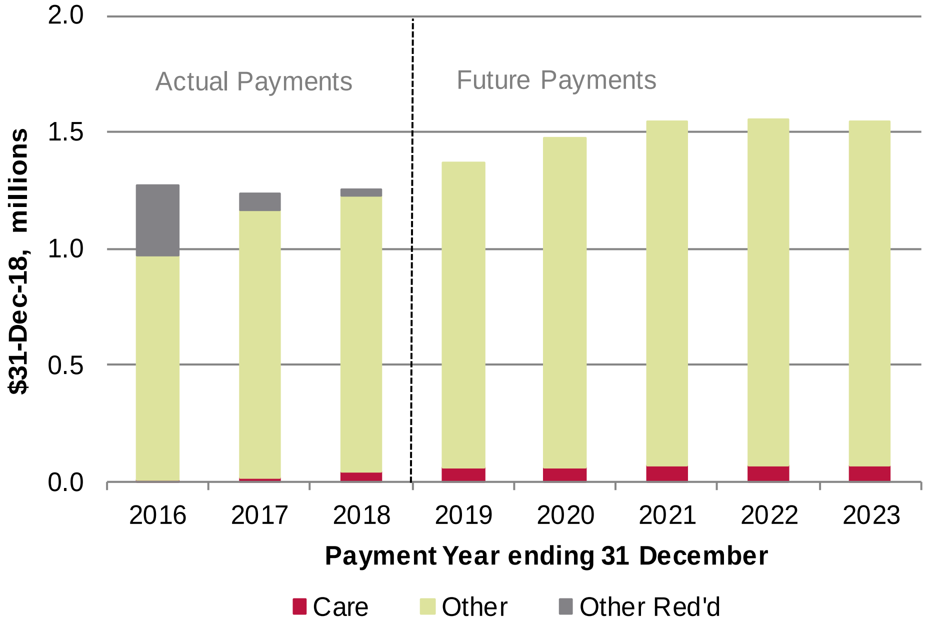


We estimate around $19 million will be paid in Income Support to Other Serious Injury claims in 2019. Future payments will generally reduce over time in line with expected mortality and retirement, although there is an increase between 2018 and 2019 due to most IBNR claims being assumed to emerge in the next year.

9.5.4 Care and Other Costs

Figure 9.13 shows historic and projected care and other payments for Other Serious Injury claims (including IBNR claims). The grey bars indicate Care and Other payments for claims who have since been redeemed.

Figure 9.13 – Other (incl. Care) Payments – Other Serious Injury claims ($Dec-18)

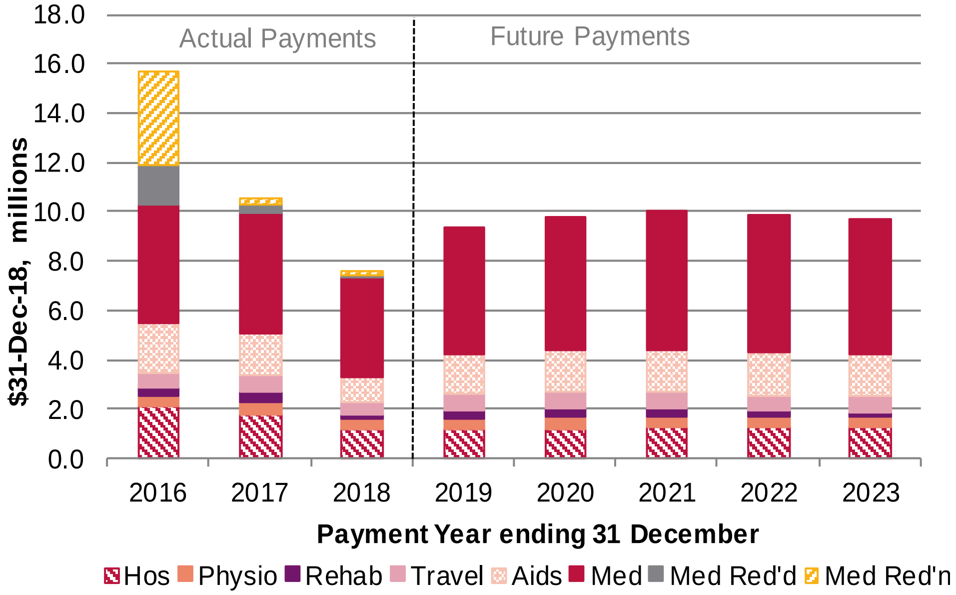


Other Serious Injury claims receive very little in care costs. We expect around $1.5 million in other payments in 2019 with an increase from the 2018 level due to IBNR claims.

9.5.5 Treatment and Related Costs

Figure 9.14 shows historic and projected treatment and related costs for Other Serious Injury claims (including IBNR claims). The grey bars indicate Medical and Treatment payments for claims who have since been redeemed.

Figure 9.14 – Treatment and Related Payments – Other Serious Injury claims ($Dec-18)

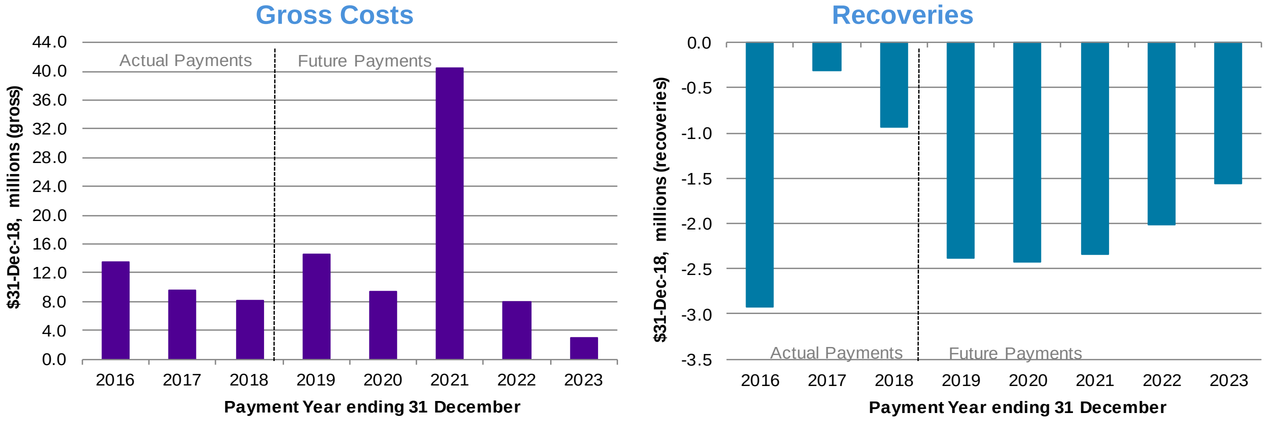


We expect treatment and related payments of $9.3 million in 2019 for ongoing claims, after lower costs in 2018. Payments increase in 2019 due to IBNR claims offset by reductions in line with mortality.

9.5.6 All Other Payments

Figure 9.15 shows historic and projected other benefits for Other Serious Injury claims (including IBNR claims).

Figure 9.15 – All Other Payments – Other Serious Injury claims ($Dec-18)



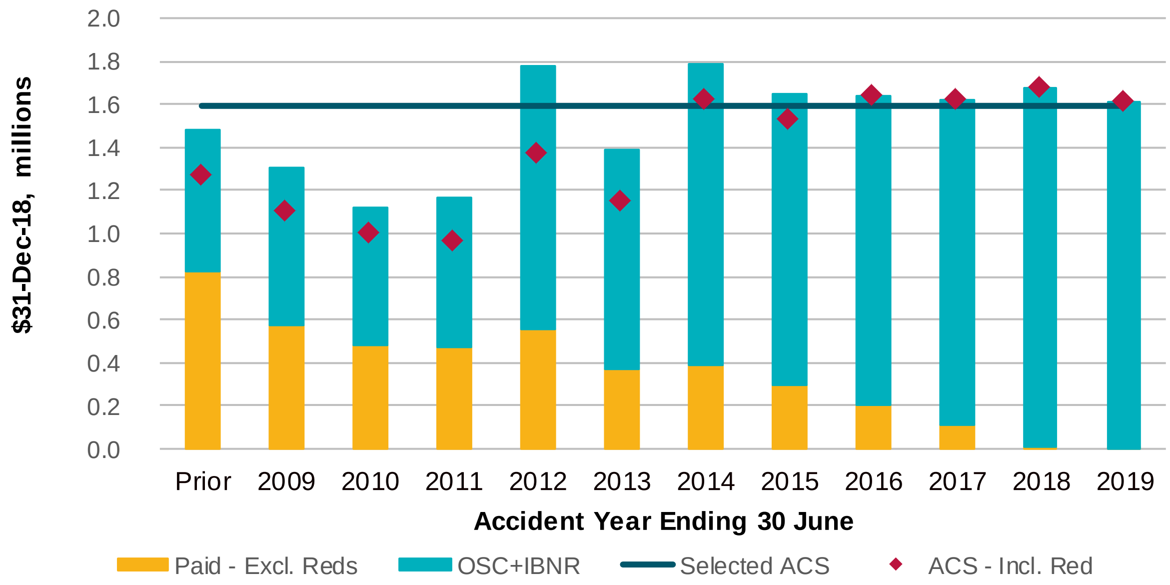
Our future projections include:

- Lump sum benefits of $63.7 million paid to current Other Serious Injury claims who have not yet had a lump sum paid. Lump sum payments on IBNR claims are pragmatically all assumed to be paid 3 years from the valuation date, leading to the spike in payments in 2021.
- Legal and investigation costs of $20.4 million
- Recoveries of $12.6 million.

9.5.7 Overall Results and Implications

Figure 9.16 shows the net ultimate average claim size (inflated to 31 December 2018 values) across all Other Serious Injury claims.

Figure 9.16 – Average Size by Payment Type



The total selected average size is around $1.6 million. Pre 2015 accident years have a lower size due to redemptions on claims for less than lifetime cost. Additionally, the identification of Serious Injury claims for these periods was made difficult due to inconsistent recording of WPI information, meaning it is possible there is some bias towards lower severity claims for these periods. It is not surprising that pre 2014 accident years that have a lower average size are also the periods that have higher claim numbers as shown in Figure 4.5. More detail on the selections underlying this average size can be found in Appendix A.6.4.

9.6 Valuation Results and Actuarial Release

Table 9.3 shows the actuarial release by accident period for Serious Injury claims.

Table 9.3 – Actuarial Release: Serious Injuries

Accident Period	Projected Liab at Dec-18 from Jun-18 Valuation	Dec-18 Estimate on Jun-18 Eco Assumptions	Difference from Projected Liability	Act v Exp Pmts in 6 months to Dec-18	Actuarial Release[2]	Release as %
	$m	$m	$m	$m	$m	
To 30 Jun 05	258.8	254.7	-4.1	-0.7	4.8	2%
2005/06 - 2012/13	585.1	574.0	-11.1	-10.3	21.4	4%
2013/14 - 2014/15	231.1	222.9	-8.2	0.0	8.2	4%
2015/16 - 2018/19[1]	457.5	470.6	13.1	-1.1	-12.0	-3%
Total	1,532.5	1,522.1	-10.3	-12.2	22.5	1%

[2] Includes change in OSC and Act vs Exp payments. Positive values represent accounting profit (valuation release), negative values represent accounting loss

The main reasons for the movements by accident period are as follows:

- Pre 2014 accident periods – the removal of claims that were included in the previous valuation, despite being reliant on the Mitchell decision explains the majority of the release for these periods

- 2014-2015 accident periods – the revised estimates for Severe Traumatic Injuries, particularly for treatment payments more than offset the increases to Other Serious Injury numbers for these periods
- 2016-2018 accident periods – this is largely related to the higher level of estimated Serious Injury numbers for RTW Act periods, that is a result of a ground-up assessment of the level of IBNR for the 2016 accident year.

Table 9.4 shows the drivers of the actuarial release for Serious Injury claims.

Table 9.4 – Components of Actuarial Release: Serious Injury Claims

	Other Serious Injury	Severe Traumatic Injury	Total
	$m	$m	$m
AvE payments in six months			12
Changes to Valuation Basis			
Removal of Mitchell Claims	24	0	24
AvE IBNR Transition Claims	(7)	6	(0)
AvE IBNR RTW Act Claims	(54)	30	(24)
Payment Selections	(7)	28	21
Other Changes	3	(13)	(10)
Subtotal			10
Total			22

As discussed above (excluding claims that were previously valued despite being reliant on the *Mitchell* decision) there has been an overall strengthening in respect of ultimate Serious Injury claim numbers, concentrated in the RTW Act periods. This has been partially offset by a reduction for Severe Traumatic Injury claims based on lower claim numbers in recent years, backed up by ReturnToWorkSA's acknowledgement that criteria for entry into EnABLE have been tightened.

Beyond this, the largest movement was payment selections for Severe Traumatic Injury claims, which was a result of the wholesale review of these claims performed by ReturnToWorkSA. Much of this was concentrated in Rehabilitation and Physiotherapy, for which we are comfortable that the resulting cashflows more accurately describe the long-term needs for these claims in relation to these payment types.

10 Economic and Other Assumptions

10.1 Discount Rate

The discounted mean term (DMT) of the liabilities is 15 years, similar to the previous valuation. The high DMT is driven by the large proportion of the OSC made up of Serious Injury liabilities. As a result, even relatively small changes on economic assumptions can have a material impact on the liability.

10.1.1 Approach

Accounting standard AASB 1023 states that the discount rates used in measuring the present value of expected future claim payments shall be: “risk free discount rates that are based on current observable, objective rates that relate to the nature, structure and term of the future obligations”. It also says that:

> *“the discount rates are not intended to reflect risks inherent in the liability cash flows”*, and
>
> “*typically, government bond rates may be appropriate discount rates for the purpose of this Standard, or they may be an appropriate starting point in determining such discount rates”*.

We derive forward interest rates applying to each future duration by:

- Taking the quoted market yields on Australian Government coupon bonds for the durations they are available, as at the date of the valuation – this information is sourced from the Reserve Bank website. These market yields are used to determine the zero coupon yields.
- Using these zero coupon yields to determine forward rates
- At longer durations we extrapolate the forward yield curve between current market rates and our expected long term forward rate. The assumed long term forward rate and extrapolation take account of:
  - The duration that government bonds are available to, and the volumes of longer term bonds traded
  - Long term risk free rates of return
  - General economic factors
  - Current monetary policy (e.g. CPI currently in the range of 2% to 3%), combined with expectations of long term real yields
- Beyond the end of our extrapolation, the yield is maintained at the long term forward rate.

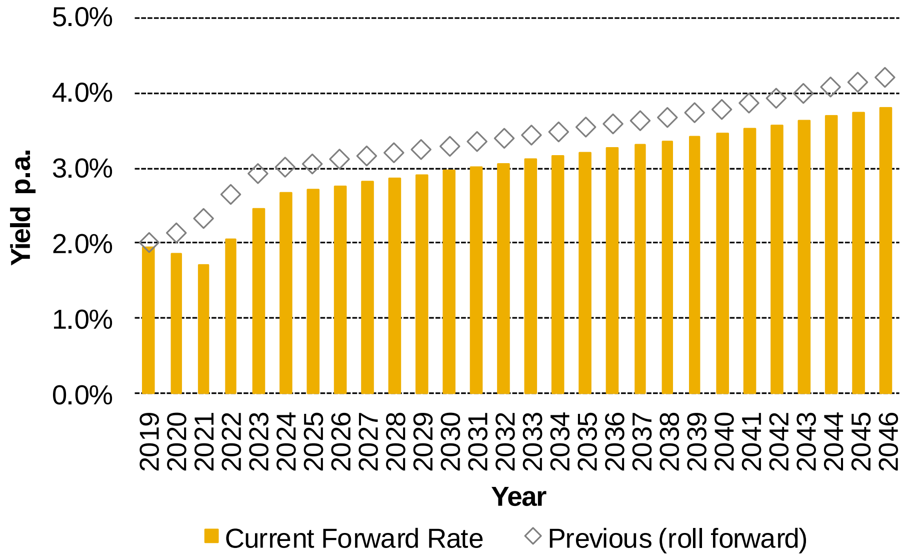
The resulting forward rates are applied to the projected cash flows for each future period. When discounting using forward rates, the relevant rates must be ‘chained’ together, for example a payment at the end of year three is discounted using the product of the first, second and third year forward rates.

10.1.2 Current Assumptions

Discount rates at December 2018 are lower at all durations compared to June 2018 as shown in Figure 10.1. We have assumed a long-term rate of 4.0%, which is 0.5% lower than assumed at June 2018, based on the yield of the longest date bond (March 2047).

The equivalent single discount rate has decreased from 3.3% p.a. at 30 June 2018 to 3.0% p.a. at 31 December 2018.

Figure 10.1 – Risk Free Forward Rate vs Previous Valuation



Details of the discount rates by year are included in Appendix C.

10.2 Inflation

In setting our inflation assumptions we consider:

- Forecasts of CPI and wage inflation
- RBA monetary policy
- Market-based information on inflation, with the aim of obtaining inflation expectations which are consistent with the discount rate expectations (as the discount rates are market based), for example using Treasury Indexed Bonds (TIBs). TIBs are essentially Government bonds where the original capital invested, and subsequent coupon payments, are indexed for CPI inflation. The difference between yields on TIBs and on nominal government bonds gives an implied breakeven rate of CPI inflation.

In summary, our assumptions at the current valuation are:

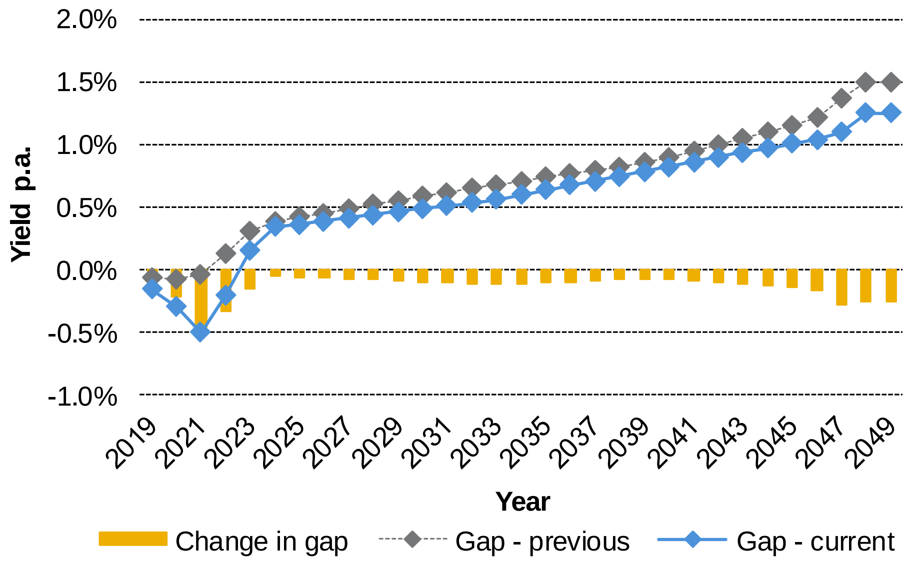
- Wage Price Inflation has been assumed to be 2.1% for the coming year, increasing to 2.4% after five years. This is a reflection of both current forecasts and the recent increase in wage growth in SA over the past six months.
- Wage Price Inflation assumptions gradually increase from this level to 2.8% over the next 23 years, after which a gap of 1.2% p.a. is maintained between Wage Price Inflation and forward discount rates. The long term gap between inflation and discount rates is 30 basis points below what it was at the June 2018 valuation, as the decrease in the yield curve could not be fully offset by lower inflation assumptions.
- Average Weekly Earnings (AWE) is set as equal to Wage Price Inflation for the coming year. From 2023 onwards, AWE is set to 0.25% above Wage Price Inflation. This is consistent with our approach at our previous valuation.

- CPI inflation has been set at 2.5% p.a. for all future durations. This is consistent with the mid-point of the Reserve Bank's targeted range of 2-3% p.a.

Overall, our resulting projected wage inflation is lower than at the previous valuation.

The combined impact of the above movements in adopted inflation and discount rates is a decrease in the 'gap' between inflation and discount rates, as shown in Figure 10.2.

Figure 10.2 – Gap between Adopted AWE and Discount Rates



The impact of this change is to increase the scheme liability, which is quantified in Section 11.3.2.

The rates of inflation are applied to entitlement types as follows:

- IS entitlements and related expenditure for Short Term claims have no inflation applied for the current cohort of claims, consistent with the RTW Act. AWE is initially applied for future injuries.
- IS entitlements and related expenditure for Serious Injury claims are inflated using the projected Wage Price Inflation rate until retirement.
- The maximum Lump Sum entitlement is indexed annually by the adopted CPI rate (the maximum entitlement applies to all accidents occurring in a year).
- All other entitlements are inflated at the adopted AWE rate, with allowance for superimposed inflation where warranted.

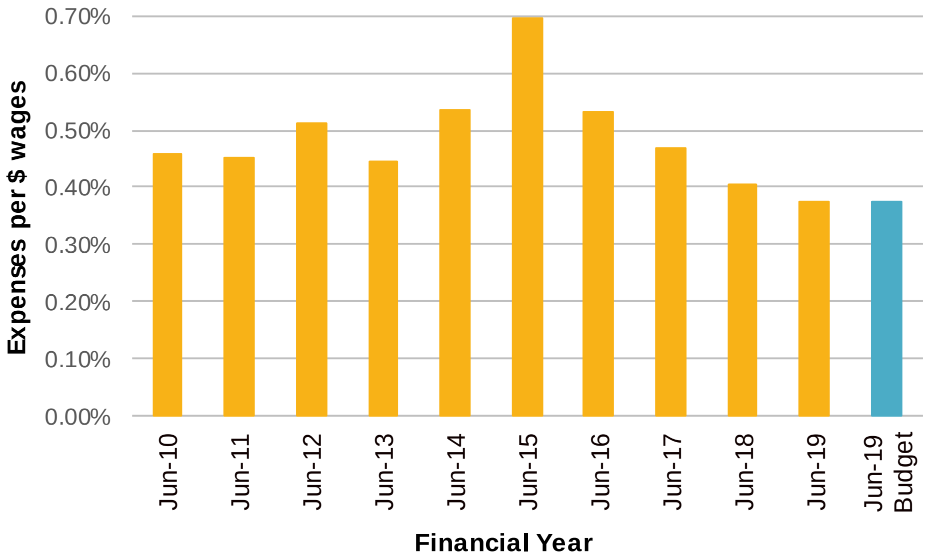
We have made assumptions about superimposed inflation for some payment types, and on the timing of the application of inflation. These assumptions are detailed in Appendix C.

10.3 Expenses

In setting provisions for outstanding claims, it is necessary under accounting and actuarial standards to include an allowance for the future costs of claim administration that are not allocated to individual claims.

Figure 10.3 below shows expenses as a percentage of wages over the past 10 years along with the forecast figure for 2018/19.

Figure 10.3 – Scheme Expense Rate (% of covered wages)



Following the passage of the RTW Act, there was a period of high expenses driven by transitional costs in the scheme. The expenses have since reduced each year since 2015, and are now budgeted for the June 2019 financial year at 0.38% of wages which is now below the anticipated long term expense rate from the reform costing work (0.40%).

The approach we have taken to set our expense allowance for the outstanding claims valuation is as follows:

(i) For Serious Injury claims we express claim handling expenses as a percentage of outstanding claims – the allowance is 8.5%, unchanged from the previous valuation.

(ii) For Short Term claims we express claim handling expenses as a percentage of outstanding claims – the allowance is 12.5%, unchanged from the previous valuation.

Given the significant changes being undertaken by ReturnToWorkSA to implement the RTW Act, and the resulting changes in claimant profile over the next one to two years, it is expected that the expense loading could continue to move until a new steady state is reached.

The overall expense rate equates to 9.7% of gross outstanding claims, up from 9.0% at the previous valuation. The increase is driven by a higher mix of Short Term claims in the outstanding claims which have a higher expense rate compared to Serious Injury claims.

10.4 GST Recoveries

Entitlements are modelled net of GST (ITC) recoveries.

10.5 Risk Margins

Since June 2017 ReturnToWorkSA has established its outstanding claims provision with a 75% probability of sufficiency.

We have reviewed the key assumptions of the risk margin at this valuation and believe they still remain appropriate. Our approach is based on the key elements of the framework proposed by the Institute of Actuaries of Australia's Risk Margin Taskforce in their paper "Framework for Assessing Risk Margins" ('the task force paper'). Specifically, we have examined Coefficients of Variation (CVs) arising from internal systemic error and external systemic error. A summary of the framework is included in Appendix C.2.

We have split the various entitlements into six groups for the purposes of risk margins analysis. For each risk margins group, we derive assumptions about the independent error, internal systemic error and external systemic error, which are then combined to estimate the total CV for that risk margin group. We assume that there is some correlation between risk margins group within internal and external systemic error, while we assume that independent error is (by definition) uncorrelated. This leads to a 'diversification benefit' in the overall Scheme risk margin.

Our current estimated CVs for each entitlement group, along with the total diversified and undiversified CV, are set out in Table 10.1 below.

Table 10.1 – Coefficient of Variation

	Total CV	
Risk Margin Group	Dec-18	Jun-18
Serious Injury	31.3%	31.3%
Short Term Claims		
IS + Redemption	14.5%	14.5%
Lump Sums	27.3%	27.3%
Legal + Investigation	28.2%	28.2%
Medical and Other Treatment	17.1%	17.1%
Recoveries	20.7%	20.7%
Total (Undiversified)	28.8%	28.8%
Total (Diversified)	**24.5%**	**24.6%**
Diversification	14.9%	14.6%

The CVs for each entitlement group are unchanged from our June 2018 valuation. The overall diversification benefit has increased from 14.6% to 14.9% due to the change in the mix of liabilities at December 2018.

Based on a coefficient of variation of 24.5% and our modelled distribution (which is a blend between a normal and lognormal distribution), we recommend a risk margin of 15.0% at a 75% probability of sufficiency. This is unchanged from our previous valuation.

As described in Section 2.1.1 the current 75% probability of sufficiency risk margin would not be sufficient to cover the increase in liabilities if the *Mitchell* precedent is maintained on appeal.

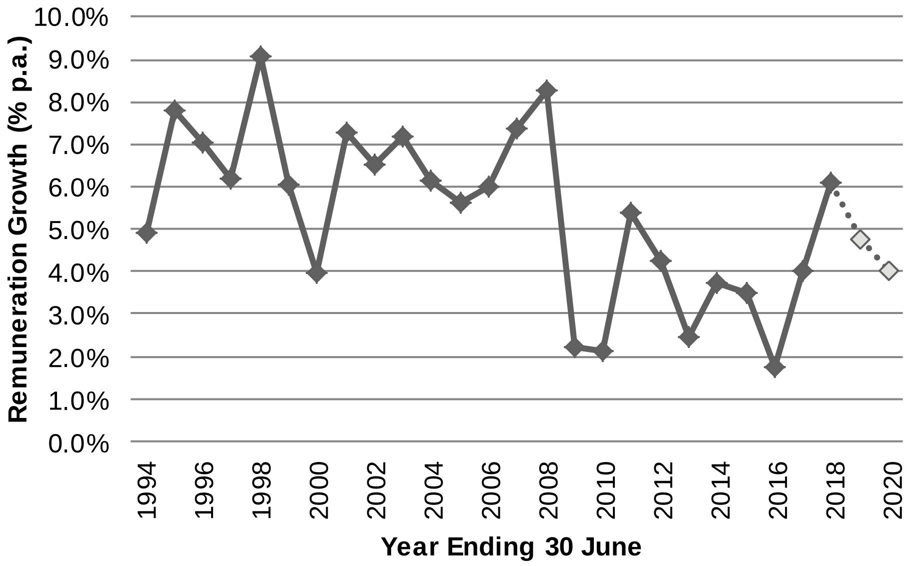
10.6 Non-Exempt Remuneration

When making our assessment of the cost of future claims, we consider the underlying remuneration pool as a measure of the exposure from which claims will arise.

The movement in the remuneration pool over time is the net result of a number of influences: (1) growth in average weekly earnings, (2) 'natural' growth in the number of employees and (3) movements of firms out of/into the scheme due to becoming self-insured or exiting self-insurance.

The remuneration projection for current and future years is undertaken by ReturnToWorkSA. The implied annual growth in the total non-exempt remuneration by year is shown below in Figure 10.4

Figure 10.4 - Non-Exempt Leviable Remuneration: Annual Growth



We have adopted ReturnToWorkSA's remuneration projection of $29.8 billion for 2018/19, noting that it is still subject to estimation as premium returns are yet to be completed for the current year. The key features we note in the remuneration experience are:

- The remuneration growth for 2009 and 2010 was the lowest seen since the early 1990's (the time of the last significant recession in Australia). There were two key contributors to this experience:
  - The global financial crisis (GFC) – during 2009 unemployment rates were higher than for the previous few years, and the level of under-employment (people working fewer hours than they would like) also rose. The level of wage inflation also reduced in the year.
  - A change in the definition of leviable remuneration from 1 July 2008, to exclude wages for trainees and apprentices (noting that while their wages are excluded, their claims costs are not). This change to the remuneration base reduced remuneration estimates for 2008/09 by about 2% relative to the previous definition.
- Despite remuneration growth briefly heading up to more 'normal' historical levels in 2011 and 2012, wage growth then reduced again towards levels seen during the GFC.
- After completing the employer declarations for 2017/18, the estimated 2018 remuneration growth has been increased to be 6.1%, higher than previously projected at June 2018 (up 2.2%). ReturnToWorkSA's projection of growth in 2019 is 4.8% (up from 4.3% previously). The expected Remuneration growth is the highest in the last 5 years.

11 Valuation Results

This section of the report summarises the valuation results, namely:

- The central estimate of outstanding claims as at 31 December 2018
- Our recommended balance sheet provision under AASB1023
- Movement in the central estimate compared to what was projected at the previous valuation
- Estimated historical scheme costs
- Projected future cash flows for the current outstanding claims
- Projected outstanding claims as at 30 June 2019 and 31 December 2019
- Reconciliation of results with 30 June 2018 projections.

As stated earlier, all the results in this section are shown on the basis that the *Mitchell* decision will be overturned on appeal. Refer to Section 2.1.1 for more details.

11.1 Outstanding Claims – Central Estimate

Our central estimate of the outstanding claims by entitlement type as at 31 December 2018 is set out in Table 11.1. This liability relates to all claims which occurred on or before 31 December 2018 and includes the impact of updated economic assumptions.

Table 11.1 – Outstanding Claims by Entitlement Type

Entitlement	Estimate of Outstanding Liability			% of Net
Group	Short Term Claims	Serious Injuries	Total	Cent Est
	$m	$m	$m	
Income	134	372	506	20.8%
Medical	117	545	661	27.2%
Other (including Care)	10	397	407	16.7%
Lump sums	271	71	342	14.1%
Hospital	20	101	121	5.0%
Travel	5	52	57	2.3%
Worker legal	38	11	48	2.0%
Corporation legal	33	11	44	1.8%
Physical Therapy	7	32	39	1.6%
Rehabilitation	13	18	31	1.3%
Investigation	2	1	3	0.1%
Common law	3	0	3	0.1%
Commutation	2	0	2	0.1%
LOEC	1	0	1	0.0%
Gross Liability	655	1,610	2,265	93.2%
Recoveries	-25	-29	-54	-2.2%
Expenses	82	137	219	9.0%
Net Central Estimate	713	1,718	2,430	

The outstanding claims liability before recoveries and expenses is estimated to be $2,265 million. The net central estimate, allowing for recoveries and including an allowance for claims handling expenses, is $2,430 million.

Table 11.2 details the outstanding claims result by accident year.

Table 11.2 – Outstanding Claims by Accident Year

Accident Year	Estimate of Outstanding Liability Short Term Claims	Serious Injuries	Total	% of Net Cent Est
	$m	$m	$m	
Pre Jun-05 Years	25	262	288	12%
Jun-06	4	42	46	2%
Jun-07	5	81	86	4%
Jun-08	6	69	75	3%
Jun-09	7	49	55	2%
Jun-10	8	87	95	4%
Jun-11	10	78	87	4%
Jun-12	11	86	98	4%
Jun-13	14	110	124	5%
Jun-14	18	118	136	6%
Jun-15	28	126	155	6%
Jun-16	68	123	190	8%
Jun-17	108	140	248	10%
Jun-18	196	144	340	14%
Dec-18	148	94	242	10%
Gross Liability	655	1,610	2,265	93%
Recoveries	-25	-29	-54	-2%
Expenses	82	137	219	9%
Net Central Estimate	713	1,718	2,430	100%

Table 11.3 shows the overall liability split between Serious Injuries and Short Term claims, both before and after discounting. As this shows, there is a significant level of discounting in relation to the Serious Injury claims liability due to its long payment pattern.

Table 11.3 – Impact of Discounting

	Serious Injuries	Short Term Claims	Total
	$m	$m	$m
Inflated	3,659	759	4,418
Inflated and Discounted	1,718	713	2,430
Ratio	47%	94%	55%

11.2 Provision for Outstanding Claims

Table 11.4 sets out the components of our recommended provision at 75% probability of sufficiency, $2,795 million.

Table 11.4 – Recommended Balance Sheet Provision

	Central Estimate	Risk Margin	Recommended Provision
	$m	$m	$m
Gross Claims Cost - Serious Injuries	1,610		
Gross Claims Cost - Short Term Claims	655		
Claims Handling Expenses	219		
Gross Outstanding Claims Liability	2,484	373	2,856
Recoveries	-54	-8	-62
Net Outstanding Claims Liability	2,430	365	2,795

11.3 Movement in Liability

Our central estimate is $94 million higher than projected at the previous valuation, as shown in Table 11.5.

Table 11.5 – Movement from Previous Valuation

	Gross	Recoveries	CHE	Net
	$m	$m	$m	$m
Liability as at Jun-18	2,123	-53	205	2,275
Plus liability for claims incurred in the period	220	-5	25	240
Less Expected Payments to Dec-18	185	-5	22	202
Plus Interest (unwinding of discount)	22	-1	2	23
Liability Projected from Previous Valuation	2,180	-54	210	2,336
Current Valuation	2,265	-54	219	2,430
Difference	85	0	9	94

We have attributed the change in central estimate into the following components:

- Movement in liability due to claims experience – this covers the components that are due to claim outcomes (such as changes in the number and mix of claims), as well as the impact of revisions to our valuation assumptions. This step also includes the impact of changes in the timing of lump sum payments, where slower than expected lump sums lead to an increase in the remaining liability.
- Impact of changes in economic assumptions – the component which is mandated by accounting standards (and therefore outside ReturnToWorkSA's control).

This split also allows calculation of the actuarial release, where we add the difference between actual and expected payments to the movement in the liability due to claims experience, to give a measure of the 'profit' impact of claims management performance relative to the previous valuation basis.

Table 11.6 – Movement in Central Estimate and Determination of Actuarial Release

	Liability Estimate[1]	AvE Payments in 6 mths to Dec-18	Actuarial Release [2]
	$m	$m	$m
Liability at Jun-18 Valuation	2,275		
Projected Liability at Dec-18 (from Jun-18 valuation)	2,336		
Claims Movement - Short Term Claims	37	4	-41
Claims Movement - Serious Injury	-11	-12	23
Impact of Change in economic assumptions	68		
Recommended Liability at Dec-18	2,430		
Total Actuarial Release			-18

[1] Net central estimate of outstanding claims liability, including CHE

[2] Includes change in OSC and Act vs Exp payments.

Each of these components is discussed in the following sections.

11.3.1 Actuarial Release at December 2018

The actuarial release over the period is a strengthening (increase) of $18 million. Table 11.7 shows the actuarial strengthening by entitlement type.

Table 11.7 – Actuarial Release by Entitlement Type

Entitlement Group	Short Term Claims[1]	Serious Injury Claims[1]	Total Actuarial Release [1]	Release %
	$m	$m	$m	%
Income	-19.6	-5.4	-25.0	
Redemptions	0.0	0.0	0.0	
Combined	*-19.6*	*-5.4*	*-25.0*	*-5.3%*
Lump Sums	0.1	-7.1	-7.0	-2.2%
Worker legal	-3.5	-1.3	-4.8	-10.6%
Corporation legal	0.3	-0.7	-0.4	-0.8%
Investigation	-0.5	-0.1	-0.6	-20.1%
Medical	-12.1	-2.9	-15.0	-2.5%
Other	0.4	-0.6	-0.2	-0.1%
Hospital	-2.6	3.5	0.8	0.7%
Travel	-0.7	5.6	4.9	8.7%
Physical therapy	-1.2	10.5	9.3	20.2%
Rehabilitation	1.6	22.3	23.8	46.5%
Common Law	0.2	0.0	0.2	7.4%
LOEC	0.0	0.0	0.0	4.0%
Commutation	-0.2	0.0	-0.2	-10.2%
Gross Liability	-37.8	23.8	-14.0	-0.7%
Recoveries	0.5	-1.3	-0.9	1.6%
Expenses	-4.0	0.9	-3.2	-1.5%
Net Central Estimate	-41.4	23.4	-18.0	-0.8%

[1] Includes change in OSC and Act vs Exp payments, excludes economic impacts

The major factors contributing to the $18 million actuarial strengthening at the current valuation are:

- For **Short Term claims**, the $41 million actuarial strengthening comprises
  - An increase of $12 million due to the higher than expected exposure growth (including the ending of a large self-insurance licence), which we expect will largely be matched by additional premium collections. This increase explains about half of the Income Support growth and some of the treatment related costs.
  - An increase of $12 million due to the slower than expected run-off of transitional claims, including higher legal, medico-legal (which is included in 'treatment related') and surgery related costs. Given the large number of open disputes and slow resolution, as well as the large number of legal matters outstanding in the Full Bench of SAET and the Supreme Court, it is possible that there will be further increases in cost for transition claims.
  - A remaining increase of $13 million due mainly to higher than expected active claim numbers, which suggests there has been some slippage in return to work outcomes.
  - A $4 million strengthening on claims handling expenses due to the slower than expected run off of transition claims and disputes and higher new claim numbers.
- For **Serious Injury claims**, there was an overall release of $23 million, due to:
  - The removal of claims previously (incorrectly) valued as Serious Injuries that are reliant on the *Mitchell* decision, decreasing the liability by $24 million
  - Net changes in Serious Injury claim numbers (including IBNR claims) increasing the liability by $24 million. With the continued late emergence of new Serious Injury claims, we have reassessed the likely level of RTW Act Serious Injury numbers using a ground-up approach

to setting IBNR for the 2016 accident year. This has led to an overall increase to expected Serious Injury claim numbers

- Revision of individual claim estimates set by ReturnToWorkSA for Severe Traumatic Injuries, particularly for Rehabilitation and Physiotherapy costs reducing the liability by $28 million
- Other changes in valuation basis changes increasing the liability by $17 million; predominantly this is due to an increased additional Care loading on Severe Traumatic Injuries for accident years 2011 to 2014, where a very high proportion of Care costs for this group are currently provided by family members (almost 100% of the Care for this group is currently provided by family members, compared to around 25% across the rest of the Severe Traumatic Injury cohort), which added $13 million to the liability.
- Payments in the six months were $12 million lower than expected, most of which is due to slower than expected lump sums.

Our projections for the remaining entitlement types were also reviewed and updated, although none of the movements are significant in relation to the overall scheme liability.

11.3.2 Impact of Economic Assumption Changes

Changes to inflation and discount rate assumptions increased the central estimate by $68 million.

As discussed in Section 10.1 there have been decreases in discount rates at long durations, an event which is outside ReturnToWorkSA's control, which has led to this increase in the OSC liability.

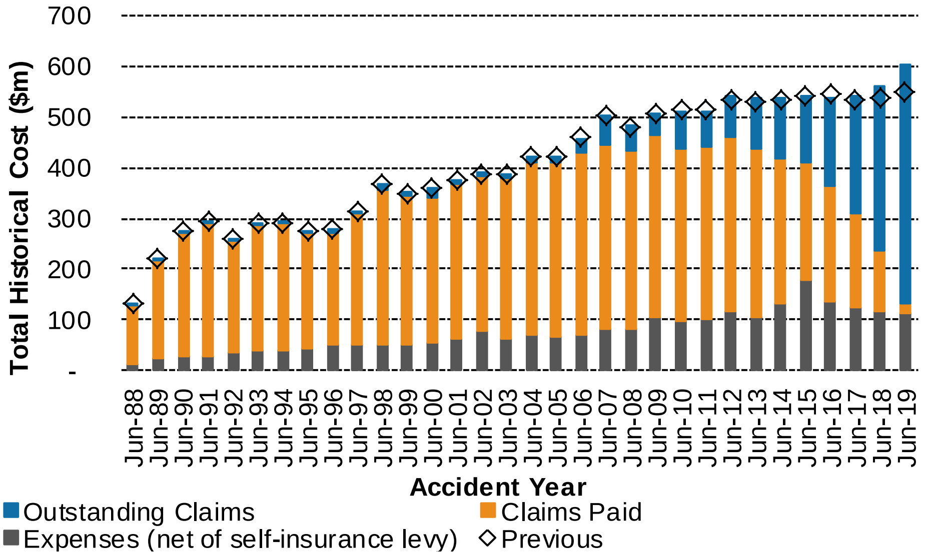
11.4 Historical Scheme Costs

As part of our valuation we have estimated the 'historical cost' for each past accident year. This represents our estimate of total projected costs for the accident year, including expenses, and is discounted to the start of the accident year. Historical claims handling, operating expense and self-insurer levy figures are taken from ReturnToWorkSA's published annual accounts and the latest information from ReturnToWorkSA for 2019.

Figure 11.1 summarises the currently estimated historical costs for each year since the scheme began. As this shows, commencement of the RTW Act has acted to contain the cost for recent accident years into the $500 million to $550 million range, breaking the strong upward trend seen in the lead up to 2010. Scheme expenses were particularly high in 2015 as a result of additional transition related expenses. In general the hindsight cost estimates are similar to the previous valuation estimates for older accident periods. For recent accidental years there have generally been small increases as a result of:

- Higher than expected exposure growth and claim frequency increases, as explained in Section 3.3.1
- Lower discount rates, as explained in Section 10.1
- For 2018 and 2019 the impact of higher active claim numbers, as explained in Section 5
- For 2019, an unusually high number of the most severely injured claims (claims in the severe traumatic injury cohort).

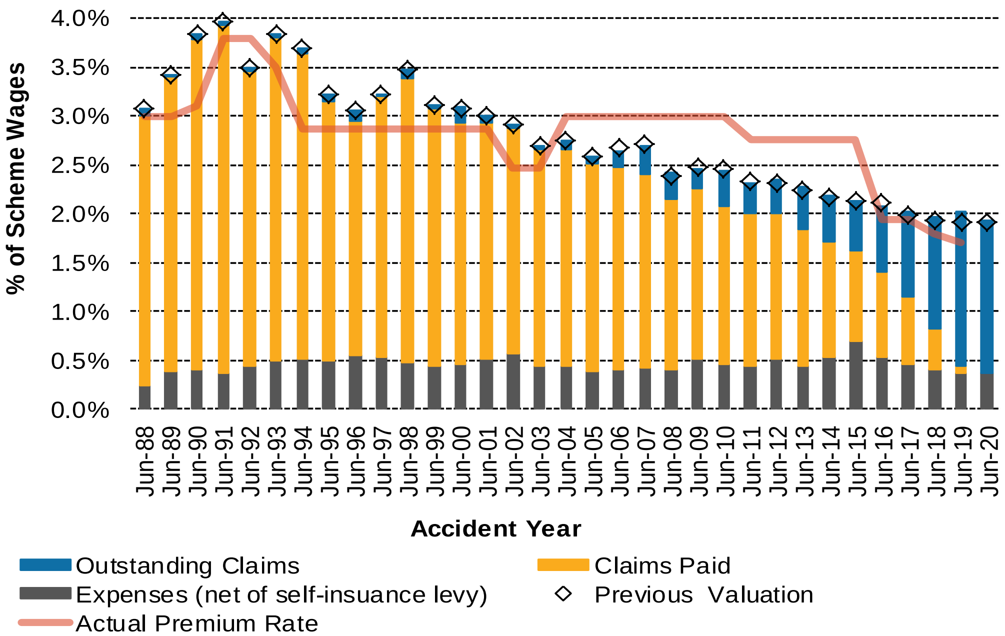
Figure 11.1 – Historical Cost Discounted to Accident Year



Using these costs we have estimated the 'historical premium rate', or the Break Even Premium (BEP) rate, for each past accident year; this is the amount that would have been sufficient to fully cover claim costs, including expenses and recoveries, assuming the scheme achieved risk free returns each year and the current actuarial valuation is an accurate forecast of future payments. The BEP is calculated by dividing the total projected costs for the accident year (from Figure 11.1) by the total scheme leviable remuneration in that year (discussed in Section 10.6). We present the costs on this basis, i.e. using risk free discount rates, so that a like with like comparison can be made over the history of the scheme, which allows current scheme performance to be assessed in a long term context.

Figure 11.2 summarises the estimated annual BEP since the scheme began, including a comparison with the estimates at our previous valuation and the scheme's actual average premium rate charged for each year.

Figure 11.2 – Break Even Premium Rate and Actual Premium Rate Charged



* The Break Even Premium Rate in this Figure is calculated using the risk free rate, so that a like with like comparison can be made over the history of the scheme. For clarity, this is not the same as the scheme's pricing basis as the scheme targets a higher than risk free rate of return when premiums are set.

The main points to note are:

- The introduction of the RTW Act reduced the BEP for accident years between 2008 and 2010 to just under 2.5% of wages
- For accident years since 2011 the costs are progressively lower again, as claims have had less opportunity to remain on long term benefits
- The current estimate of the BEP for the 2019 accident year is 2.02%, up from 1.97% for the 2018 year. The increase is driven by a high number of claimants with severe traumatic injuries; in recent years the experience for this group has favourable, so for now we are treating this as a 'one-off''.
- Scheme expenses have reduced year-on-year since 2015 when they were particularly high as a result of additional transition related requirements. Expenses for the 2019 year are expected to be around 0.38% of wages, which is below the target post-reform rate of 0.40% of wages.

We note that these calculations assume past and future investment earnings at the risk free rate, and adopt the annual cost of expenses in the year. All else being equal, any earnings above the risk free rate or additional sources of income would act to reduce the required premium rate.

We emphasise that (as seen in the graph) the BEP estimates for recent accident years include a significant outstanding claims estimate and are therefore likely to change as experience emerges. We also note that the adopted wages figure for 2019 still involves a degree of estimation.

11.5 Future Cash Flows

Table 11.8 presents projected cash flows for the coming four half-years, by entitlement type. These cash flows include allowance for future claims incurred as described in Section 11.6, but make no allowance for expenses.

Table 11.8 – Projected Cash Flows

Entitlement Group	Projected Cashflows for Period			
	Dec-18 to Jun-19	Jun-19 to Dec-19	Dec-19 to Jun-20	Jun-20 to Dec-20
	$m	$m	$m	$m
Income Support	69.1	69.5	70.1	70.6
Medical	34.5	35.8	35.6	37.2
Lump sums	38.7	50.3	43.9	46.0
Rehabilitation	5.9	6.2	6.3	6.5
Physical Therapy	4.9	5.1	5.2	5.3
Hospital	9.6	9.9	10.1	10.6
Legal - Non-Contract	7.0	6.8	6.7	6.6
Other	7.3	7.5	8.5	8.6
Legal Contract	9.9	9.9	9.1	9.1
Travel	2.8	2.9	3.0	3.1
Investigation	1.3	1.3	1.3	1.4
Commutation	0.2	0.2	0.2	0.2
LOEC	0.1	0.1	0.1	0.1
Common law	0.2	0.2	0.2	0.2
Recoveries	-6.3	-4.4	-4.5	-5.1
Net Claims Cost - Total	185.2	201.2	195.8	200.4
Serious Injuries (net)	22.8	39.0	28.9	29.4
Short Term Claims (net)	162.4	162.2	166.9	171.0

Cash flows over the next two years are expected to remain relatively stable, with the next half-year a little bit lower with a lower number of lump sums expected over the next six months.

11.6 Projected Outstanding Claims

Table 11.9 shows the outstanding claims projected to 30 June 2019 and out to 30 June 2020. We note the payments shown here are based on that in Table 11.8, but also include an allowance for claims handling expenses for consistency with our liability estimate.

Table 11.9 – Projected Outstanding Claims Provision (30 June 2019 to 30 June 2020)

	Half year ending		
	Jun-19	Dec-19	Jun-20
	$m	$m	$m
Provision at Period Start	2,795	2,865	2,921
Less Risk Margin	365	374	381
Central Estimate at Period Start	2,430	2,491	2,540
Plus Additional Liability Incurred in Period	245	247	248
Less Expected Payments in Period	-208	-225	-220
Plus Interest (unwind of discount)	24	27	29
Projected Central Estimate at Period End	2,491	2,540	2,597
Plus Risk Margin	374	381	390
Projected Provision at Period End	2,865	2,921	2,987

We project the central estimate for the net outstanding claims liability at 30 June 2019 to be $2,491 million; this estimate includes allowance for claim payments and expenses, discount rate movements in line with forward rates and new claims incurred in the period 1 January 2019 to 30 June 2019. The corresponding provision at a 75% probability of sufficiency is $2,865 million.

The projected increase to 30 June 2020 in the liabilities relates to the fact that the additional liability incurred on new Serious Injury claims is more than the expected payments on existing Serious Injury claims; for Short Term claims the half-yearly ins and outs are now broadly offsetting.

11.7 Reconciliation of Incurred Cost with Previous Projection

At the 30 June 2018 valuation we projected an additional claim cost liability of $210 million would be incurred from claims arising in the July to December 2018 half-year. Our current projection for the ultimate value of this liability is $249 million, a material increase of 15.8% or $34 million consisting of:

- Higher than expected exposure and increase in claim frequency adding $7 million
- An unusually high number of the most seriously injured claims adding $22 million
- Reduction in discount rates adding $5 million

Table 11.10 – Comparison of December 2018 Projections to Current Valuation

For period 01 Jul 2018 to 31 Dec 2018		
Incurred Claims Liability ($m, excl. expenses):		Difference
Projected in Jun-18 Valuation	215	
Incurred (current valuation)	249	15.8%

12 Uncertainty and Sensitivity Analysis

12.1 Risk and Uncertainty

In this section we discuss the major areas of uncertainty involved in estimating the balance sheet outstanding claims provision (OSC, including allowance for expenses and risk margins, with provision at 75% probability of sufficiency). At the present time there are heightened uncertainties and risks, particularly on the unfavourable side, with the operation of the RTW Act still to stabilise.

To assist in understanding the uncertainty, we have designed a range of scenarios which illustrate potential scheme outcomes. For each scenario we have made an approximate estimate of its impact on the OSC provision.

We have considered the uncertainty in four broad categories:

- Economic – employment, inflation, investment markets
- Legal – disputes, tribunal decisions, appeal court decisions
- Short Term claims – outcomes relating to claims whose entitlements are subject to the hard boundaries
- Serious Injury claims – outcomes for claims who are entitled to long term payments from the scheme.

There is overlap and interaction between these categories. ReturnToWorkSA has essentially no control over economic influences, full control over scheme management and some influence (but not control) over legal and behavioural risks.

We note that sensitivity analysis is indicative only of a range of possible liability outcomes. The sensitivities shown below do not represent upper or lower bounds to the scheme's outstanding claims liabilities.

12.2 Economic Scenarios

In brief, the scenarios we have considered are a stronger economy and a weaker economy:

Table 12.1 – Economic Scenarios

	Stronger	Weaker
Unemployment	Down to 3%	Up to 7%
Wage inflation	4% pa	2% pa
Investment earnings	6% pa	2% pa
Real 'Gap'[1]	2%	0%

[1] Difference between inflation and discount rate

In undertaking sensitivity analysis it is straightforward to model inflation and investment earnings. In relation to unemployment, there is no clear way to estimate the impact on the cost of claims, and we refer to the RTW scenarios in the 'short term claims' section. Broadly, the claims impact will be in the same direction as other economic impacts, but the magnitude of the impact is probably smaller than that of inflation and investment changes.

Table 12.2 – Economic Sensitivities

	OSC Impact	
	$m	%
31 Dec 18 OSC estimate (Including risk margin at 75% POS)	2,795	
Strong Economic Scenario (2% gap between inflation and discount rate)	-590	-21%
Weak Economic Conditions (0% gap)	+114	+4%

Economic conditions are still currently unfavourable for scheme performance relative to long term historical norms. If conditions do improve the implications for both funding and premiums are favourable.

12.3 Legal Risk Scenarios

As discussed in section 3, there are currently high numbers of disputes in the scheme and the duration of open disputes is again growing, and a number of key provisions of the RTW Act are subject to adverse legal precedent which is under appeal. The table below indicates the sensitivity of results to three scenarios around dispute rates and dispute outcomes. It is likely that if the legal environment is either better or worse than we have implicitly assumed, then several experience changes are likely to happen together.

Table 12.3 - Legal Sensitivities

	OSC Impact	
	$m	%
31 Dec 18 OSC estimate (Including risk margin at 75% POS)	2,795	
Mitchell precedent is maintained on appeal	>$400m	>14%
WPI assessments increase by 2% as a result of the higher incentives under the RTW Act, resulting in extra Serious Injury claims and higher lump sum payments.	+202	+7%
Restrictions on multiple assessments ('top ups') do not work as expected.	+148	+5%

As indicated in the sensitivities above, if the WPI assessment provisions in the RTW Act do not work as intended it is possible that the impacts could be measured in hundreds of millions of dollars.

There is improvement potential that would measure in the tens of millions of dollars if favourable resolution trends occur and the number of disputes drops as a result.

12.4 Short Term Claim Scenarios

The implementation of the RTW Act has brought significant change to the scheme, and changes in the scheme's culture. It is possible that the early changes in the scheme's experience might not be sustained if patterns of behaviour revert towards those of past years. On the other hand, it is possible that the scheme experience might outperform current projections, because of the extent of the changes in expectations and behaviour of scheme participants.

Table 12.4 summarises a number of sensitivities that help demonstrate the potential for variability in the Short Term Claim cohort.

Table 12.4 - Short Term Claim Sensitivities

	OSC Impact	
	$m	%
31 Dec 18 OSC estimate (Including risk margin at 75% POS)	2,795	
Income Support		
Deterioration in IS continuance rates continue to follow the most recent trend	+20	+1%
Double the number of late reported IS claims than currently allowing	+8	+0%
Treatment Costs		
Late surgery costs emerge more than expected, approximately double the current allowance	+26	+1%
Dispute and late surgery related costs remain high and extend into RTW Act periods	+19	+0%
Legal Fees		
Reductions in dispute costs under the RTW Act are lower than allowed for	+14	+1%
Higher average cost of legal fees for transitional claims due to disputes progressing further in the disputation process	+5	+0%
Expenses		
Higher expense rate of 15% for Short Term Claims due to expenses not reducing as much as gross claim costs	+19	+1%
Lump Sums		
Recent reduction in lump sum payments is due to First Paid and Economic Loss lump sum numbers reducing by 15%	-41	-1%
Economic Loss lump sums emerge 20% lower than expected	-34	-1%
Lump sum numbers increase in line with ultimate claim numbers for 2018 and 2019(HY)	+9	+0%

These scenarios illustrate some of the key areas of uncertainty for Short Term Claim costs including:

- Changes in RTW performance can increase Income Support costs by tens of millions of dollars – as an example, if we were to fully reflect the most recent RTW rates, where experience has deteriorated in the last 6 to 12 months, this would add around $20 million to the provision.
- Lump sums are currently tracking much lower than expected levels, which we continue to interpret as mainly being a ‘slowdown’ rather than a ‘reduction’ in lump sums. If this is not the case, and there is in fact improvements in lump sum experience, this could result in a release of up to $75 million in the provision.
- Higher dispute related costs are currently only projected to impact on the runoff of the transition cohort, but if this ongoing slow dispute resolution process either worsens further or moves into the RTW Act claims then it could add another $60 million to the provision due to a combination of higher legal fees, medico legal costs and claims handling expenses.
- Higher numbers of late surgeries, for example if there was a behaviour change whereby claimants seek to have more surgeries covered by the workers compensation system, could add $26 million to the provision.

12.5 Serious Injury Scenarios

With significantly higher benefits available to Serious Injury claims, the numbers of claimants becoming eligible for these benefits will have significant financial consequences for the scheme. In addition, with an increasing proportion of future claims liabilities relating to Serious Injury claims, changes in life expectancy and escalation of costs for Serious Injury claims costs will also have significant financial impacts.

Table 12.5 - Serious Injury Sensitivities

	OSC Impact	
	$m	%
31 Dec 18 OSC estimate (Including risk margin at 75% POS)	2,795	
10 additional Serious Injury IBNR claims emerge for 2016 and higher numbers continue for all RTW Act periods	+56	+2%
95% of WPI disputes are successful, of which 90% become serious injury claims (currently assuming 10% dispute success rate and 8% serious injury rate)	+649	+23%
Serious Injury application disputes have a 50% success rate (currently 25%) and claims under RTW Act are all in line with 2016 accident year	+137	+5%
Unpaid care on EnABLE cohort ceases immediately and is replaced with paid care	+169	+6%
Uncertainty around mortality - impact of a 6 year increase in the life expectancy of the EnABLE claims (bringing them back in line with a standard population life expectancy)	+463	+17%
Superimposed inflation is 1% p.a. higher than assumed for medical and care, whether due to higher utilisation of services such as care and treatment, or from increasingly expensive treatments, above average award wage increases for carers, increased pressure as current unpaid family carers age, etc.	+381	+14%
Superimposed inflation is 1% p.a. lower than assumed for medical and care.	-278	-10%
No increase in utilisation of Care benefits after age 65	-111	-4%
Twice the additional allowance for utilisation of Care benefits after age 65	+111	+4%

Because of the very long tail of Serious Injury claims and the consequent leverage in the scheme's financial results, the scenarios illustrate some very large changes in the outstanding claims liability.

We emphasise that there is significant uncertainty around ultimate claim numbers, as indicated by the following scenarios:

- If an additional 10 IBNR claims emerge for the 2016 accident year, and future RTW Act years continue at this higher level, there will be an increase of around $56 million in the OSC provision. For this to occur there would only have to be a slight deterioration in the assumed conversion rates from our pool of possible IBNR claims or a small number of Serious Injury claims to emerge from outside this broad pool.
- If the success rate on Serious Injury application disputes is roughly twice the level allowed for in our IBNR, the increase in the provision would be around $137 million.
- Based on the findings of ReturnToWorkSA's claims reviews, we have only allowed for a small percentage of WPI disputes to ultimately result in additional Serious Injury claims, as the majority of these disputes are seeking to rely on key legal precedents (such as *Mitchell*) to achieve increases in the assessed WPI. If these key legal precedents do not resolve in ReturnToWorkSA's favour, the implication is that many claims would reach the Serious Injury threshold. If this was to occur, and assuming the impacts continue into RTW Act periods, the impact on the provision would be multiple hundreds of millions of dollars.

Changes in the level of benefits payable for care, support and medical needs also have very significant implications for the OSC liability.

12.6 Key Uncertainties

A number of current factors mean there is more uncertainty than usual in our central estimate – primarily the uncertainty surrounding the impact of the changes introduced by the RTW Act.

The main areas of uncertainty in our current estimates of the liabilities are:

- **Legal precedent risk** – risks here relate to the possibility of decisions which are unfavourable to the scheme or the culture and behaviours of its participants. In particular, recent decisions have gone against ReturnToWorkSA's interpretation of the WPI assessment rules and if maintained would lead to increases in the liability; these decisions are currently under appeal. On current timing, this risk is likely to remain for another year, and perhaps longer.

  As noted, all of our valuation work has been undertaken on the basis that the *Mitchell* decision will be overturned on appeal. This means there is no allowance for *Mitchell*-related costs in the central estimate projection, other than legal costs. More information on this uncertainty is found in Section 13.2.1. Importantly, we note that if the *Mitchell* decision were to be upheld, the revised central estimate would exceed the current recommended provision at the 75% probability of sufficiency level.

- **WPI assessments** – under the RTW Act, there are significant differences between the compensation available to claims above the 30% WPI threshold and those below. This factor, combined with the new lump for future economic loss payable to Short Term claims, means there will be increasing pressure on WPI assessments. The scheme will face significant financial consequences if this leads to either extra claims getting over the 30% WPI threshold or 'WPI creep'. The robustness of the 'once and for all' WPI assessment rules under the RTW Act is an important area of risk.

- **Serious Injury claim costs** – as these claims have benefits for life, the biggest risk for this group are factors that are common across most claims, and deviations from our assumptions that compound across multiple years. For the current valuation the key uncertainties are:

  - **Life expectancy** – the future life expectancy for Serious Injury claims has a significant impact on future cost projections.

  - **Cost escalation** – the potential for future cost escalation in a number of medical, care and treatment related items poses a risk. One example is the extent to which care costs that are currently not compensated by the scheme may become compensable in future, as family-based carers age and claimants increasingly require paid attendant care and/or residential care facilities. Another example is the potential increase in costs for care related specialists and facilities, due to wage pressures and/or market demand pressures for these specialists (for example, as the National Disability Insurance Scheme scales up in the next few years).

  - **Ultimate numbers of claims** – there are several areas of uncertainty in relation to claim numbers, including: the ultimate number of top-ups that are yet to emerge due to legislation changes, the impact the removal of WPI top-ups will have on ultimate claim numbers, the impact of claimants seeking to delay assessments and the number of outstanding Serious Injury application disputes and other WPI disputes that ultimately meet the 30% WPI threshold.

- **Return to work** – in the last 6 months there have been deterioration in return to work outcomes for claims managed entirely under the RTW Act. In addition, there continues to be significant legal involvement on transition claims, and if this carries through to the RTW Act cohort the sustainability of recent improvements (prior to the last 6 months) could be at risk.
- **Outcomes for claims with current disputes** – risks here include the possibility of decisions which are unfavourable to the scheme, as well as the behavioural consequences of so many disputes remaining. Open dispute numbers are again increasing quickly, and more claims are moving into the later stages of the dispute resolution process.

Even though the RTW Act provisions commenced on 1 July 2015, there are still key areas of the Act being tested in the Courts, and there is as yet only limited information on the number of Serious Injury claims which will emerge from these cohorts. The current valuation basis reflects our best estimate of how this experience will eventuate, based on our and ReturnToWorkSA's interpretation of the intent of the Act. Over time, our basis will further reflect the developing post-reform experience, and it is possible that the experience could differ, perhaps materially, from our current expectations.

13 Reliances and Limitations

Our results and advice are subject to a number of limitations, reliances and assumptions. The main ones are outlined below.

13.1 Reliance on Data and Other Information

We have relied on the accuracy and completeness of the data and other information (qualitative, quantitative, written and verbal) provided to us by ReturnToWorkSA for the purpose of this report. We have not independently verified or audited the data, but we have reviewed the information for general reasonableness and consistency. The reader of this report is relying on ReturnToWorkSA and not Finity for the accuracy and reliability of the data. If any of the data or other information provided is inaccurate or incomplete, our advice may need to be revised and the report amended accordingly.

13.2 Uncertainty

13.2.1 Mitchell Decision and other Supreme Court matters

Realising the expected long term financial savings from introducing the RTW Act depends on the effectiveness of maintaining the boundaries in practice. Any legal precedent that causes 'slippage' in the application of the boundaries will have an unfavourable impact on scheme costs

Along with *Mitchell*, there are an unusually high number of other cases on appeal to the Supreme Court and until these cases are resolved there will be uncertainty as to the financial costs which eventuate under the RTW Act benefit package.

Our assessment of the outstanding claims liability at December 2018 assumes the *Mitchell* precedent is overturned on appeal. If this is not the case, the outstanding claims liability would be materially higher than shown. This applies particularly to the Serious Injury and Income Support benefit types; we also expect that claimants would be incentivised to stay on benefits for longer to help establish higher WPI scores through 'add ons' to the original injury if *Mitchell* is maintained.

13.2.2 Other Uncertainty

There is considerable uncertainty in the projected outcomes of future claims costs, particularly for long tail claims; it is not possible to value or project long tail claims with certainty. Our payment projections for Serious Injury claims, in particular, include payments which are expected to occur many decades into the future.

We have prepared our estimates on the basis that they represent our current assessment of the likely future experience of the scheme. Sources of uncertainty include difficulties caused by limitations of historical information, as well as the fact that outcomes remain dependent on future events, including legislative, social and economic forces, and behaviour by scheme stakeholders such as Corporation management, claimants and claims agents.

In our judgement, we have employed techniques and assumptions that are appropriate and the conclusions presented herein are reasonable given the information currently available, subject to our comments above. However, it should be recognised that future claim outcomes and costs will likely deviate, perhaps materially, from the estimates shown in this report.

The uncertainty at the current valuation is heightened by the need to allow for the impacts of the RTW Act. While its key features came into effect back in July 2015, legal testing of its implementation is still occurring and likely to take a number of years to complete.

Our valuation assumes a continuation of the current environment with allowance for known changes where we have been able to quantify or estimate the effects. It is possible that one or more changes to the environment could produce a financial outcome materially different from our estimates.

13.3 Latent Claims

We have made no allowance for catastrophic aggregation of claims from latent sources (such as claims relating to asbestos) other than as reflected in the data and information we have received. Latent claim sources are those where the date of origin of a claim is many years before the claim is reported.

13.4 Reinsurance

We understand that there is no reinsurance program in place in relation to any of the liabilities we have valued.

13.5 Limitations on Use

This report has been prepared for the sole use of ReturnToWorkSA's board and management for the purpose stated in Section 1. At ReturnToWorkSA's request, we consent to the release of this report to the public, subject to the reliances and limitations noted in the report.

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

While due care has been taken in preparation of the report Finity accepts no responsibility for any action which may be taken based on its contents.

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

This report, including all appendices, should be considered as a whole. Finity staff are available to answer any questions, and the reader should seek that advice before drawing conclusions on any issue in doubt.

Any reference to Finity in reference to this analysis in any report, accounts or any other published document or any other verbal report is not authorised without our prior written consent.

14 Scheme History

This section summarises the key events and changes in the scheme over the last ten years.

2007-08

Changes to the Workers Rehabilitation and Compensation Act passed by the South Australian Parliament. The key aim was to place greater focus on earlier rehabilitation and return to work outcomes.

2008-09

Key components of the 2008 legislative changes commenced: earlier step-downs for IS claims; Work Capacity Assessment; changes to non-economic loss payments; changes to the dispute resolution framework (including Medical Panels introduced); provisional liability.

2009-10

- 'Window' for continuation of redemptions under previous legislation closed 1 July 2010
- Replacement of IT system IDEAS with Curam
- Change to process for reimbursement of weekly payments to employers
- Initial projects commenced under the $15 million Return to Work Fund.

2010-11

- Bonus/Penalty scheme for employer levies discontinued.

2011-12

Claims estimates introduced for all claims.

2012-13

- New employer payments scheme commenced 1 July 2012, with compulsory experience rating for medium and large employers, and optional 'retro paid loss' arrangement for large employers
- Second claims agent, Gallagher Bassett, commenced 1 January 2013 (Employers Mutual Limited had been the sole agent since 1 July 2006)
- Second legal service provider, Sparke Helmore, commenced 1 January 2013.

2014-15

The **Return To Work Act 2014** was passed in late 2014, with major changes to the scheme and claimant entitlements. Key provisions took effect 1 July 2015.

The main features of the reforms, for claims occurring from 1 July 2015, were:

- A tighter link between employment and injury before compensation is available
- For Seriously Injured workers: ongoing benefits, reduced emphasis on RTW, access to common law benefits for economic loss

- Introduction of boundaries on claim duration for 'non-serious injuries': 104 weeks for weekly benefits and 52 weeks thereafter for medical costs
- New lump sum payment for loss of future earning capacity for non-serious injuries with WPI of 5% or more.

A number of **Regulations** in June 2015 impacted on the operation of the RTW Act. The changes related to pre-1 July 2015 injuries and allow:

- 'Top-up' payments for non-economic loss in limited circumstances; approval to seek further compensation was required before 1 July 2016
- Coverage of future surgeries and up to 13 weeks of IS benefits for existing non-Serious Injuries, even if surgery falls outside the standard time boundaries.

2015-16

The premium system was changed so that nearly all employers were subject to experience rating, but under a new and much simpler system.