



3 August 2018

Mr Anthony Honeybone
Chief Executive Officer
Southern Response Earthquake Services Ltd
10 Show Place
Christchurch 8149
NEW ZEALAND

Dear Anthony

Valuation of Insurance Liabilities at 30 June 2018 for Southern Response Earthquake Services

We are pleased to enclose our report in respect of the valuation of the insurance liabilities of Southern Response Earthquake Services as at 30 June 2018.

This valuation has been prepared in compliance with the International Financial Reporting Standards which are applicable in New Zealand and the liabilities are suitable for inclusion in Southern Response's NZ IFRS 4 balance sheet. It has also been conducted in accordance with the Australian Actuaries Institute's Professional Standard 300 and Professional Standard 30 issued by the New Zealand Society of Actuaries.

Please do not hesitate to contact us if you wish to discuss any aspect of this report.

Yours sincerely

9(2)(a)

Fellows of the Institute of Actuaries of Austra
Fellows of the New Zealand Society of Actuaries

Svdnev

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Insurance Liabilities at 30 June 2018

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Part I Executive Summary

Introduction and Scope

We have been asked by Southern Response Earthquake Services Limited ("SRES") to make an assessment of its insurance liabilities as at 30 June 2018. SRES is the Crown-owned entity which emerged from a transaction whereby, with effect from 5 April 2012, the ongoing business of AMI Insurance Limited ("AMI") was separated from the existing AMI entity and sold to Insurance Australia Group.

The purpose of this report is to assist SRES in setting their outstanding claims provisions for balance sheet purposes. This valuation has been prepared in compliance with the International Financial Reporting Standards which are applicable in New Zealand ('NZ IFRS 4'). It has also been conducted in accordance with the Australian Actuaries Institute's Professional Standard 300 and Professional Standard 30 issued by the New Zealand Society of Actuaries.

The "High Level" Results

Table 1 sets out a high level summary of the main components of cost underpinning our estimate of SRES' ultimate and outstanding earthquake liabilities, together with a comparison to the results from our 30 June 2017 valuation.

Table 1 – High Level Summary of Results Mov't from 30 Jun 17 30 Jun 18 Jun 17 \$m \$m \$m Ultimate Outflows (Net of EQC) Over Cap 2.571 2.548 -23 Out of Scope 331 333 2 Other 153 155 3 Claims Cost 3.055 3.037 -18 9(2)(b)(ii) Project Management Costs SRES Claims Handling 9(2)(i)Reinsurance Recoveries 1.291 1.283 -8 **Ultimate Net Outflow** 9(2)(b)(ii) and 9(2)(i) Cum. Paid Net of EQC 2.842 3.095 253 Cum. Paid Net of Reinsurance 9(2)(b)(ii) and 9(2)(i) Discounting **Net Liability** Central Estimate 9(2)(b)(ii) and 9(2)(i) Risk Margin Provision Required

9(2)(b)(ii)



The projected ultimate net outflow is just more than twelve months ago. In this period, the ultimate claims cost (net of EQC, excluding CHE) has decreased by \$18 million. The decrease is attributable to the combined impact of:

- Pre 1 October 2016 Over Cap properties that were settled during the year came in slightly below our projected settled values
- A decrease in the average size assumed for Over Cap properties received after 1 October 2016, recognising that the settlements and assessments completed on these properties over the year have indicated the average size of these is emerging lower than anticipated at the June 2017 valuation.
- An increase in the number of Over Cap properties expected to emerge from the EQC settlement program (36 more properties projected to be Over Cap compared to June 2017)
- A small increase to the estimated cost of Out of Scope (OOS) and Other Classes.

Claims handling expenses have **increased** by The increase in claims handling expense relates mainly to refinements to forecasts, as the effort involved in resolving the tail claims has become clearer. Assumed reinsurance recoveries have **decreased** since June 2017 by around \$8 million. This is due to a decrease in the allocation of cost to the June 2011 event, which has not yet reached the reinsurance recoverable limit. As a result of these movements, at a net of reinsurance level, the ultimate net outflow remains virtually unchanged since June 2017. The estimated net outstanding liability has however reduced by \$252 million due mainly to payments made during the last twelve months and also to a reduction in the risk margin amount.

A detailed reconciliation to 30 June 2017 can be found in Section 7.5.

Allowance for Uncertainty

For this valuation, we have conducted a formal risk margin assessment, taking into account the various contributors of uncertainty and risk attaching to our central estimate. In light of that assessment, we have adopted a risk margin of 20% to apply to the central estimate (14% at June 2017). The risk margin is intended to achieve a 75% Probability of Sufficiency. Details of the risk margin assessment are set out in Section 6.4.

In our view, there remain two key areas of uncertainty which could result in material adjustments to the ultimate outcome for SRES' remaining claims:

- the volume of future new Over Cap claims which might emerge, and the proportion of these which will ultimately be the subject of dispute and/or litigation
- higher than allowed escalation in settling the remaining body of outstanding claims, including the additional costs involved in settling disputed and litigated claims.

Recommended Provisions as at 30 June 2018

Table 2 sets out our recommended provisions as at 30 June 2018 for the three main events and for all others combined.



Table 2 – Recommended Provisions as at 30 June 2018

Table 2 – Recoil	Cat 93	Cat 106	Cat 112		Total		Ì
Provisions for Outstanding Claims as at	4-Sep-10	22-Feb-11	13-Jun-11	Major	Minor	Overall	ı
30 Jun 2018	\$m	\$m	\$m	\$m	\$m	\$m	ĺ
Gross Incurred Cost in 30 Jun \$ after EQC Share	696.2	2,421.8	90.1	3,208.1	44.1	3,252.2	
less paid to 30 Jun 2018	-660.3	-2,148.7	-80.4	-2,889.3	-40.7	-2,930.0	
Gross Outstanding Claims							
In 30 Jun 2018 Values	35.9	273.1	9.8	318.7	3.5	322.2	
Allowance for Future Inflation	0.0	0.1	0.0	0.2	0.0	0.2	
Inflated Values	35.9	273.3	9.8	318.9	3.5	322.4	
Discount to Present Value	-0.5	-4.5	-0.2	-5.2	-0.1	-5.2	
OSC Discounted to 30 Jun 2018	35.4	268.8	9.6	313.7	3.4	317.2	
Claims Handling						2	9(2
Gross Central Estimate						70	0(2
Catastrophe R/I Recoveries	0.0	0.0	-9.6	-9.6	-1.3	-10.9	
Aggregate R/I Recoveries	0.0	0.0	0.0	0.0	0.0	0.0	
Net Central Estimate							9(2
Risk Margin	78	711					- (
Recommended provision	44.9	341.5	0.7	387.1	2.7	389.8	
Inflated Gross Incurred Cost	696	2,422	90	3,208	44	3,252.4	
(Incl paid to date, excl CHE)				7/,			
Change on 30 Jun 2017 Valuation	-61	48	-8	-20	3	-18	
						9(2)(b)(ii)	

We have made a number of changes to the valuation basis since the 30 June 2017 valuation. The result of the changes is a decrease of around \$18 million in our estimate of the inflated gross incurred cost when compared to the estimate at 30 June 2017.

GCA Class Action

On 29 May 2018, GCA Lawyers initiated a new class action proceeding against SRES, proposing to represent all policyholders that entered into a settlement agreement with Southern Response prior to 1 October 2014 (which is when the Court of Appeal issued its decision in *Avonside Holdings*). The class action seeks to re-open full and final settlements, seeking the difference between what was recorded in the 'Office Use' version of a DRA and the 'Customer DRA' that was issued to policyholders.

As at 30 June 2018, SRES is still working with its legal advisors to determine how it will respond to this class action and the extent of its liability (if any). At this stage, SRES does not accept any liability in respect of the claims made in this class action. Based on discussion with its auditors, and information known to 30 June 2018, SRES considers this to be a contingent liability. Therefore, our recommended outstanding claims provision as at 30 June 2018 makes no allowance for costs arising due to the GCA Class Action.

We note that if a liability were to emerge from this class action, the cost to SRES would likely represent a significant amount relative to the outstanding claims provision. We request that SRES management keep us updated on developments relating to the Class Action prior to finalising the 30 June 2018 accounts, so that any need to make post-balance date adjustments to the accounts can be considered if necessary.



Reliances and Limitations

A number of important reliances and limitations attach to the advice set out in this report. These are set out in Section 1.5 of Part II of this report.

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Part II Detailed Findings

1 Introduction and Background

1.1 Purpose and Scope

We have been asked by Southern Response Earthquake Services Limited ("SRES") to make an assessment of its insurance liabilities as at 30 June 2018. SRES is the Crown-owned entity which emerged from a transaction whereby, with effect from 5 April 2012, the ongoing business of AMI Insurance Limited ("AMI") was separated from the existing AMI entity and sold to Insurance Australia Group.

The purpose of this report is to assist SRES in setting their outstanding claims provisions for balance sheet purposes. This valuation has been prepared in compliance with the International Financial Reporting Standards which are applicable in New Zealand ('NZ IFRS 4'). It has also been conducted in accordance with the Australian Actuaries Institute Professional Standard 300 and Professional Standard 30 issued by the New Zealand Society of Actuaries.

1.2 SRES' Insurance Liabilities

There are two parts to SRES' insurance liabilities:

- claims incurred by AMI arising from the various Canterbury earthquake events ("EQ losses") which had occurred up until 5 April 2012. These liabilities are the subject of this report.
- claims incurred from certain other events specified by the Sale and Purchase agreement; these claims relate to events and incidents where there have been, or where it is anticipated that there will be, reinsurance recoveries on the losses incurred by AMI. We do not report on these liabilities in this report as the outstanding amount relating to these claims at 30 June 2018 is not material. SRES have estimated the outstanding amounts to be less than \$10k.

The following sets out in more detail the earthquake events covered by this report and the types of losses involved.

1.2.1 Earthquake Events Covered

SRES' insurance liabilities relate almost solely to claims for certain earthquake events which occurred up until the time of separation from the ongoing business on 5 April 2012. Table 1.1 lists the EQ events for which SRES is responsible for the outstanding claims liabilities.



Table 1.1 - Earthquake events covered by SRES

Earthquake	SRES CAT
Events	Code
4-Sep-10	93
19-Oct-10	97
26-Dec-10	99
20-Jan-11	103
22-Feb-11	106
16-Apr-11	107
6-Jun-11	111
13-Jun-11	112
21-Jun-11	114
9-Oct-11	117
23-Dec-11	122

1.2.2 Policy Coverage

For the listed events, SRES is responsible for damage across a range of products issued by AMI, as follows:

House

- Over Cap ("OC") Physical Damage Damage to buildings in excess of the amount covered by the Earthquake Commission ("EQC"), which is currently capped at \$100,000 (excluding GST), noting that the majority of AMI policies provided for full replacement value and as such do not have specified sums insured
- Out of Scope ("OOS") Physical Damage Cover for damage to sheds, fences, driveways, swimming pools, which are not covered by EQC
- Loss of Rent For investment properties, cover for loss of rental income while the building is uninhabitable.

Contents

- Over Cap Damage Damage to Contents in excess of EQC cover of \$20,000 (excluding GST)
- Temporary Accommodation The cost of temporary accommodation is covered for up to 12 months and is subject to a maximum of 25% of Contents sum insured (noting that AMI has agreement from reinsurers to extend the period to 12 months from the 6 months specified in its policy wording).

Other products

Comprehensive Motor, Farm and Boat – Earthquake related damage covered similarly to other types of damage.

1.2.3 Management of Claims

Table 1.2 summarises how the liabilities and the physical management of claims were split between SRES and the ongoing AMI business entity. Service level agreements have been put in place with the objective of ensuring that appropriate service levels are delivered by both organisations.



Table 1.2 – Division of Claims Responsibilities

TUDIC 1.2 DIVISIO	on Oranna ite.	эропавине	
Obligation	Products	Financial Responsibility for Any Liability	Physical Management of the Matter
Settled, open and future claims on eligible EQ events occuring up until completion	House, Farm Motor, Boat	SRES SRES	SRES AMI/IAG NZ
Settled, open and future claims on non- EQ events occurring up until completion and which trigger AMI's reinsurance cover	All	SRES	AMI/IAG NZ
All other settled, open and future claims on incidents occurring up until completion	All	AMI/IAG NZ	AMI/IAG NZ
All future obligations emerging after completion on policies in force at completion	All	AMI/IAG NZ	AMI/IAG NZ
Any obligations arising after completion on expired policies and not falling into a category listed above	All	AMI/IAG NZ	AMI/IAG NZ

1.2.4 Contract Works

We also note that, as part of managing the earthquake claims run-off, SRES is assuming a level of exposure to Contracts Work claims. This exposure is largely reinsured with a residual exposure of \$5,000 per claim and as such is not likely to generate any losses of a material nature. For this assessment we have assumed that SRES' contract works exposure is effectively embedded within the claims cost estimates underpinning our projection of ultimate costs (this assumption is unchanged from previous valuations).

1.3 Nature of Estimates

The estimates of outstanding claims in this report have been prepared initially on a central estimate basis. The valuation assumptions have been selected such that the estimates of these liabilities contain no deliberate overstatement or understatement. The central estimate is intended to be a mean of the distribution of outcomes.

The liability cannot be estimated with certainty due to, among other things, random fluctuations in experience and changes in the external environment. Because of this uncertainty, we believe that the balance sheet provisions should include a risk margin above the central estimate. Consistent with NZ IFRS 4, we have included a risk margin in the provision that we believe is sufficient to produce at least a 75% probability of sufficiency.

Under NZ IFRS 4, insurers must discount expected future claim payments for the time value of money. All results have been estimated gross and net of reinsurance recoveries. All claims data supplied for the valuation was net of GST for all lines of business. The valuation results in this report are, therefore, net of GST.



1.4 Structure of Report

The remainder of this report contains the following:

- Section 2 describes the approach used to value the outstanding claims liabilities, the data supplied for this valuation, details of reconciliations performed and control processes
- Section 3 documents the analysis of the Over Cap claims together with our valuation assumptions
- Section 4 documents the analysis and valuation assumptions for Out of Scope and other covers for which EQ losses have been incurred
- Section 5 sets out the basis behind other assumptions required to form our recommended provisions for SRES' EQ liabilities
- Section 6 documents the approach used in the Risk Margin review and the recommended risk margin
- Section 7 summarises the outstanding claims valuation results at 30 June 2018 and sets out the key uncertainties affecting our valuation of the EQ liabilities.

The Appendices to this report provide more detail on the data provided, the analysis undertaken and the valuation results.

1.5 Reliances and Limitations

This report is being provided for the sole use of SRES for the purposes stated in Section 1.1 of this report. It is not intended, nor necessarily suitable, for any other purpose. This report should only be relied on by SRES for the purpose for which it is intended.

You can provide the report to the auditor of the 2018 financial statements and to New Zealand Treasury. It may also be passed onto other parties involved in the audit of the Crown's accounts. If you do this, you should provide the report in full. The auditor must only use the report in connection with its work as your auditor. The auditor should confirm whether our conclusions are appropriate.

No other distribution of the report is allowed, unless we give our approval in writing. Any third party receiving this report should not rely on it, and this report is not a substitute for their own due diligence. We accept no liability to third parties relying on our advice.

Please read the report in full. If you only read part of the report, you may miss something important. If anything in the report is unclear, please contact us. We are always pleased to answer your questions.

We relied on the completeness and accuracy of the information we received. If the information provided to us is inaccurate or incomplete, please let us know as we may need to change our advice. We did not audit or verify the information provided to us, but have reviewed it for general reasonableness and consistence.

Many things may change in the future. We have formed our views based on the current environment and what we know today. If future circumstances change, it is possible that our findings may not prove to be



correct. It is not possible to put a value on outstanding claim liabilities with certainty. Differences between actual experience and our estimates are normal and to be expected.

As well as difficulties caused by limitations in the historical information, outcomes remain dependent on future events, including legislative, social and economic forces. We have generally assumed that the run-off of claims will proceed as in the recent past, and we have not anticipated any extraordinary changes to the legal, social or economic environment (or to the interpretation of policy language) that might affect the cost, frequency or future reporting or re-opening of claims. It is quite possible that one or more changes to the environment could produce a financial outcome materially different from our estimates.

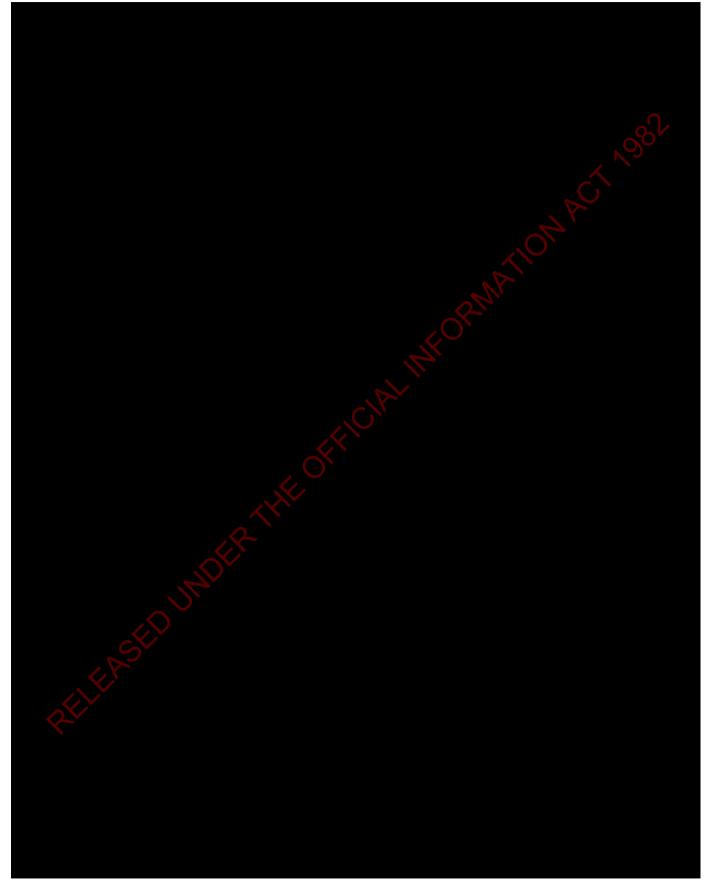
It has been assumed that any amounts arising from the reinsurance programs protecting SRES will be eith ier. We ries.

All the carrier of the carrier fully recoverable on a prompt basis. If any reinsurance proves not to be recoverable (either through insolvency of a reinsurer or contract dispute) the net liability of SRES could be higher. We are not aware

Kfinity

2 Approach and Information

2.1 Approach to Estimating EQ liabilities 9(2)(b)(ii)







2.2 Control Processes and Review

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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 judgments, results and advice.

We have conducted, where possible, a range of cross-reference checks and reconciliations to assess the suitability of various components of the data. This process has been aided by the availability in a number of cases of the same (or similar) data elements from different sources. In most of the areas critical to our analyses, we are satisfied with the results of these reconciliations and cross-checks.



3 Over Caps

Over Cap claims can be considered in three groups, with each group subject to a different cost projection process:

- 1. Over Caps reported on or before 30 September 2016, where SRES and Arrow are managing the settlement process
- 2. Over Caps reported on or before 30 September 2016, where another insurer and PMO are managing the settlement process (multi-unit blocks where another insurer is taking lead)
- 3. Over Caps reported on or after 1 October 2016 (including IBNR Over Caps)

The segregation based on reporting date recognises the differing nature of the two groups of Over Caps. Around October 2016, a Joint Agency Review Team (JART) was formed. The JART includes representatives from each of the major insurers, as well as the EQC. The JART was formed to deal with the unresolved and disputed properties being managed by the EQC, which had been a source of new Over Caps, in order to establish greater clarity around the status and ownership (between the insurer and EQC) of each claim.

3.1 Pre 1 October 2016 Over Caps (SRES Managed)

3.1.1 Approach to estimating ultimate cost

The majority of Over Caps reported prior to 1 October 2016 have had detailed damage assessments completed, and therefore have case estimates based on these assessments (i.e. the Arrow DRAs). Our valuation approach is to:

9(2)(b)(ii)



A separate allowance is also made for "additional payments" that may be made sometime after construction is completed or the cash settlement payment made. These additional payments include items such as:



- Payments relating to comeback clauses
- Demolition costs on cash settlements, which are only paid at the time that customer shows proof of demolition costs being incurred
- Contract works insurance
- Partial cash settlements for driveways, fences, variations etc. 9(2)(i)

Around of additional payments are assumed to emerge within one year of construction completion or the cash settlement being paid. We allow for a small amount of payments to continue from one year after completion to four years after completion, based on payment experience to date. Once the four year period has elapsed, the property is deemed to be "closed" and we assume there are no outstanding payments attributable to the property.

3.1.2 Actual vs Expected Settlement Experience

Settlement experience of SRES managed Pre 1 October 2016 over caps that have reached completion throughout the year has been in line with the projected experience in the June 2017 valuation. The table below summarises this experience by construction type and phase at June 2017.

Table 3.1 – Actual Settlement vs June 2017 Projection

9(2)(i) and 9(2)(j)

Tubic o	7 Total O	thement vo valle zo il il ajec						
		Claims completed in 2017/18						
BAU	No.	DRA @ J17 Projected Cost \$'000s \$'000s	Actual Cost \$'000s	Actual vs Proj Size				
Repair	328							
Construction	83	1 Pro						
Cash Settled	212							
No Estimate @ Jun17	33							
Rebuild	237							
Construction	161							
Cash Settled	71							
No Estimate @ Jun17	5							
Total	565							

The average claim size of claims settled during the year came in slightly below the projected sizes at June 2017. However, the volume of properties settled during the year has been lower than projected. This means that the remaining properties, on average, are taking longer than expected to settle. Past experience has shown that the longer it takes to settle a claim, the more cost development it experiences.

3.1.3 / Projected ultimate costs for remaining Open properties

Properties without a DRA

A small number of properties (11) have not yet had a DRA completed and therefore no DRA estimate exists, nor is it known if the property will be a Repair or a Rebuild. For these properties, we have assumed a 5/95 split between Rebuilds and Repairs, which is in line with the mix of initial DRAs completed in the last twelve months.

Repairs

The figure below shows:





9(2)(b)(ii) and 9(2)(j)



The table below summarises this experience by calendar year.

Table 3.2 – Repairs Initial DRA vs Completed Value (by Calendar Year)

	Completed Year	No of Properties			9(2)(b)(ii) and 9(2)(j)
_		/			
	2011	20			
	2012	108			
	2013	173			
	2014	432			
$\overline{}$	2015	543			
\sim	2016	646			
	2017	409			
`_	2018H1	98			
	Outstanding	266			
_	No DRA	11			

The dollar value as well as the ratio of the completed cost, compared to the initial and the twelve month prior DRA value, has increased consistently over time. This experience reflects the growing complexity of the claims being settled over time, and the higher cost associated with settling these more complex claims. The figure below shows the mix of Repairs completed over time, as well as the mix for Open properties.



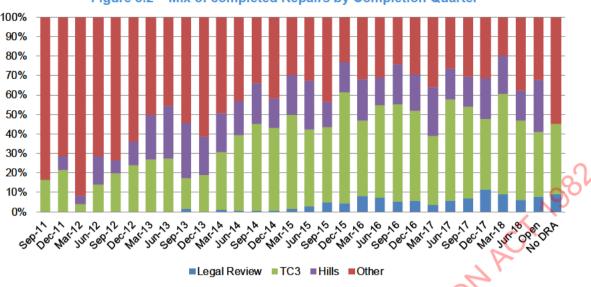


Figure 3.2 - Mix of completed Repairs by Completion Quarter

It can be seen that as the settlement has progressed, there is a growing proportion of properties from the more complex TC3 land zone, as well as properties that are subject to legal review. The remaining properties from the other land zones also tend to have a higher incidence of foundation related complexities than equivalent properties that were settled earlier. The loading adopted for outstanding properties is higher than the historic experience, but is in line with the increasing trend observed. As the number of outstanding claims has reduced, the group of claims now left have a high level of complexity and potential for differences in view about repair methodology and scope. The higher loading is intended to reflect the higher costs expected to emerge from the resolution of these issues.

More specifically, the higher loading reflects:

- A recognition of the additional costs that are incurred in resolving properties that have become subject to professional and legal review due to more serious disagreements with the customer regarding the scope (both due to added scope, and the greater level of professional fees that are incurred through the review and resolution process, which are not factored in to the DRA estimates)
- An allowance for a proportion of currently undisputed claims to be subject to professional and legal review in future
- A higher likelihood of scope related increases being incurred before the settlement basis can be agreed (including Repairs turning into Rebuilds in some cases). In particular the likelihood of this increases over time as the claims with no methodology dispute tend to be settled more quickly.

Rebuilds

The figure below shows:

9(2)(b)(ii) and 9(2)(j)







The table below summarises this experience by calendar year.

Table 3.3 – Rebuilds Initial DRA ys Completed Value (by Calendar Year)

Completed Year	No of Properties Initial DRA	Payments at Completion	% Loading Completed vs Initial	_
2011	462			9(2)(b)(ii) and 9(2)(j)
2012	1,209			()()()
2013	585			
2014	625			
2015	792			
2016	797			
2017	412			
2018H1	50			
Outstanding	127			
No DRA	0			

As with the Repairs, the dollar value as well as the ratio of the completed cost, compared to the initial and the twelve month prior DRA value, has increased consistently over time. Again, this experience simply reflects the growing complexity of the claims being settled over time. The figure below shows the mix of Rebuilds completed over time, as well as the mix for Open properties.



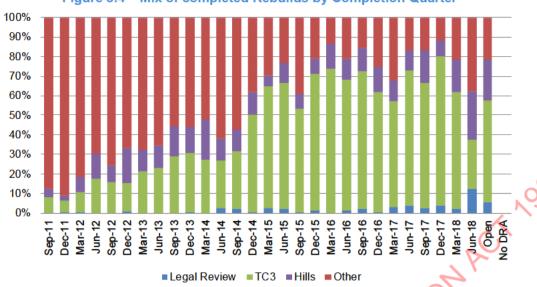


Figure 3.4 – Mix of completed Rebuilds by Completion Quarter

As with Repairs, we have assumed the observed trend will continue and that the ratio of completed cost versus initial DRA value will be higher for the remaining Open properties.

3.1.4 Comparison of average claim size to June 2017 projections

The table below compares our previous projected averages sizes with the current projected costs by construction type and phase at June 2017. In aggregate, our projected size for the remaining claims remains largely unchanged relative to June 2017.

Table 3.4 – Current vs previous projected average size

	Claims still outstanding @ Jun18					
BAU	No.	rojected Cos @ J17 \$'000s	t Projected Cost @ J18 \$'000s	Current vs Prev (%)		
Repair	275					
Construction	76					
Cash Settled	168					
No Estimate @ Jun17	31					
Rebuild	123					
Construction	91					
Cash Settled	32					
No Estimate @ Jun17	-					
Total	398					

9(2)(b)(ii) and 9(2)(j)

Pre 1 October 2016 Over Caps (Other PMO Managed)

3.2.1 Emergence of Cost

Costs on properties managed by other PMOs emerge differently to those managed by SRES. We generally do not have valid assessment data for these properties, and rely on the payments made to the other insurers. Generally, SRES makes a major payment to the PMO managing the property at the time of contract signing. This is followed by a number of variation payments made in order to reimburse the other PMO for any contract variations that emerge during the construction process. Variation payments

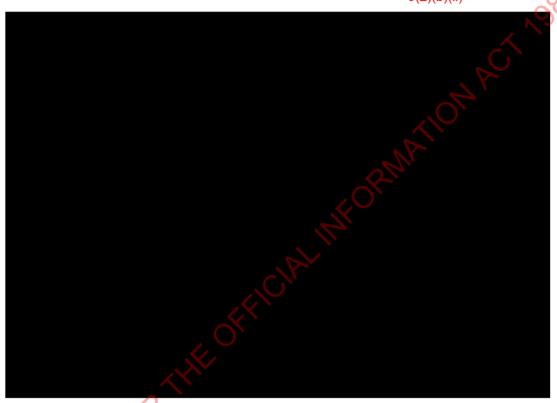


tend to be paid in the 12 months after completion, although payment requests tend to be received fairly sporadically, and practices vary from insurer to insurer.

3.2.2 Average Completed Sizes

Figure 3.5 shows the average completed size of these properties, and our assumed completion size of outstanding properties. The projected ultimate costs for the outstanding properties take into account post-contract variation information about properties currently in construction, where it is available. The higher projected size of the outstanding properties reflects that the remaining properties are the ones that are taking longest to complete, and are therefore more likely to have incurred more significant contract variations.

9(2)(b)(ii)



The ultimate average sizes on the incomplete properties managed by other PMOs are shown in Table 3.5 below.

Table 3.5 – Ultimate Sizes and Total Liability on Other PMOs

		Rebuild		Repair		
		No Ave Properties	g Ultimate Total Size Liability (\$m)		g Ultimate Total Size Liability (\$m)	
Outstanding		11		10		
Completed						
Year of Completion	2015	5		1		
	2016	31		27		
	2017	28		20		
	2018	5		3		
Total		80		61		

3.3 Post 1 October 2016 Over Caps 9(2)(b)(ii)

Continuing New Over Cap claim reports prompted the initiation of the JART process in the second half of 2016. SRES was given access to EQC data and worked with the EQC to identify unresolved properties that were likely to turn Over Cap. This allowed SRES to take carriage of the resolution of these



properties earlier than may have been possible if they had been resolved by existing EQC processes. Since the initial review (which involved 2,400 properties), around 1,500 additional properties have been reviewed.

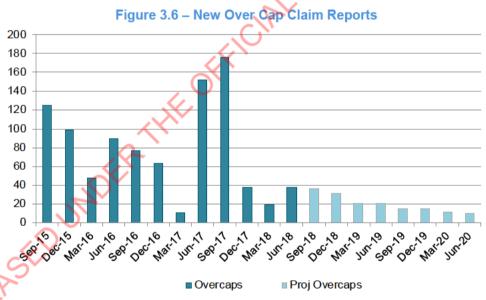
As more detailed information about these properties has emerged over the last twelve months (as SRES has been able to complete detailed damage assessments), we have observed that the cost profile of these properties is different to that of the previously outstanding body of claims. Given the difference in damage profile, and that SRES's own information about these claims is generally less mature than older Over Caps, we have treated all Over Caps reported after 1 October 2016 (including future Over Caps) as a separate group for valuation purposes.

3.3.1 Future Over Cap Numbers

We expect future Over Caps to emerge in three ways:

- Properties previously reviewed by SRES and deemed EQC owned, emerging as Over Cap
- Some of the ~3,600 properties (at industry level) unresolved EQC properties ultimately emerging as Over Cap
- Future EQC reopening of previously resolved Under Cap claims leading to some properties becoming Over Cap.

The figure below shows the recent history of Over Cap reporting activity and our projection of future Over Caps.



Our projections assume that SRES will continue to receive 181 future new Over Caps between now and June 2020, albeit at a declining rate. Based on available, albeit limited, data we have observed a declining rate of EQC re-openings. Much of the unreviewed, unresolved EQC claims backlog that existed eighteen months ago has now also been reviewed by SRES (hence the high levels of new Over Cap reporting in 2017). Taking these two factors into consideration, we expected the future flow rate of new Over Caps to be lower. It is difficult to know how long EQC will continue to reopen claims with a material risk of the claim turning Over Cap. Our projections assume that the reopening of EQC Under Cap claims

The detailed analysis supporting our projections is set out in Appendix C.



be largely resolved by early 2020.

3.3.2 Sizes of the New Over Caps

The Post October 2016 Over Caps have varying levels of damage and associated complexity, but on average have incurred less damage than the Over Caps reported prior to 1 October 2016. At the last valuation, very few properties had detailed assessments completed, and we had assumed that the New Over Caps would be around 10% smaller than the Pre October 2016 claims. Over the year, 115 of these Over Caps have been completed, with a further 115 now having detailed assessments completed. Table 3.6 shows our assumed ultimate sizes compared to the previous valuation.

Table 3.6 – Ultimate sizes compared to previous



Settlement and assessment experience over the year has shown:

- A number of properties were settled through a fast track process, either because they had relatively little damage or the policy wording only required an indemnity value based settlement. The average size on these properties has been much lower than expected at June 2017. We expect that of the remaining claims, very few will settle in this manner.
- 29 properties were settled following the preparation of a Builders' Price DRA (which serves as the basis for settlement negotiations) with an average size of , compared to 9(2)(i) and 9(2)(j)projected at June 2017
- Based on the assessed value for 115 properties that are not yet settled, the projected average size is around grown, compared to grown at June 2017 9(2)(i) and 9(2)(j)
- For properties that don't yet have an assessment (including IBNR) we have assumed the ultimate size will be in line with that of properties that have had a Builders' Price assessment (and have a similar level of damage profile)

Our projected average size for the outstanding claims is , which is projected size at June 2017. 9(2)(i) and 9(2)(i)

coading for "additional payments" applied to completed

Once the construction or cash settlement has been completed, additional payments can still be recorded against a property for some time. For any properties that reached completion within the last four years, we make an explicit allowance for these additional payments. For properties that that have been completed for more than four years, we assume no further payments will be made. We assume different payment profiles by property type due to the difference in observed additional payment profiles for construction completions, cash settlements and other PMO managed properties. Our assumptions are detailed in Appendix D.

¹ Completion is defined as either construction being completed or the cash settlement being paid out.



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The table below details, by completion quarter, the average additional payments per property expected for each property type, as well as the total projected payments for all properties. In total we have an allowance of around \$20 million for outstanding additional payments (for both outstanding claims, as well as claims completed within the last four years).

The additional payment allowance per property decreases with time since completion. Given SRES' intention to cash settle those customers that have not already elected an Arrow Managed construction, the construction additional payment streams only apply to those customers that have already joined the construction queue. All other Open properties receive the Cash Settled Repair loading.

9(2)(i) and 9(2)(j)



3.5 Ultimate Number of Over Cap Properties

Table 3.8 shows the projected ultimate number of Over Cap properties and the change since June 2017.

Movt from Over Cap Claims Jun-17 Jun-18 Jun-17 **Over Cap** Overcaps Recorded Currently 8,122 8,417 295 Future additions 440 181 -259 Ultimate No with Over cap damage 8,598 8,562

Table 3.8 - Projected Ultimate Over Cap Properties

We have increased the total number of Post 1 October 2016 Over Caps by 36 since the previous valuation.

3.6 Future Escalation

Adjustments made to the DRA values vary according to DRA age, and the adjustments adopted are based upon an analysis of increases observed in the past based on nominal dollar values. As such, the adjustments made to the current DRA values implicitly include an allowance for future escalation (at a rate broadly in line with the historic average). Therefore we make no further explicit allowance for future escalation.



3.7 EQC Contributions and Event Apportionment

Up until August 2014, SRES went through a process of agreeing apportionment and therefore EQC contributions with the EQC (the process is referred to as "endorsement"). In an effort to speed up the settlement process of the outstanding claims, SRES now accepts the apportionment put forward by the EQC unless there is an obvious inconsistency. We use the apportionment data to allocate cost at a property level.

Previously, data on EQC contributions was not specifically recorded in SRES systems. We estimated contributions using recovery data, the endorsement information and data directly from the EQC. SRES has populated historical and current data regarding the EQC contributions. This removes a layer of estimation we previously had to apply to assess EQC contributions, particularly for cash settled properties.

We also now use this information as an input to cost apportionment calculations. Where a property has an EQC contribution for an event that exceeds its gross cost apportionment, the apportionment is adjusted to allow for this. Therefore cost apportionment between events takes into account both EQC contribution information and the information to calculate the final apportionment.

3.7.1 Apportionment Across Events

The figure below shows the event apportionment for all properties with valid apportionment and contribution data, as well as our projected apportionment for properties without valid data. For properties without valid data, we use the experience reported to date as the basis for projection of the ultimate apportionment of Over Cap claims across events and explicitly allow for any observable difference in mix.

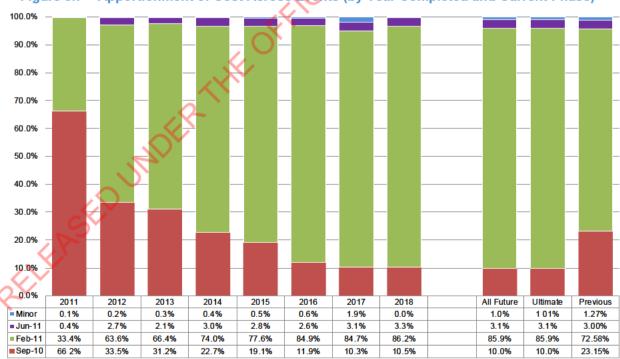


Figure 3.7 – Apportionment of Cost Across Events (by Year Completed and Current Phase)

There has been a reduction in our apportionment to the September and June events and an increase in our apportionment to the February event. As part of the annual valuation process we investigated the causes of the ongoing movement in event allocation toward the February event, the net impact of which



has been to add volatility to the June event allocation at recent quarterly valuations. Upon further investigation we found that there had been changes in the practices for recording interim event apportionment data (prior to the final apportionments being recorded upon closure of the claim). As a result, as event apportionments were being finalised in the system, a different view of apportionment was slowly being picked up in our analysis. We have modified our analysis to account for this change in practice, and this has been the main driver of the movement between events.

As both major events, September and February are well over their reinsurance limits, it is only the decrease in allocation to the June events that has an impact on reinsurance recoveries and hence on SRES' net liability. The lower allocation to the June 2011 event results in an \$8 million reduction to expected reinsurance recoveries.

3.7.2 EQC Contributions

Pre October 2016 Properties

EQC contributions are taken from three data sources, where available (in hierarchical order):

- EQC contributions recorded in SRES' data
- Actual recoveries adjusted for uninsured works
- The EQC contribution recorded directly in EQC's database for properties that haven't been endorsed.

For those properties without valid data from any of these sources, we assume the EQC contribution will be the same as the average contribution size recorded to date, allowing for differences by property type. Due to the varying observed sizes, we project EQC contributions separately for each of Repairs, Group Home Builds, Non-Group Home Builds and Multi-units. Our projected EQC contributions for outstanding properties are shown in Table 3.9.

Table 3.9 – Projected Average EQContributions for outstanding Pre October 2016 Properties

Property Type	No of Properties	Contribution (\$)	EQC Contribution (\$)	
Repair	223	117,000	122,000	
Group Home Build	64	117,000	122,000	
Non Group Home Build	27	132,000	137,000	
Multi Repair	66	105,000	106,000	
Multi Rebuild	49	103,000	110,000	
Total	429	114,000	119,000	

The projected EQC contribution for remaining Pre October 2016 properties has reduced slightly. During the year we received new data relating to EQC Emergency Works, which formed part of the recorded EQC contributions. As these amounts had already been spent by the EQC they act to reduce the expected EQC contribution that SRES will receive. The exclusion of this component of the EQC contribution reduces the average expected EQC contribution size on the remaining Pre October 2016 claims by approximately \$5,000. The net impact on the liability is a reduction in expected EQC recoveries by \$2 million.

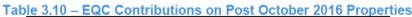


Post October 2016 Properties

For many Post October 2016 properties, the customer has not yet received the full EQC contribution as it was previously assumed that the claim was under cap. In most cases, EQC has done some repair works or cash settled the customer as a minor repair. Which means that when SRES settles its claim with the customer, it deducts the amount received by the customer to date from the gross cost, and recovers the balance of the contribution from the EQC. These claims tend to have had some level of work completed by the EQC (other than emergency works), which is netted off the recoverable contribution. SRES is seeking to claim additional recoveries from the EQC where work needs to be redone or has resulted in consequential damage.

Table 3.10 details the breakdown of costs relating to the EQC recoveries on properties that have complete data (noting the sample size is around 30, and therefore relatively small).

9(2)(b)(ii), 9(2)(i) and 9(2)(j)





On average:

The customer has already received an EQC cash settlement payment of around and 9(2)(b)(ii), 9(2)(i) and 9(2)(j)

After allowing for Emergency Works completed, that leaves remaining from the full cap

• The EQC has completed around of work, leaving only a further recoverable from the original cap.

9(2)(b)(ii), 9(2)(i) and 9(2)(j)

This means that SRES expects, at a minimum, of EQC contribution to go toward the gross repair sizes. We assume that properties that do not yet have valid EQC contribution data, will have a similar profile.

9(2)(b)(ii), 9(2)(i) and 9(2)(j)

We note that for these properties SRES is seeking average recoveries of per property from the EQC, relating to disregarded work and consequential damage. We understand that SRES and EQC have an Memorandum of Understanding, under which EQC has agreed to pay additional amounts for disregarded work and consequential damage where SRES can provide evidence. Given the relatively small sample of properties with this information available, and relatively high size of the estimated additional recoveries, at this stage we have adopted a lower average recovery amount in respect of disregarded work and consequential damage. We have judgmentally assumed the average recovery amount will be half that estimated for this sample.

9(2)(b)(ii), 9(2)(i) and 9(2)(j)



3.8 Summary of Projected Over Cap Claim Costs

The table below summarises the resulting projected claims costs, as well as the outstanding amounts. We also show the current values recorded in the system, where DRAs exist, as well as the additional allowance above those DRA estimates. This allowance reflects both a projected estimate for properties where a DRA does not yet exist (and therefore no estimate is recorded), as well as our IBNER allowance above the current DRA values where a DRA exists.

9(2)(i) and 9(2)(j)

Table 3.11 – Summary of Over Cap Claim Costs (net EQC, CHE)

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4 Other Covers

4.1 Out of Scope Claims

4.1.1 Out of Scope Liability

Out of Scope (OOS) claims are close to being finalised with the vast majority of constructions and settlements having been completed. There remain only 131 open claims. We continue to see a small volume of new OOS claim reports (less than 100 over the last year). We have assumed that more OOS claims will continue to emerge, albeit at a declining rate, until early 2020 (in line with the assumed timeframe for EQC's resolution of claims).

The table below sets out the current status of the projected ultimate number of properties with OOS only damage.

Table 4.1 - Assessment Status of OOS claims

OOS Claim Status	Total
Closed	21,178
Open	131
Withdrawn	636
IBNR	176
Total	22,121

We have adopted an average ultimate size on open claims that takes into account the estimates and payments to date. We have selected an average size of IBNR claim based on the settlement size of the more recently reported claims. The table below summarises the current paid to date, ultimate cost, and outstanding liability for OOS claims.

Table 4.2 – QOS Ultimate Claims Cost 9(2)(i) and 9(2)(j)



The total OOS ultimate claims cost exclusive of project management costs, is \$333.3m.

4.1.2 Out of Scope Event Apportionment

We have relied on the payments made in IVIIS for apportioning the claim costs against the earthquake events. We assume that apportionment for unassessed properties for each land zone will be in line with the observed apportionment to date.

Figure 4.1 below compares the results of the apportionment process to the previous valuation's apportionment of OOS claims costs.



60%
50%
40%
30%
10%
September February June Minor Events
This Valuation Jun-17 Valuation

Figure 4.1 – OOS Apportionment Overall

Table 4.3 summarises the outstanding claims cost apportioned by event.

Table 4.3 - OOS Ultimate Claims Cost by Event

Sep-10	Dec-10	Feb-11	Jun-11	Dec-11	Minor Events	All
				\sim		
9,980	753	14,908	1,407	969	357	28,374
139	11	210	18	13	5	396
10,119	764	15,118	1,425	982	362	28,770
			_<			
			(0)			
142.2	10.0	168.0	10.7	8.8	3.7	343.3
3.7	0.3	4.4	0.3	0.2	0.1	8.9
145.9	10.2	172.3	11.0	9.0	3.8	352.2
	9,980 139 10,119 142.2 3.7	9,980 753 139 11 10,119 764 142.2 10.0 3.7 0.3	9,980 753 14,908 139 11 210 10,119 764 15,118 142.2 10.0 168.0 3.7 0.3 4.4	9,980 753 14,908 1,407 139 11 210 18 10,119 764 15,118 1,425 142.2 10.0 168.0 10.7 3.7 0.3 4.4 0.3	9,980 753 14,908 1,407 969 139 11 210 18 13 10,119 764 15,118 1,425 982 142.2 10.0 168.0 10.7 8.8 3.7 0.3 4.4 0.3 0.2	9,980 753 14,908 1,407 969 357 139 11 210 18 13 5 10,119 764 15,118 1,425 982 362 142.2 10.0 168.0 10.7 8.8 3.7 3.7 0.3 4.4 0.3 0.2 0.1

4.2 Temporary Accommodation

4.2.1 Approach

The cost of temporary accommodation is covered for up to 12 months and is subject to a maximum of 25% of contents sum insured (noting that SRES has agreement from reinsurers to extend the period to 12 months from the 6 months specified in its policy wording).

The valuation approach is unchanged from last year. We have categorised the claims as arising from either one of the following claim types:

- Over Cap
- Under Cap (a property with OOS damage only or EQC liability only), or
- Contents Only claim (where the policyholder has not lodged a buildings claim to SRES or EQC).

The rationale behind this approach is that a more severely damaged property will tend to lead to longer periods of displacement for policyholders, and therefore incur more temporary accommodation cost. For Over Caps the ultimate numbers of temporary accommodation claims have been projected by using the projected number of Over Cap building claims as a starting point, and selecting a proportion of these to ultimately lodge temporary accommodation claims. For the other categories we have used a chain ladder model to project future claim lodgements. In projecting claim sizes, we have made assumptions regarding the percentage of the claimant's entitlement expected to be used.



4.2.2 Results Summary

Table 4.4 summarises the results of the experience to date and our projected ultimate cost. Details of the analysis by claim type can be found in Appendix E.

Table 4.4 - Projected Ultimate Cost of Temporary Accommodation Claims

	Over Caps	Under Caps	Contents Only	Total	Jun17 Valn
Reported Claims					
Open Claims					
Claim Numbers	246	13	15	274	273
To Date Average Claim Size (\$)	8,837	4,824	13,894	8,923	6,872
Ultimate Average Claim Size (\$)	15,631	12,851	14,715	15,449	15,879
Finalised Claims					
Claim Numbers	3,999	9,153	1,449	14,601	14,465
Finalised Average Claim Size (\$)	12,689	5,039	4,186	7,050	6,924
Claims to Date	4,245	9,166	1,464	14,875	14,738
Average Size	12,879	5,050	4,294	7,210	7,095
Reported to Date Total (\$m)	54.7	46.3	6.3	107.2	104.6
IBNR Claims			Ali,		
Claim Numbers	92	26	16	134	261
Adopted Average Claim Size (\$)	17,000	9,600	10,500	14,782	14,018
IBNR Total (\$m)	1.6	0.2	0.2	2.0	3.7
		14			
Total	~	V			
Ultimate Claim Numbers	4,337	9,192	1,480	15,009	14,999
Ultimate Average Size	12,966	5,063	4,361	7,278	7,215
Estimated Ultimate Liability (\$m)	56.2	46.5	6.5	109.2	108.2

In order to project the ultimate number of Temporary Accommodation claims, we analyse the proportion of recent Over Cap cash settlements that have a related Temporary Accommodation claim and assume that this proportion will be similar for future settlements. We have increased the number of IBNR claims expected for Temporary Accommodation in line with the increase in Over Cap claim numbers.

Table 4.5 shows the split of the temporary accommodation costs by event, which is calculated based on the allocation implied by payments recorded against these claims in the ERT report.

Table 4.5—Projected Ultimate Cost of Temporary Accommodation Claims by Event

	Sep-10	Dec-10	Feb-11	Jun-11	Dec-11	Other Events	Total
Ultimate Claims	3,044	34	11,355	425	112	38	15,009
Ultimate Liability (\$m)	22.2	0.2	82.6	3.1	0.8	0.3	109.2
Paid to Date (\$m)	21.6	0.2	80.0	2.9	0.8	0.3	105.8
Outstanding Liability (\$m)	0.6	0.0	2.6	0.1	0.1	0.0	3.4
% Allocation of Ult to Event	20.3%	0.2%	75.7%	2.8%	0.7%	0.3%	



4.3 Other Cover Types

Table 4.6 shows our adopted ultimate cost for the other cover types:

Table 4.6 – Other Cover Types Ultimate Cost Summary

	Rep	orted		Ultimate				
	Claim Numbers	Average Size	Claim Numbers	Average Size	Estimated Cost (\$m)	Paid to Date (\$m)	Outstanding (\$m)	Estimated Cost (\$m) Jun-17
Lost Rent	2,433	6,960	2,477	7,442	18.4	16.5	1.9	17.9
Contents	1,945	9,680	2,033	10,142	20.6	18.4	2.2	20.2
Vehicles	3,912	1,527	3,912	1,527	6.5	6.5	0.0	6.0
Other	155	6,567	155	6,567	1.0	1.0	0.0	0 1.0
Total	8,445	5,062	8,577	5,368	46.0	42.5	4.1	45.1

Overall, there has been an increase of \$0.9 million in the other claim classes since the June 2017 valuation. The increase is driven by ongoing reporting of new Lost Rent and Contents claims. We previously allowed for only a small amount of IBNR claims, but have increased our projection of claim numbers in light of the ongoing reporting activity.

Table 4.7 summarises the claim numbers and average sizes adopted for other classes, apportioned by event.

Table 4.7 – Other Cover Types Ultimate Cost Summary by Event

Table 4.7 Other Govern Types Othinate Gost Guilliary by Event								
		Repo	orted		Ultimate			
		Claim	Average	Claim	Average	Estimated	Estimated	
		Numbers	Size	Numbers	Size	Cost (\$m)	Cost (\$m)	
		Nullibers	3126	Mullipers	3126	Cost (\$III)	Jun-17	
	Lost Rent	418	7,413	418	7,478	3.1	3.1	
4.0 4.0040	Contents	406	6,041	428	6,791	2.9	3.0	
4 Sept 2010	Vehicles	1,278	992	1,278	992	1.3	1.3	
Darfield	Other	91	7,429	91	7,429	0.7	0.7	
	Total	2,193	3,417	2,215	3,601	8.0	8.0	
	Lost Rent	1,857	7,011	1,901	7,623	14.5	14.0	
00 Fab 0044	Contents	1,414	11,237	1,480	11,640	17.2	16.7	
22 Feb 2011	Vehicles	2,248	1,938	2,248	1,938	4.4	4.4	
Lyttleton	Other	40	6,463	40	6,463	0.3	0.3	
	Total	5,559	6,031	5,669	6,409	36.3	35.3	
	Lost Rent	124	5,543	124	5,549	0.7	0.7	
13 June	Contents	64	5,174	64	5,174	0.3	0.3	
2011	Vehicles	194	991	194	991	0.2	0.2	
Lyttleton	Other	11	4,026	11	4,026	0.0	0.0	
	Total	393	3,193	393	3,195	1.3	1.3	
	Lost Rent	34	3,761	34	3,761	0.1	0.1	
Minor	Contents	61	2,532	61	2,532	0.2	0.2	
	Vehicles	192	818	192	818	0.2	0.2	
Events	Other	13	3,002	13	3,002	0.0	0.0	
	Total	300	1,595	300	1,595	0.5	0.5	
					Total	46.0	45.1	

Escalation 4.4

The table below summarises the escalation rates assumed for each of the other cover types.

Table 4.8 – Summary of Escalation Assumptions

	Effective Rate (% pa)					
Claim Type	Jun-18	Jun-17				
Out of Scope	0.0%	0.0%				
Lost Rent	3.0%	3.0%				
Contents	3.0%	3.0%				
Vehicles	3.0%	3.0%				
Temporary Accommodation	0.0%	0.0%				

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5 Other Factors

5.1 Claims Handling and Project Management Expenses

We have assumed claims handling and project management expenses to be in line with SRES' forecast of these expenses. The table below sets out the expenses paid to date and the forecasts of future expenses, both at this valuation as well as at June 2017.

Jun-18 Jun-17 (\$m) (\$m) Claims Handling Expenses Paid to Date **Future** FY18 FY19+ Ultimate **Project Management Costs** Paid to Date **Future** FY18 FY19+ Ultimate

Table 5.1 – Forecast Claims Handling and Project Management Expense

The increase in the ultimate expected claims handling expenses reflects refinements to forecasts, as the effort involved in resolving, and the number of, tail claims has become clearer.

For the purpose of the valuation we have assumed that the claims handling expenses will not be claimable from reinsurers, noting that the September and February events are over the limit of cover anyway. The project management costs are treated as being part of the claims cost. For the purpose of the valuation we have assumed that all of the project management expenses will be claimable from reinsurers up to the limit of cover.

5.2 Legal Costs

We have prepared an independent projection of the legal costs expected to be incurred by SRES in settling disputed claims. In forming our projections, we have considered the average legal costs incurred for recently settled claims subject to some legal action, and assumed a similar cost will be incurred for open claims that are the subject of some legal action. We have also made an allowance for the additional legal costs expected to be incurred as a result of claims that will become the subject of some dispute in the future.

Table 5.2 details the legal costs incurred to date, and the estimated outstanding legal costs.





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5.3 Reinsurance Recoveries

Table 5.3 sets out the flow of reinsurance recoveries implied by our valuation. As noted above, we have assumed that no claims handling expenses will be recoverable under SRES' reinsurance contracts.

Table 5.3 – Reinsurance Cashflows (Inflated and Undiscounted)

Pay	ment Year							,		9/
	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Major Events (\$000's)	37.8	330.5	269.7	358.1	138.8	113.0	9.9	7.5	5.7	4.1
Minor Events (\$000's)	0.0	0.0	0.0	0.0	1.8	2.7	1.6	0.1	0.8	0.5
Total (\$000's)	37.8	330.5	269.7	358.1	140.7	115.7	11.5	7.6	6.5	4.6

Furthermore, we have assumed that there will be no failures among the reinsurers participating on SRES' contracts and hence that the full cover under these contracts will be received

It should be noted that our valuation produces a present value of those reinsurance recoveries which relate to claim payments made after 30 June 2018. To the extent that the recoveries actually received by SRES to 30 June 2018 are different to those receivable against claim payments already made, then appropriate compensating entries need to appear in SRES' balance sheet.

5.4 Payment Pattern

Our projected payment pattern takes into account SRES' internal project management projections, as well as our own projections of settlements. Settlement projections are based on historical experience, adjusted to allow for the fact that almost all properties will be cash settled moving forward. Figure 5.1 shows the projected payment pattern. The payment pattern has been extended to June 2021. This is due to settlement progress being slower than expected at the last valuation, as well as the additional New Over Cap claims.





5.5 Discount Rates

For the valuation at 30 June 2018 and as with previous valuations, we have adopted the 30 June 2018 risk free zero coupon discount rates as published by New Zealand Treasury. Figure 5.2 shows the movement in the yield curve from 30 June 2017 to 30 June 2018.



Compared to June 2017, there has been a downwards shift of the yield curve for all durations.

The single effective discount rate and discounted mean term at each of the dates are shown in Table 5.4.

Table 5.4 – Single Effective Discount Rate and Discounted Mean Term (DMT)

Tubic 0.4	Olligic Eli	COULT DISCOULT	i Mute unu i							
		Gross		Ne	et					
		Disc Rate DM	T (years)	Disc Rate	DMT (years)					
30 June	2017	2.1%	0.9	2.0%	0.9					
30 June	2018	1.8%	0.9	1.7%	0.9					
		XV.								
	.0-	-								
	\mathcal{O}_{V}									
	7									
^\										
5										
X-										



6 Risk Margin

6.1 Background

We have reviewed the risk margin to be incorporated into the 30 June 2018 outstanding claims liability valuation for SRES's EQ liabilities. This note documents the results of that review.

6.2 Risk margin adopted previously

A gross risk margin of 14% was adopted at the 30 June 2017 valuation, intended to provide a 75% probability of sufficiency (PoS). This risk margin was also adopted at the 30 September 2017 valuation. For the quarterly valuations thereafter, we chose to hold the dollar risk margin adopted at 30 September 2017 (~\$69 million) constant. This decision was intended to foreshadow an increase in the risk margin percentage to be adopted at 30 June 2018.

As we move further into the run-off and as the outstanding liability reduces, the exposure to external environment risks (in particular the impact of adverse legal rulings) does not reduce at the same rate as the reduction in the outstanding claims amount.

6.3 Recommended risk margin for 30 June 2018 valuation

We recommend a gross risk margin of 20% be adopted for the 30 June 2018 accounts. This risk margin is intended to provide a 75% PoS.

6.4 Approach

Our assessment of the risk margin incorporates the key elements of the framework proposed by the Australian Actuaries Institute's Risk Margin Taskforce in their paper 'A Framework for Assessing Risk Margins'². Specifically, our assessment attempts to explicitly consider and allow for uncertainty arising from each of the following sources of variability:

- Independent error: This is the component inherent in the claim settlement process the
 randomness that will be present no matter how good the data and methodology, or how stable the
 environment. This relates primarily to the variability in individual claim settlement outcomes
 relative to estimates.
- Internal systemic risk: Represents the uncertainty associated with the valuation models inability to perfectly represent the underlying insurance processes and therefore variability expected to arise as a result of having imperfect models.
- External systemic risk: There remain risks which are external to the modelling process. In the case of SRES' earthquake liabilities, the major exposure being exposure to the cost of litigation, both in terms of legal fees involved as well as the impact of court rulings on claim settlement outcomes.

For each component of variability, we have estimated a Coefficient of Variation (CV), which is a measure of the relative variability arising due to that source of risk. The CVs are then aggregated into a "consolidated CV", assuming each component to be independent of one another (thereby producing some diversification across the risk types). The risk margin at the 75th percentile is then derived by applying the consolidated CV and assuming the liability follows a LogNormal distribution.

² https://www.actuaries.asn.au/Library/Framework%20for%20assessing%20risk%20margins.pdf





6.5 Assessment of risk margin components

6.5.1 Independent Error

Our independent error assessment excludes IBNR claims. Given the poor data and relevant history on which to project IBNR claims, we have considered the impact of IBNR exposure as part of the internal and external systemic risk assessments.

For the known (already reported) claims, we have constructed an individual claim level stochastic model that simulates individual claim outcomes. The model allows for variations in future settlement volumes and individual claim outcomes relative to current estimates. The model generally assumes that the longer a claim takes to settle, the more cost development there will be. It is also assumed that claims settled later will be subject to greater variability. Variability assumptions have been calibrated with regard to the most recent settlement experience. We have seen the level of variability in individual claim outcomes, relative to estimates, increase as time has gone on. As such, we have assumed that the level of variability in individual settlements will continue to increase in future.

The CV estimated from the stochastic model is 2.4%. The relatively low CV estimated for the independent error reflects the fact that claims that are already being actively managed by SRES are reasonably predictable in aggregate.

We have adopted a CV for the independent error component of 3%. Our adopted CV is a little higher than the modelled CV, to allow for the fact that our stochastic model is a simplified representation of the actual valuation models and won't fully reflect all process uncertainties inherent in the valuation model.

6.5.2 Internal and External Systemic Risk

The systemic risks assessment focuses upon more qualitative considerations. For each of the internal and external systemic risks we have selected:

- A "CV Scale", which is intended to reflect the relative exposure to variability, and
- A score (out of 5) to reflect
 - How well the actuarial valuation process captures the sources of variability (in the case of internal systemic) and
 - The extent of the risk arising from external factors
 - A higher score reflects a lower assessment of these risks.

The table below shows the range of CV scales that are typically used, the CVs corresponding to the scoring range (out of 5) as well as the scores and scales we have selected.

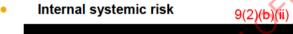


Table 6.1 – Selected Systemic Risk CVs

		Variabi	lity (CV) S	cale	
Score	1	2	3	4	5
0.00	10.0%	20.0%	30.0%	40.0%	50.0%
0.25	9.6%	19.1%	28.7%	38.2%	47.8%
0.50	9.1%	18.2%	27.3%	36.4%	45.5%
0.75	8.7%	17.3%	26.0%	34.6%	43.3%
1.00	8.2%	16.4%	24.6%	32.8%	41.0%
1.25	7.8%	15.5%	23.3%	31.0%	38.8%
1.50	7.3%	14.6%	21.9%	29.2%	36.5%
1.75	6.9%	13.7%	20.6%	27.4%	34.3%
2.00	6.4%	12.8%	19.2%	25.6%	32.0%
2.25	6.0%	11.9%	17.9%	23.8%	29.8%
2.50	5.5%	11.0%	16.5%	22.0%	27.5%
2.75	5.1%	10.1%	15.2%	20.2%	25.3%
3.00	4.6%	9.2%	13.8%	18.4%	23.0%
3.25	4.2%	8.3%	12.5%	16.6%	20.8%
3.50	3.7%	7.4%	11.1%	14.8%	18.5%
3.75	3.2%	6.5%	9.7%	13.0%	16.3%
4.00	2.8%	5.6%	8.4%	11.2%	14.0%
4.25	2.3%	4.7%	7.0%	9.4%	11.8%
4.50	1.9%	3.8%	5.7%	7.6%	9.5%
4.75	1.4%	2.9%	4.3%	5.8%	7.2%
5.00	1.0%	2.0%	3.0%	4.0%	5.0%

Internal Systemic Risk Score
External Systemic Risk Score

Our selected CVs reflect the following considerations:





External systemic risk
 9(2)(b)(ii)







6.5.3 **Adopted CVs**

The table below summarises the CVs adopted for each component and the resulting combined CV.

Table 6.2 – Adopted CVs and Risk Margin at 75% Pos

Risk Margin Component	Adopted CV
Independent Error	3.0%
Internal Systemic Risk	22.0%
External Systemic Risk	32.0%
Combined CV	38.9%
Risk Margin @ 75% PoS	20.1%

Assuming outcomes follow a LogNormal distribution, and applying the combined CV of 38.9% results in a risk margin of 20%, in order to achieve a 75% PoS.

Scenario testing 6.6

9(2)(b)(ii) and 9(2)(i)





Risk margin for known vs IBNR claims 9(2)(i) and 9(2)(j) 9(2)(b)(ij) Benchmarking to long-tail portfolio risk margins

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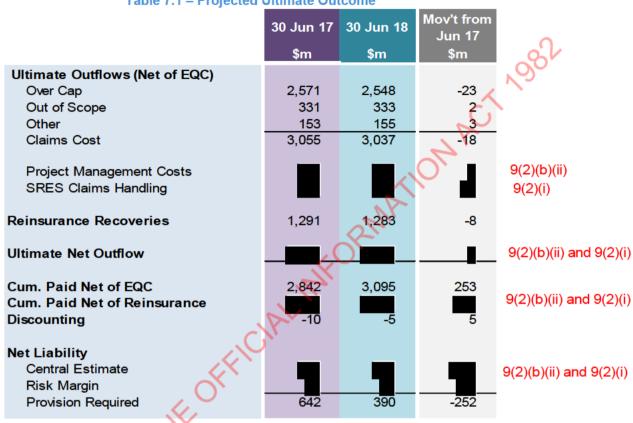
9(2)(b)(ii)

7 Summary of EQ Liabilities

7.1 Projected Ultimate Costs

Table 7.1 sets out a high level summary of the financial numbers, together with a comparison to the results adopted in our 30 June 2017 valuation.

Table 7.1 - Projected Ultimate Outcome



Over the last twelve months, the ultimate cost of claims (net of EQC, excluding CHE) has decreased by \$18 million, before reinsurance. The decrease is attributable to:

- Pre 1 October 2016 Over Cap properties that were settled during the year came in slightly below our projected settled values
- A decrease in the average size assumed for Over Cap properties received after 1 October 2016, recognising the settlements and assessments completed on these properties over the year have indicated the average size of these is emerging lower than anticipated at the June 2017 valuation
- These impacts have been somewhat offset by an increase in the number of Over Cap properties expected to emerge from the EQC settlement program (36 more properties projected to be Over Cap compared to June 2017)
- A small increase to the estimated cost of Out of Scope (OOS) and Other Classes has further offset some of the Over Cap size related reductions.



7.2 'Wash Up' matters between SRES and the EQC

There are ongoing discussions between SRES and EQC around the settlement of a few areas of cost:

- EQC Contributions EQC has settled their liability on Over Cap claims in line with their view of the expected ultimate cost of these properties. To the extent that properties have incurred costs in excess of what the EQC expected, there is an additional liability owed to SRES in respect of properties with a partial cap claim. Our analysis indicates that the potential additional contributions from the EQC could be in excess of (9(2)(b)(ii))
- Protocol 1 Properties these are properties that EQC have determined to be Over Cap after construction on these properties had commenced. To date, EQC have notified SRES of Protocol 1 properties. We note that with the exception of Protocol 1 claims identified in the last year, EQC has not provided any update on costs for the older claims for a considerable amount of time. Based on the available information, it is expected the final liability owed to EQC in respect of Protocol 1's could be of the order of possibly more. We note that some of the Protocol 1 cost estimates provided by the EQC are now quite old, and this amount may be higher if EQC has updated cost information on these properties that it has not shared with SRES. 9(2)(b)(ii)
- Land Remediation Recoveries EQC has indicated that they may reimburse insurers for the cost of the installation of gravel rafts as part of land remediation processes. This could lead to a total recoverable of around (around 150 properties, per property). This issue hasn't progressed during the year and will likely be resolved as part of the other wash up matters. 9(2)(b)(ii)

Given the uncertainty around the final outcome of these issues and the likely offsetting nature of these settlements, we have not adjusted our valuation basis for their potential impact (i.e. we have assumed that these various issues will be largely offsetting).

7.3 GCA Class Action

On May 29 2018, GCA Lawyers initiated a new class action proceeding against SRES, proposing to represent all policyholders that entered into a settlement agreement with Southern Response prior to 1 October 2014 (which is when the Court of Appeal issued its decision in *Avonside Holdings*). The class action seeks to re-open full and final settlements, seeking the difference between what was recorded in the 'Office Use' version of a DRA and the 'Customer DRA' that was issued to policyholders.

As at 30 June 2018, SRES is still working with its legal advisors to determine how it will respond to this class action and the extent of its liability (if any). At this stage, SRES does not accept any liability in respect of the claims made in this class action. Based on discussion with its auditors, and information known to 30 June 2018, SRES considers this to be a contingent liability. Therefore, our recommended outstanding claims provision as at 30 June 2018 makes no allowance for costs arising due to the GCA Class Action.

We note that if a liability were to emerge from this class action, the cost to SRES would likely represent a significant amount relative to the outstanding claims provision. We request that SRES management



keep us updated on developments relating to the Class Action prior to finalising the 30 June 2018 accounts, so that any need to make post-balance date adjustments to the accounts can be considered if necessary.

7.4 Recommended Provisions as at 30 June 2018

Table 7.2 summarises our estimates of SRES' EQ liabilities at 30 June 2018, with each of the three major events shown separately. Note that the figures in the body of the table are net of payments made to 30 June 2018. The line below the table indicates our estimate of the total amount which will ultimately be paid once all claims are settled (including payments already made). Our recommended provisions incorporate a risk margin which we believe to be consistent with the company's decision to establish provisions which incorporate at least a 75% probability of sufficiency.

Table 7.2 - Recommended EQ Provision at 30 June 2018

Table 1.2 - Nec	Ullillellue	U E & FIOVI	Sion at 30	Julie 2010		Ť	_
Beauticians for Outstanding Claims as at	Cat 93	Cat 106	Cat 112		Total		1
Provisions for Outstanding Claims as at 30 Jun 2018	4-Sep-10	22-Feb-11	13-Jun-11	Major	Minor	Overall	
30 Jun 2018	\$m	\$m	\$m	\$m	\$m	\$m	
Gross Incurred Cost in 30 Jun \$ after EQC Sha	696.2	2,421.8	90.1	3,208.1	44.1	3,252.2	
less paid to 30 Jun 2018	-660.3	-2,148.7	-80.4	-2,889.3	-40.7	-2,930.0	
Gross Outstanding Claims				N			
In 30 Jun 2018 Values	35.9	273.1	9.8	318.7	3.5	322.2	
Allowance for Future Inflation	0.0	0.1	0.0	0.2	0.0	0.2	
Inflated Values	35.9	273.3	9.8	318.9	3.5	322.4	
Discount to Present Value	-0.5	-4.5	-0.2	-5.2	-0.1	-5.2	
OSC Discounted to 30 Jun 2018	35.4	268.8	9.6	313.7	3.4	317.2	
Claims Handling							9(2)
Gross Central Estimate			•				0(2)
Catastrophe R/I Recoveries	0.0	0.0	-9.6	-9.6	-1.3	-10.9	
Aggregate R/I Recoveries	0.0	0.0	0.0	0.0	0.0	0.0	
Net Central Estimate	. <						9(2)
Risk Margin		× -					
Recommended provision	44.9	341.5	0.7	387.1	2.7	389.8	
	1.						
Inflated Gross Incurred Cost	696	2,422	90	3,208	44	3,252.4	
(Incl paid to date, excl CHE)							
Change on 30 Jun 2017 Valuation	-61	48	-8	-20	3	-18	

We have made a number of changes to the valuation basis since the 30 June 2017 valuation. The result of the changes is a decrease of around \$18 million in our estimate of the inflated gross incurred cost when compared to the estimate at 30 June 2017. This reduction has been largely offset by an \$8 million reduction to the expected reinsurance recoveries from the June event, due to a lower allocation to June.



7.5 Reconciliation with Previous Estimate at 30 June 2017

The table below compares the estimate at 30 June 2018 with our previous estimate at 30 June 2017.

Table 7.3 - Movement of Provision Net of EQC Contribution, Net of RI

	Net Provisior (\$m)
osition at 30 June 2017	641.
Actual Payments (includes unwind of discount and risk margins for provisions)	(273.
Reallocation of Project Management payments previously deducted from over cap claims co	st 😽 7.
ctual Rollforward Provision at June18 using June17 Assumptions	376.
Changes due to:	
Over Cap Claims	
Increase in Ultimate Number of Over Caps 9(2)(i), 9(2)(j) and 9(2)	(b)(ii)
Rebuild Sizes	
Repair Sizes	
Properties Managed by Other Insurers	
Sizes on post October 2016 Over Caps	
Other Classes	
Out of Scope	
Other Classes	
Expenses and Other Factors	
Legal Fees	
CHE	
Event Apportionments	
Discount Rate	
Payment Pattern	
Risk Margin	
Total	
ecommended Position at 30 June 2018	389

The table shows

9(2)(b)(ii), 9(2)(i) and 9(2)(j)

- increase due to the 36 additional Over Caps, compared to our projected ultimate last year, that are now expected to emerge from the EQC settlement program.
 - decrease due to a lower projected ultimate size of Rebuilds. This largely reflects the experience over the year, which showed Rebuild settled sizes emerging lower than anticipated. Our project size for the remaining claims is largely unchanged.
- decrease due to a reduction in the projected ultimate size of Repairs. As with the rebuilds, the decrease reflects better than projected settlement outcomes during the year. Our projected size for the remaining claims is unchanged.
- A process increase to the cost of properties being managed by other PMOs, reflecting settlement outcomes emerging slightly higher than projected.



- decrease due to a reduction in the projected size of Post October 2016 Over Caps.
 This reflects both the settlement experience during the year, and a reduction in the projected sizes (net of EQC) for the outstanding claims.
- A line increase in the cost of OOS claims, largely as a result of new OOS Only claims continuing to be reported for a longer period than anticipated.
- A limit increase to other classes, mostly relating to additional Temporary Accommodation and Lost Rent claims arising from the greater volume of Over Caps now expected, as well as a slightly higher average size.
- in additional legal fees, which reflects the higher average size of legal costs across the recently settled and outstanding claims and additional claims expected to be subject to litigation.
- in additional Claims Handling expenses, which relates to additional expenses anticipated in the finalisation of the tail claims.
- Decreased allocation of costs to the June event has decreased the reinsurance recoverable, which has acted to increase the net provision by around
- A increase arising from a lower discount rate.
- A decrease due to the extension of the assumed payment pattern.
- of additional risk margin
- A lower allocation to the June event resulting in a reduction in the reinsurance recoverable, and therefore an increase in the net liability.

7.6 Sensitivity Testing

Table 7.4 sets out a summary of the sensitivity tests we have applied to our central estimate, to illustrate the sensitivity of the central estimate to the key assumptions. The sensitivities shown focus upon the Over Cap costs. The volume of outstanding claims relating to other covers (OOS, Temporary Accommodation, Contents, etc.) is now around \$10 million. Therefore, we have not included sensitivities for these segments, as they do not represent a material exposure.





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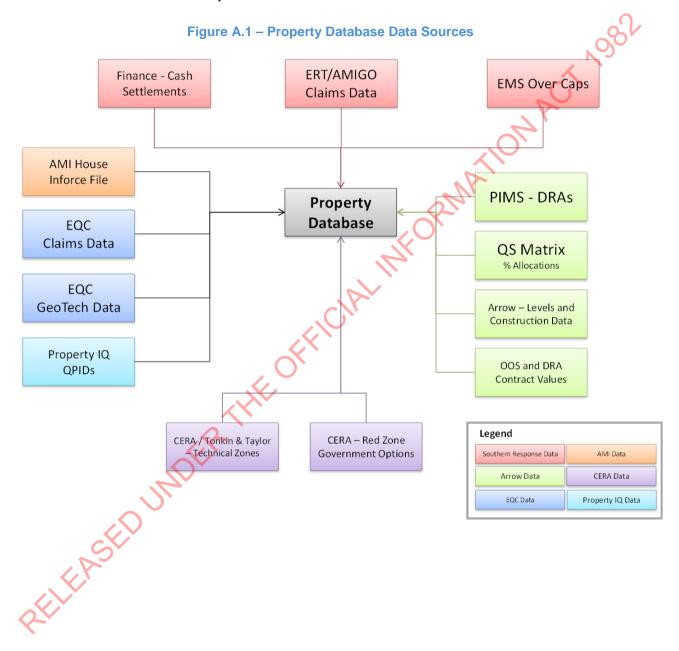


Part III Appendices

A Data

A.1 Data Sources

The flowchart below shows the data sources used to construct the property database which underpins most of where our data is for analysis in the valuation.





Data Reconciliation

The summaries below provide data reconciliations between the property database against the Canterbury Earthquake Report produced by the data warehouse and Arrow's PCG report.

Table A.1- Reconciliation to Canterbury Earthquake Re	eport 9(2)(i) and 9(2)(j
---	--------------------------

	Property Database 2018-06-06	Cantebury Earthquake Report 2018-06-01	Total Diffe (#'s / \$'s)	erence Differ (%)	ence accounting (#'s / \$'s)	for rejected (%)
Claims Case Estimates Payments	43,674 3,107,404	45,657 3,113,753	1,983 6,349	0.20%	5 73	0.01% 0.01% 0.00%
Ta	hle A 2 - Peconcili	ation to Canterbury Ea	orthauske F	Penort - Claim	Details	181

Table A.2 – Reconciliation to Canterbury Earthquake Report – Claim Details

Open 1,304 3 57 4 2,020 3 21 393 9 4 105 3,922 Closed 16,061 127 1,044 55 20,087 73 115 2,892 66 56 1,158 41,734 Withdrawn Declined Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,65 Difference Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 127 0 0 4 0 0 5 1,830 Withdrawn Entered in Emor Declined Total 411 1 1 1,510 0 1 42 0 0 6 1,983		Table A.2 –	Recond	ciliation	1 10 C	anterbury i	Earting	uake R	eport –	Claim	Details		
Open 1,283 3 57 4 1,993 3 21 389 9 4 104 3,777					400	400	407		440)	
Closed 15,671 126 1,033 54 18,704 73 114 2,854 66 56 1,153 39,90- Withdrawn Entered in Erro Declined Total 16,954 129 1,090 58 20,597 76 135 3,243 75 60 1,257 43,67- Cantebury Earthquake Report 2018-06-01 Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 1,304 3 57 4 2,020 3 21 393 9 4 105 3,920- Closed 16,061 127 1,044 55 20,087 73 115 2,892 66 56 1,158 41,73- Withdrawn Entered in Erro Declined Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,651 Difference Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 227 0 0 4 4 0 0 1 155 Closed 390 1 11 1 1,383 0 1 38 0 0 5 1,834 Withdrawn Entered in Erro Declined Total 411 1 1 11 1,510 0 1 42 0 0 6 1,983 Rejected due to Duplicate Claims or Withdrawn/Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 124 0 0 1 42 0 0 6 1,983 Rejected due to Duplicate Claims or Withdrawn/Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 124 0 0 0 6 1,983 Rejected due to Duplicate Claims or Withdrawn/Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 124 0 0 0 4 0 0 5 1,883 Entered in Erro Declined Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,966 Difference Accounting for Rejected Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0													
Withdrawn Entered in Error Declined Total 16,954 129 1,090 58 20,597 76 135 3,243 75 60 1,257 43,677 Cantebury Earthquake Report 2018-06-01 Status 93 97 99 103 106 107 111 112 114 117 122 Total 16,061 127 1,044 55 20,087 73 145 2,892 66 56 1,158 41,739 Withdrawn Entered in Error Declined Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,655 Difference Status 93 97 99 103 106 107 111 112 114 117 122 Total 17,090 1 11 1 112 114 117 122 Total 17,090 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1													
Entered in Error Declined Total 16,954 129 1,090 58 20,597 76 135 3,243 75 60 1,257 43,677 Cantebury Earthquake Report 2018-06-01 Status 93 97 99 103 106 107 111 112 114 117 122 Tota 16,061 127 1,044 55 20,087 73 115 2,892 66 56 1,158 41,734 Withdrawn Entered in Error Declined Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,655 Status 93 97 99 103 106 107 111 112 114 117 122 Tota 17,044 107 10 10 10 10 10 10 10 10 10 10 10 10 10		15,6/1	126	1,033	54	18,704	13	114	2,854	рр	7 20	1,153	39,904
Declined Total 16,954 129 1,090 58 20,597 76 135 3,243 75 60 1,257 43,674													
Total 16,954 129 1,090 58 20,597 76 135 3,243 75 60 1,257 43,674 Cantebury Earthquake Report 2018-06-01 Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 1,304 3 57 4 2,020 3 21 393 9 4 105 3,922 Closed 16,061 127 1,044 55 20,087 73 115 2,892 66 56 1,158 41,734 Withdrawn Entered in Error Declined Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,651 Difference Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 127 0 0 4 0 0 1 152 Closed 390 1 11 1 1,383 0 1 38 0 0 5 1,833 Withdrawn Entered in Error Declined Total 411 1 1 1 1,510 0 1 42 0 0 6 1,983 Rejected due to Duplicate Claims or Withdrawn/Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 127 0 0 4 0 0 0 1 188 Withdrawn Entered in Error Declined Total 411 1 1 1 1,510 0 1 42 0 0 6 1,983 Rejected due to Duplicate Claims or Withdrawn/Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 124 0 0 4 0 0 1 1 158 Closed 389 1 11 1 3,822 0 1 38 0 0 5 1,923 Withdrawn 898 4 37 5 628 5 8 161 7 3 77 1,833 Entered in Error 322 4 19 2 507 5 5 203 3 4 45 1,122 Difference Accounting for Rejected Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0										\mathcal{L}			
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Status 93 97 99 103 106 107 111 112 114 117 122 Tota	Iotai	10,554	123	1,030	30	20,331	70	133	3,243	13	00	1,231	45,014
Open 1,304 3 57 4 2,020 3 21 393 9 4 105 3,922 Closed 16,061 127 1,044 55 20,087 73 115 2,892 66 56 1,158 41,734 Withdrawn Declined Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,657 Difference Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 127 0 0 4 0 0 1 150 Closed 390 1 11 1 1,510 0 1 42 0 0 6 1,983 Withdrawn 1 1 1 1,510	Cantebury Earthq	juake Report 201	8-06-01						NY				
Closed 16,061 127 1,044 55 20,087 73 115 2,892 66 56 1,158 41,734	Status	93	97	99	103	106	107	111	112	114	117	122	Total
Withdrawn Entered in Error Declined Declined Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,657 Difference Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 127 0 0 4 0 0 1 155 (Closed 390 1 11 1 1 3,833 0 1 38 0 0 0 5 1,836 withdrawn Entered in Error Declined Declined United Entered in Error Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 124 0 0 4 0 0 1 156 (Closed 389 1 14 1 1,382 0 1 38 0 0 0 5 1,835 (Closed 389 1 14 1 1,382 0 1 38 0 0 0 5 1,825 (Closed 389 4 37 5 628 5 8 161 7 3 3 77 1,835 (Closed 161 Firor 332 4 19 2 507 5 5 203 3 3 4 45 1,125 (Closed 10 10 0 1 0 7 0 0 1 0 0 5 22 (Closed 10 0 0 1 0 0 0 1 0 1 0 7 0 0 1 0 0 5 22 (Closed 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Open	1,304	3	57	4	2,020	3	21 🤇	393	9	4	105	3,923
Withdrawn Entered in Error Declined Declined Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,657 Difference Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 127 0 0 4 0 0 1 155 (Closed 390 1 11 1 1 3,833 0 1 38 0 0 0 5 1,836 withdrawn Entered in Error Declined Declined United Entered in Error Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 124 0 0 4 0 0 1 156 (Closed 389 1 14 1 1,382 0 1 38 0 0 0 5 1,835 (Closed 389 1 14 1 1,382 0 1 38 0 0 0 5 1,825 (Closed 389 4 37 5 628 5 8 161 7 3 3 77 1,835 (Closed 161 Firor 332 4 19 2 507 5 5 203 3 3 4 45 1,125 (Closed 10 10 0 1 0 7 0 0 1 0 0 5 22 (Closed 10 0 0 1 0 0 0 1 0 1 0 7 0 0 1 0 0 5 22 (Closed 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Closed	16,061	127	1,044	55	20,087	73	115	2,892	66	56	1,158	41,734
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Decimed Total 17,365 130 1,101 59 22,107 76 136 3,285 75 60 1,263 45,655	Entered in Error												
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Status 93 97 99 103 106 107 111 112 114 117 122 Tota	Total	17,365	130	1,101	59	22,107	76	136	3,285	75	60	1,263	45,657
Status 93 97 99 103 106 107 111 112 114 117 122 Tota													
Open 21 0 0 0 127 0 0 4 0 0 1 155 Closed 390 1 11 1 1,383 0 1 38 0 0 5 1,836 Withdrawn Entered in Error Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 124 0 0 4 0 0 1 155 Olised 389 1 11 1 1,822 0 1 156 1,822 Withdrawn 898 4 37 5 628 5 8 161 7 3 77 1,833 Entered in Error 332 4 19 2 507 5 5 203 3 4 45 1,125	Difference					-							
Closed 390	Status		97	99	103	106	107	111	112	114	117	122	Total
Withdrawn Entered in Error Declined Declined Total 411 1 1,510 0 1	Open	21	0	0	0	127	0	0	4	0	0	1	153
Entered in Error Declined Total	Closed	390	1	11	1	1,383	0	1	38	0	0	5	1,830
Declined Total A11	Withdrawn												
Rejected due to Duplicate Claims or Withdrawn/Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Tota													
Rejected due to Duplicate Claims or Withdrawn/Declined Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 21 0 0 0 124 0 0 4 0 0 1 156 Closed 389 1 111 1 1,382 0 1 38 0 0 5 1,826 Withdrawn 898 4 37 5 628 5 8 161 7 3 77 1,833 Entered in Error 332 4 19 2 507 5 5 203 3 4 45 1,125 Declined 10 0 1 0 7 0 0 1 0 0 5 22 Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,964 Difference Accounting for Rejected Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0													
Status 93 97 99 103 106 107 111 112 114 117 122 Total Open 21 0 0 0 124 0 0 4 0 0 1 150 Closed 389 1 11 1 1,382 0 1 38 0 0 5 1,826 Withdrawn 898 4 37 5 628 5 8 161 7 3 77 1,833 Entered in Error 332 4 19 2 507 5 5 203 3 3 4 45 1,125 Declined 10 0 1 0 7 0 0 1 0 0 5 22 Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,964 Status <td>Total</td> <td>411</td> <td>1</td> <td>11</td> <td>. (</td> <td>1,510</td> <td>0</td> <td>1</td> <td>42</td> <td>0</td> <td>0</td> <td>6</td> <td>1,983</td>	Total	411	1	11	. (1,510	0	1	42	0	0	6	1,983
Status 93 97 99 103 106 107 111 112 114 117 122 Total Open 21 0 0 0 124 0 0 4 0 0 1 150 Closed 389 1 11 1 1,382 0 1 38 0 0 5 1,826 Withdrawn 898 4 37 5 628 5 8 161 7 3 77 1,833 Entered in Error 332 4 19 2 507 5 5 203 3 3 4 45 1,125 Declined 10 0 1 0 7 0 0 1 0 0 5 22 Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,964 Status <td>Rejected due to D</td> <td>Ounlicate Claims o</td> <td>or Withdray</td> <td>vn/Decline</td> <td>4/</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Rejected due to D	Ounlicate Claims o	or Withdray	vn/Decline	4/								
Open 21 0 0 0 124 0 0 4 0 0 1 150 Closed 389 1 11 1 1,382 0 1 38 0 0 5 1,828 Withdrawn 898 4 37 5 628 5 8 161 7 3 77 1,835 Entered in Error 332 4 19 2 507 5 5 203 3 3 4 45 1,125 Declined 10 0 1 0 7 0 0 1 0 0 5 22 Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,964 Status 93 97 99 103 106 107 111 112 114 117 122 Tota <t< td=""><td>Status</td><td>•</td><td></td><td></td><td></td><td>106</td><td>107</td><td>111</td><td>112</td><td>114</td><td>117</td><td>122</td><td>Total</td></t<>	Status	•				106	107	111	112	114	117	122	Total
Closed 389 1 11 1 1,382 0 1 38 0 0 5 1,828 Withdrawn 898 4 37 5 628 5 8 161 7 3 77 1,833 Entered in Error 332 4 19 2 507 5 5 203 3 4 45 1,129 Declined 10 0 1 0 7 0 0 1 0 0 5 22 Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,964 Difference Accounting for Rejected Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 0 0 0 0 0 0 0 0 0 0													150
Entered in Error 332 4 19 2 507 5 5 203 3 4 45 1,125 Declined 10 0 1 0 7 0 0 1 0 0 5 22 Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,964 Difference Accounting for Rejected Status 93 97 99 103 106 107 111 112 114 117 122 Total Open 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0							0	1	38	0	0	5	1,828
Entered in Error 332 4 19 2 507 5 5 203 3 4 45 1,129 Declined 10 0 1 0 7 0 0 1 0 0 5 24 Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,964 Difference Accounting for Rejected Status 93 97 99 103 106 107 111 112 114 117 122 Total Open 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0	Withdrawn	898	4 /	37	5		5	8	161	7	3	77	1,833
Declined 10 0 1 0 7 0 0 1 0 0 5 22 Total 1,650 9 68 8 2,648 10 14 407 10 7 133 4,964 Difference Accounting for Rejected Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 0 0 0 0 3 0	Entered in Error	332	4	19	2	507	5	5	203	3	4	45	1,129
Difference Accounting for Rejected Status 93 97 99 103 106 107 111 112 114 117 122 Tota Open 0 0 0 0 0 3 0 0 0 0 0 0 0 Closed 1 0 0 0 0 1 0 0 0 0 0 0 0 Withdrawn Entered in Error Declined	Declined	10	0	1	0	7	0	0	1	0	0	5	24
Status 93 97 99 103 106 107 111 112 114 117 122 Total T	Total	1,650	9	68	8	2,648	10	14	407	10	7	133	4,964
Status 93 97 99 103 106 107 111 112 114 117 122 Total T	Difference Access	utius fau Daiast	7 $^{\prime}$										
Open 0				00	402	400	407	444	442	444	447	422	Total
Closed 1 0 0 0 1 0 <td></td> <td>93</td> <td></td> <td>Total 3</td>		93											Total 3
Withdrawn Entered in Error Declined													2
Entered in Error CODEclined CODEC			U	U	U		U	U	U	U	U	U	0
Declined 0		~\/											0
													0
	Total	1	0	0	0	4	0	0	0	0	0	0	5

Table A.3 - Reconciliation to Canterbury Earthquake Report – Claim Estimates Details 9(2)(i) Property Database 2018-06-06 (\$000s) Status Open Closed Withdrawn Entered in Error Declined Total Cantebury Earthq Status Open Closed Withdrawn Entered in Error Declined Total Difference Status Open Closed Withdrawn Entered in Error Declined Total Rejected Status Open Closed Withdrawn Entered in Error Declined

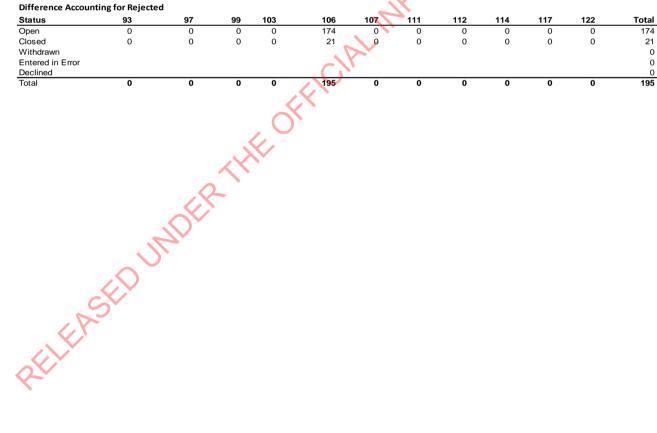




Table A.4 - Reconciliation to Canterbury Earthquake Report – Payment Details

Property Databa	se 2018-06-06 (\$000s)			-			•	-			
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	123,640	0	2,092	0	313,330	0	3	3,372	287	4	900	443,628
Closed	895,116	1,963	15,146	533	1,698,472	293	660	39,172	1,008	371	11,042	2,663,776
Withdrawn	•		•						•			
Entered in Error												
Declined												
Total	1,018,756	1,963	17,238	533	2,011,802	293	663	42,543	1,295	375	11,942	3,107,404
Cantebury Earth	quake Report 2	2018-06-01 (\$0	00s)									
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	123,758	0	2,092	0	313,680	0	3	3,373	287	4	917	444,115
Closed	897,181	1,963	15,151	533	1,702,153	293	660	39,280	1,008	371	11,045	2,669,638
Withdrawn												
Entered in Error												
Declined												\Box
Total	1,020,939	1,963	17,243	533	2,015,833	293	663	42,654	1,295	375	11,961	3,113,753
											C	NO .
Difference											V.)
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	118	0	0	0	350	0	0	2	0	0	17	487
Closed	2,065	0	5	0	3,680	0	0	108	0	0	3	5,862
Withdrawn										~		
Entered in Error										V~		
Declined												
Total	2,183	0	5	0	4,031	0	0	110	0	• 0	20	6,349
									()			
Rejected												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	121	0	0	0	414	0	0	37	0	0	17	589
Closed	1,484	0	99	0	3,975	0	0	126	0	0	3	5,687
Withdrawn	474	2	5	1	203	0	0	36	2	0	29	752
Entered in Error	99	-16	0	0	844	2	0 <	167	0	0	3	1,099
Declined	17	0	1	0	3	0	0	4	0	0	5	30
Total	2,195	-14	105	1	5,439	2	(0)	371	2	0	57	8,157
Difference Acco	unting for Rejec	cted					71					
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	-3	0	0	0	-64	0	0	-35	0	0	0	-102
Closed	581	0	-94	0	-295	0	0	-18	0	0	0	175
Withdrawn					, 7	>\ <u>`</u>						0
Entered in Error						\						0
Declined					(_1)							0
Total	578	0	-94	0	-358	0	0	-53	0	0	0	73

Table A.5 - Reconciliation to PCG report - Completed Properties

Tubic A.o - Necontamenton	to 1 00 report – comp	neteu i roperties
	Property Database	PCG Report
Data Date	2-Jun-17	May17
Number of properties	2,284	2,183
Average DRA Size		
RELEASEDUM		

9(2)(i) and 9(2)(j)



B Payments Data

Table B.1 – Gross Payments Summary By Event as at 30 Jun 2018

	1	able B.1 –	Gross Pa	yments 50	ummary By	y Event as	s at 30 Jun	12018	7			
Summary of Payments	Cat 93	Cat 97	Cat 99	Cat 103	Cat 106	Cat 107	Cat 111	Cat 112	Cat 114	Cat 117	Cat 122	Total
As at 30 Jun	4-Sep-10	19-Oct-10	26-Dec-10	20-Jan-11	22-Feb-11	16-Apr-11	6-Jun-11	13-Jun-11	21-Jun-11	9-Oct-11	23-Dec-11	\$000s
	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$0005
Gross Paid to Date (\$m)								7				
Rebuild	178,970	1,051	998	0	497,519	57	39	12,011	223	0	904	691,772
Repairs	54,617	53	2,104	155	243,403	26	107	4,984	12	0	627	306,089
Cash Settled	505,464	784	9,182	2	1,646,894	79	1,558	66,466	36	4	4,163	2,234,633
Overcap Multi Units	22,426	4	189	3	117,004	0	0	2,191	80	0	64	141,962
Unallocated Arrow Costs (\$m)	1,199	0	76	0	10,261	0	0	369	0	0	45	11,949
DoA EQC Recoveries (\$m)	-20	0	0	0	-109	0	0	-37	0	0	0	-166
Net Rebuilds Paid to Date	179,247	1,051	1,004	0	499,536	57	39	12,057	223	0	911	694,125
Net Repairs Paid to Date	54,702	53	2,117	155	244,390	26	107	5,003	12	0	632	307,197
Adjusted Net Cash Settled Paid to Date	506,247	784	9,237	2	1,653,569	79	1,558	66,724	36	4	4,195	2,242,436
Net Multi Unit Builds Paid to Date	22,461	4	190	3	117,478	0	0	2,199	80	0	65	142,481
					/							
Out of Scope (Net of Cancelled Cheques)	144,160	1,219	10,098	533	170,307	305	655	10,863	627	374	8,898	348,039
Out of Scope (Cancelled Cheques)	-1,880	-12	-115	-0	-2,120	-10	-8	-107	-1	-0	-91	-4,345
Lost Rent	2,894	0	59	0	12,834	3	9	647	3	0	58	16,507
Temp Accom	21,623	42	245	12	79,156	21	81	2,834	76	35	779	104,904
Contents	2,273	20	13	3	15,662	8	1	338	0	18	93	18,428
Motor	1,306	1	12	0	4,839	1	3	205	8	0	136	6,513
Other	685	1	24	0	262	0	0	44	2	0	12	1,031
Total Gross Paid to Date (\$m)	935,599	3,176	23,000	709	2,798,032	499	2,453	100,913	1,068	432	15,779	3,881,661
Less Adjustments to Cash Settlements for EQC												
Recoveries not recorded in AMIGO	-140,608	-218	-2,554	- 1	-458,127	-22	-433	-18,489	-10	-1	-1,158	-621,622
Plus Uninsured Works Adjustment	7,099	40	45	0	20,286	2	2	484	9	0	37	28,004
Less Unallocated Costs	-1,179	0	-76	0	-10,151	0	0	-332	0	0	-45	-11,783
Less Farm, Boat and Motor	-1,991	-2	-36	-0	-5,101	-1	-3	-249	-10	-0	-148	-7,544
Plus Cancelled Cheques	1,880	12	115	0	2,120	10	8	107	1	0	91	4,345
Total Before Adjustments	800,799	3,009	20,494	709	2,347,058	488	2,026	82,434	1,057	431	14,557	3,273,062
Event Split Adjustments in AMIGO ¹	-252,040	998	2,761	160	209,450	164	1,271	35,888	-318	2	1,638	-26
Total Before Split Adjustment	1,052,839	2,011	17,733	549	2,137,608	324	754	46,546	1,376	429	12,919	3,273,088
Total From Canterbury Earthquake Report	, - ,	$\langle \langle \rangle \rangle$,		, ,			-,-	,		,-	, .,
2018-07-02	1,052,834	2,011	17,733	549	2,137,572	324	754	46,546	1,376	429	12,919	3,273,046
Difference	5		0	0	36	0	0	-0	0	0	0	41

¹ AMIGO system uses separate field to adjust payments to the event splits agreed with the EQC. Payments in the Canterbury Earthquake Report are before this adjustment.



Table B.2 - EQC Recoveries Summary By Event as at 30 Jun 2018

Summary of Recoveries	Cat 93	Cat 97	Cat 99	Cat 103	Cat 106	Cat 107	Cat 111	Cat 112	Cat 114	Cat 117	Cat 122	Total
As at 30 Jun	4-Sep-10	19-Oct-10	26-Dec-10	20-Jan-11	22-Feb-11	16-Apr-11	6-Jun-11	13-Jun-11	21-Jun-11	9-Oct-11	23-Dec-11	
	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s	\$000s
Recoveries to Date (\$m)							_					
Rebuild (EQC Recovs)	-70,892	-104	-333	0	-97,706	2	(H)	-1,558	8	0	-115	-170,697
Repair (EQC Recovs)	-26,627	-106	-310	0	-64,702	0	0	-950	0	0	-99	-92,794
Adjusted Cash Settled (EQC Recovs)	-147,393	-250	-2,870	-1	-472,852	-22	-439	-19,539	-10	-1	-1,229	-644,606
MUBs (EQC Recovs)	-7,684	0	-106	0	-35,584	0	0	-769	-80	0	-4	-44,227
						7						
Lost Rent	204	0	-4	0	245	0	-0	41	0	0	0	486
Temp Accom	-67	0	-3	0	854	0	0	116	0	0	-23	878
Contents	-27	0	0	0	-136	0	0	-7	0	0	-1	-171
Motor	-39	0	0	0	-483	0	0	-13	0	0	-6	-540
Other	-9	0	0	0	-4	0	0	-0	0	0	0	-13
Total Recoveries to Date	-252,534	-460	-3,626	-0	-670,368	-20	-437	-22,679	-82	-1	-1,477	-951,685
Plus Adjustments to Cash Settlements for					. (~)							
EQC Recoveries not recorded in AMIGO	140,608	218	2,554	1	458,127	22	433	18,489	10	1	1,158	621,622
Less Uninsured Works Adjustment	-7,099	-40	-45	-0	-20,286	-2	-2	-484	-9	-0	-37	-28,004
Plus Farm, Boat and Motor	48	0	0	.0	487	0	0	13	0	0	6	553
Less Cancelled Cheques	-1,880	-12	-115	-0	-2,120	-10	-8	-107	-1	-0	-91	-4,345
Total Before Cash Settlement Adjustment	-120,858	-294	-1,232		-234,160	-10	-13	-4,769	-82	-0	-441	-361,859
Total From Canterbury Earthquake Report												
2018-07-02	-120,858	-294	-1,232	-0	-234,160	-10	-13	-4,769	-82	-0	-441	-361,859
Difference	-0	0	0	0	0	0	0	0	0	0	0	-0

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C New Over Cap Claims Projection

We expect future Over Caps to emerge in three ways:

- Properties previously reviewed by SRES and deemed EQC owned, emerging as Over Cap
- Some of the ~3,600 properties (at industry level) unresolved EQC properties ultimately emerging as Over Cap
- Future EQC reopening of previously resolved Under Cap claims leading to some properties becoming Over Cap

Reassessment of properties previously assessed as EQC Owned

Since the initial JART review, some properties which were assessed as EQC Owned have turned Over Cap due to new information regarding the damage profile of the property. We have assumed that a decreasing proportion of the currently outstanding EQC Owned properties will turn over Cap over the remainder of this year, based on the Over Cap rate over the last three quarters.

Table C.1 – Over Cap rate on EQC Owned properties

	O/S at	Over Cap		0/4	Projected
	beginning	reports	Over Cap	Projected	Over Cap
Qtr	of Qtr	during Qtr	Rate	Over Caps	Rate
Sep-17	2,136	66	3.09%		
Dec-17	3,135	27	0.86%		
Mar-18	3,176	13	0.41%		
Jun-18	3,172	11_	0.35%	7	0.56%
Sep-18	3,351)	18	0.55%
Dec-18	3,333			12	0.35%
Total		117		37	

Note that the June 2018 quarter has only two months of data, and so our projection includes the month of June 2018. We have projected an additional 37 Over Caps from this group.

Current and future unresolved EQC properties

Information regarding the exposure of unresolved EQC properties is limited. Since the start of 2017, the EQC has provided some snapshot summaries around the outstanding and in and outflow of unresolved properties; however these snapshots were only provided twice at a SRES level, and once more at an industry level. From this information and some additional publicly available information we have estimated the exposure of unresolved properties since the start of 2017, and projected the inflow and outflow of unresolved properties. Based on the estimated historical exposure, we have projected the flow of EQC reopenings to continue until June 2020, with a total of 700 future reopenings relating to SRES insured properties.



Table C.2 – Unresolved EQC Exposure

	Table C	2 – Unreson	ved EQC Exp	
	1 (1	0(O/S at end	Future
F-5 47	Inflow	Outflow	of Month	Over Caps
Feb-17	400	000	2,160	
Mar-17	420	698	1,882	
Apr-17	367	611	1,638	
May-17	315	524	1,429	
Jun-17	262	436	1,255	
Jul-17	210	349	1,116	
Aug-17	157	262	1,011	
Sep-17	105	175	942	
Oct-17	52	87	907	
Nov-17	78	246	739	
Dec-17	87	181	645	
Jan-18	87	50	683	
Feb-18	75	82	676	
Mar-18	80	70	686	
Apr-18	80	70	696	
May-18	365	70	991	
Jun-18	80	70	1,001	6
Jul-18	80	70	1,011	6
Aug-18	60	70	1,001	6
Sep-18	60	70	991	6
Oct-18	40	70	961	6
Nov-18	40	80	921	7
Dec-18	40	80	881	7
Jan-19	40	80	841	7
Feb-19	40	80	801	7
Mar-19	30	80	751	7
Apr-19	30	80	701	7
May-19	30	80	651	7
Jun-19	30	80	601	7
			541	5
Jul-19	20	80		5 5
Aug-19	20	80	481	
Sep-19	20	80	421	5
Oct-19	20	60	381	5
Nov-19	20	60	341	5
Dec-19	0	60	281	5
Jan-20		60	221	5
Feb-20	0	60	161	3
Mar-20	0	40	121	3
Apr-20	0	40	81	3
May-20	0	40	41	3
Jun-20	0	41	0	3
y	EQC data (SR			
	Estimated fro	m EQC data	(industry lev	vel / public i

Estimated from EQC data (industry level / public information)
Interpolated / estimated from other data points
Projected

Note: Inflow refers to new EQC reopenings of SRES properties, while Outflow refers to EQC's resolution of properties (either passing on as Over Cap, or closing out Under Cap and EQC land cover issues)

In order to project the number of new Over Caps flowing from the resolution of EQC claims, we have assumed that the Over Cap proportion will be similar to the rate of Over Cap claims since the conclusion of the initial JART review. We consider the initial JART review to have identified most of the difficult



claims with long-term outstanding issues, while those identified since the review are representative of new reopenings, which now make up the outstanding.

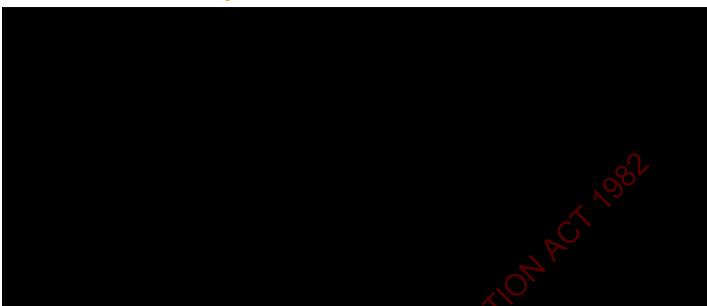
Table C.3 – Selected Over Cap Proportion

Selected Over Cap proportion	8.5%
Over Cap proportion since September 2017	8.4%
Total EQC properties resolved	856
Total New Over Caps since September 2017	72

We have assumed that the outstanding unresolved p	nis group of properties will have the same Over Ca properties.	p proporti	on as the current
	Table C.4 – Total Future Over Cap Reports	;	
F	Future reports from current EQC Owned	37	
F	Future reports from current unresolved	84	
<u> </u>	Future reports from future reopenings	60	7,
<u> </u>	Total future New Over Caps	181	
_			

ar cap reported the control of the c Across these three sources, our total projected number of new over cap reports comes to 181.





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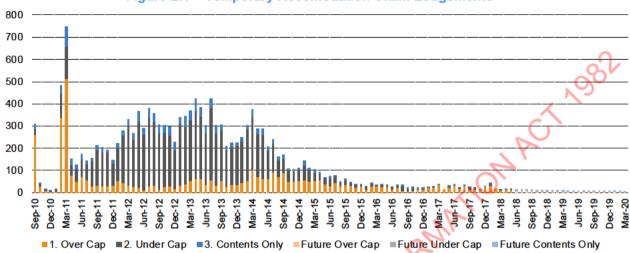


E Temporary Accommodation

E.1 Claim Lodgements

The figure below shows the temporary accommodation claim lodgements projection.

Figure E.1 – Temporary Accomodation Claim Lodgements



E.2 Claim Sizes



9(2)(i) and 9(2)(j)



PAELE ASED UNDER THE OFFICIAL PARTY.



Other Claim Classes

Lost Rent F.1

The loss of rent cover applies if the policyholder has an AMI Rental House or House policy with a 'lost rent cover' option. Southern Response must reimburse the claimant for loss of rent during the period in which the house is deemed unfit to be inhabited due to earthquake damage.

We have used a Payment Per Claim Finalised (PPCF) approach to value the Lost Rent claim class in this valuation. This involves:

- Selecting a stream of future claim reports based on recent experience and considering our assumptions relating to future New Over Cap claims
- Selecting a finalisation pattern to project claim finalisations
- Selecting an average claim size per finalisation.

AELERSED UNDER THE OFFICIAL REPORT OF \$20, AND THE OFFICIAL REPORT OF THE OFFICIAL REPORT O For IBNR lost rent lodgements we have adopted an average claim size of \$20,000.



Table F.1- Lost Rent Claim Numbers

	Lost Rent		
	Claim	S	
	Cat 93	Cat 106	Cat 112
	Valid	Valid	Valid
Month	Claims	Claims	Claims
Sep-11	174	493	45
Dec-11	189	564	50
Mar-12	197	616	56
Jun-12	210	675	63
Sep-12	221	753	73
Dec-12	227	814	81
Mar-13	248		
Jun-13	272		
Sep-13	288		
Dec-13	301	1,164	
Mar-14	332		
Jun-14	360	•	
Sep-14	376		
Dec-14	384	•	
Mar-15	393		119
Jun-15	405	•	
Sep-15	406		
Dec-15	408	•	
Mar-16	412		
Jun-16	412		
Sep-16	414		
Dec-16	414		
Mar-17	415		
Jun-17	416		
Sep-17	418		
Dec-17	418		
Mar-18	418		
Jun-18	418	•	
Sep-18	418	,	
Dec-18	418	•	124
Mar-19	418		
Jun-19	418		
	418	•	
Sep-19			
Dec-19	418		
Mar-20	418	1,901	124

Dec-Mar-Jun-1 Sep-Dec-1 Mar-2

G Other Factors

Table G.1- Payment Pattern

Table G.1- Payment Pattern								
Month	All Overcaps	Out of Scope Pattern	Lost Rent Pattern	Temp Accom Pattern	Contents Pattern	Vehicles Costs Pattern	Other Pattern	Arrow Costs Pattern
Jul-18	4.87%	33.33%	4.87%	4.87%	4.87%			16.14%
Aug-18	4.87%	33.33%	4.87%	4.87%	4.87%			19.75%
Sep-18	4.87%	33.33%	4.87%	4.87%	4.87%			13.19%
Oct-18	4.87%		4.87%	4.87%	4.87%			9.71%
Nov-18	4.87%		4.87%	4.87%	4.87%			10.89%
Dec-18	4.87%		4.87%	4.87%	4.87%			29.28%
Jan-19	4.87%		4.87%	4.87%	4.87%			0.35%
Feb-19	4.87%		4.87%	4.87%	4.87%			0.35%
Mar-19	4.87%		4.87%	4.87%	4.87%			0.34%
Apr-19	4.12%		4.12%	4.12%	4.12%			\bigcirc
May-19	4.12%		4.12%	4.12%	4.12%			
Jun-19	4.12%		4.12%	4.12%	4.12%		2'	
Jul-19	3.37%		3.37%	3.37%	3.37%			
Aug-19	3.37%		3.37%	3.37%	3.37%	<i>Z</i>		
Sep-19	3.37%		3.37%	3.37%	3.37%			
Oct-19	3.00%		3.00%	3.00%	3.00%			
Nov-19	3.00%		3.00%	3.00%	3.00%	VA.		
Dec-19	3.00%		3.00%	3.00%	3.00%			
Jan-20	2.62%		2.62%	2.62%	2.62%)		
Feb-20	2.62%		2.62%	2.62%	2.62%			
Mar-20	2.62%		2.62%	2.62%	2.62%			
Apr-20	1.87%		1.87%	1.87%	1.87%			
May-20	1.87%		1.87%	1.87%	1.87%			
Jun-20+	13.11%		13.11%	13.11%	13.11%			

Table G.2 - Selected Future Inflation Rates

		Treasury	Selected -
	Quarter	National	Canterbury
		Forecast (% pa.)	(% pa.)
	Jun-18	2.7%	3.0%
	Sep-18	2.4%	3.0%
_<	Dec-18	2.4%	3.0%
	Mar-19	2.7%	3.0%
,4	Jun-19	2.8%	3.0%
	Sep-19	2.9%	3.0%
	Dec-19	3.0%	3.0%
	Mar-20	3.1%	3.0%
	Jun-20	3.1%	3.0%
	Sep-20	3.2%	3.0%
	Dec-20	3.3%	3.0%
	Mar-21	3.3%	3.0%
2	Jun-21	3.4%	3.0%



Table G.3 – Discounting Rates
Discounting

	DISCOL	anung	
Month	Spot	t Discount	
WIOHTH	Rate	Factor	
Jul-18	1.75%	0.999	
Aug-18	1.75%	0.998	
Sep-18	1.75%	0.996	
Oct-18	1.75%	0.995	
Nov-18	1.75%	0.994	
Dec-18	1.76%	0.992	
Jan-19	1.76%	0.991	
Feb-19	1.76%	0.989	
Mar-19	1.76%	0.988	
Apr-19	1.77%	0.986	
May-19	1.77%	0.985	
Jun-19	1.78%	0.983	
Jul-19	1.78%	0.982	
Aug-19	1.78%	0.980	
Sep-19	1.79%	0.979	
Oct-19	1.79%	0.977	
Nov-19	1.80%	0.976	
Dec-19	1.80%	0.974	
Jan-20	1.81%	0.973	
Feb-20	1.81%	0.971	
Mar-20	1.82%	0.970	
Apr-20	1.83%	0.968	
May-20	1.83%	0.967	
Jun-20	1.84%	0.965	



H Accounting Disclosures

Table H.1- Outstanding Earthquake Claims

	Jun	-18	Jun	Jun-17	
	Group \$000	Company \$000	Group \$000	Company \$000	
Outstanding claims	317,155	317,155	562,736	562,736	
Risk margin	64,967	64,967	78,478	78,478	
Claims handling costs	18,606	18,606	26,673	26,673	100%
	400,729	400,729	667,888	667,888	X 1
Tabl	e H.2 - Clai	ms Develop	ment	Total	Ć,

Table H.2 - Claims Development

	Total
	\$000
	"V"
Discounted central estimate	317,155
Claims handling expense	18,606
Risk margin	64,967
14.	
Gross outstanding claims liabilities	400,729
	_
Expected Reinsurance Recoveries	-11,104
Impact of discounting on	179
reinsurance recoveries	179
Reinsurance receivables	-10,924
Net outstanding claims liabilities (refer Note 3)	389,805

Table H.3 - Key Actuarial Assumptions - Earthquake

.0-	Jun-18		Jun	-17
	Group	Company	Group	Company
Future Inflation				
Building Cost	0.00%	0.00%	0.00%	0.00%
Out of Scope	0.00%	0.00%	0.00%	0.00%
Temporary Accommodation	0.00%	0.00%	0.00%	0.00%
Other cover types	3.00%	3.00%	3.00%	3.00%
Claims Handling Expenses	0.00%	0.00%	0.00%	0.00%
Discount Rate	1.80%	1.80%	2.04%	2.04%
Risk margin – Outstanding Claims Liabilities	20.00%	20.00%	14.00%	14.00%
Risk margin – Liability Adequacy Test	n/a	n/a	n/a	n/a
Average weighted term to settlement from reporting date	0.90 yrs	0.90 yrs	0.88 yrs	0.88 yrs

Table H.4 - Sensitivity Analysis - Impact of Changes in Key Variables

	Net Outstanding claims impact				
	Movement in Variable	Jun-18	Jun-17		
		\$000	\$000		
Inflation Rate	+1% p.a.	3,214	4,992		
	-1% p.a.	-3,203	-4,978		
Discount Rate	+1% p.a.	-3,396	-5,464		
	-1% p.a.	3,474	5,589		
Claims Handling Expense	+10% higher	2,233	3,038		
	10% lower	-2,233	-3,038		

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I Non-EQ Claims

Table I.1 – Summary of Non-EQ Claims Provision

	rabio iii oanimary or itori za olamio ri otiolon							
•				Gross		Net		
		Gross	less Paid	Central	Reinsurance	Central	Risk	Recommended
		Incurred Cost	to 30 Jun	Estimate	Recoveries	Estimate	Margin	Provision
Events	CAT 121	1,854.6	(1,854.6)	0.0	0.0	0.0	0.0	0.0
	CAT 116	3,848.1	(3,844.5)	3.5	0.0	3.5	0.4	3.9
	CAT 115	1,639.1	(1,638.1)	1.0	0.0	1.0	0.1	1.1
	CAT 108	1,617.0	(1,617.0)	0.0	0.0	0.0	0.0	0.0
	CAT 105	1,824.8	(1,824.8)	0.0	0.0	0.0	0.0	0.0
	CAT 100	1,696.1	(1,696.1)	0.0	0.0	0.0	0.0	0.0
	CAT 98	418.0	(418.0)	0.0	0.0	0.0	0.0	0.0
	CAT 96	1,676.3	(1,676.3)	0.0	0.0	0.0	0.0	0.0
	CAT 90	925.4	(925.4)	0.0	0.0	0.0	0.0	0.0
	CAT 91	2,473.9	(2,473.9)	0.0	0.0	0.0	0.0	0.0
Per Risk Claims		1,736.8	(1,736.8)	0.0	0.0	0.0	0.0	0.0
Total	•	19.710.0	(19.705.5)	4.5	0.0	4.5	0.5	5.0

4.5 LA ALIMPORMATION PROPERTIES THE OFFICIAL INFORMATION PROPERTIES AND ASSESSMENT OF THE OFFICIAL INF

