

# Insurance Liabilities at 30 June 2016

Southern Response Earthquake Services

August 2016

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-----SEPTEMBER 2016-----

29 July 2016



Mr Ross Butler  
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Dear Ross

## Valuation of Insurance Liabilities at 30 June 2016 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 2016.

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 Institute of Actuaries of Australia'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

[Redacted signature]

9(2)(a)

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# Insurance Liabilities at 30 June 2016

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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 2016. 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 Institute of Actuaries of Australia'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 earthquake liabilities, together with a comparison to the results adopted in our 30 June 2015 valuation.

Table 1 – High Level Summary of Results

	30 Jun 15	30 Jun 16	Mov't from Jun 15
	\$m	\$m	\$m
<b>Ultimate Outflows</b>			
Over Cap	3,025	3,210	184
Out of Scope	308	338	30
Other	157	153	-5
Claims Cost (Excl PM Cost)	3,491	3,701	210
Project Management Costs	■	■	■
SRES Claims Handling	■	■	■
<b>Ultimate Inflows</b>			
EQC Contributions	971	996	25
Reinsurance Recoveries	1,246	1,259	13
	2,217	2,256	38
<b>Gross Outflow (net EQC, ex CHE)</b>	2,716	2,903	187
<b>Net Outflow (net of RI)</b>	■	■	■
<b>Cum. Paid Net of EQC (excl CHE)</b>	1,616	2,228	612
<b>Net Liability</b>			
Central Estimate	999	701	-298
Risk Margin	■	■	■
Provision Required	■	■	■

9(2)(b)(ii)

The valuation results indicate the likely ultimate cost has continued to increase over the last twelve months. The ultimate cost of claims (net of EQC, excluding CHE) has increased by \$187 million, before reinsurance, since June 2015. The increase is attributable to a number of factors –

- An increase in the number of Over Cap properties expected to emerge from the EQC settlement program (328 more properties projected to be Over Cap).
- An allowance made for payments made on Over Cap properties outside of the construction or cash settlement process. These payments were not allowed for at the June 2015 valuation.
- An increase in the number of properties switching from being scoped as a repair to being scoped as a rebuild.

Project management costs and claims handling expenses have increased by \$ million and \$ million respectively. These relate mainly to refinements to forecasts, taking into account increasing volumes and complexities resulting in a longer construction tail and consequential increases in staff costs. A detailed reconciliation to 30 June 2015 can be found in Section 9.3.

## Allowance For Uncertainty

In March 2016, we conducted a formal assessment of the various layers of uncertainty and risk attaching to our central estimate. In light of our assessment, we are of the opinion that, the overall level of uncertainty attaching to this valuation has increased as a greater proportion of the outstanding claims liability relates to more complex claims. Many of the claims yet to be finalised are under dispute or have complex construction issues and there is a higher degree of uncertainty around the ultimate cost of these properties.

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- the volume of claims SRES is handling means that natural variations in the outcomes for individual claims is likely to be a relatively minor contributor to a change in the run-off experience compared to that assumed. There is potential for this variation to have a larger impact in the tail of the run-off as the number of claims reduces.
- experience “drifting” away from recent levels assumed in the valuation basis continues to be a source of uncertainty and is likely to lead to increased uncertainty in the tail of the construction program when dealing a higher proportion of complex claims. The key areas of the valuation basis exposed to this risk are:
  - ▶ Multi Unit Buildings (MUB’s), where there is only a limited history of experience to base future development assumptions on, and
  - ▶ the number of new claims being reported as Over Cap, as we only have limited visibility of the progress of EQC’s settlement program
- unforeseen and material changes in the underlying experience, often due to changes in the external environment or internal processes have been the biggest risk over the recent history and remain the biggest uncertainty going forward.

## Recommended Provisions as at 30 June 2016

Table 2 sets out our recommended provisions as at 30 June 2016 for the three main events and for all others combined.

9(2)(b)(ii)

**Table 2 – Recommended Provisions as at 30 June 2016**

Provisions for Outstanding Claims as at 30 Jun 2016	Cat 93	Cat 106	Cat 112	Total		Overall \$m
	4-Sep-10 \$m	22-Feb-11 \$m	13-Jun-11 \$m	Major \$m	Minor \$m	
<b>Gross Incurred Cost in 30 Jun \$ before EQC</b>	1,144.0	2,590.8	102.6	3,837.4	44.0	3,881.3
Expected EQC Share	-338.3	-616.9	-34.8	-990.0	-5.0	-995.0
<b>Gross Incurred Cost in 30 Jun \$ after EQC</b>	805.7	1,973.9	67.8	2,847.4	39.0	2,886.4
less paid to 30 Jun 2016	-638.1	-1,493.5	-63.0	-2,194.6	-33.0	-2,227.7
<b>Gross Outstanding Claims</b>						
In 30 Jun 2016 Values	167.6	480.4	4.8	652.7	6.0	658.7
Allowance for Future Inflation	5.0	11.1	0.4	16.5	0.4	16.9
Inflated Values	172.6	491.5	5.1	669.2	6.4	675.6
Discount to Present Value	-3.2	-8.6	-0.1	-11.8	-0.1	-11.9
<b>OSC Discounted to 30 Jun 2016</b>	<b>169.4</b>	<b>482.9</b>	<b>5.0</b>	<b>657.4</b>	<b>6.3</b>	<b>663.7</b>
Claims Handling						
<b>Gross Central Estimate</b>						
Catastrophe R/I Recoveries	0.0	0.0	-5.0	-5.0	-1.7	-6.7
Aggregate R/I Recoveries	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net Central Estimate</b>						
Risk Margin						
<b>Recommended provision</b>						
<b>Inflated Gross Central Estimate (Incl paid to date, excl CHE)</b>	<b>811</b>	<b>1,985</b>	<b>68</b>	<b>2,864</b>	<b>39</b>	<b>2,903.3</b>
<b>Change on 31 Mar 2016 Valuation</b>	<b>31</b>	<b>-3</b>	<b>2</b>	<b>30</b>	<b>3</b>	<b>33</b>
<b>Change on 30 Jun 2015 Valuation</b>	<b>9</b>	<b>158</b>	<b>11</b>	<b>178</b>	<b>9</b>	<b>187</b>

We have made a number of changes to the valuation basis since the 30 June 2015 valuation. The result of the changes is an increase of around \$187 million in our estimate of the inflated gross incurred cost when compared to the estimate at 30 June 2015. \$154 million of the full year movement had been reflected in the accounts by the 31 March 2016 quarterly valuation update.

## 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.



## 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 2016. 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 Institute of Actuaries of Australia 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 2016 is not material. SRES have estimated the outstanding amounts to be less than \$1 million. We have reviewed their estimate and are satisfied it is reasonable. The results are set out in Appendix H.

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

##### 1.2.1 Events Covered

SRES' insurance liabilities relate almost solely to claims for certain 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 Events	SRES CAT 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

Obligation	Products	Financial Responsibility for Any Liability	Physical Management of the Matter
Settled, open and future claims on eligible EQ events occurring 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 Contracts Work exposure (up to \$5,000 per property). This exposure is largely reinsured 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.

### 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 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 claim number experience together with our valuation assumptions for Buildings cover
- Section 4* - documents the analysis of the Over Cap average claim size experience together with our valuation assumptions
- Section 5* - documents the analysis of the Out of Scope average claim size experience together with our valuation assumptions
- Section 6* - set outs the analysis and assumptions for other covers for which EQ losses have been incurred
- Section 7* - set outs the construction forecasts and basis for the payment pattern
- Section 8* - sets out the basis behind other assumptions required to form our recommended provisions for SRES' EQ liabilities
- Section 9* - summarises the outstanding claims valuation results at 30 June 2016 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 2016 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 on 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 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 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 of any current reinsurer solvency problems or disputes over reinsurance recoveries.

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## 2 Approach and Information

### 2.1 Approach to Estimating EQ liabilities

#### 2.1.1 Our Actuarial “Roadmap”

Our approach to the analysis and assessment of the emerging experience for SRES' EQ losses aims to respond to the various stages and avenues that claims can progress through. Figure 2.1 depicts the claims process from an actuarial viewpoint, noting that the settlement options open to claimants mean that the selection of ultimate average claim sizes requires consideration of a range of issues.

Figure 2.1 – Roadmap of Our Actuarial Review



The approach is largely unchanged from last year, albeit the issues, and therefore the focus of our analysis, have progressed. The red shading indicates the areas of focus at 30 June 2016, reflecting the fact that the process is in the settlement (for those choosing one of the non-Arrow managed construction options) and construction phase.

#### 2.1.2 Deriving Provisions for Outstanding Claims

At a high level, the calculation of SRES' ultimate liability for each event relies on a relatively small number of parameters for each of the covers for earthquake damage provided under AMI's various products:

- Gross Claims Cost (in June 2016 \$):
  - ▶ Ultimate number of claims
  - ▶ Ultimate average claim size (net of expected EQC contributions)

- Translating to Recommended Provision
  - ▶ Spread amount still outstanding according to expected pattern of future payments
  - ▶ Inflate for anticipated future escalation of claims costs
  - ▶ Deduct expected reinsurance recoveries
  - ▶ Discount to present value at risk free rate
  - ▶ Load for claims handling expenses, project management costs and risk margins.

Our valuation has essentially followed this approach, but with differences for the various covers, in how we have derived our estimates of the ultimate claim numbers and of the ultimate average claim size. Our estimates of outstanding claims at 30 June 2016 are derived by deducting from ultimate costs actual payments made up until 30 June 2016.

In relation to EQC contributions, we note that the 'normal' procedure is that EQC settles its claim directly with the policyholder and that this amount, together with the deductible payable under the EQC cover, becomes the AMI policyholder's contribution to the rebuild or repair being undertaken by SRES. As such it is the net amount which becomes the liability in SRES' balance sheet.

There are a small number of cases where SRES has settled with its claimant on a gross of EQC contribution basis and raised a debtor in respect of the expected EQC contribution. In these cases, we understand a Deed of Assignment exists between SRES and the policyholder and that under this arrangement SRES is entitled to the EQC contribution. Our valuation does not explicitly deal with such variations, but any such differences are implicitly incorporated in our adopted ultimate average EQC contribution.

### 2.1.3 Covers Other Than House Physical Damage

For the less significant parts of SRES' liabilities (Loss of Rent, Contents, and Temporary Accommodation) our approach has essentially followed a "traditional" approach, by taking views on how the experience reported to date is likely to develop over future periods.

For Lost Rent:

- A Payment-Per-Active-Claim (PPAC) method is used to project the ultimate liability. Future claim finalisations are projected based on historical experience. These can be used to derive the number of claims active at each point in the future. We also project the payments to be made per active claim per month to estimate the outstanding payments. The projections allow for a small number of incurred but not reported (IBNR) claims, using a Chain-Ladder method.

For Contents:

- A Chain-Ladder (CL) method is used to project the ultimate number of claims for each loss type. This involves deriving chain ladder factors from the experience and then applying the selected factors to the undeveloped accident periods.

- An average incurred amount per claim is also projected for each loss type. This involves deriving chain ladder factors for the development of the cumulative average incurred amount per claim from the experience provided for each event.

- The ultimate claims cost for each event is determined by multiplying the projected ultimate claim numbers by the ultimate average incurred claim size. Payments to date are deducted to produce the gross current value EQ liability.

For Temporary Accommodation, the ultimate number of claims is linked to our projection of Over Cap claims. The average incurred amount per claim and ultimate claims costs then follow the same methodology as for Contents.

For Motor, Farm and Boat we note that the liability to SRES has now been fully settled and we no longer value any SRES liability from these areas.

## 2.2 Supporting Information

Figure 2.1 lists the various sources of information used for the valuation. As our roadmap indicates, there are a number of quite complex elements to be considered and put together to arrive at a coherent valuation result.

## 2.3 Control Processes and Review

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

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

### 3.1 Approach Adopted

The bulk of properties with buildings claims have already lodged claims with SRES, however a steady stream of OC claims continue to be reported as the EQC wraps up its settlement process with its customers (335 additional OC claims have been reported between June 2015 and May 2016). During the settlement process the EQC confirms the extent of house damage, estimated repair costs, and therefore the ownership of the claims (whether it is an EQC Only claim or an OC claim that insurers have primary responsibility for). New claims lodged are due to further damage being identified to Under Cap properties during the final settlement phase, which results in the property moving to OC status.

We base our projection of the future volumes of new OC claims using two approaches:

- Allowing for the recent volumes of claims emerging from the EQC settlement process to continue for the period implied by the EQC finalisation rate.
- Profiling properties yet to be settled by EQC. EQC provides a list of SRES properties outstanding in their settlement process and we have used this list to project out future new OC reports.

Properties with OC damage are broken down further into one of the following settlement types:

- An Arrow managed settlement solution – where the repair or rebuild is primarily managed by Arrow.
- Cash settlement – where the customer takes some form of cash settlement.
- Multi-Unit Building (MUB) claims – which have a separate project management stream and in some cases will involve insurers “swapping claims” for construction management purposes.

OOS property projections are selected based on recent volumes, noting that volumes reported in recent quarters have been low and only a small number are projected to be reported in the future.

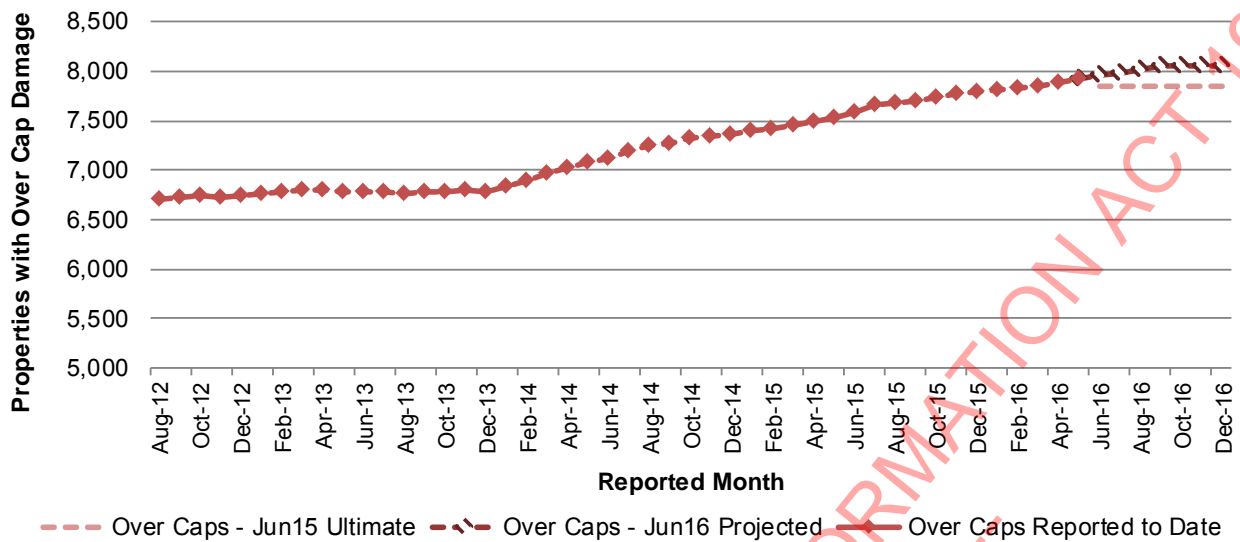
## 3.2 Projected Damaged Over Cap Properties Covered by SRES

### 3.2.1 Projected Over Cap Lodgements

Figure 3.1 shows:

- The number of properties currently known to have OC damage.
- Our projections of the future progression of the reported number of OC properties.
- A comparison to our projected ultimate number at June 2015.

Figure 3.1 – All properties with Over Cap Damage



The projected number of ultimate OC properties has increased since June 2015. The major difference in our projections at June 2015 was that we had expected the EQC settlement process to be completed by January 2016, but we now estimate this process to continue to around October 2016.

We have used two approaches to estimate future lodgements:

1. Allowing for the recent volumes of claims emerging from the EQC settlement process to continue for the period implied by the EQC finalisation rate:
  - ▶ Over the past 10 months, SRES have on average been receiving 27 new properties each month.
  - ▶ With around 200 properties being finalised by the EQC each month in 2016 to date and 1,045 properties outstanding as at the end of May 2016, this suggests it will be around 5 months before EQC resolves all of its outstanding matters (a completion date of October 2016).
  - ▶ This implies there may be around 135 (=5 x 27) OC properties still to be reported.
2. Profiling properties that are yet to be settled by EQC. The profile of SRES' properties on EQC's list of outstanding settlements suggests approximately 65 properties are likely to turn OC from their main settlement stream. The experience in the past three months since we received this information has suggested that approximately 50% of the reported OC's are from this list. Applying this proportions suggests ~130 future OC's still to be reported which is consistent with our estimate from the first approach.

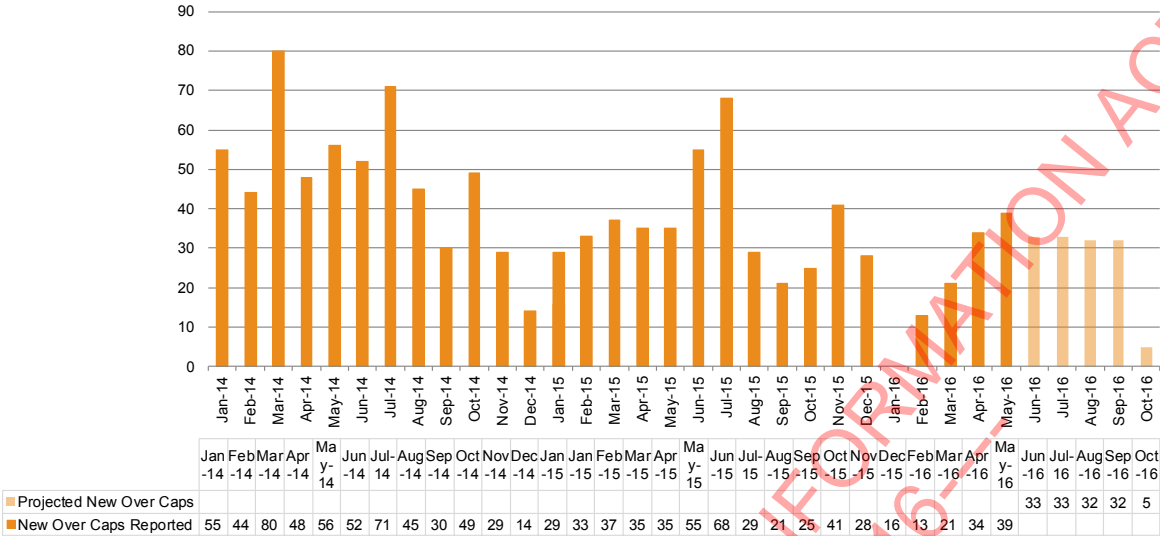
For this valuation we have adopted 135 future OC's. This estimates is net of properties expected to move back Under Cap. We also note that EQC's own estimates suggest a much lower number of future OC's (around 60).

Historically, a portion of properties lodged as OC have moved back UC, as a result of either:

- The EQC's settlement process resulting in the EQC taking over management of the claim, or
- Arrow's Detailed Repair/Rebuild Assessment ("DRA") process resulting in an estimate of repair costs that are less than the EQC cap.

Figure 3.2 shows the number of OC properties reported since January 2014 and our projection of future OC lodgements, net of those moving back UC.

Figure 3.2 – Net Over Cap Property Lodgements



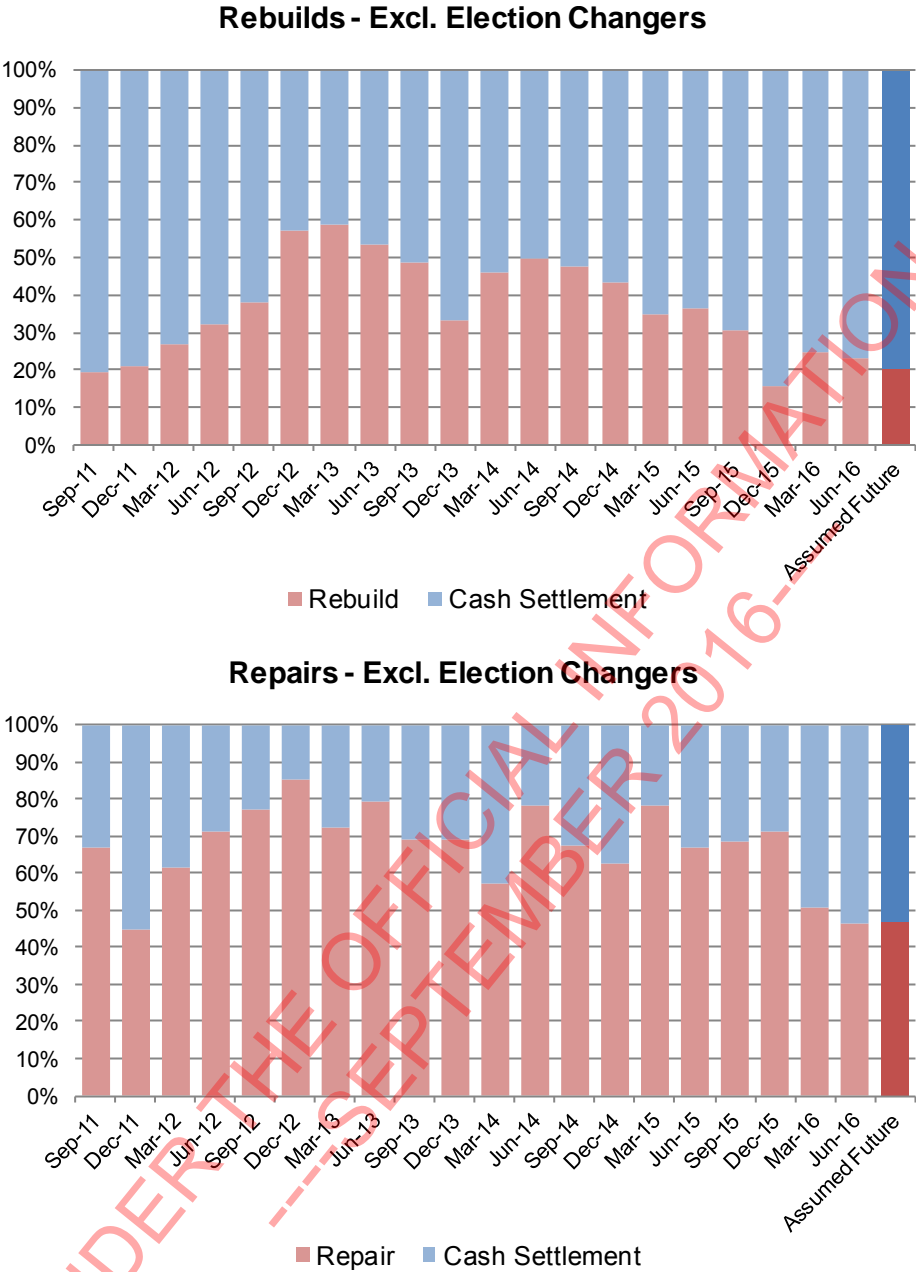
The projected ultimate number of properties with OC damage is 8,021. Of these, 812 are projected to be MUBs.

3.2.2 Profile by Customer Settlement Options

Although we don't expect the settlement size for cash settlements to be different to that of Arrow managed properties going forward, we consider cash settlements separately as they generally progress faster through to finalisation and hence are less exposed to building cost escalation.

Figure 3.3 below shows separately for the non-MUB OC properties, the mix of initial customer decisions over time, as well as our adopted mix for outstanding customer decisions excluding properties which are "Election Changers". Details of the results by land zone can be found in Appendix C.2.

Figure 3.3 – Initial Customer Settlement Decisions – Trend by Quarter

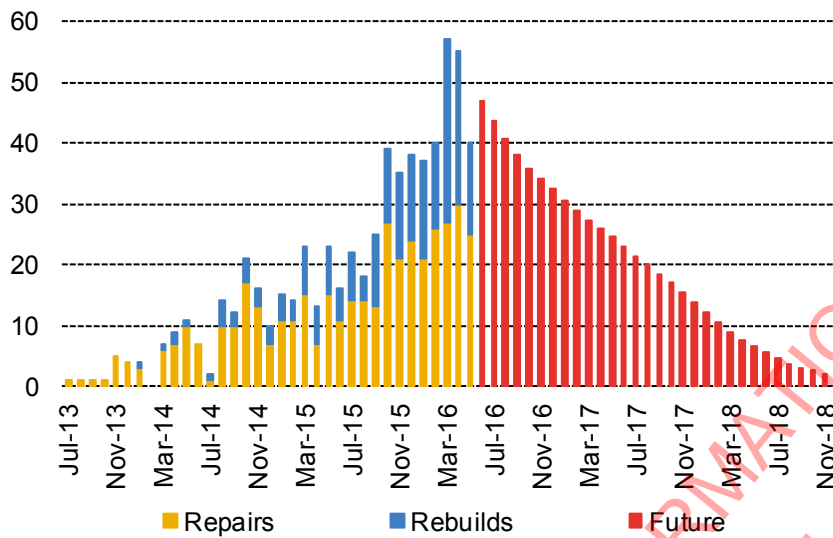


The large number of customers choosing one of the cash settlement options over an Arrow managed rebuild/repair early on in 2011 to 2013 was a result of Red Zone customers representing a disproportionate number of the early decisions. Recent trends show an increasing proportion of customers initially choosing a cash settlement option and we have selected the future proportion of cash settlements to be in line with this.

Over the past year we have also observed an increase in the number of customers initially selecting an Arrow managed rebuild or repair but switching to a cash settlement option during the process (“Election Changers”). Figure 3.4 shows historical and projected future numbers of cash settlement “Election Changers”.



Figure 3.4 – Projected Cash Settlement “Election Changers”



The higher volume of “Election Changers” has resulted in a higher number of ultimate cash settlements projected compared with our June 2015 valuation, as shown in Table 3.1. MUBs are considered separately and there is still a larger proportion of MUB customers yet to choose a settlement option.

Table 3.1 – Customer Settlement Decisions Summary

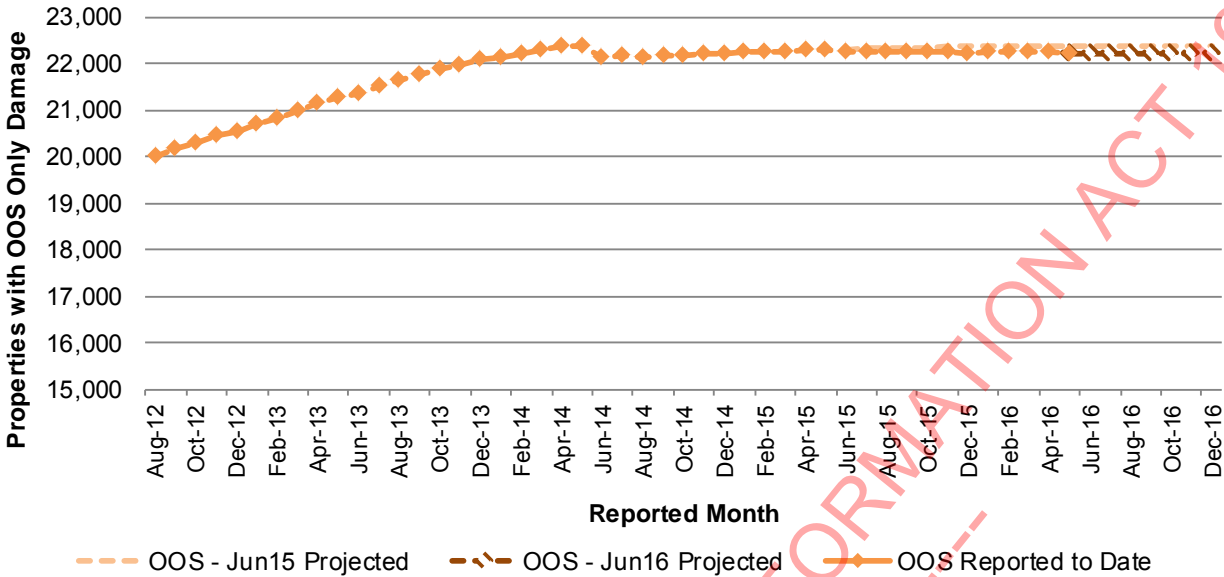
	To Date	Future Decisions	Future Election Changers	Future Net Impact	Total	Jun 15 Total	Movt from Jun 15
Arrow Managed Rebuild	1,471	23	-122	-98	1,373	1,635	-262
Arrow Managed Repair	1,120	174	-291	-117	1,003	1,591	-588
Multi Unit Constructions	516	131	-202	-71	445	523	-78
Cash Settlement	4,282	303	615	919	5,201	4,031	1,170
<b>Total</b>	<b>7,389</b>			<b>632</b>	<b>8,021</b>	<b>7,779</b>	<b>242</b>

Where SRES insures the majority of the units in a MUB, it manages the construction of the entire block, and the opposite occurs where another insurer insures the majority of a MUB. Therefore, in certain cases SRES and Arrow manages the construction of MUB properties that SRES does not insure, whilst in others another insurer manages SRES’ properties. We have separately valued the cost of MUB’s managed by another insurer.

### 3.3 Properties with Out of Scope Damage Only

Figure 3.5 below shows the progression of the reported number of OOS properties, and the results of our projection, with a comparison to the projections at June 2015.

Figure 3.5 – Properties with OOS Only Damage Projection



The settlements for OOS only properties is near completion and hence we are not expecting any future OOS only properties to be reported.

### 3.4 Summary of Properties with Building Claims

Table 3.2 below summarises our projections of the number of damaged properties at this valuation, split by OC and OOS damage, as well as the projections by settlement path (Arrow Managed vs Cash Settlement) for Over Caps. The table includes a comparison to the 30 June 2015 valuation. Note that the Arrow Managed number includes MUBs.

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Table 3.2 – Projected Ultimate Damaged Properties

Properties with Buildings Claims	All Events Combined		
	Jun-15	Jun-16	Movt from Jun15
<b>Over Cap</b>			
Overcaps Recorded Currently	7,554	7,923	369
No. ever reported as Over Cap	8,781	9,109	328
Future additions	356	142	-214
Estimated Ultimate No to be assessed	9,137	9,251	114
No. moved under cap	-1,358	-1,230	128
<b>Ultimate No with Over cap damage</b>	<b>7,779</b>	<b>8,021</b>	<b>242</b>
<b>Arrow Managed</b>			
- Rebuild	2,019	1,729	-290
- Repair	1,730	1,092	-638
	3,748	2,820	-928
<b>Cash Settlements</b>	4,031	5,201	1,170
<b>Out of Scope Damage Only</b>			
No in Database	22,014	21,928	-86
Withdrawn/Declined Claims			
Estimated further additions	85	0	-85
	22,099	21,928	-171
<b>Total No of Properties with Claims</b>	<b>29,878</b>	<b>29,949</b>	<b>71</b>
<b>No of EQC Only Properties</b>	<b>24,150</b>	<b>23,906</b>	<b>-244</b>
<b>Total with EQ Damage<sup>1</sup></b>	<b>54,028</b>	<b>53,855</b>	<b>-173</b>

<sup>1</sup>Total assumed to be equal to total recorded to date on EQC database

Overall, the projected ultimate number of damaged properties has decreased since the June 2015 valuation. The 'EQC Only' category relates to those properties where it has been assessed that there is no damage for which SRES is responsible.

The projected number of properties with OC damage (after allowing for those properties that will move to the 'EQC Only' following Arrow's assessment process) is 8,021. The projected number of properties with OOS damage only is 22,221.

### 3.5 Translation to Claim Numbers

Where it is apparent that more than one event has contributed to the Over Cap or OOS damage, a claim is raised against each contributing event and the cost apportioned. In translating the volumes of properties with Over Cap and OOS only damage to their equivalent claim volumes for each event, we have divided the EQ events into two groups:

- The five events where it is apparent that SRES' ultimate payout is likely to exceed the SRES' reinsurance deductible (the 'major events'), namely:
  - ▶ 4 September 2010 (Cat 93)
  - ▶ 26 December 2010 (Cat 99)
  - ▶ 23 February 2011 (Cat 106)
  - ▶ 13 June 2011 (Cat 112)
  - ▶ 23 December 2011 (Cat 122)
- Six other events for which SRES has recoded claims (the 'minor events').

In this section we consider the translation of damaged property numbers to claim numbers. The implication for apportionment of claims costs across the events is set out separately in Section 5.

### 3.5.1 Major Events

We have used extracts from the IVIS system to determine the number of OC claims applicable to each property. We have adopted the relationship between property and claim numbers to date for the Over Cap properties yet to be completed. Table 3.3 summarises the adopted ultimate number of OC and OOS claims.

Table 3.3 – Claim Volumes for Major Events

	No. of Claims by Event					Total
	Sep-10	Dec-10	Feb-11	Jun-11	Dec-11	
<b>Over Cap</b>						
Claims To Date	4,829	212	6,663	1,297	208	13,209
Future Net Movement	60	3	82	16	3	163
<b>Ultimate Number Claims</b>	<b>4,889</b>	<b>215</b>	<b>6,745</b>	<b>1,313</b>	<b>211</b>	<b>13,372</b>
<b>Out of Scope Only</b>						
Claims Assessed to Date	10,391	738	12,359	741	652	24,881
Future Assessments	56	4	66	4	4	134
<b>Ultimate Number of Claims</b>	<b>10,446</b>	<b>742</b>	<b>12,425</b>	<b>745</b>	<b>656</b>	<b>25,015</b>

For OOS damage only properties, we have applied the number of claims per property assessed to date to our ultimate projection of OOS properties to come up with our expected ultimate number of claims.

### 3.5.2 Minor Events

Table 3.4 summarises the number reported to date, together with the ultimate volumes we have included in the valuation.

Table 3.4 – Minor Events Selected Claim Numbers

Events	Over Cap		Out of Scope Only	
	Reported	Ultimate	Assessed	Ultimate
CAT 97 - 19/10/2010	23	23	71	74
CAT 103 - 20/01/2011	8	8	34	35
CAT 107 - 16/04/2011	26	26	17	18
CAT 111 - 6/06/2011	54	55	50	52
CAT 114 - 21/06/2011	9	9	44	45
CAT 117 - 9/10/2011	13	13	37	38



## 4 Buildings Cover – Over Cap Average Claim Sizes

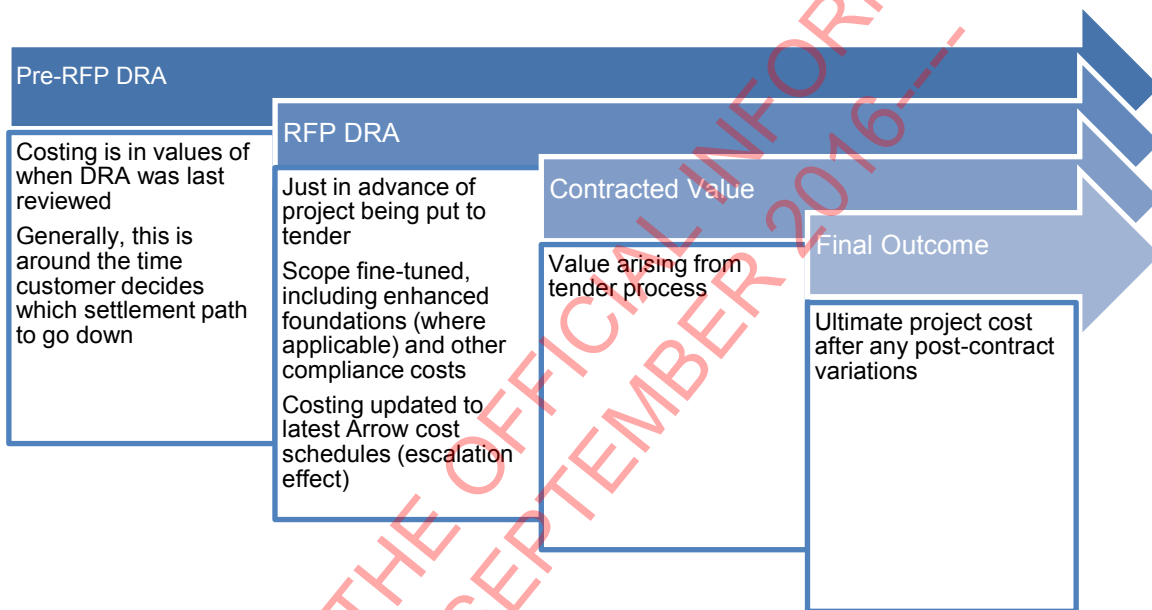
This section sets out our analysis of gross OC average claim sizes, expected EQC contributions, the apportionment of OC claim costs across events, and the future escalation allowance.

### 4.1 Introduction

Our assessment of Over Cap average claim size for Buildings cover is based primarily on Arrow's assessed costs. Similar to 30 June 2015, we have assessed the adequacy of the DRA estimates against the emerging contract experience to make adjustments to the DRA estimates where appropriate.

The figure below illustrates the stages through which Arrow estimates of Building claims progress.

Figure 4.1 - Progression of DRAs to Final Construction Costs



For the purposes of the valuation, we have examined the development patterns of the estimates across these phases to adjust currently recorded values to their equivalent likely ultimate value at construction completion. In addition, we have considered the potential impact of the emerging experience in respect of enhanced foundation costs relating to TC3 and TC2 properties.

We note that the figures shown in this section exclude allowances made in the DRAs for project management fees. The allowance for project management fees is documented separately in Section 8.1.

### 4.2 Over Cap Claim Sizes

#### 4.2.1 Recorded DRA Assessed Costs

The table below summarises the average DRA estimate, by zone, for the 3,188 Over Cap DRAs completed to date, where customers haven't chosen a cash settlement option. We consider the average size of cash settled properties separately.

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

Table 4.1 – Average DRA Assessed Costs (excluding Arrow fees)

	Red	TC3	Hills	Other	All Regions
<b>Rebuilds</b>					
No of completed DRAs	150	1,140	197	371	1,857
DRA ex Enhanced Foundations, Arrow Costs (\$000)	■	■	■	■	■
Enhanced foundations and engineering costs (\$000)	■	■	■	■	■
<b>Total ex Arrow Costs</b>	■	■	■	■	■
<b>Repairs</b>					
No of completed DRAs	3	585	295	447	1,331
DRA ex enhanced foundations, Arrow costs (\$000)	■	■	■	■	■
Enhanced foundations and engineering costs (\$000)	■	■	■	■	■
<b>Total ex Arrow Costs</b>	■	■	■	■	■

The figures in the table show the assessed cost split into the standard DRA estimate (which incorporates a ■% contingency margin for rebuilds and ■ for repairs) as well as allowances in excess of the standard contingency amounts. The additional contingency amounts reflect allowances made by Arrow for the cost of enhanced foundations in TC3 and more complex engineering solutions for Hills properties.

For properties where construction has been completed, the completed value of the Building claim is used in place of the DRA value. The figures in the table reflect the “starting point” of our assessment of the average cost of Over Cap property damage.

### 4.3 Estimated Rebuild and Repair Costs in June 2016 Values

The DRA estimates above reflect estimates for Building claims at various stages of the “lifecycle” for a property; from initial assessment through to completion of construction and finalisation of the claim. In interpreting the current DRA estimates, we have considered the lifecycle in the four stages described earlier.

For the purposes of the valuation, we have examined the development patterns of the estimates across these phases to adjust currently recorded values to their equivalent likely ultimate value, in June 2016 dollars (that is the estimated cost of the construction at today’s rates).

The adjustments made to the DRAs give regard to –

- the effect of past escalation in construction costs to adjust DRA values to reflect current construction rates,
- the effect of scope changes at RFP stage on the DRA estimates,
- the effect of savings or over-runs relative to DRAs at the construction stage, and
- the expected size for DRAs yet to be done.

Figure 4.2 shows experience by quarter of the progression of Rebuild DRA’s through different stages of their lifecycle along with an explanation of our selected assumptions. Figure 4.3 provides the same details for repair DRA’s. Note that pre-RFP DRAs have been adjusted using an escalation index (which can be found in Appendix C.3) to re-state them to June 2016 values so that the effect of scope adjustments can be considered in isolation. These movements also exclude the costs of enhanced foundation solutions and contingency loadings as these are considered separately.

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

Figure 4.2 – DRA Adjustments - Rebuilds

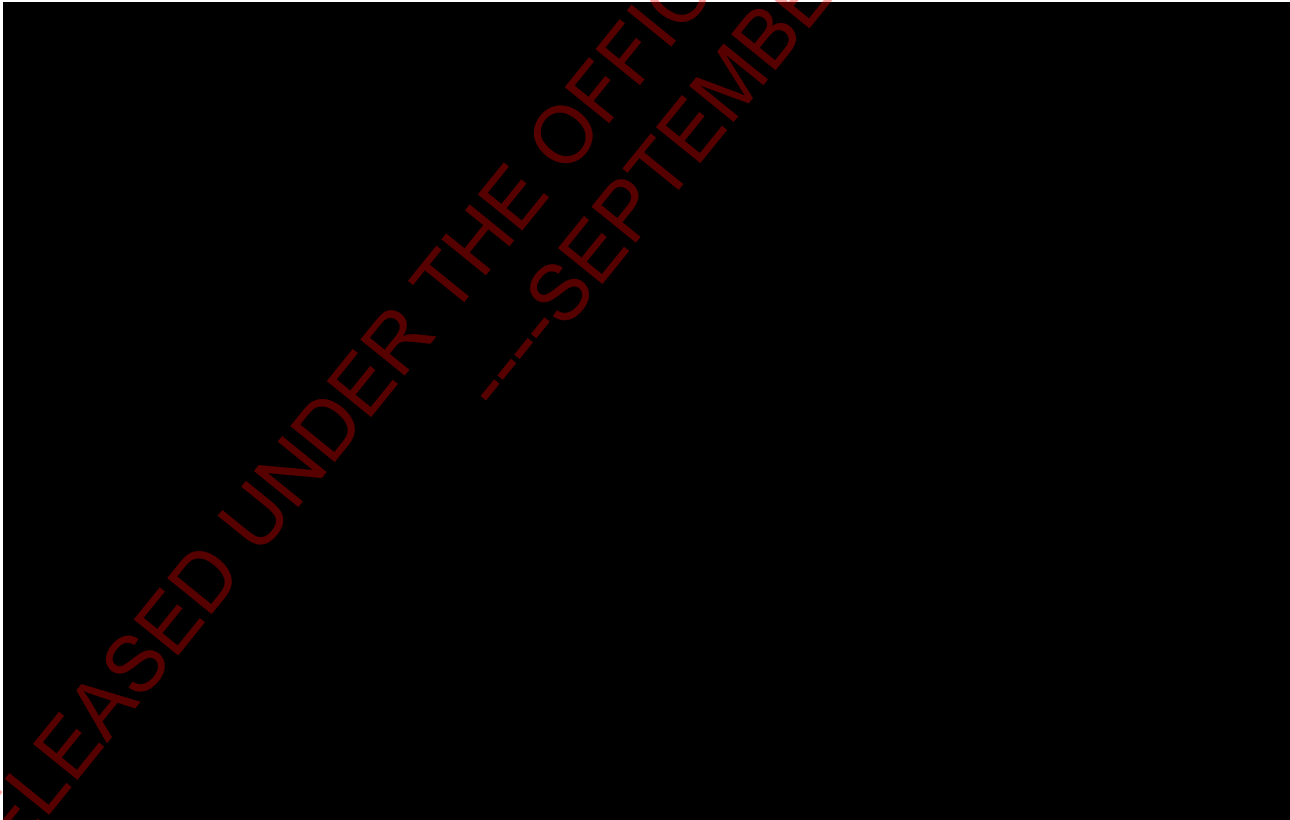


Table 4.2 summarises our selected adjustments for each stage of the DRA lifecycle.

Table 4.2 – DRA Lifecycle Adjustments Summary

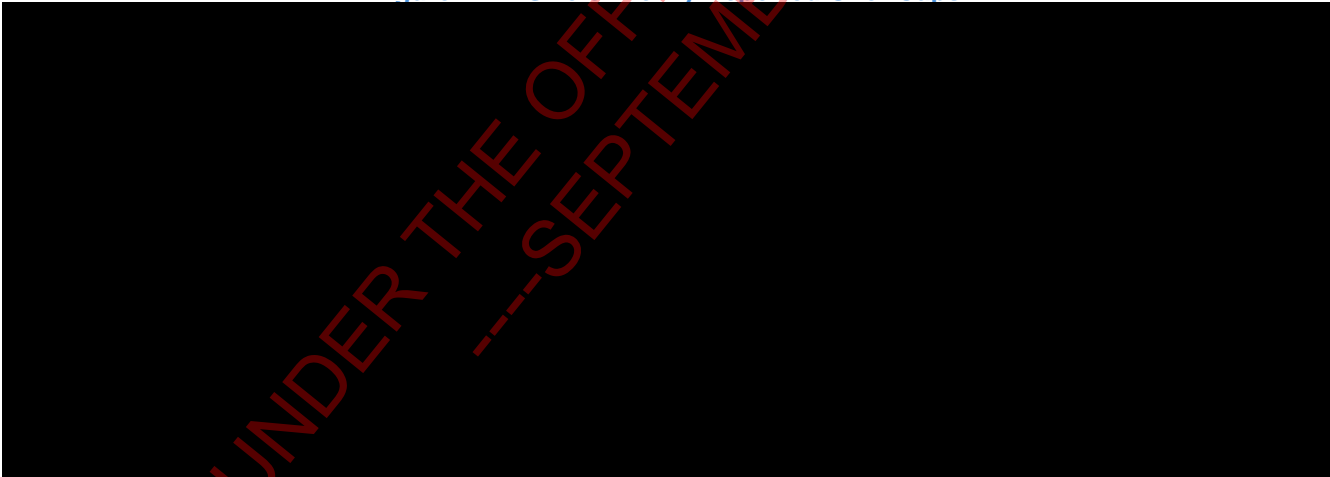
Stage	Adjustments to DRAs	
	Rebuilds	Repairs
<b>RFP</b>		
Escalation	█%	█%
Scope	█%	█%
<b>Contract Movement</b>	█%	█%
<b>Post Contract Variations</b>	█%	█%

Using Rebuilds as the example, the table can be read as follows: 9(2)(i) and 9(2)(j)

- for all DRAs currently awaiting an RFP DRA, their recorded value has been increased by an average of █% to account for past escalation and by █ to allow for expected scope changes at time of RFP
- the same DRAs plus all current RFP DRAs then have a █ reduction applied for the anticipated movement at contract stage (relative to the RFP DRA excluding contingency)
- for all the above plus properties already contracted, a █ adjustment is made for the impact of post contract variations.

For properties assessed for the first time at some point in the future, DRA sizes have been selected for MUB's and stand-alone buildings by looking at the size of assessments done on properties moving Over Cap as a result of EQC settlement process. All future assessments are expected to be on properties that have moved Over Cap as a result of this process. Figure 4.4 shows our selected sizes.

Figure 4.4 – Size of Newly Reported Over Caps



The table below shows the combined effect of the adjustments we have made to the DRA average claim cost estimates in developing them to the expected ultimate average claim costs at completion of construction. The movements that have been observed to date from their respective current states to completion (the "ultimate") are also shown. The table includes the cost of enhanced foundations and contingency loadings (where appropriate) and excludes DRAs where the customer has chosen an option that does not involve an Arrow managed construction.

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

**Table 4.3 – DRA Adjustments (Arrow Managed Constructions Only)**

Current Status	Rebuilds			Repairs			
	No. of Properties	Current (\$000)	Ultimate (\$000)	Net Adopted Mov't vs Current	No. of Properties	Current (\$000)	Ultimate (\$000)
Pre-RFP	258				481		
Post-RFP	206				107		
Contracted	324				165		
Completed	1,069				578		
DRAs ex Cash Settled	1,857				1,331		
Incl future DRA	86				1,591		
	1,943				2,922		
Ultimate	1,635				980		

The adjustments reflect our view that, based on the experience to date, and including an allowance for the projected future DRAs:

- The ultimate average rebuild cost (in June 2016 dollars) will be █% above that currently recorded in Arrow's DRAs.
- The ultimate average repair cost (in June 2016 dollars) will be █% above that currently recorded in the DRAs.

We have assumed that MUB's will develop at the same rates as stand-alone repairs and rebuilds as there has not been enough experience on these to date to analyse separately and no anecdotal evidence to suggest a different development pattern would be more appropriate.

**4.4 Cost of Enhanced Foundations**

**4.4.1 TC3 Properties**

In addition to the "development" of DRAs above, we have considered whether the DRAs need any further adjustments to reflect the emerging experience relating to the cost of enhanced foundation solutions in areas with badly damaged land. A number of properties in TC3 and TC2 will require enhanced foundation solutions due to extensive land damage. The enhanced foundation solutions are expected to be more costly than the standard "3604" foundations allowed for in the standard DRA estimates.

The table below sets out the adjustments made to DRAs (per property) in respect of TC3 enhanced foundations.

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

**Table 4.4 – Adjustment to TC3 DRAs for Enhanced Foundations**

TC3 Enhanced Foundations	(\$000)
█	█
█	█
█	█

Arrow initially included an additional █ contingency in TC3 rebuild DRAs, as an allowance for the expected cost of TC3 enhanced foundations, which equates to around \$█ per property.

Since that allowance was added to the DRA estimates, Arrow has subsequently contracted around 810 TC3 properties with enhanced foundations. Based on the contract outcomes for these properties the expected



cost of enhanced foundations for TC3 properties is around \$ [REDACTED] per property (allowing for differences in mix for contracted properties versus those yet to be contracted).

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

The net result is an expected cost to SRES of \$ [REDACTED] per property, compared to the [REDACTED] allowed for in the DRAs. Therefore we make a small downward adjustment to TC3 DRAs to reflect this expected saving relative to the DRA allowances.

4.4.2 TC2 Properties

Due to the extent of land damage experienced for a number of properties, a number of TC2 properties will also require enhanced foundations. The DRAs currently make approximately a [REDACTED] allowance for TC2 properties. We have estimated the expected cost of enhanced foundations in TC2 by looking at the proportion of properties requiring enhanced foundation solutions and the average size of the solution for the 242 TC2 rebuilds that have gone to contract.

The table below sets out the adjustments made to DRAs (per property) in respect of TC2 enhanced foundations.

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

Table 4.5 – Adjustment to TC2 DRAs for Enhanced Foundations

TC2 Enhanced Foundations	(\$000)
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

Contract experience to date suggests that all TC2 properties will require enhanced foundations at an average cost of approximately [REDACTED] above a standard 3604 foundation. This is lower than the allowance of [REDACTED] currently in the DRAs and results in a \$ [REDACTED] downward adjustment on TC2 DRAs.

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### 4.5 Impact of Customer Settlement Options

Under AMI’s policy terms, there are a number of alternative settlement options available to customers. Eligible customers are able to choose between rebuilding their property elsewhere, purchasing another property, or taking a cash settlement.

On 22 July 2015, the New Zealand Supreme Court issued a judgment in respect of the Avonside vs SRES case (“Avonside decision”) where it upheld the Court of Appeal’s ruling in late 2014 that SRES must pay customers that are cash settling an amount inclusive of the contingency. The wording of the judgment indicates that a 10% allowance for contingency would be expected, consistent with the contingency allowance in the DRAs.

Figure 4.5 – Cash Settlement Sizes

9(2)(b)(ii)



For election changers, the valuation basis assumes that the cost outcome will be the same irrespective of whether the customer chooses an Arrow-managed project or elects to take a cash settlement. However, the mix of properties for cash settlements is different to Arrow managed and so the average size can vary.

### 4.6 EQC Contributions and Event Apportionment

In this section we set out our analysis of the likely levels of EQC contributions and the apportionment of buildings damage across events.

Up until August 2014, SRES went through a process of agreeing apportionment (the process is referred to as “endorsement”), and therefore EQC contributions with the EQC, but 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 obvious inconsistency. The final apportionment is now only known to SRES at the time of construction commencing.

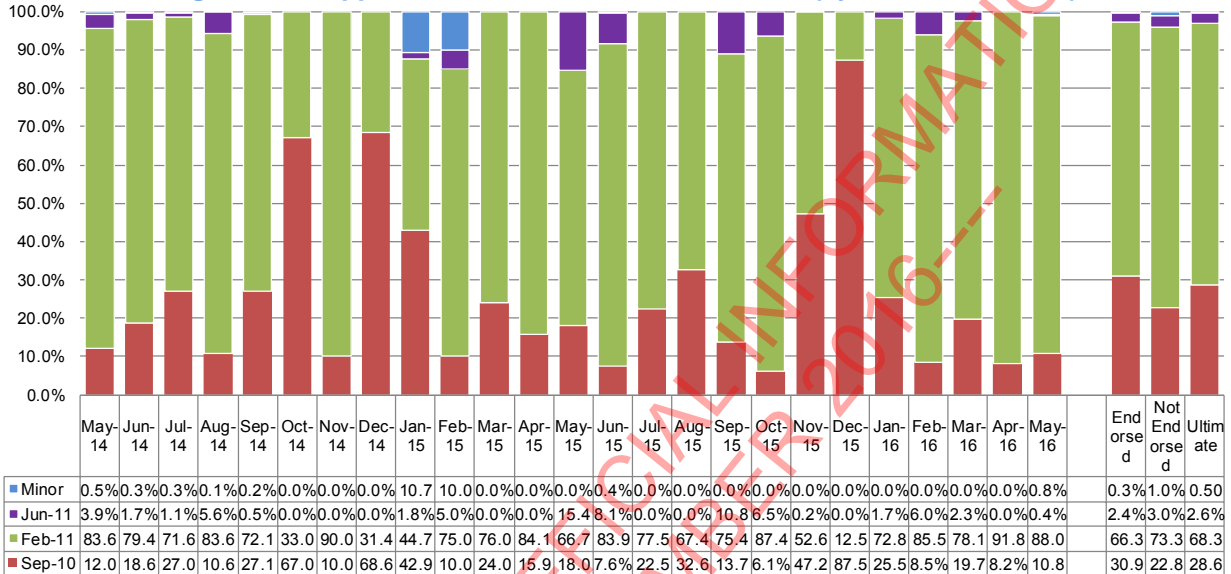
We use the endorsement experience as the basis for projection of the ultimate apportionment of OC claims across events and explicitly allow for any difference in mix between endorsed and not endorsed properties.

We estimate EQC contributions for properties that haven't gone through the endorsement process by looking at estimates recorded directly in EQC's database and making adjustments for any variation that has historically occurred when comparing EQC's estimates to the amount ultimately recorded by SRES.

### 4.6.1 Apportionment Across Events

The figure below shows the event apportionment agreed with the EQC for the 5,330 OC properties endorsed to date, as well as our projected apportionment for those properties yet to be endorsed.

Figure 4.6 – Apportionment of Cost Across Events (by Month Endorsed)



There has been a slight reduction in our apportionment to the September event and a slight increase in our apportionment to the other events given the recent experience and the profile of newly reported Over Cap properties. As both major events, September and February are well over their reinsurance limits, it is only the small increase in the minor events that reduces SRES' liability.

### 4.6.2 EQC Contributions

The table below shows the EQC contributions recorded from three sources:

- Final EQC contributions recorded in SRES' data for contracted and completed properties.
- The agreed EQC contribution coming out of the endorsement process for properties yet to be contracted or completed.
- The EQC contribution recorded directly in EQC's database for properties that haven't been endorsed.



**Table 4.6 – Average EQC Contributions**

		Rebuilds	Repairs	Settlements	Multi Units
<b>Recorded Contribution</b>	SRES Data	121,000	117,000	0	105,000
	Endorsed	133,000	131,000	127,000	116,000
	EQC Data	130,000	120,000	120,000	124,000
<b>Numbers</b>	SRES Data	1,238	690	0	142
	Endorsed	146	180	3,236	64
	EQC Data	143	357	889	208
<b>"Leakage" - Relative to SRES Data</b>	SRES Data	0%	0%	0%	0%
	Endorsed	-2%	-2%	0%	-3%
	EQC Data	1%	-1%	0%	-4%
<b>Average Contribution</b>		<b>123,000</b>	<b>119,000</b>	<b>126,000</b>	<b>113,000</b>
<b>Overall</b>					<b>123,000</b>

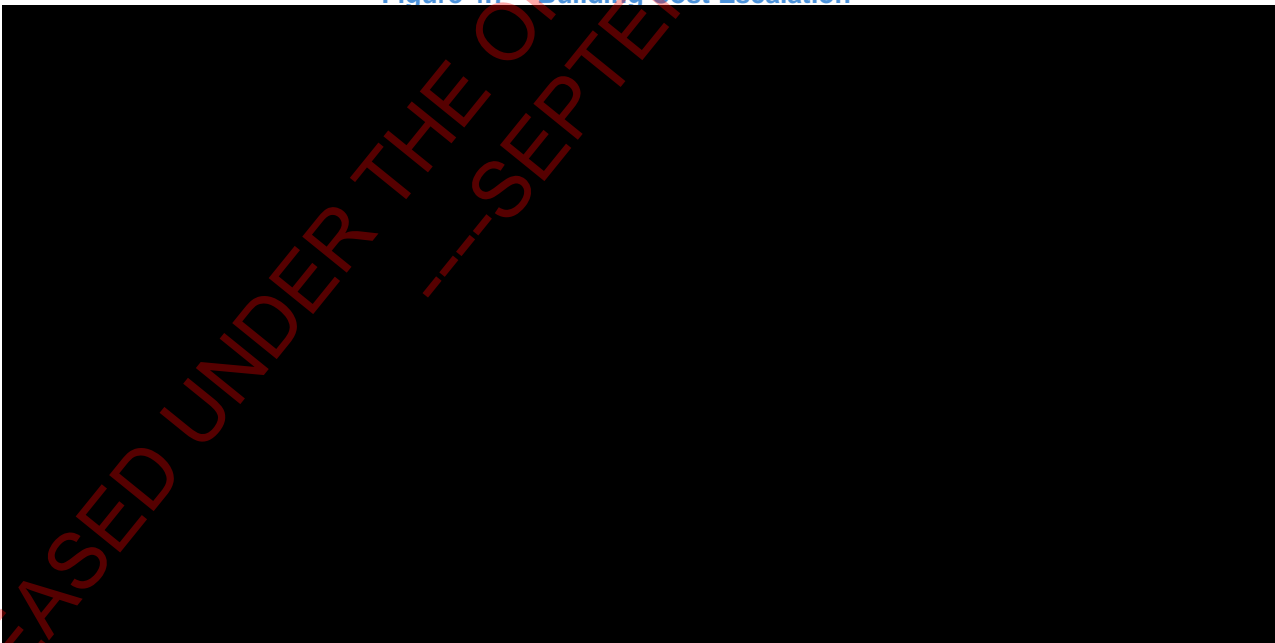
The three data sources are combined by comparing any historical differences relative to the final contribution recorded by SRES ("leakage"). The resulting ultimate EQC contribution is therefore around \$123,000 per property and is \$1,000 lower than our June 2015 estimate.

#### 4.7 Future Escalation

Our valuation explicitly allows for the impact of future building cost escalation. The figure below compares the recent experience for Canterbury versus the rest of New Zealand and shows how our adopted assumptions compare to Treasury's national forecasts. The past experience is shown as 12 month rolling movements.

**Figure 4.7 – Building Cost Escalation**

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



Based on the figures above we make the following observations:

- Initially very high rates of escalation were reported for Canterbury (>10% p.a.) at a time when the rest of New Zealand was experiencing around █% to █% per annum.

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

- In recent periods, the Canterbury rate of escalation has dropped below the NZ excluding Canterbury rates of escalation and is around █ per annum.
- Treasury’s forecasts anticipate building cost escalation settling down at around █% per annum over the medium term.
- Arrow cost schedules initially increased by around █% per annum, well below the observed increase in construction costs in the wider Canterbury area. Experience in recent quarters suggests escalation experienced by SRES is now █.

Consistent with the above observations, for this valuation, we have assumed that SRES will experience building cost escalation slightly below Treasury’s forecasts. This results in rates of escalation slightly lower than those adopted at our June 2015 valuation, as set out in the table below.

**Table 4.7 – Assumed Future Escalation**

Year	Jun-16 Valn			Jun-15 Valn			Change	
	National Forecast	Assumed Canterbury	Gap	National Forecast	Assumed Canterbury	Gap	National Forecast	Assumed Canterbury
FY17	█	█	█	█	█	█	█	█
FY18	█	█	█	█	█	█	█	█
FY19	█	█	█	█	█	█	█	█

We have assumed that escalation during FY17 will be similar to the level of escalation observed in recent quarters which is below the national forecast. We have now assumed a negative gap between the national forecast and the assumed Canterbury escalation rate, and there has also been a reduction in the national forecast compared to June 2015. This has resulted in an escalation reduction of █ for all future years.

### 4.8 Summary of Projected Over Cap Claim Costs

The table below summarises the resulting projected claims costs, separately for those customers selecting an Arrow managed repair or rebuild, and those choosing one of the cash settlement options.

**Table 4.8 – Summary of Over Cap Claim Costs (Current & Inflated Values)**

	No of Properties	Average Claim Size \$000				Total Claim Cost \$m			
		Recorded	Adjust.	Value in \$Jun16	Jun15 Val \$Jun16	Recorded	Adjust.	Value in \$Jun15	Jun15 Val \$Jun16
Rebuild	1,729	█	█	█	█	█	█	█	█
Repair	1,092	█	█	█	█	█	█	█	█
Arrow Managed	2,820	█	█	█	█	█	█	█	█
Cash Settlements	5,201	█	█	█	█	█	█	█	█
<b>All Over Cap</b>	<b>8,021</b>	<b>█</b>	<b>█</b>	<b>█</b>	<b>█</b>	<b>█</b>	<b>█</b>	<b>█</b>	<b>█</b>
EQC Contribution				█	█			█	█
<b>Net Over Cap</b>				█	█			█	█
<b>Gross Inflated Average Size</b>				█	█			█	█
<b>EQC Contribution</b>				█	█			█	█
<b>Net Inflated Average Size</b>				█	█			█	█
<b>Net Inflated Claims Cost (\$m)</b>				█	█			█	█
<b>Net Paid to Date (\$m)</b>				█	█			█	█
<b>Net Inflated Outstanding (\$m)</b>				█	█			█	█

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

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

The amounts shown above exclude project management costs. In June 2016 values, the projected ultimate average size (net of EQC contributions) has increased from [REDACTED] to [REDACTED] predominantly due to the increase in the projected average size for cash settlements. The total claim cost has increased further as a result of the 328 additional properties projected to have Over Cap damage.

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## 5 Buildings Cover – Out of Scope Claims

### 5.1 Introduction

We have relied on data from Arrow's 'Mercury' system and payments from the IVIS in estimating the average cost per OOS property. The Mercury system contains cost estimate for all out of scope properties that have had assessments completed, whilst IVIS contains the payments made by Arrow and SRES for OOS properties that have had construction work completed.

We split our analysis of claim sizes into three OOS claim type categories:

- Simple or Cash Out Claims – these are claims which are classified by Arrow as being 'standard' OOS repair claims or claims that have been primarily cashed out.
- Complex Claims – claims having mixed components of cash outs and repairs, or with repair work having complexities or special works required.
- Pools – claims that have a spa or swimming pool attached to the property required to be repaired.

### 5.2 Claims Assessments to Date

As at June 2016, Arrow has completed a majority of its total claim assessments and constructions. In total there are around 19,500 claims managed by Arrow for construction of which 500 claims are currently awaiting assessment or in construction. In addition to these claims, there are around 2,700 OOS claims which are not managed by Arrow but managed by Southern Response. These are usually older claims that have been mostly finalised by the claims management company used by Southern Response prior to the appointment of Arrow, or directly by Southern Response themselves. Table 5.1 below sets out the current assessment status of the projected ultimate number of properties with OOS only damage.

**Table 5.1 - Assessment Status of Arrow Managed OOS claims**

OOS Claim Status	Total
<b>Arrow Managed</b>	
Closed and Paid	15,123
Closed	3,845
Open	389
Awaiting Assessment	115
<b>SRES Managed</b>	
Resolved/Cancelled	2,574
Open	132
<b>Total</b>	<b>22,178</b>

### 5.3 OOS Claim Costs

As Arrow have now completed a majority of its claims assessments and construction, we have adopted a simplified approach to calculating the outstanding claims liability for OOS claims. Our approach in the June 2016 valuation consists of the following steps for Arrow Managed OOS claims:

- For **reported and assessed claims**, calculate the total reported assessed case estimate amount and apply a development factor to arrive at an ultimate cost.

- For **future or unassessed claims**, adopt the implied ultimate average claim size from Step 1 to arrive at an ultimate cost.
- For **claims that have been deemed finalised**, apply a development factor to the reported incurred amount to account for adjustments to payments at the finalisation stage to customer.
- Deduct the claim payments made to date excluding Arrow claims management cost paid to date by SRES to arrive at the final outstanding claims cost for OOS claims.

For this valuation we have been provided with new sources of data for payments in the form of a payments transaction file. This has allowed us to reconcile against the Mercury data source and identify an emergence of payments past the initial closed date of the claim and also additional payments made above the initial Arrow assessment. We have responded to this by increasing the development factors applied to the OOS average claim sizes.

Table 5.2 below summarises the development factors we have applied to each of the claim type and claim statuses below:

**Table 5.2 – OOS Claims Incurred Development Factors**

OOS Claim Status	Jun-16	Jun-15
<b>Arrow Managed</b>		
Closed and Paid	1.15	1.00
Closed	1.15	1.04
Open	1.15	1.04
Awaiting Assessment	1.15	1.04
<b>SRES Managed</b>		
Resolved/Cancelled	1.04	1.04
Open	1.04	1.04

Table 5.3 below summarises the reported case estimates and the resulting ultimate OOS cost for Arrow Managed OOS claims when these development factors are applied.

**Table 5.3 – OOS Ultimate Claims Cost**

OOS Claim Status	Properties	Reported Case Estimate (\$m)	Development Factor	Ultimate Cost (\$m)
<b>Arrow Managed</b>				
Closed and Paid	15,123	205.8	1.15	236.6
Closed	3,845	58.7	1.15	67.5
Open	389	8.0	1.15	9.2
Awaiting Assessment	115		1.15	3.1
<b>SRES Managed</b>				
Resolved/Cancelled	2,574	28.8	1.04	29.8
Open	132	2.0	1.04	2.1
<b>Ultimate Claims Cost (inc Arrow Costs)</b>	<b>22,178</b>	<b>303.3</b>		<b>348.3</b>
Less Arrow Costs				15.8
<b>Ultimate Claims Cost (excl Arrow Costs)</b>				<b>332.5</b>

The total OOS ultimate claims cost is \$332.5m, excluding Arrow OOS claims management costs.

## 5.4 Miscellaneous OOS Costs

There are a number of additional costs that are associated with the OOS claims not included in the above analysis:

- Red Zone Indemnities – properties which have become Under Cap during the CERA settlement process but have associated OOS damage that will need to be paid.
- Removal of Contents – costs associated with contents removal or storage during the Under Cap repair work, as part of the buildings policy coverage.
- Excess costs – customers were previously paying both an EQC claim excess as well as an OOS excess to their insurer. In 2013 SR decided to refund oos excesses after advice that it was contrary to the terms of the insurance policy to deduct them from settlements

Table 5.4 summarises the estimated costs for each of these areas. The costs have been apportioned in line with the apportionment of the other OOS claim costs.

**Table 5.4 – Miscellaneous OOS Costs**

	Ultimate Cost (\$m)
Red Zone Idemnities	0.4
Removal of Contents	3.0
Excess Costs	2.2
<b>Total</b>	<b>5.6</b>

## 5.5 Summary of Ultimate OOS Claims Cost

Table 5.5 shows the summary of the total ultimate claims cost of OOS only claims, excluding Arrow costs:

**Table 5.5 – OOS Ultimate Claims Cost Excluding Arrow Costs**

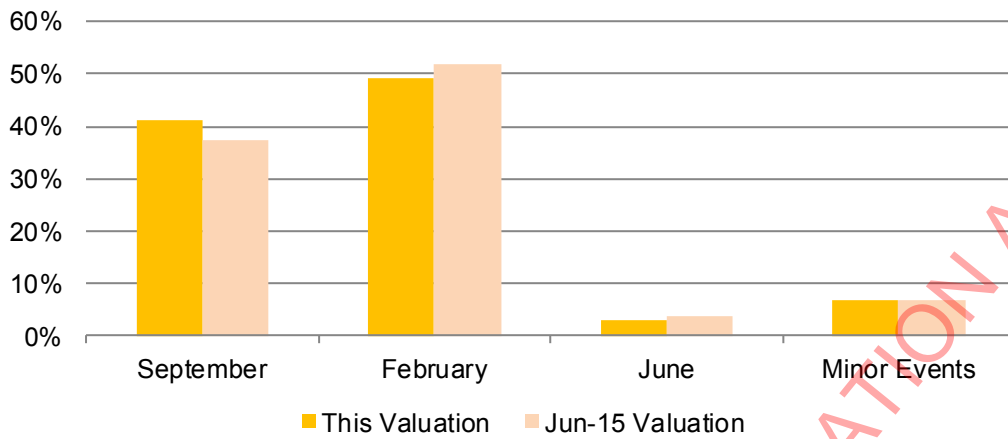
	\$m
<b>Ultimate Cost</b>	
OOS Claims excluding Arrow Costs	332.5
Miscellaneous OOS Costs	5.6
<b>Total Ultimate Cost (excluding Arrow Costs)</b>	<b>338.1</b>
<b>Paid to Date</b>	<b>322.1</b>
<b>Outstanding (excluding Arrow Costs)</b>	<b>16.0</b>

## 5.6 Apportionment to Events

In previous valuations, we have previously relied on Arrow's apportionment recorded in the Mercury system. As only a small proportion of the claims are outstanding, we have now relied on the payments made in IVIS 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.

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

Figure 5.1 – OOS Apportionment Overall



There has been small movements in allocation towards the September event from February, otherwise the apportionments remain relatively unchanged.

Table 5.6 summarises the outstanding claims cost apportioned by event.

Table 5.6 – OOS Ultimate Claims Cost by Event

	Sep-10	Dec-10	Feb-11	Jun-11	Dec-11	Minor Events	All
<b>No of Claims</b>							
Assessed	10,391	738	12,359	741	652	270	25,151
Unassessed	56	4	66	4	4	1	135
<b>Ultimate</b>	<b>10,446</b>	<b>742</b>	<b>12,425</b>	<b>745</b>	<b>656</b>	<b>271</b>	<b>25,286</b>
<b>Total Cost (\$m)</b>							
Assessed	133.1	9.5	158.3	9.5	8.4	3.5	322.1
Unassessed	6.7	0.5	8.0	0.5	0.4	0.2	16.3
<b>Ultimate</b>	<b>139.8</b>	<b>9.9</b>	<b>166.3</b>	<b>10.0</b>	<b>8.8</b>	<b>3.6</b>	<b>338.4</b>

### 5.7 Future Escalation

We apply the same future escalation assumptions to OOS claims as used for OC claims.

## 6 Other Covers

### 6.1 Temporary Accommodation

#### 6.1.1 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 temporary accommodation claims arising for customers with Over Cap claims, we categorise the claims into three categories: Arrow managed rebuilds ('Rebuilds'), Arrow managed repairs ('Repairs') and Non-Arrow managed or cash outs ('Cash Out'). We expect that temporary accommodation claim lodgements and payments from Arrow managed constructions will coincide with when the property enters construction phase.

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.

#### 6.1.2 Results Summary

Table 6.1 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 0.



**Table 6.1 – Projected Ultimate Cost of Temporary Accommodation Claims**

	Over Caps				Under Caps	Contents Only	Total	Jun15 Valn
	Rebuilds	Repairs	Cash Out	Total				
<b>Reported Claims</b>								
<b>Open Claims</b>								
Claim Numbers	362	533	458	1,353	148	227	1,728	1,990
To Date Average Claim Size (\$)	9,450	7,328	7,735	8,034	5,724	6,591	7,647	5,362
Ultimate Average Claim Size (\$)	14,093	13,263	11,988	13,054	9,626	9,512	12,295	11,359
<b>Finalised Claims</b>								
Claim Numbers	840	308	1,213	2,361	8,345	2,423	13,129	12,392
Finalised Average Claim Size (\$)	13,560	12,755	10,456	11,860	5,057	5,102	6,289	5,874
<b>Claims to Date</b>	<b>1,202</b>	<b>842</b>	<b>1,670</b>	<b>3,714</b>	<b>8,493</b>	<b>2,650</b>	<b>14,857</b>	<b>14,382</b>
<b>Average Size</b>	<b>13,720</b>	<b>13,077</b>	<b>10,876</b>	<b>12,295</b>	<b>5,136</b>	<b>5,480</b>	<b>6,987</b>	<b>6,633</b>
<b>Reported to Date Total (\$m)</b>	<b>16.5</b>	<b>11.0</b>	<b>18.2</b>	<b>45.7</b>	<b>43.6</b>	<b>14.5</b>	<b>103.8</b>	<b>95.4</b>
<b>IBNR Claims</b>								
Claim Numbers	18	134	229	381	21	35	437	1,188
Adopted Average Claim Size (\$)	15,300	12,600	10,800	11,646	8,000	9,075	11,267	13,549
<b>IBNR Total (\$m)</b>	<b>0.3</b>	<b>1.7</b>	<b>2.5</b>	<b>4.4</b>	<b>0.2</b>	<b>0.3</b>	<b>4.9</b>	<b>16.1</b>
<b>Total</b>								
Ultimate Claim Numbers	1,220	976	1,899	4,095	8,514	2,685	15,294	15,570
Ultimate Average Size	13,744	13,011	10,866	12,235	5,143	5,526	7,110	7,161
<b>Estimated Ultimate Liability (\$m)</b>	<b>16.8</b>	<b>12.7</b>	<b>20.6</b>	<b>50.1</b>	<b>43.8</b>	<b>14.8</b>	<b>108.7</b>	<b>111.5</b>

The projected rate of temporary accommodation lodgements has decreased since June 2015. The volume of temporary accommodation claim lodgements have reduced over the last 12 months as the EQC repair programme is nearing completion, and we have responded to this experience by reducing our future claim number assumptions. There has also been a decrease in the projected ultimate claim size. This has been mainly driven by Over Cap claims switching to cash settlement which tends to have a lower average claim size than Arrow Managed claims.

The net impact of the lower claim numbers and higher claim sizes results in an estimated ultimate liability of \$108.7 million, which is a slight reduction from the June 2015 valuation.

Table 6.2 shows the split of the temporary accommodation costs by event.

**Table 6.2 – Projected Ultimate Cost of Temporary Accommodation Claims by Event**

	Sep-10	Dec-10	Feb-11	Jun-11	Dec-11	Other Events	Total
<b>Ultimate Claims</b>	3,550	51	11,049	471	117	55	15,294
<b>Ultimate Average Size (\$)</b>	7,110	7,110	7,110	7,110	7,110	7,110	7,110
<b>Ultimate Liability (\$m)</b>	25.2	0.4	78.6	3.4	0.8	0.4	108.7
<b>Paid to Date (\$m)</b>	20.5	0.2	71.9	2.7	0.8	0.3	96.4
<b>Outstanding Liability (\$m)</b>	4.7	0.1	6.6	0.7	0.1	0.1	12.3
<b>% Allocation of Ult to Event</b>	23.2%	0.3%	72.2%	3.1%	0.8%	0.4%	

## 6.2 Other Cover Types

Table 6.3 shows our adopted ultimate cost for the other classes types:

**Table 6.3 – Other Cover Types Ultimate Cost Summary**

	Reported		Ultimate		Estimated Cost (\$m)	Paid to Date (\$m)	Outstanding (\$m)	Estimated Cost (\$m) Jun-15
	Claim Numbers	Average Size	Claim Numbers	Average Size				
<b>Lost Rent</b>	2,376	6,406	2,551	7,078	<b>18.1</b>	15.3	<b>2.8</b>	<b>16.2</b>
<b>Contents</b>	1,780	9,588	1,913	9,581	<b>18.3</b>	17.9	<b>0.4</b>	<b>21.7</b>
<b>Vehicles</b>	3,003	2,103	3,003	2,130	<b>6.5</b>	6.5	<b>0.0</b>	<b>6.4</b>
<b>Other</b>	121	8,023	122	8,257	<b>1.0</b>	1.0	<b>0.0</b>	<b>1.1</b>
<b>Total</b>	<b>7,280</b>	<b>5,436</b>	<b>7,589</b>	<b>5,770</b>	<b>43.8</b>	<b>40.7</b>	<b>3.2</b>	<b>45.5</b>

Overall, there has been an decrease of \$1.7 million in the other claim classes since the June 2015 valuation, driven mainly by a decrease in Contents claim lodgements.

Table 6.4 summarises the claim numbers and average sizes adopted for other classes, apportioned by event.

**Table 6.4 – Other Cover Types Ultimate Cost Summary by Event**

		Reported		Ultimate		Estimated Cost (\$m)	Estimated Cost (\$m) Jun-15
		Claim Numbers	Average Size	Claim Numbers	Average Size		
4 Sept 2010 Darfield	<b>Lost Rent</b>	415	6,622	420	7,097	<b>3.0</b>	<b>2.9</b>
	<b>Contents</b>	374	5,673	393	5,982	<b>2.4</b>	<b>2.7</b>
	<b>Vehicles</b>	1,063	1,221	1,063	1,221	<b>1.3</b>	<b>1.3</b>
	<b>Other</b>	70	9,758	70	9,758	<b>0.7</b>	<b>0.8</b>
	<b>Total</b>	<b>1,922</b>	<b>3,565</b>	<b>1,946</b>	<b>3,758</b>	<b>7.3</b>	<b>7.7</b>
22 Feb 2011 Lyttleton	<b>Lost Rent</b>	1,804	6,488	1,968	7,239	<b>14.2</b>	<b>12.5</b>
	<b>Contents</b>	1,291	11,329	1,405	11,063	<b>15.5</b>	<b>18.6</b>
	<b>Vehicles</b>	1,722	2,796	1,722	2,796	<b>4.8</b>	<b>4.8</b>
	<b>Other</b>	32	7,604	32	7,604	<b>0.2</b>	<b>0.2</b>
	<b>Total</b>	<b>4,849</b>	<b>6,473</b>	<b>5,127</b>	<b>6,797</b>	<b>34.8</b>	<b>36.1</b>
13 June 2011 Lyttleton	<b>Lost Rent</b>	124	5,159	129	5,395	<b>0.7</b>	<b>0.7</b>
	<b>Contents</b>	64	4,985	64	4,985	<b>0.3</b>	<b>0.3</b>
	<b>Vehicles</b>	128	1,576	128	1,576	<b>0.2</b>	<b>0.2</b>
	<b>Other</b>	10	4,436	10	4,436	<b>0.0</b>	<b>0.0</b>
	<b>Total</b>	<b>326</b>	<b>3,696</b>	<b>331</b>	<b>3,809</b>	<b>1.3</b>	<b>1.3</b>
Minor Events	<b>Lost Rent</b>	33	3,854	34	3,854	<b>0.1</b>	<b>0.1</b>
	<b>Contents</b>	51	0	51	2,285	<b>0.1</b>	<b>0.1</b>
	<b>Vehicles</b>	90	0	90	902	<b>0.1</b>	<b>0.1</b>
	<b>Other</b>	9	0	10	3,660	<b>0.0</b>	<b>0.0</b>
	<b>Total</b>	<b>183</b>	<b>695</b>	<b>185</b>	<b>1,975</b>	<b>0.4</b>	<b>0.4</b>
<b>Total</b>						<b>43.8</b>	<b>45.5</b>

### 6.3 Escalation

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

Table 6.5 – Summary of Escalation Assumptions

Claim Type	Effective Rate (% pa )	
	Jun-16	Jun-15
Lost Rent	█%	█
Contents	3.0%	3.0%
Vehicles	3.0%	3.0%
Temporary Accommodation	0.0%	0.0%

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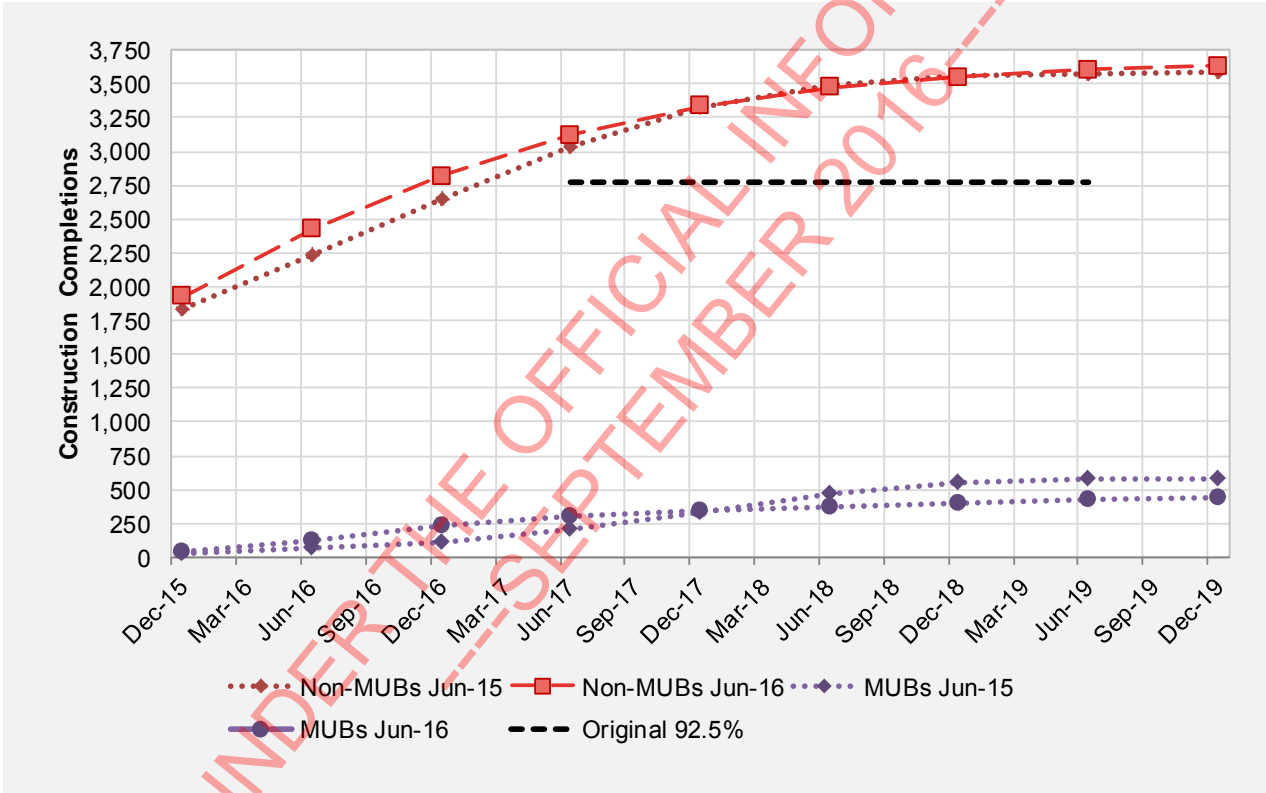
# 7 Construction Forecast & Payment Pattern

## 7.1 Construction Forecasts

Since the June 2013 valuation we have worked with SRES to develop a detailed construction throughput projection model ('Proteus') of Over Cap claims. Proteus is used to analyse trends in the timeframes taken to complete various activities that form part of the construction design, contracting and construction process. The model then projects how properties will progress through the various phases to completion of construction works over time. Proteus models the process from the claim being lodged to when construction is completed or cash settlement payment occurs. We have also separately modelled "Election Changers" in our projections.

The figure below shows the projected cumulative progression of completed constructions for all Arrow Managed Over Caps.

Figure 7.1 – Proteus Projected Cumulative Construction Completion

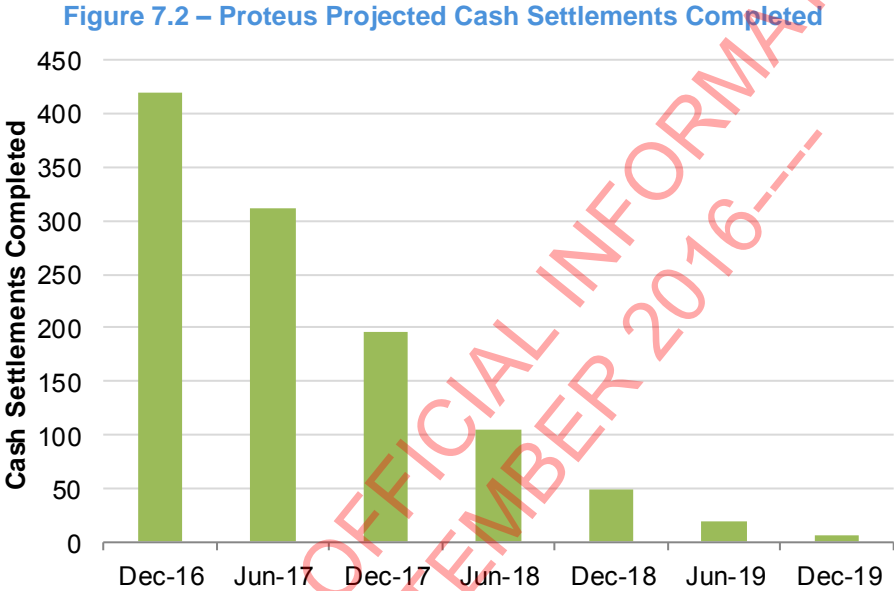


Valuation Date	Incremental Construction Completions										
	Dec-14	Jun-15	Dec-15	Jun-16	Dec-16	Jun-17	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19
<b>Non-MUB's</b>											
Jun-15				405	420	384	295	157	66	23	6
Jun-16				495	396	299	218	133	81	51	30
Actual	404	456	512	493							
<b>MUB's</b>											
Jun-15				35	54	89	127	134	90	18	1
Jun-16				83	105	78	39	27	32	23	10
Actual	2	4	33	83							

Note: Properties "flipping" considered a completion

SRES is currently aiming for 90% of the Over Cap projects to have either completed construction or cash settled by June 2017. Our updated Proteus projections aligns with this forecast. We have reflected changes in the staged process made by SRES over the last year for managing Over Cap Repair claims to perform engineering and design upfront, and also increasing number of customers electing for cash settlements in recent quarters. SRES expects that the rate of cash settlements will remain similar to recent levels in the next 6 months.

Overall construction completions are slightly faster than previously projected in June 2015. On current patterns, the Proteus projection shows that at June 2017, there will still be around 650 projects remaining to be completed, and around 370 cash settlements remaining to be completed. Figure 7.2 below shows the projected progression of completed cash settlements from Proteus.

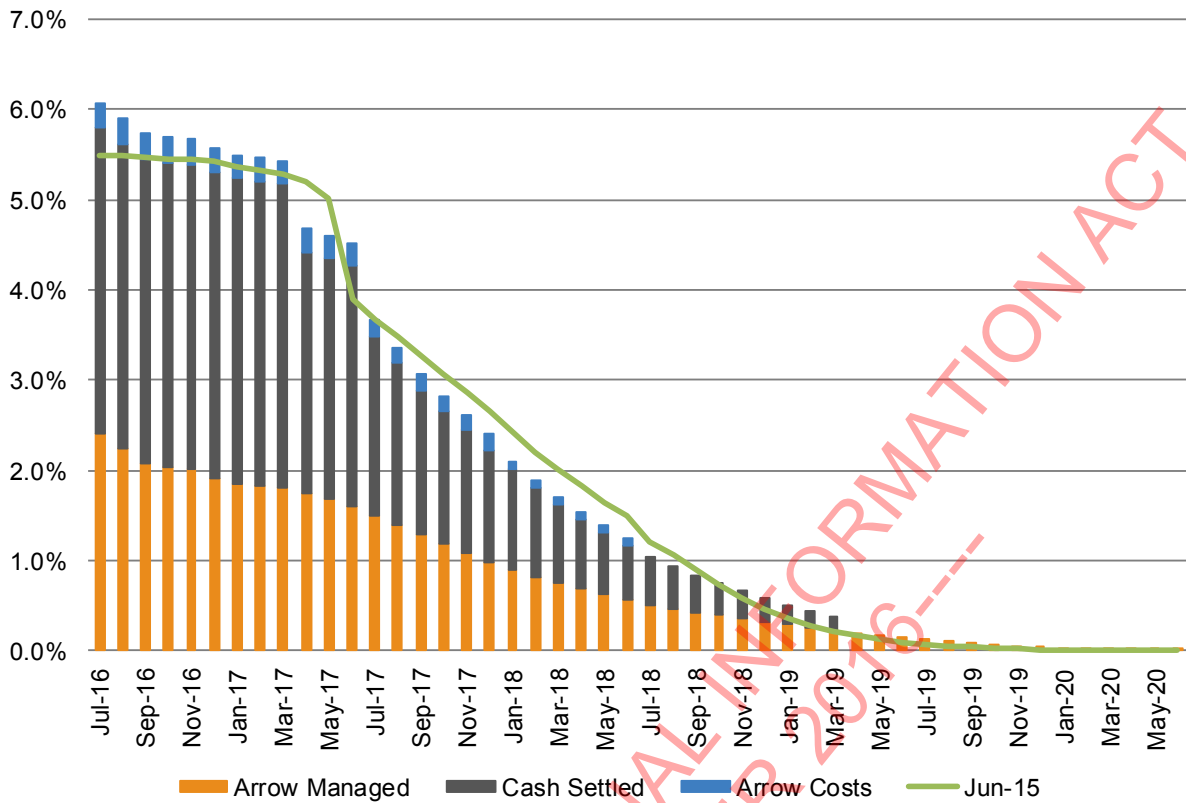


### 7.2 Linking the Payment Pattern to Construction Forecasts

The Proteus model directly provides a forecast of construction starts in each future month. The relevant payments relating to the construction are triggered by a series of milestones before and after construction work commences. The assumed payment pattern for Arrow Managed Over Caps corresponds directly to the Proteus construction projections. Payments are spread out over a number of months following the date the building contract is expected to be signed. Details of the determination of the payment pattern for Arrow Managed Over Caps can be found in Appendix F.

The payment pattern assumed for all Over Cap claims (including cash settlements) is shown in Figure 7.3, along with a comparison to the payment pattern assumed at June 2015.

Figure 7.3 – Projected Incremental Payments by Payment Type



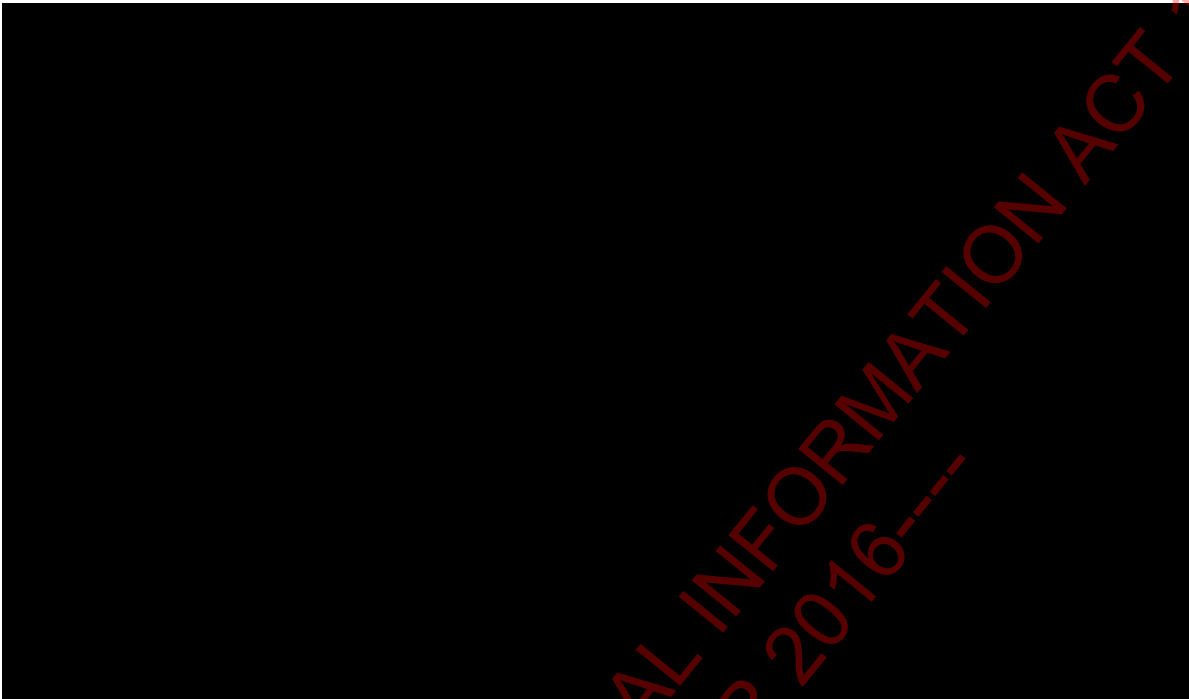
The combined result of our updated construction forecast in Proteus has meant that the shape of future payments is increased relative to the Jun-15 valuation in the shorter term due to a higher number of customers electing for cash settlements, but lengthened slightly due to an increase in new Over Cap claims from EQC (refer to 3.2.1).

In addition to the Over Cap claim payments:

- For **OOS only claims**, as there is very small amount of outstanding projects to be completed, the future work is projected to be uniformly spread over the period to the end of December 2016.
- For **Temporary Accommodation and Contents claims** the payment pattern is linked to the projected completion of Over Cap constructions (where relevant) and to the EQC settlement process for Under Cap claims.
- For **other claim types** we have assumed that there are no future payments.

Figure 7.4 shows the projected gross inflated undiscounted payments net of EQC contributions across all claim types (that is, including OOS and other minor covers), including payments made in the year to 30 June 2016.

Figure 7.4 – Past and Future Gross Inflated Undiscounted Payments (Net of EQC)  
Compared to Previous Valuation



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## 8 Other Factors

### 8.1 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 2015.

**Table 8.1 – Forecast Claims Handling and Project Management Expense**

	Jun-16 (\$m)	Jun-15 (\$m)
<b>Claims Handling Expenses</b>		
<b>Paid to Date</b>	█	█
<b>Future</b>	█	█
FY16	█	█
FY17	█	█
FY18	█	█
FY19	█	█
<b>Ultimate</b>	█	█
<b>Project Management Costs</b>		
<b>Paid to Date</b>	█	█
<b>Future</b>	█	█
FY16	█	█
FY17	█	█
FY18	█	█
FY19	█	█
<b>Ultimate</b>	█	█

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

The increase in the ultimate expected claims handling and project management expenses is a result of a number of factors:

- The extension of the construction timeline for Over Cap properties, in particular due to the increased ultimate number of Arrow managed claims.
- Increases in SRES' claims management expenses due to an extension of the operational timeline, and increased costs involved with resolving claims under dispute.

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.

### 8.2 Reinsurance Recoveries

Table 8.2 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 8.2 – Reinsurance Cashflows (Inflated and Undiscounted)**

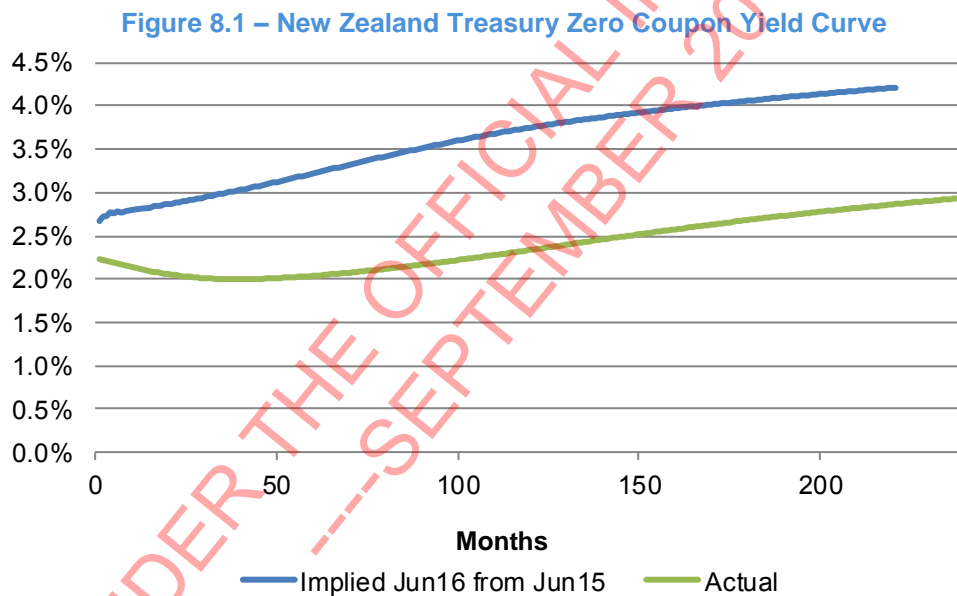
	Payment Year						FY17	FY18	FY19
	FY11	FY12	FY13	FY14	FY15	FY16			
Major Events (\$000's)	37.8	330.5	269.7	358.1	138.8	112.9	3.6	1.4	0.3
Minor Events (\$000's)	0.0	0.0	0.0	0.0	1.8	2.6	1.3	0.4	0.1
<b>Total (\$000's)</b>	<b>37.8</b>	<b>330.5</b>	<b>269.7</b>	<b>358.1</b>	<b>140.7</b>	<b>115.5</b>	<b>4.8</b>	<b>1.8</b>	<b>0.3</b>

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 2016. To the extent that the recoveries actually received by SRES to 30 June 2016 are different to those receivable against claim payments already made, then appropriate compensating entries need to appear in SRES' balance sheet.

### 8.3 Discount Rates

For the valuation at 30 June 2016 and as with previous valuations, we have adopted the 30 June 2016 risk free zero coupon discount rates as published by New Zealand Treasury. Figure 8.1 shows the movement in the yield curve from 30 June 2015 to 30 June 2016.



Compared to June 2015, there has been an overall downwards shift of the yield curve of approximately 100 basis points.

The single effective discount rate and discounted mean term at each of the dates are shown in Table 8.3.

**Table 8.3 – Single Effective Discount Rate and Discounted Mean Term (DMT)**

	Gross		Net	
	Disc Rate	DMT (years)	Disc Rate	DMT (years)
30 June 2015	2.9%	1.3	2.8%	1.4
30 June 2016	2.1%	0.9	1.9%	0.9

## 9 Summary of EQ Liabilities

### 9.1 Projected Ultimate Costs

Table 9.1 sets out a high level summary of the financial numbers, together with a comparison to the results adopted in our 30 June 2015 valuation.

Table 9.1 – Projected Ultimate Outcome

	30 Jun 15	30 Jun 16	Mov't from Jun 15
	\$m	\$m	\$m
<b>Ultimate Outflows</b>			
Over Cap	3,025	3,210	184
Out of Scope	308	338	30
Other	157	153	-5
Claims Cost (Excl PM Cost)	3,491	3,701	210
Project Management Costs	█	█	█
SRES Claims Handling	█	█	█
<b>Ultimate Inflows</b>			
EQC Contributions	971	996	25
Reinsurance Recoveries	1,246	1,259	13
	2,217	2,256	38
<b>Gross Outflow (net EQC, ex CHE)</b>	2,716	2,903	187
<b>Net Outflow (net of RI)</b>	█	█	█
<b>Cum. Paid Net of EQC (excl CHE)</b>	1,616	2,228	612
<b>Net Liability</b>			
Central Estimate	999	701	-298
Risk Margin	█	█	█
Provision Required	█	█	█

9(2)(b)(ii)

The valuation results indicate the likely ultimate cost has continued to increase over the last twelve months. The ultimate cost of claims (net of EQC, excluding CHE) has increased by \$187 million, before reinsurance, since June 2015. The increase is attributable to a number of factors –

- An increase in the number of Over Cap properties expected to emerge from the EQC settlement program (328 more properties projected to be Over Cap).
- An allowance made for payments made on Over Cap properties outside of the construction or cash settlement process. These payments were not allowed for at the June 2015 valuation..
- An increase in the number of properties switching from being scoped as a repair to being scoped as a rebuild.

9(2)(b)(ii)

Project management costs and claims handling expenses have increased by \$ million and million respectively. These relate mainly to refinements to forecasts, taking into account increasing volumes and complexities resulting in a longer construction tail and consequential increases in staff costs.

## 9.2 Recommended Provisions as at 30 June 2016

Table 9.2 summarises our estimates of SRES' EQ liabilities at 30 June 2016, 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 2016. 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.

9(2)(b)(ii)

Table 9.2 - Recommended EQ Provision at 30 June 2016

Provisions for Outstanding Claims as at 30 Jun 2016	Cat 93	Cat 106	Cat 112	Total		
	4-Sep-10 \$m	22-Feb-11 \$m	13-Jun-11 \$m	Major \$m	Minor \$m	Overall \$m
<b>Gross Incurred Cost in 30 Jun \$ before EQC</b>	1,144.0	2,590.8	102.6	3,837.4	44.0	3,881.3
Expected EQC Share	-338.3	-616.9	-34.8	-990.0	-5.0	-995.0
<b>Gross Incurred Cost in 30 Jun \$ after EQC</b>	805.7	1,973.9	67.8	2,847.4	39.0	2,886.4
less paid to 30 Jun 2016	-638.1	-1,493.5	-63.0	-2,194.6	-33.0	-2,227.7
<b>Gross Outstanding Claims</b>						
In 30 Jun 2016 Values	167.6	480.4	4.8	652.7	6.0	658.7
Allowance for Future Inflation	5.0	11.1	0.4	16.5	0.4	16.9
Inflated Values	172.6	491.5	5.1	669.2	6.4	675.6
Discount to Present Value	-3.2	-8.6	-0.1	-11.8	-0.1	-11.9
<b>OSC Discounted to 30 Jun 2016</b>	<b>169.4</b>	<b>482.9</b>	<b>5.0</b>	<b>657.4</b>	<b>6.3</b>	<b>663.7</b>
Claims Handling						
<b>Gross Central Estimate</b>						
Catastrophe R/I Recoveries	0.0	0.0	-5.0	-5.0	-1.7	-6.7
Aggregate R/I Recoveries	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net Central Estimate</b>						
Risk Margin						
<b>Recommended provision</b>						
<b>Inflated Gross Central Estimate (Incl paid to date, excl CHE)</b>	<b>811</b>	<b>1,985</b>	<b>68</b>	<b>2,864</b>	<b>39</b>	<b>2,903.3</b>
<b>Change on 31 Mar 2016 Valuation</b>	<b>31</b>	<b>-3</b>	<b>2</b>	<b>30</b>	<b>3</b>	<b>33</b>
<b>Change on 30 Jun 2015 Valuation</b>	<b>9</b>	<b>158</b>	<b>11</b>	<b>178</b>	<b>9</b>	<b>187</b>

We have made a number of changes to the valuation basis since the 30 June 2015 valuation. The result of the changes is an increase of around \$187 million in our estimate of the inflated gross incurred cost when compared to the estimate at 30 June 2015. \$154 million of the full year movement had been reflected in the accounts by the 31 March 2016 quarterly valuation update.

### 9.3 Reconciliation with Previous Estimate at 30 June 2015

The table below compares the estimate at 30 June 2016 with our previous estimate at 30 June 2015.

**Table 9.3 – Movement of Provision Net of EQC Contribution, Net of RI**

	Net Provision (\$m)
Position at 30 June 2015	1,108.0
<b>Actual Payments<sup>1</sup></b>	<b>(536.1)</b>
Actual Rollforward Provision at June16 using June15 Assumptions	571.8
Changes due to:	
FY16 Experience	█
Future Assumptions:	
Adjustment for Post-Completion Payments	█
Additional projected Overcaps from EQC Assessments	█
Rebuild Size	█
Repair Size	█
Cash Settlements	█
Other Classes (Including Out of Scope Only Properties)	█
Payment Pattern	█
Escalation Rate	█
Arrow Costs	█
CHE and Legal Costs	█
Discount Rate	█
Increased Risk Margin	█
<b>Total</b>	<b>█</b>
<b>Recommended Position at 30 June 2016</b>	<b>█</b>

<sup>1</sup>Includes unw ind of discount and risk margins for provisions

The table shows that:

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

- \$█ million of the increase is due to experience over the year. The majority of this relates to adverse development on repair average sizes as a change in repair methodology by SRES has meant that more of the costs are incorporated into the scope of works upfront meaning less changes to the scope are required in the future. We are not projecting the change in methodology to have a material change in the ultimate size of these repairs. Cash settlement outcomes also account for a portion of the increases – cash settlement sizes now include an allowance for contingency and project management costs. 9(2)(i) and 9(2)(j)
- An allowance made for payments made on Over Cap properties outside of the construction or cash settlement process has resulted in a █ million increase. Examples of this include payments for removalists, ex-gratia temporary accommodation payments and payments made directly by SRES for contract works insurance which were not allowed for in the previous valuation basis.
- The increase in the ultimate number of OC properties has led to an increase in the net provision of \$█ million. The increase is largely a result of the additional OC properties coming through from the EQC

settlement process - which is now expected to continue for significantly longer than expected in our June 2015 valuation basis.

- Our allowance for future repair development is lower in the June 2016 valuation basis as the change in repair methodology has meant that significant increases have already been made to repair average sizes (coming through in the experience line) and lower increases are assumed for the future.
- Other Classes have increased by \$30 million which is attributable to OOS only claims, lost rent claims, temporary accommodation claims and contents claims.
- Lower escalation assumed for the remainder of the construction programme has led to \$3 million decrease.
- The combined effects of Arrow Costs, CHE and legal costs have caused a \$9(2)(i) and 9(2)(j) million increase due to the higher number of ultimate OC claims and the increased complexity of properties in the tail.
- The decrease in the discount rate has led to an increase of around \$5 million.

## 9.4 Assessing Uncertainty

### 9.4.1 Sensitivity Testing

Our model firstly segments SRES' overall liability into a number of reasonably homogeneous "buckets" of claims (rebuilt, repairs, cash settlements etc.), and then, for each of these segments, explicitly allows for the likely cost development experience across each of the key phases that each of these claim segments will pass through. In this way the valuation model is aligned to SRES' operations and, as such, it is much easier to make the connection between the signals emerging from our analysis and what is happening operationally. This also acts to reduce the uncertainty which might otherwise be attached to an actuarial model based on a set of more "macro" assumptions.

Table 9.4 sets out a summary of the sensitivity tests we have applied together with some commentary, broken down into three categories:

1. The exposure to further claims coming from EQC's settlement processes.
3. The exposure to adverse cost outcomes by segment.
4. The exposure to the underlying environment (essentially, throughput and escalation) which is assumed to apply across all segments.

For these tests, note that, while SRES' central estimate of its net liability at 30 June 2016 is \$701 million, the "fixed" value of EQC contributions means that exposure to adverse development relates predominantly to SRES' liability gross of EQC recoveries, for which, at 30 June 2016, the inflated undiscounted value is \$929 million. Hence our tests relate to the gross liability, although in most cases, the incremental increase in the gross value will directly flow through to the net value. For the purposes of the sensitivity testing we have adopted as "adverse" a movement where the ultimate cost is increased by at least \$20 million.

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

Table 9.4 – Summary of Sensitivity Tests

Valuation Element	Gross of EQC Inflated Outstanding \$m	Adverse Movement Needed for \$20 m Increase	Comments	Assessed Risk of >\$20m Change
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*[Redacted content]*

Key points to emerge from these results are described in the following paragraphs.

The exposure to an adverse outcome from a higher than expected number of new claims is considered to be the highest risk, mostly due to the lack of visibility of EQC’s settlement process.

In respect of exposure to adverse settlement outcomes, SRES’ liability is spread across a number of segments. In our assessment, the chances of adverse outcomes (i.e. +\$20m) vary considerably across the different segments, with repairs, MUB’s and cash settlements remaining the “most risky” segments, noting



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that our assessed position for cash settlements effectively assumes that they will follow the experience exhibited by rebuilds, repairs and MUBs.

In respect of the overarching “environmental” exposures, while there is the possibility that the “tail” of claims could extend beyond that allowed in the valuation, in the absence of the emergence of a “game changing” element, we do not consider that throughput delays or building cost escalation represent areas which have a high likelihood of producing an adverse impact on SRES’ liability.

#### 9.4.2 Key Sources of Uncertainty in our Estimates

In March 2016, we conducted a formal assessment of the various layers of uncertainty and risk attaching to our central estimate. In light of our assessment, we are of the opinion that, the overall level of uncertainty attaching to this valuation has increased as a greater proportion of outstanding claims liability relates to more complex claims. Many of the claims yet to be finalised are under dispute or have complex construction issues and there is a higher degree of uncertainty around the ultimate cost of these properties.

Some of the key points to emerge from our assessment in support of this conclusion are as follows:

- the volume of claims SRES is handling is still sufficiently large enough that natural variations in the outcomes for individual claims is likely to be a relatively minor contributor to a change in the run-off experience compared to that assumed. There is potential for this variation to have a larger impact in the tail of the run-off as the number of claims reduces.
- experience “drifting” away from recent levels assumed in the valuation basis continues to be a source of uncertainty and is likely to lead to increased uncertainty in the tail of the construction program when dealing a higher proportion of complex claims. The key areas of the valuation basis exposed to this risk are:
  - ▶ Multi Unit Buildings (MUB’s), where there is only a limited history of experience to base future development assumptions on, and
  - ▶ the number of new claims being reported as Over Cap, as we only have limited visibility of the progress of EQC’s settlement program
- unforeseen and material changes in the underlying experience, often due to changes in the external environment or internal processes have been the biggest risk over the recent history and remain the biggest uncertainty going forward.
- the actuarial modelling process is at best an approximation to the underlying claims process. As such, the liability valuation process cannot aim to fully capture and reflect each and every element of potential variation. This potential “mismatching” between the valuation model and the underlying processes adds an additional layer of variability in the run-off process.

The unforeseen “step shift” events have been the biggest contributor to increases in the valuation estimate with 5 events having occurred over the past two years (3 minor and 2 major). The existence of 5 such events in this period of time acts to emphasise the persistent occurrence of “unexpected events” producing adverse development in SRES’ run-off experience.

In our view, it would be optimistic to assume that all such “unexpected” events have already emerged. It is our assessment, as well as that of SRES management, that there remains exposure to legal challenges and the like which could readily form sources of future adverse development. For major “step shift” changes,

because it is not possible to assess the “true” exposure, to understand the influence that exposure to such changes may have we have examined three scenarios, reflecting low, median and high exposures respectively.

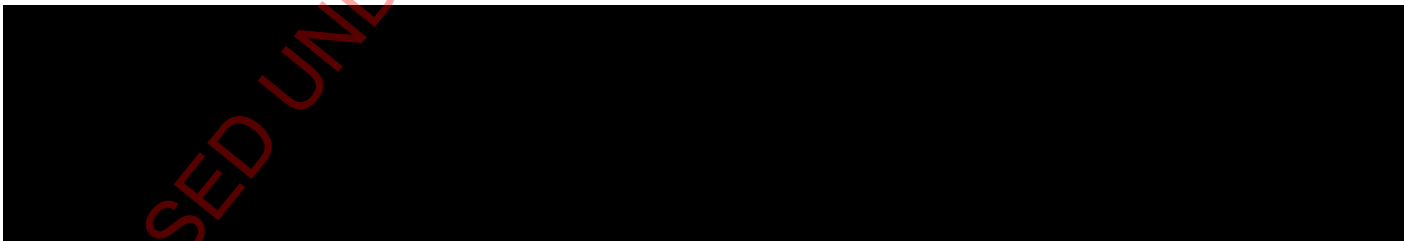
The distribution of results produced by our simulation model provides insight into the variability inherent in SRES’ run-off. Figure 9.1 indicates how the risk margin required by SRES varies with the targeted probability of sufficiency for the major “step shift” scenarios examined. The points inside the dotted box represent the 75<sup>th</sup> percentile.

Figure 9.1 – Risk Margin vs Probability of Sufficiency

9(2)(i)



#### 9.4.3 Adopted Risk Margin at 30 June 2016



#### 9.4.4 ‘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 \$18 million.

- 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 \$6 million Over Cap liability corresponding to Protocol 1 properties, with more being notified regularly. It is expected the final liability owed to EQC in respect of Protocol 1's could be of the order of \$10-12 million.

Further, there remains the risk that the rate of protocol 1 notifications increases as EQC begins to revisit a number of their repairs. Increases of scope on revisits, could lead to more properties turning Over Cap.

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).

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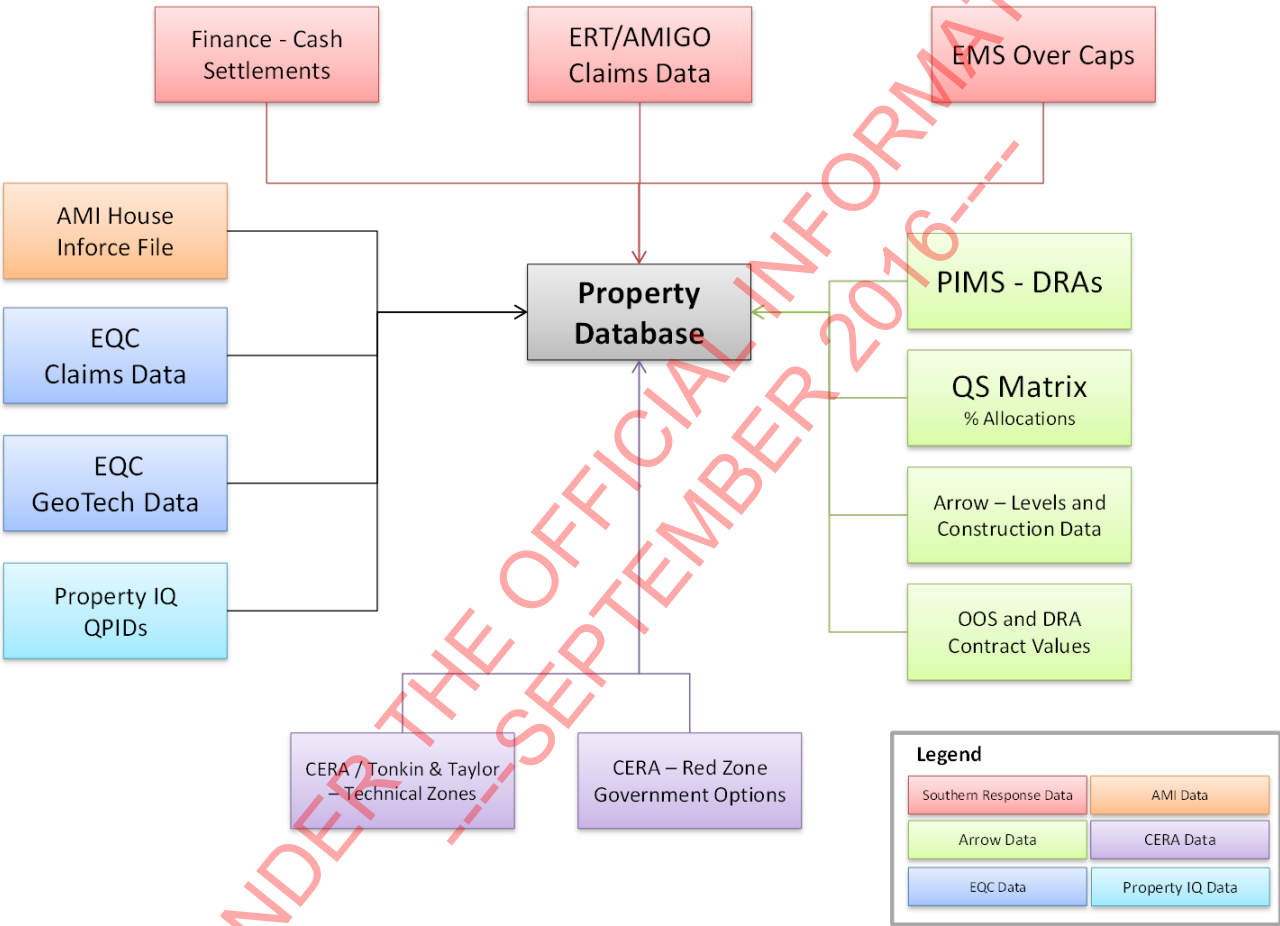
# Part III Appendices

## 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.

Figure A.2 – Property Database Data Sources



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## A.2 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 Report**

	Property Database 2016-06-07	Canterbury Earthquake Report 2016-06-13	Total Difference (#'s / \$'s)	Difference accounting for rejected (%)	Difference accounting for rejected (#'s / \$'s)	(%)
<b>Claims</b>	42,351	44,225	1,874	4.42%	3	0.01%
<b>Case Estimates</b>	2,546,675	2,558,933	12,258	0.48%	216	0.01%
<b>Payments</b>	2,334,464	2,350,625	16,160	0.69%	7,611	0.33%

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

Property Database 2016-06-07												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	7,270	40	349	10	8,457	30	62	1806	18	22	381	18,445
Closed	9,072	82	688	44	11,789	38	64	1,218	55	38	818	23,906
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>16,342</b>	<b>122</b>	<b>1,037</b>	<b>54</b>	<b>20,246</b>	<b>68</b>	<b>126</b>	<b>3,024</b>	<b>73</b>	<b>60</b>	<b>1,199</b>	<b>42,351</b>
Canterbury Earthquake Report 2016-06-13												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	7,307	41	352	11	8,673	30	62	1,812	18	22	382	18,710
Closed	9,402	82	693	44	13,028	38	65	1,247	55	38	823	25,515
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>16,709</b>	<b>123</b>	<b>1,045</b>	<b>55</b>	<b>21,701</b>	<b>68</b>	<b>127</b>	<b>3,059</b>	<b>73</b>	<b>60</b>	<b>1,205</b>	<b>44,225</b>
Difference												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	37	1	3	1	216	0	0	6	0	0	1	265
Closed	330	0	5	0	1,239	0	1	29	0	0	5	1,609
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>367</b>	<b>1</b>	<b>8</b>	<b>1</b>	<b>1,455</b>	<b>0</b>	<b>1</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1,874</b>
Rejected due to Duplicate Claims or Withdrawn/Declined												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	39	1	3	1	209	0	0	7	0	0	1	261
Closed	328	0	5	0	1,242	0	1	29	0	0	5	1,610
Withdrawn	927	4	38	6	652	5	9	170	7	3	80	1,901
Entered in Error	337	4	22	2	453	5	5	228	2	4	48	1,110
Declined	10	0	1	0	5	0	0	2	0	0	5	23
<b>Total</b>	<b>1,641</b>	<b>9</b>	<b>69</b>	<b>9</b>	<b>2,561</b>	<b>10</b>	<b>15</b>	<b>436</b>	<b>9</b>	<b>7</b>	<b>139</b>	<b>4,905</b>
Difference Accounting for Rejected												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	-2	0	0	0	7	0	0	-1	0	0	0	4
Closed	2	0	0	0	-3	0	0	0	0	0	0	-1
Withdrawn												0
Entered in Error												0
Declined												0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>-1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

Table A.3 - Reconciliation to Canterbury Earthquake Report – Claim Estimates Details

## Property Database 2016-06-07 (\$000s)

Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	470,885	235	6,642	51	1,574,462	611	1,028	67,305	840	542	8,024	2,130,625
Closed	187,045	1,035	8,721	456	200,298	261	591	9,232	487	235	7,688	416,050
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>657,930</b>	<b>1,270</b>	<b>15,363</b>	<b>507</b>	<b>1,774,760</b>	<b>872</b>	<b>1,619</b>	<b>76,537</b>	<b>1,327</b>	<b>777</b>	<b>15,712</b>	<b>2,546,675</b>

## Canterbury Earthquake Report 2016-06-13 (\$000s)

Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	471,293	236	6,682	51	1,580,721	611	1,028	67,516	840	542	8,042	2,137,562
Closed	188,605	1,035	8,735	456	203,998	261	599	9,269	487	235	7,691	421,371
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>659,898</b>	<b>1,271</b>	<b>15,418</b>	<b>507</b>	<b>1,784,718</b>	<b>872</b>	<b>1,628</b>	<b>76,785</b>	<b>1,327</b>	<b>777</b>	<b>15,732</b>	<b>2,558,933</b>

## Difference

Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	408	1	40	0	6,259	0	0	211	0	0	17	6,936
Closed	1,560	0	15	0	3,700	0	8	37	0	0	3	5,322
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>1,968</b>	<b>1</b>	<b>54</b>	<b>0</b>	<b>9,959</b>	<b>0</b>	<b>8</b>	<b>248</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>12,258</b>

## Rejected

Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	438	1	40	0	6,099	0	0	214	0	0	35	6,827
Closed	1,551	0	15	0	3,615	0	0	34	0	0	1	5,216
Withdrawn	108	2	6	13	127	0	0	36	2	0	3	296
Entered in Error	-2	0	0	0	0	0	0	0	0	0	0	-2
Declined	16	0	1	0	4	0	0	4	0	0	5	30
<b>Total</b>	<b>2,110</b>	<b>3</b>	<b>61</b>	<b>13</b>	<b>9,845</b>	<b>0</b>	<b>0</b>	<b>288</b>	<b>2</b>	<b>0</b>	<b>44</b>	<b>12,366</b>

## Difference Accounting for Rejected

Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	-30	0	0	0	159	0	0	-3	0	0	-17	110
Closed	9	0	0	0	85	0	8	3	0	0	2	106
Withdrawn												0
Entered in Error												0
Declined												0
<b>Total</b>	<b>-21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>244</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-16</b>	<b>216</b>

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

Property Database 2016-06-07 (\$000s)												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	639,373	789	6,265	60	1,235,091	88	46	25,815	330	113	2,274	1,910,244
Closed	194,463	1,150	8,817	455	200,633	261	592	9,368	489	234	7,757	424,220
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>833,836</b>	<b>1,939</b>	<b>15,082</b>	<b>515</b>	<b>1,435,724</b>	<b>350</b>	<b>638</b>	<b>35,184</b>	<b>818</b>	<b>347</b>	<b>10,031</b>	<b>2,334,464</b>

Canterbury Earthquake Report 2016-06-13 (\$000s)												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	640,664	789	6,267	60	1,244,448	85	46	25,745	330	114	2,277	1,920,824
Closed	196,249	1,150	8,832	455	204,370	261	600	9,401	489	234	7,760	429,801
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>836,912</b>	<b>1,939</b>	<b>15,099</b>	<b>515</b>	<b>1,448,818</b>	<b>347</b>	<b>646</b>	<b>35,146</b>	<b>819</b>	<b>348</b>	<b>10,037</b>	<b>2,350,625</b>

Difference												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	1,290	0	3	0	9,357	-3	0	-70	1	1	3	10,580
Closed	1,786	0	15	0	3,737	0	8	32	0	0	3	5,580
Withdrawn												
Entered in Error												
Declined												
<b>Total</b>	<b>3,076</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>13,093</b>	<b>-3</b>	<b>8</b>	<b>-38</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>16,160</b>

Rejected												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	150	0	6	0	2,940	0	0	13	0	0	3	3,112
Closed	1,713	0	15	0	3,675	0	0	34	0	0	1	5,438
Withdrawn	109	2	6	13	141	0	0	34	2	0	3	309
Entered in Error	58	16	0	0	72	0	0	0	0	0	-31	115
Declined	17	0	1	0	2	0	0	4	0	0	5	30
<b>Total</b>	<b>2,047</b>	<b>18</b>	<b>27</b>	<b>13</b>	<b>6,831</b>	<b>0</b>	<b>0</b>	<b>85</b>	<b>2</b>	<b>0</b>	<b>-19</b>	<b>9,004</b>

Difference Accounting for Rejected												
Status	93	97	99	103	106	107	111	112	114	117	122	Total
Open	1,141	0	-3	0	6,416	-3	0	-83	1	1	0	7,469
Closed	73	0	0	0	62	0	8	-2	0	0	2	142
Withdrawn												0
Entered in Error												0
Declined												0
<b>Total</b>	<b>1,213</b>	<b>0</b>	<b>-3</b>	<b>0</b>	<b>6,478</b>	<b>-3</b>	<b>8</b>	<b>-85</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>7,611</b>

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

	Property Database	PCG Report
Data Date	7-Jun-16	May16
Number of properties	████████	████████
Average DRA Size	████████	████████

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

## B Payments Data

Table B.1 – Gross Payments Summary By Event as at 30 Jun 2016

Summary of Payments As at 30 Jun	Cat 93	Cat 97	Cat 99	Cat 103	Cat 106	Cat 107	Cat 111	Cat 112	Cat 114	Cat 117	Cat 122	Total \$000s
	4-Sep-10 \$000s	19-Oct-10 \$000s	26-Dec-10 \$000s	20-Jan-11 \$000s	22-Feb-11 \$000s	16-Apr-11 \$000s	6-Jun-11 \$000s	13-Jun-11 \$000s	21-Jun-11 \$000s	9-Oct-11 \$000s	23-Dec-11 \$000s	
<b>Gross Paid to Date (\$m)</b>												
Rebuild	146,668	641	1,052	1	400,547	37	88	7,917	0	0	1,057	<b>558,008</b>
Repairs	46,554	45	688	0	193,563	1	98	5,156	0	41	275	<b>246,422</b>
Cash Settled	309,356	65	2,751	1	726,627	106	157	29,199	160	8	1,315	<b>1,069,746</b>
Overcap Multi Units	12,574	4	283	6	59,305	0	38	2,245	13	0	43	<b>74,511</b>
Unallocated Arrow Costs (\$m)	6,207	27	45	0	16,950	2	4	335	0	0	45	<b>23,614</b>
DoA EQC Recoveries (\$m)	-1,329	0	-2	0	-1,050	0	0	-249	0	0	0	<b>-2,631</b>
<b>Net Rebuilds Paid to Date</b>	165,673	636	1,322	1	393,590	45	156	9,251	0	0	1,255	<b>571,928</b>
<b>Net Repairs Paid to Date</b>	56,588	94	842	5	198,000	19	99	5,906	0	41	405	<b>261,999</b>
<b>Adjusted Net Cash Settled Paid to Date</b>	489,317	218	4,444	1	1,084,688	162	231	51,237	241	12	2,228	<b>1,632,779</b>
<b>Net Multi Unit Builds Paid to Date</b>	13,827	6	430	6	60,450	0	38	2,610	13	0	50	<b>77,430</b>
<b>Out of Scope (Net of Cancelled Cheques)</b>	139,483	1,204	9,909	528	165,899	308	640	9,951	626	318	8,757	<b>337,623</b>
<b>Out of Scope (Cancelled Cheques)</b>	-1,271	-12	-118	-0	-1,920	-10	-8	-116	-1	-0	-83	<b>-3,540</b>
<b>Lost Rent</b>	2,735	0	59	0	11,766	3	9	657	3	0	58	<b>15,290</b>
<b>Temp Accom</b>	20,543	43	247	12	71,935	19	81	2,678	76	35	754	<b>96,423</b>
<b>Contents</b>	2,335	20	13	3	15,047	10	1	349	0	18	99	<b>17,895</b>
<b>Motor</b>	1,298	1	12	0	4,815	1	3	202	7	0	129	<b>6,469</b>
<b>Other</b>	685	1	24	0	262	0	0	44	2	0	12	<b>1,030</b>
<b>Total Gross Paid to Date (\$m)</b>	<b>892,482</b>	<b>2,222</b>	<b>17,302</b>	<b>557</b>	<b>2,006,453</b>	<b>566</b>	<b>1,257</b>	<b>82,885</b>	<b>968</b>	<b>425</b>	<b>13,748</b>	<b>3,018,865</b>
Less Adjustments to Cash Settlements for EQC												
Recoveries not recorded in AMIGO	-152,568	-68	-1,386	-0	-338,207	-50	-72	-15,975	-75	-4	-695	-509,101
Plus Uninsured Works Adjustment	6,745	28	51	0	18,796	2	5	388	0	0	48	26,063
Less Unallocated Costs	-4,878	-27	-42	-0	-15,900	-2	-4	-86	0	-0	-45	-20,983
Less Farm, Boat and Motor	-1,983	-2	-36	-0	-5,077	-1	-3	-246	-10	-0	-148	-7,507
Plus Cancelled Cheques	1,271	12	118	0	1,920	10	8	116	1	0	83	3,540
<b>Total Before Adjustments</b>	<b>741,069</b>	<b>2,165</b>	<b>16,007</b>	<b>556</b>	<b>1,667,984</b>	<b>525</b>	<b>1,190</b>	<b>67,083</b>	<b>885</b>	<b>421</b>	<b>12,991</b>	<b>2,510,877</b>
Event Split Adjustments in AMIGO <sup>1</sup>	-128,613	178	548	13	97,218	147	451	27,994	-15	20	2,059	0
<b>Total Before Split Adjustment</b>	<b>869,683</b>	<b>1,988</b>	<b>15,459</b>	<b>543</b>	<b>1,570,766</b>	<b>378</b>	<b>739</b>	<b>39,088</b>	<b>899</b>	<b>401</b>	<b>10,933</b>	<b>2,510,877</b>
Payments between 2016-06-30 and 2016-07-04	4,529	10	81	3	8,181	2	4	204	5	2	57	13,077
<b>Updated Payments</b>	<b>874,212</b>	<b>1,998</b>	<b>15,539</b>	<b>546</b>	<b>1,578,947</b>	<b>380</b>	<b>743</b>	<b>39,292</b>	<b>904</b>	<b>403</b>	<b>10,990</b>	<b>2,523,954</b>
<b>Total From Canterbury Earthquake Report 2016-07-04</b>	<b>872,581</b>	<b>2,005</b>	<b>15,458</b>	<b>549</b>	<b>1,580,680</b>	<b>378</b>	<b>739</b>	<b>39,310</b>	<b>901</b>	<b>401</b>	<b>10,954</b>	<b>2,523,957</b>
<b>Difference</b>	<b>1,631</b>	<b>-7</b>	<b>81</b>	<b>-3</b>	<b>-1,733</b>	<b>2</b>	<b>4</b>	<b>-18</b>	<b>3</b>	<b>2</b>	<b>36</b>	<b>-2</b>

<sup>1</sup> 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 2016

Summary of Recoveries As at 30 Jun	Cat 93 4-Sep-10 \$000s	Cat 97 19-Oct-10 \$000s	Cat 99 26-Dec-10 \$000s	Cat 103 20-Jan-11 \$000s	Cat 106 22-Feb-11 \$000s	Cat 107 16-Apr-11 \$000s	Cat 111 6-Jun-11 \$000s	Cat 112 13-Jun-11 \$000s	Cat 114 21-Jun-11 \$000s	Cat 117 9-Oct-11 \$000s	Cat 122 23-Dec-11 \$000s	Total \$000s
<b>Recoveries to Date (\$m)</b>												
Rebuild (EQC Recovs)	-53,781	-116	-325	0	-87,456	2	-26	-1,429	0	0	-102	-143,234
Repair (EQC Recovs)	-25,087	-106	-314	0	-54,960	0	0	-837	0	0	-100	-81,402
Adjusted Cash Settled (EQC Recovs)	-170,482	-100	-1,701	-0	-348,872	-50	-77	-17,010	-75	-4	-766	-539,139
MUBs (EQC Recovs)	-5,051	0	-101	0	-22,280	0	0	-754	0	0	0	-28,187
Lost Rent	204	0	-4	0	287	0	-0	41	0	0	0	528
Temp Accom	-61	0	-3	0	902	0	0	116	0	0	-23	932
Contents	-30	0	0	0	-111	0	0	-7	0	0	-1	-148
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
<b>Total Recoveries to Date</b>	<b>-254,337</b>	<b>-322</b>	<b>-2,448</b>	<b>-0</b>	<b>-512,976</b>	<b>-49</b>	<b>-103</b>	<b>-19,893</b>	<b>-75</b>	<b>-4</b>	<b>-996</b>	<b>-791,204</b>
Plus Adjustments to Cash Settlements for EQC Recoveries not recorded in AMIGO	152,568	68	1,386	0	338,207	50	72	15,975	75	4	695	509,101
Less Uninsured Works Adjustment	-8,959	-27	-21	0	-16,813	-0	1	-219	-0	-0	-25	-26,063
Plus Farm, Boat and Motor	48	0	0	0	487	0	0	13	0	0	6	554
Less Cancelled Cheques	-1,271	-12	-118	-0	-1,920	-10	-8	-116	-1	-0	-83	-3,540
<b>Total Before Cash Settlement Adjustment</b>	<b>-111,951</b>	<b>-293</b>	<b>-1,201</b>	<b>-0</b>	<b>-193,015</b>	<b>-8</b>	<b>-38</b>	<b>-4,240</b>	<b>-1</b>	<b>-0</b>	<b>-403</b>	<b>-311,151</b>
Payments between 2016-06-30 and 2016-07-	-218	-1	-2	-0	-376	-0	-0	-8	-0	-0	-1	-606
<b>Updated Payments</b>	<b>-112,169</b>	<b>-293</b>	<b>-1,204</b>	<b>-0</b>	<b>-193,391</b>	<b>-8</b>	<b>-38</b>	<b>-4,248</b>	<b>-1</b>	<b>-0</b>	<b>-404</b>	<b>-311,758</b>
<b>Total From Canterbury Earthquake Report 2015-07-04</b>	<b>-109,740</b>	<b>-294</b>	<b>-1,232</b>	<b>-0</b>	<b>-195,601</b>	<b>-10</b>	<b>-43</b>	<b>-4,410</b>	<b>-1</b>	<b>-0</b>	<b>-427</b>	<b>-311,759</b>
<b>Difference</b>	<b>-2,429</b>	<b>1</b>	<b>28</b>	<b>0</b>	<b>2,210</b>	<b>2</b>	<b>5</b>	<b>161</b>	<b>-0</b>	<b>0</b>	<b>23</b>	<b>1</b>

# C Over Caps

## C.1 Claim Numbers

Table C.1 - Red Zone Transitions Summary

	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
Over Cap	1,953	1,998	2,016	2,017	2,025	2,030	2,029	2,033	1,879	1,983	2,016	2,017	2,023	2,025	2,025	2,021	2,030	2,034	2,037	2,033	2,035	2,039
OOS Only	314	276	259	262	258	255	257	255	383	289	266	262	264	262	264	269	271	267	264	268	265	261
EQC Only	2	2	4	3	2	1	1	1	29	22	13	18	13	13	11	10	3	3	2	2	1	1
<b>Total</b>	<b>2,269</b>	<b>2,276</b>	<b>2,279</b>	<b>2,282</b>	<b>2,285</b>	<b>2,286</b>	<b>2,287</b>	<b>2,289</b>	<b>2,291</b>	<b>2,294</b>	<b>2,295</b>	<b>2,297</b>	<b>2,300</b>	<b>2,300</b>	<b>2,300</b>	<b>2,300</b>	<b>2,304</b>	<b>2,304</b>	<b>2,303</b>	<b>2,303</b>	<b>2,301</b>	<b>2,301</b>
	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
Over Cap	1.023	1.009	1.000	1.004	1.002	1.000	1.002	0.924	1.055	1.017	1.000	1.003	1.001	1.000	0.998	1.004	1.002	1.001	0.998	1.001	1.002	
OOS Only	0.88	0.94	1.01	0.98	0.99	1.01	0.99	1.50	0.75	0.92	0.98	1.01	0.99	1.01	1.02	1.01	0.99	1.02	0.99	1.02	0.99	
EQC Only	1.00	2.00	0.75	0.67	0.50	1.00	1.00	29.00	0.76	0.59	1.38	0.72	1.00	0.85	0.91	0.30	1.00	0.67	1.00	0.50	1.00	
<b>Increment in Claim Numbers</b>	<b>Over Cap</b>	45	18	1	8	5	-1	4	-154	104	33	1	6	2	0	-4	9	4	3	-4	2	4
	OOS Only	-38	-17	3	-4	-3	2	-2	128	-94	-23	-4	2	-2	2	5	2	-4	-3	4	-3	-4
	EQC Only	0	2	-1	-1	-1	0	0	28	-7	-9	5	-5	0	-2	-1	-7	0	-1	0	-1	0
		7	3	3	3	1	1	2	2	3	1	2	3	0	0	0	4	0	-1	0	-2	0
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
Over Cap	2,035	2,037	2,039	2,039	2,035	2,034	2,029	2,030	2,030	2,031	2,033	2,033	2,031	2,031	2,035	2,035	2,035	2,036	2,036	2,036	2,038	2,040
OOS Only	265	264	264	267	271	272	277	276	276	275	273	276	275	274	265	268	268	295	295	294	292	290
EQC Only	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>Total</b>	<b>2,301</b>	<b>2,302</b>	<b>2,304</b>	<b>2,307</b>	<b>2,307</b>	<b>2,307</b>	<b>2,307</b>	<b>2,307</b>	<b>2,307</b>	<b>2,307</b>	<b>2,307</b>	<b>2,310</b>	<b>2,307</b>	<b>2,306</b>	<b>2,301</b>	<b>2,304</b>	<b>2,304</b>	<b>2,332</b>	<b>2,332</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
Over Cap	0.998	1.001	1.001	1.000	0.998	1.000	0.998	1.000	1.000	1.000	1.001	1.000	0.999	1.000	1.002	1.000	1.000	1.000	1.000	1.000	1.001	1.001
OOS Only	1.02	1.00	1.00	1.01	1.01	1.00	1.02	1.00	1.00	1.00	0.99	1.01	1.00	1.00	0.97	1.01	1.00	1.10	1.00	1.00	0.99	0.99
EQC Only	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Increment in Claim Numbers</b>	<b>Over Cap</b>	-4	2	2	0	-4	-1	-5	1	0	1	2	0	-2	0	4	0	0	1	0	0	2
	OOS Only	4	-1	0	3	4	1	5	-1	0	-1	-2	3	-1	-1	-9	3	0	27	0	-1	-2
	EQC Only	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	1	2	3	0	0	0	0	0	0	3	-3	-1	-5	3	0	28	0	-1	0	0
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
Over Cap	2,040	2,040	2,053	2,053	2,053	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	
OOS Only	290	290	278	278	276	279	278	278	278	278	278	278	278	278	278	278	278	278	278	278	278	
EQC Only	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
<b>Total</b>	<b>2,331</b>	<b>2,331</b>	<b>2,332</b>	<b>2,332</b>	<b>2,332</b>	<b>2,332</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	<b>2,331</b>	
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
Over Cap	1.000	1.000	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
OOS Only	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
EQC Only	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
<b>Increment in Claim Numbers</b>	<b>Over Cap</b>	0	0	13	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	OOS Only	0	0	-12	0	0	1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	
	EQC Only	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	





Table C.2 - TC3 Transitions Summary

	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	
Over Cap	2,016	2,142	2,246	2,276	2,314	2,348	2,363	2,382	2,218	2,364	2,395	2,385	2,407	2,424	2,447	2,451	2,460	2,480	2,498	2,512	2,519	2,520	
OOS Only	3,133	3,108	3,073	3,117	3,141	3,151	3,163	3,190	3,363	3,229	3,222	3,247	3,244	3,241	3,231	3,246	3,251	3,246	3,241	3,254	3,280	3,291	
EQC Only	11	11	14	13	13	14	13	12	25	20	13	12	9	9	10	10	9	8	8	9	7	9	
Total	5,160	5,261	5,333	5,406	5,468	5,513	5,539	5,584	5,606	5,613	5,630	5,644	5,660	5,674	5,688	5,707	5,720	5,734	5,747	5,775	5,806	5,820	
	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	
Over Cap	1.063	1.049	1.013	1.017	1.015	1.006	1.008	0.931	1.066	1.013	0.996	1.009	1.007	1.009	1.002	1.004	1.008	1.008	1.007	1.006	1.003	1.000	
OOS Only	0.99	0.99	1.01	1.01	1.00	1.00	1.01	1.05	0.96	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	
EQC Only	1.00	1.27	0.93	1.00	1.08	0.93	0.92	2.08	0.80	0.65	0.92	0.75	1.00	1.11	1.00	0.90	0.89	1.00	1.13	0.78	1.29		
Increment in Claim Numbers	Over Cap	126	104	30	38	34	15	19	-164	146	31	-10	22	17	23	4	9	20	18	14	7	1	
	OOS Only	-25	-35	44	24	10	12	27	173	-134	-7	25	-3	-3	-10	15	5	-5	13	26	11		
	EQC Only	0	3	-1	0	1	-1	-1	13	-5	-7	-1	-3	0	1	0	-1	-1	0	1	-2	2	
	Numbers	101	72	73	62	45	26	45	22	7	17	14	16	14	14	19	13	14	13	28	31	14	
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	
Over Cap	2,527	2,530	2,534	2,553	2,571	2,584	2,582	2,622	2,650	2,704	2,731	2,773	2,818	2,863	2,895	2,910	2,934	2,950	2,958	2,979	2,994	3,015	
OOS Only	3,299	3,315	3,328	3,322	3,330	3,328	3,342	3,318	3,306	3,284	3,280	3,253	3,199	3,172	3,165	3,161	3,140	3,131	3,135	3,128	3,116	3,103	
EQC Only	8	8	8	7	8	7	7	6	6	7	7	9	9	13	18	23	26	26	26	26	26	26	
Total	5,834	5,853	5,870	5,882	5,909	5,919	5,931	5,946	5,962	5,995	6,018	6,035	6,026	6,048	6,078	6,094	6,100	6,107	6,119	6,133	6,136	6,144	
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	
Over Cap	1.003	1.001	1.002	1.007	1.007	1.005	0.999	1.015	1.011	1.020	1.010	1.015	1.016	1.016	1.011	1.005	1.008	1.005	1.003	1.007	1.005	1.007	
OOS Only	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	0.98	0.99	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	
EQC Only	0.89	1.00	1.00	0.88	1.14	0.88	1.00	0.86	1.00	1.17	1.00	1.29	1.00	1.44	1.38	1.28	1.13	1.00	1.00	1.00	1.00	1.00	
Increment in Claim Numbers	Over Cap	7	3	4	19	18	13	-2	40	28	54	27	42	45	45	32	15	24	16	8	21	15	21
	OOS Only	8	16	13	-6	8	-2	14	-24	-12	-22	-4	-27	-54	-27	-7	-4	-21	-9	4	-7	-12	-13
	EQC Only	-1	0	0	-1	1	-1	0	-1	0	1	0	2	0	4	5	5	3	0	0	0	0	0
	Numbers	14	19	17	12	27	10	12	15	16	33	23	17	-9	22	30	16	6	7	12	14	3	8
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16		
Over Cap	3,030	3,043	3,060	3,086	3,101	3,110	3,119	3,139	3,153	3,161	3,167	3,175	3,190	3,202	3,217	3,232	3,246	3,261	3,263	3,263	3,263		
OOS Only	3,091	3,083	3,070	3,053	3,042	3,033	3,030	3,015	3,007	3,003	2,999	2,993	2,982	2,970	2,970	2,970	2,970	2,970	2,970	2,970	2,970		
EQC Only	27	27	28	28	28	27	27	26	24	24	24	24	24	24	24	24	24	24	24	24	24		
Total	6,148	6,153	6,158	6,167	6,171	6,170	6,176	6,180	6,184	6,188	6,190	6,192	6,196	6,196	6,211	6,226	6,240	6,255	6,257	6,257	6,257		
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16		
Over Cap	1.005	1.004	1.006	1.008	1.005	1.003	1.003	1.006	1.004	1.003	1.002	1.003	1.005	1.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
OOS Only	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
EQC Only	1.04	1.00	1.04	1.00	1.00	0.96	1.00	0.96	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Increment in Claim Numbers	Over Cap	15	13	17	26	15	9	9	20	14	8	6	8	15	12	15	15	14	14	2	0	0	
	OOS Only	-12	-8	-13	-17	-11	-9	-3	-15	-8	-4	-4	-6	-11	-12	0	0	0	0	0	0	0	
	EQC Only	1	0	1	0	0	-1	0	-1	-2	0	0	0	0	0	0	0	0	0	0	0	0	
	Numbers	4	5	5	9	4	-1	6	4	4	4	2	2	4	0	15	15	14	14	2	0	0	

Table C.3 - TC2 Transitions Summary

	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
Over Cap	991	1,035	1,029	1,015	1,027	1,033	1,037	1,041	974	1,035	1,050	1,045	1,047	1,046	1,051	1,029	1,024	1,028	1,032	1,038	1,035	1,026
OOS Only	7,799	8,026	8,268	8,470	8,610	8,823	8,963	9,145	9,301	9,311	9,356	9,442	9,515	9,604	9,671	9,742	9,797	9,885	9,966	10,043	10,145	10,218
EQC Only	38	40	46	49	48	49	49	47	58	56	48	44	43	44	46	46	45	45	45	44	45	44
<b>Total</b>	<b>8,828</b>	<b>9,101</b>	<b>9,343</b>	<b>9,534</b>	<b>9,685</b>	<b>9,905</b>	<b>10,049</b>	<b>10,233</b>	<b>10,333</b>	<b>10,402</b>	<b>10,454</b>	<b>10,531</b>	<b>10,605</b>	<b>10,694</b>	<b>10,768</b>	<b>10,817</b>	<b>10,866</b>	<b>10,958</b>	<b>11,043</b>	<b>11,125</b>	<b>11,225</b>	<b>11,288</b>
	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
Over Cap	1.044	0.994	0.986	1.012	1.006	1.004	1.004	0.936	1.063	1.014	0.995	1.002	0.999	1.005	0.979	0.995	1.004	1.004	1.006	0.997	0.991	
OOS Only	1.03	1.03	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	
EQC Only	1.05	1.15	1.07	0.98	1.02	1.00	0.96	1.23	0.97	0.86	0.92	0.98	1.02	1.05	1.00	0.98	1.00	1.00	0.98	1.02	0.98	
<b>Increment in Claim Numbers</b>	<b>Over Cap</b>	44	-6	-14	12	6	4	4	-67	61	15	-5	2	-1	5	-22	-5	4	4	6	-3	-9
	OOS Only	227	242	202	140	213	140	182	156	10	45	86	73	89	67	71	55	88	81	77	102	73
	EQC Only	2	6	3	-1	1	0	-2	11	-2	-8	-4	-1	1	2	0	-1	0	0	-1	1	-1
	<b>Total</b>	<b>273</b>	<b>242</b>	<b>191</b>	<b>151</b>	<b>220</b>	<b>144</b>	<b>184</b>	<b>100</b>	<b>69</b>	<b>52</b>	<b>77</b>	<b>74</b>	<b>89</b>	<b>74</b>	<b>49</b>	<b>49</b>	<b>92</b>	<b>85</b>	<b>82</b>	<b>100</b>	<b>63</b>
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
Over Cap	1,020	1,018	1,020	1,021	1,017	1,018	1,019	1,031	1,043	1,053	1,059	1,069	1,073	1,088	1,089	1,104	1,120	1,130	1,135	1,138	1,146	1,155
OOS Only	10,250	10,331	10,401	10,462	10,531	10,567	10,627	10,665	10,707	10,781	10,843	10,850	10,782	10,812	10,834	10,856	10,862	10,881	10,880	10,908	10,911	10,929
EQC Only	41	41	42	42	42	43	42	42	42	43	43	46	63	83	96	110	115	125	130	129	127	127
<b>Total</b>	<b>11,311</b>	<b>11,390</b>	<b>11,463</b>	<b>11,525</b>	<b>11,590</b>	<b>11,628</b>	<b>11,688</b>	<b>11,738</b>	<b>11,792</b>	<b>11,877</b>	<b>11,945</b>	<b>11,965</b>	<b>11,918</b>	<b>11,983</b>	<b>12,019</b>	<b>12,070</b>	<b>12,097</b>	<b>12,136</b>	<b>12,145</b>	<b>12,175</b>	<b>12,184</b>	<b>12,211</b>
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
Over Cap	0.994	0.998	1.002	1.001	0.996	1.001	1.001	1.012	1.012	1.010	1.006	1.009	1.004	1.014	1.001	1.014	1.014	1.009	1.004	1.003	1.007	1.008
OOS Only	1.00	1.01	1.01	1.01	1.01	1.00	1.01	1.00	1.00	1.01	1.01	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EQC Only	0.93	1.00	1.02	1.00	1.00	1.02	0.98	1.00	1.00	1.02	1.00	1.07	1.37	1.32	1.16	1.15	1.05	1.09	1.04	0.99	0.98	1.00
<b>Increment in Claim Numbers</b>	<b>Over Cap</b>	-6	-2	2	1	-4	1	1	12	12	10	6	10	4	15	1	15	16	10	5	3	8
	OOS Only	32	81	70	61	69	36	60	38	42	74	62	7	-68	30	22	22	6	19	-1	28	3
	EQC Only	-3	0	1	0	0	1	-1	0	0	1	0	3	17	20	13	14	5	10	5	-1	-2
	<b>Total</b>	<b>23</b>	<b>79</b>	<b>73</b>	<b>62</b>	<b>65</b>	<b>38</b>	<b>60</b>	<b>50</b>	<b>54</b>	<b>85</b>	<b>68</b>	<b>20</b>	<b>-47</b>	<b>65</b>	<b>36</b>	<b>51</b>	<b>27</b>	<b>39</b>	<b>9</b>	<b>30</b>	<b>9</b>
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
Over Cap	1,163	1,175	1,188	1,223	1,231	1,237	1,244	1,253	1,262	1,263	1,268	1,278	1,288	1,304	1,316	1,327	1,338	1,350	1,351	1,351	1,351	
OOS Only	10,955	10,961	10,972	10,978	10,975	10,977	10,987	10,990	10,986	11,001	11,009	11,013	11,011	11,008	11,008	11,008	11,008	11,008	11,008	11,008	11,008	
EQC Only	127	128	127	127	128	128	128	128	128	128	127	127	128	130	130	130	130	130	130	130	130	
<b>Total</b>	<b>12,245</b>	<b>12,264</b>	<b>12,287</b>	<b>12,328</b>	<b>12,334</b>	<b>12,342</b>	<b>12,359</b>	<b>12,371</b>	<b>12,376</b>	<b>12,392</b>	<b>12,404</b>	<b>12,418</b>	<b>12,427</b>	<b>12,442</b>	<b>12,454</b>	<b>12,465</b>	<b>12,476</b>	<b>12,488</b>	<b>12,489</b>	<b>12,489</b>	<b>12,489</b>	
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
Over Cap	1.007	1.010	1.011	1.029	1.007	1.005	1.006	1.007	1.007	1.001	1.004	1.008	1.008	1.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
OOS Only	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
EQC Only	1.00	1.01	0.99	1.00	1.01	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.01	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
<b>Increment in Claim Numbers</b>	<b>Over Cap</b>	8	12	13	35	8	6	7	9	9	1	5	10	10	16	12	12	11	11	2	0	
	OOS Only	26	6	11	6	-3	2	10	3	-4	15	8	4	-2	-3	0	0	0	0	0	0	
	EQC Only	0	1	-1	0	1	0	0	0	0	0	-1	0	1	2	0	0	0	0	0	0	
	<b>Total</b>	<b>34</b>	<b>19</b>	<b>23</b>	<b>41</b>	<b>6</b>	<b>8</b>	<b>17</b>	<b>12</b>	<b>5</b>	<b>16</b>	<b>12</b>	<b>14</b>	<b>9</b>	<b>15</b>	<b>12</b>	<b>12</b>	<b>11</b>	<b>11</b>	<b>2</b>	<b>0</b>	



Table C.5 - Hills Transitions Summary

	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
Over Cap	985	993	1,011	992	990	989	990	1,003	945	980	994	998	998	996	987	985	986	985	988	991	985	975
OOS Only	961	983	997	1,041	1,057	1,075	1,089	1,103	1,159	1,134	1,136	1,145	1,159	1,175	1,188	1,201	1,204	1,220	1,228	1,236	1,257	1,277
EQC Only	6	10	11	13	12	12	12	12	24	21	15	14	11	10	12	11	10	10	10	10	10	10
Total	1,952	1,986	2,019	2,046	2,059	2,076	2,091	2,118	2,128	2,135	2,145	2,157	2,168	2,181	2,187	2,197	2,200	2,215	2,226	2,237	2,252	2,262
	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
Over Cap	1.008	1.018	0.981	0.998	0.999	1.001	1.013	0.942	1.037	1.014	1.004	1.004	1.000	0.998	0.991	0.998	1.001	0.999	1.003	1.003	0.994	0.990
OOS Only	1.02	1.01	1.04	1.02	1.02	1.01	1.01	1.05	0.98	1.00	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.01	1.01	1.01	1.02	1.02
EQC Only	1.67	1.10	1.18	0.92	1.00	1.00	1.00	2.00	0.88	0.71	0.93	0.79	0.91	1.20	0.92	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Increment in Claim Numbers	Over Cap	8	18	-19	-2	-1	1	13	-58	35	14	4	0	-2	-9	-2	1	-1	3	3	-6	-10
	OOS Only	22	14	44	16	18	14	14	56	-25	2	9	14	16	13	13	3	16	8	8	21	20
	EQC Only	4	1	2	-1	0	0	0	12	-3	-6	-1	-3	-1	2	-1	-1	0	0	0	0	0
		34	33	27	13	17	15	27	10	7	10	12	11	13	6	10	3	15	11	11	15	10
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
Over Cap	970	965	949	940	931	927	928	930	932	947	960	963	964	971	980	979	987	991	992	999	1,006	1,006
OOS Only	1,286	1,300	1,326	1,347	1,366	1,375	1,387	1,397	1,401	1,392	1,391	1,396	1,383	1,385	1,379	1,375	1,373	1,368	1,368	1,372	1,371	1,375
EQC Only	10	10	10	10	11	11	11	11	11	11	11	11	13	16	21	22	26	27	28	28	28	28
Total	2,266	2,275	2,285	2,297	2,308	2,313	2,326	2,338	2,344	2,350	2,362	2,370	2,360	2,372	2,380	2,376	2,386	2,386	2,388	2,399	2,405	2,409
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
Over Cap	0.995	0.995	0.983	0.991	0.990	0.996	1.001	1.002	1.002	1.016	1.014	1.003	1.001	1.007	1.009	0.999	1.008	1.004	1.001	1.007	1.007	1.000
OOS Only	1.01	1.01	1.02	1.02	1.01	1.01	1.01	1.01	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EQC Only	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.18	1.23	1.31	1.05	1.18	1.04	1.04	1.00	1.00	1.00
Increment in Claim Numbers	Over Cap	-5	-5	-16	-9	-9	-4	1	2	15	13	3	1	7	9	-1	8	4	1	7	7	0
	OOS Only	9	14	26	21	19	9	12	10	4	-9	-1	5	-13	2	-6	-4	-2	-5	0	4	-1
	EQC Only	0	0	0	0	1	0	0	0	0	0	0	2	3	5	1	4	1	1	0	0	0
		4	9	10	12	11	5	13	12	6	6	12	8	-10	12	8	-4	10	0	2	11	6
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
Over Cap	1,014	1,018	1,030	1,033	1,038	1,042	1,047	1,053	1,056	1,062	1,064	1,067	1,073	1,078	1,081	1,085	1,088	1,091	1,092	1,092	1,092	
OOS Only	1,377	1,375	1,369	1,367	1,361	1,358	1,355	1,353	1,351	1,347	1,347	1,346	1,341	1,337	1,337	1,337	1,337	1,337	1,337	1,337	1,337	
EQC Only	29	29	29	29	29	29	29	28	27	27	26	26	26	26	26	26	26	26	26	26	26	
Total	2,420	2,422	2,428	2,429	2,428	2,429	2,431	2,434	2,434	2,436	2,437	2,439	2,440	2,441	2,444	2,448	2,451	2,454	2,455	2,455	2,455	
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
Over Cap	1.008	1.004	1.012	1.003	1.005	1.004	1.005	1.006	1.003	1.006	1.002	1.003	1.006	1.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
OOS Only	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
EQC Only	1.04	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.96	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Increment in Claim Numbers	Over Cap	8	4	12	3	5	4	5	6	3	6	2	3	6	5	3	3	3	3	1	0	0
	OOS Only	2	-2	-6	-2	-6	-3	-3	-2	-2	-4	0	-1	-5	-4	0	0	0	0	0	0	0
	EQC Only	1	0	0	0	0	0	0	-1	-1	0	-1	0	0	0	0	0	0	0	0	0	0
		11	2	6	1	-1	1	2	3	0	2	1	2	1	1	3	3	3	3	1	0	0

Table C.6 – Other Zones Transitions Summary

	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
<b>Over Cap</b>	245	253	236	221	224	217	216	216	207	216	218	213	213	213	214	217	217	215	208	210	210	207
OOS Only	2,501	2,610	2,674	2,743	2,813	2,919	2,995	3,095	3,132	3,170	3,202	3,242	3,264	3,293	3,313	3,335	3,359	3,388	3,410	3,420	3,436	3,449
EQC Only	33	34	36	33	37	40	40	40	47	47	44	41	40	40	41	39	36	35	35	34	34	34
<b>Total</b>	2,779	2,897	2,946	2,997	3,074	3,176	3,251	3,351	3,386	3,433	3,464	3,496	3,517	3,546	3,568	3,591	3,612	3,638	3,653	3,664	3,680	3,690
	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13
<b>Over Cap</b>	1.033	0.933	0.936	1.014	0.969	0.995	1.000	0.958	1.043	1.009	0.977	1.000	1.000	1.005	1.014	1.000	0.991	0.967	1.010	1.000	0.986	
OOS Only	1.044	1.025	1.026	1.026	1.038	1.026	1.033	1.012	1.012	1.010	1.012	1.007	1.007	1.009	1.006	1.007	1.009	1.006	1.003	1.005	1.004	
EQC Only	1.03	1.06	0.92	1.12	1.08	1.00	1.00	1.18	1.00	1.00	0.94	0.93	0.98	1.00	1.03	0.95	0.92	0.97	1.00	0.97	1.00	
<b>Increment in Claim Numbers</b>	8	-17	-15	3	-7	-1	0	-9	9	2	-5	0	0	1	3	0	-2	-7	2	0	-3	
OOS Only	109	64	69	70	106	76	100	37	38	32	40	22	29	20	22	24	29	22	10	16	13	
EQC Only	1	2	-3	4	3	0	0	7	0	-3	-3	-1	0	1	-2	-3	-1	0	-1	0	0	
	118	49	51	77	102	75	100	35	47	31	32	21	29	22	23	21	26	15	11	16	10	
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
<b>Over Cap</b>	207	205	210	212	214	211	208	210	211	215	216	217	221	222	223	224	223	223	222	222	223	227
OOS Only	3,435	3,467	3,472	3,483	3,492	3,507	3,520	3,530	3,539	3,560	3,578	3,581	3,541	3,535	3,526	3,520	3,510	3,513	3,514	3,520	3,523	3,527
EQC Only	35	35	35	35	35	36	36	37	36	42	41	44	50	61	74	80	84	87	88	88	88	88
<b>Total</b>	3,677	3,707	3,717	3,730	3,741	3,754	3,764	3,777	3,786	3,817	3,835	3,842	3,812	3,818	3,823	3,824	3,817	3,823	3,824	3,830	3,834	3,842
	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
<b>Over Cap</b>	1.000	0.990	1.024	1.010	1.009	0.986	0.986	1.010	1.005	1.019	1.005	1.005	1.018	1.005	1.005	1.004	0.996	1.000	0.996	1.000	1.005	1.018
OOS Only	0.996	1.009	1.001	1.003	1.003	1.004	1.004	1.003	1.003	1.006	1.005	1.001	0.989	0.998	0.997	0.998	0.997	1.001	1.000	1.002	1.001	1.001
EQC Only	1.03	1.00	1.00	1.00	1.00	1.03	1.00	1.03	0.97	1.17	0.98	1.07	1.14	1.22	1.21	1.08	1.05	1.04	1.01	1.00	1.00	1.00
<b>Increment in Claim Numbers</b>	0	-2	5	2	2	-3	-3	2	1	4	1	1	4	1	1	1	-1	0	-1	0	1	4
OOS Only	-14	32	5	11	9	15	13	10	9	21	18	3	-40	-6	-9	-6	-10	3	1	6	3	4
EQC Only	1	0	0	0	0	1	0	1	-1	6	-1	3	6	11	13	6	4	3	1	0	0	0
	-13	30	10	13	11	13	10	13	9	31	18	7	-30	6	5	1	-7	6	1	6	4	8
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
<b>Over Cap</b>	230	234	234	239	240	243	247	251	252	253	253	253	256	259	262	264	267	269	270	270	270	
OOS Only	3,530	3,530	3,538	3,533	3,532	3,536	3,539	3,539	3,538	3,557	3,559	3,563	3,563	3,565	3,565	3,565	3,565	3,565	3,565	3,565	3,565	
EQC Only	87	87	87	87	87	87	87	87	87	88	88	87	88	89	89	89	89	89	89	89	89	
<b>Total</b>	3,847	3,851	3,859	3,859	3,859	3,866	3,873	3,877	3,877	3,898	3,900	3,903	3,907	3,913	3,916	3,918	3,921	3,923	3,924	3,924	3,924	
	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
<b>Over Cap</b>	1.013	1.017	1.000	1.021	1.004	1.013	1.016	1.016	1.004	1.004	1.000	1.000	1.012	1.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
OOS Only	1.001	1.000	1.002	0.999	1.000	1.001	1.001	1.000	1.000	1.005	1.001	1.001	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
EQC Only	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	0.99	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
<b>Increment in Claim Numbers</b>	3	4	0	5	1	3	4	4	1	1	0	0	3	3	3	3	3	3	0	0	0	
OOS Only	3	0	8	-5	-1	4	3	0	-1	19	2	4	0	2	0	0	0	0	0	0	0	
EQC Only	-1	0	0	0	0	0	0	0	0	1	0	-1	1	1	0	0	0	0	0	0	0	
	5	4	8	0	0	7	7	4	0	21	2	3	4	6	3	3	3	3	0	0	0	

## C.2 Initial Settlement Options

Table C.7 - Red Zone Rebuilds

	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Total To Date	Assumed Future	Jun15 Valn	
Rebuild	0%	7%	6%	7%	13%	12%	10%	10%	9%	16%	0%	13%	5%	14%	0%	10%	0%	0%	0%	0%	0%	0%	8%	0%	10%
Repair	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Customer Managed Rebuild	0%	8%	5%	12%	19%	20%	20%	29%	21%	12%	12%	38%	29%	0%	11%	5%	0%	100%	20%	50%	0%	0%	13%	50%	10%
Repurchase	75%	78%	66%	61%	61%	49%	37%	44%	58%	36%	60%	50%	38%	57%	33%	76%	0%	0%	40%	0%	33%	0%	59%	30%	60%
Cash Settlement	0%	1%	0%	0%	0%	0%	0%	0%	0%	4%	4%	0%	0%	0%	0%	5%	50%	0%	0%	0%	33%	0%	0%	0%	0%
Cash Settlement - Govt Option 1	0%	0%	18%	11%	1%	4%	20%	2%	7%	8%	8%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	10%
Cash Settlement - Govt Option 2	25%	6%	5%	9%	6%	13%	14%	15%	5%	24%	16%	0%	10%	29%	44%	5%	50%	0%	40%	50%	33%	0%	9%	20%	10%

Table C.8 - Red Zone Repairs

	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Total To Date	Assumed Future	Jun15 Valn	
Rebuild	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Repair	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Customer Managed Rebuild	25%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	2%
Repurchase	0%	12%	19%	0%	9%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	9%	0%	8%
Cash Settlement	0%	2%	0%	11%	0%	6%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	5%
Cash Settlement - Govt Option 1	25%	61%	33%	11%	18%	41%	0%	43%	40%	50%	0%	60%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	40%	40%
Cash Settlement - Govt Option 2	50%	24%	44%	78%	73%	53%	100%	57%	40%	50%	0%	40%	0%	100%	100%	100%	0%	0%	100%	0%	0%	0%	47%	60%	45%

Table C.9 - TC3 Rebuilds

	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Total To Date	Assumed Future	Jun15 Valn
Rebuild	48%	67%	58%	47%	64%	59%	64%	53%	38%	39%	36%	44%	36%	36%	50%	32%	14%	11%	28%	29%	0%	50%	25%	60%
Repair	11%	1%	1%	2%	5%	21%	11%	21%	25%	13%	18%	21%	20%	6%	0%	10%	9%	4%	0%	0%	0%	12%	0%	0%
Customer Managed Rebuild	4%	3%	1%	4%	1%	3%	5%	9%	10%	13%	16%	10%	27%	14%	7%	27%	23%	32%	25%	18%	0%	8%	25%	10%
Repurchase	33%	27%	35%	39%	25%	11%	17%	8%	12%	18%	20%	6%	7%	26%	21%	20%	41%	14%	19%	24%	0%	20%	20%	20%
Cash Settlement	4%	2%	5%	8%	6%	5%	4%	10%	15%	18%	9%	19%	11%	18%	21%	12%	14%	39%	28%	29%	0%	10%	30%	10%

Table C.10 - TC3 Repairs

	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Total To Date	Assumed Future	Jun15 Valn	
Rebuild	0%	0%	0%	0%	5%	1%	0%	0%	4%	0%	0%	0%	2%	0%	0%	0%	3%	0%	0%	0%	0%	0%	1%	0%	0%
Repair	75%	80%	82%	79%	80%	92%	86%	82%	78%	84%	55%	80%	77%	68%	80%	84%	68%	67%	63%	43%	0%	0%	79%	50%	75%
Customer Managed Rebuild	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	2%	0%	0%	3%	0%	3%	0%	4%	0%	1%	0%	0%
Repurchase	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cash Settlement	25%	20%	12%	21%	15%	7%	14%	18%	18%	16%	41%	18%	21%	32%	20%	11%	32%	31%	37%	52%	0%	0%	19%	50%	25%

Table C.11 - TC2/TC1/Other Zones Rebuilds

	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Total To Date	Assumed Future	Jun15 Valn	
Rebuild	32%	61%	64%	58%	60%	58%	64%	41%	31%	18%	9%	18%	18%	46%	30%	38%	25%	67%	8%	20%	0%	0%	49%	10%	55%
Repair	0%	2%	0%	0%	6%	4%	15%	17%	6%	12%	18%	18%	8%	40%	0%	17%	0%	0%	0%	0%	0%	0%	6%	0%	0%
Customer Managed Rebuild	5%	5%	4%	2%	12%	10%	15%	19%	29%	45%	41%	12%	0%	31%	25%	33%	25%	20%	50%	0%	0%	0%	12%	25%	20%
Repurchase	37%	25%	25%	25%	15%	15%	3%	15%	25%	6%	27%	12%	23%	10%	23%	17%	0%	17%	40%	50%	0%	0%	20%	40%	15%
Cash Settlement	26%	7%	6%	15%	17%	10%	8%	12%	19%	35%	0%	12%	12%	20%	8%	17%	0%	50%	20%	0%	0%	0%	13%	25%	10%

**Table C.12 - TC2/TC1/Other Zones Repairs**

	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Total To Date	Assumed Future	Jun15 Valn	
Rebuild			0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Repair			82%	85%	77%	77%	84%	68%	84%	72%	53%	68%	86%	67%	48%	87%	44%	65%	81%	26%	47%	72%	40%	70%	
Customer Managed Rebuild			0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Repurchase			0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cash Settlement			18%	15%	23%	19%	16%	32%	14%	28%	48%	32%	14%	33%	48%	13%	56%	35%	19%	74%	53%	28%	60%	30%	

**Table C.13 - Hills Rebuilds**

	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Total To Date	Assumed Future	Jun15 Valn	
Rebuild			53%	45%	27%	37%	30%	15%	17%	27%	18%	54%	36%	32%	42%	50%	25%	42%	26%	25%	33%	33%	50%	30%	50%
Repair			6%	4%	0%	0%	2%	5%	0%	7%	0%	0%	7%	0%	8%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%
Customer Managed Rebuild			6%	2%	0%	2%	4%	5%	0%	7%	13%	9%	15%	14%	12%	8%	0%	25%	33%	26%	33%	33%	8%	30%	20%
Repurchase			35%	45%	65%	53%	44%	45%	69%	48%	33%	50%	23%	43%	44%	8%	0%	38%	17%	37%	25%	33%	44%	30%	20%
Cash Settlement			0%	4%	8%	9%	14%	16%	15%	21%	27%	18%	8%	12%	33%	50%	13%	8%	11%	17%	0%	12%	10%	10%	

**Table C.14 - Hills Repairs**

	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Total To Date	Assumed Future	Jun15 Valn	
Rebuild			0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%
Repair			86%	95%	92%	87%	90%	75%	76%	68%	73%	42%	74%	55%	73%	74%	60%	69%	75%	62%	67%	78%	65%	65%	
Customer Managed Rebuild			0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%	0%	0%	0%	0%	8%	0%	0%	0%	0%	0%	0%
Repurchase			0%	0%	0%	0%	1%	0%	0%	0%	0%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	
Cash Settlement			14%	5%	8%	13%	10%	9%	25%	21%	32%	27%	33%	26%	45%	27%	26%	40%	25%	17%	38%	33%	21%	35%	35%

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Table C.15 - Settlement Options Summary

	Rebuilds					Repairs					Total
	Red	TC3	TC2/TC1/Other	Hills	All Regions	Red	TC3	TC2/TC1/Other	Hills	All Regions	
<b>Decisions Made</b>											
Arrow Managed Rebuild or Repair	149	870	297	155	1,471	0	481	358	281	1,120	2,591
Customer Rebuild	238	178	82	52	550	2	7	3	2	14	564
Purchase Another	1,094	396	124	234	1,848	13	2	1	3	19	1,867
Cash - Other	8	265	95	57	425	4	428	298	168	898	1,323
Cash - Gov't Option 1	196	0	1	1	198	70	0	1	5	76	274
Cash - Gov't Option 2	165	0	0	14	179	73	0	1	1	75	254
Multi Unit Builds	0	216	63	23	302	0	142	60	12	214	516
<b>Future Decisions</b>											
Arrow Managed Rebuild or Repair	0	14	4	6	23	0	77	66	32	174	198
Customer Rebuild	1	15	12	6	33	0	0	0	0	0	33
Purchase Another	0	11	16	6	33	0	0	0	0	0	33
Cash - Other	0	19	13	2	35	0	79	100	19	199	233
Cash - Gov't Option 1	0	0	0	0	0	1	0	0	0	1	1
Cash - Gov't Option 2	0	0	0	0	0	2	0	0	0	2	2
Multi Unit Builds	0	21	21	4	46	0	43	35	7	85	131
<b>Flippers</b>											
Non-Multi Unit	0	90	17	15	122	0	162	80	50	291	413
Multi Unit	0	62	11	11	84	0	65	32	20	118	202
<b>Total</b>											
Arrow Managed Rebuild or Repair	149	794	285	145	1,373	0	396	343	264	1,003	2,376
Customer Rebuild	239	236	106	68	649	2	9	5	2	18	667
Purchase Another	1,094	482	151	249	1,976	13	3	1	3	20	1,996
Cash - Other	8	319	113	66	506	4	731	509	256	1,500	2,006
Cash - Gov't Option 1	196	0	1	1	198	71	0	1	5	77	275
Cash - Gov't Option 2	165	0	0	14	179	75	0	1	1	77	256
Multi Unit Builds	0	174	73	17	264	0	120	63	-1	181	445
	1,851	2,005	728	560	5,144	165	1,259	923	530	2,877	8,021

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C.3 DRA Escalation

Table C.16 – DRA Adjustment Factors

Pre-RFP DRA Qtr	Standard House Cost (\$000's)	Qtr Increase	Adjustment Factor
Jun-11			
Sep-11			
Dec-11			
Mar-12			
Jun-12			
Sep-12			
Dec-12			
Mar-13			
Jun-13			
Sep-13			
Dec-13			
Mar-14			
Jun-14			
Sep-14			
Dec-14			
Mar-15			
Jun-15			
Sep-15			
Dec-15			
Mar-16			
Jun-16			

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

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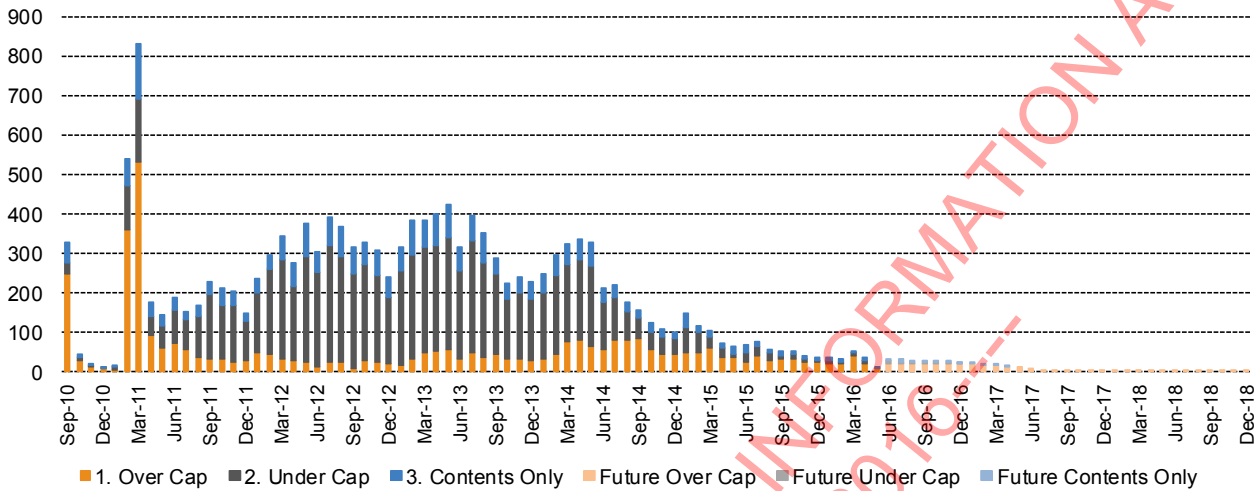


## D Temporary Accommodation

### D.1 Claim Lodgements

The figure below shows the temporary accommodation claim lodgements projection

Figure D.1 – Temporary Accommodation Claim Lodgements



For Over Cap Claims, the projected number and timing of Over Cap construction starts for the different project streams aligns with the number of future temporary accommodation claims. For Under Cap and Contents Only temporary accommodation claims we have selected chain ladder factors to tail off around end of 2016 and mid-2017 respectively.

### D.2 Over Cap Claims

Figure D.2 – Proportion of Property Constructions with Temporary Accommodation Claims

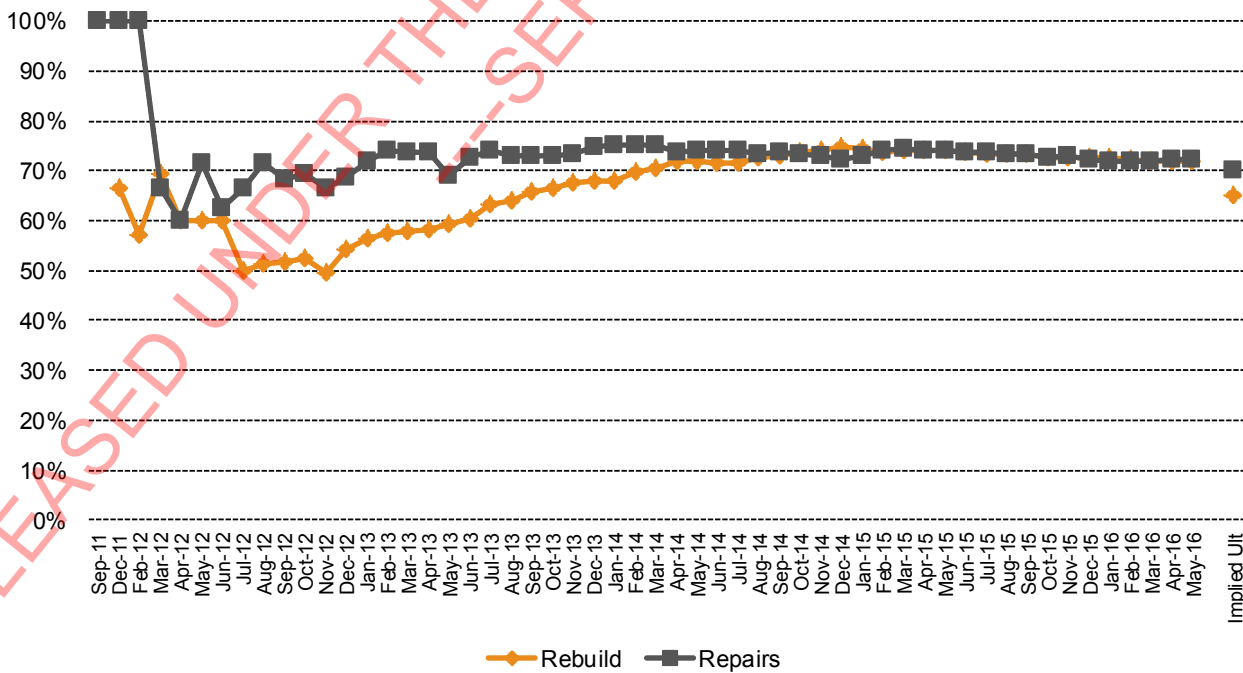


Figure D.3 – Chain Ladder Factors

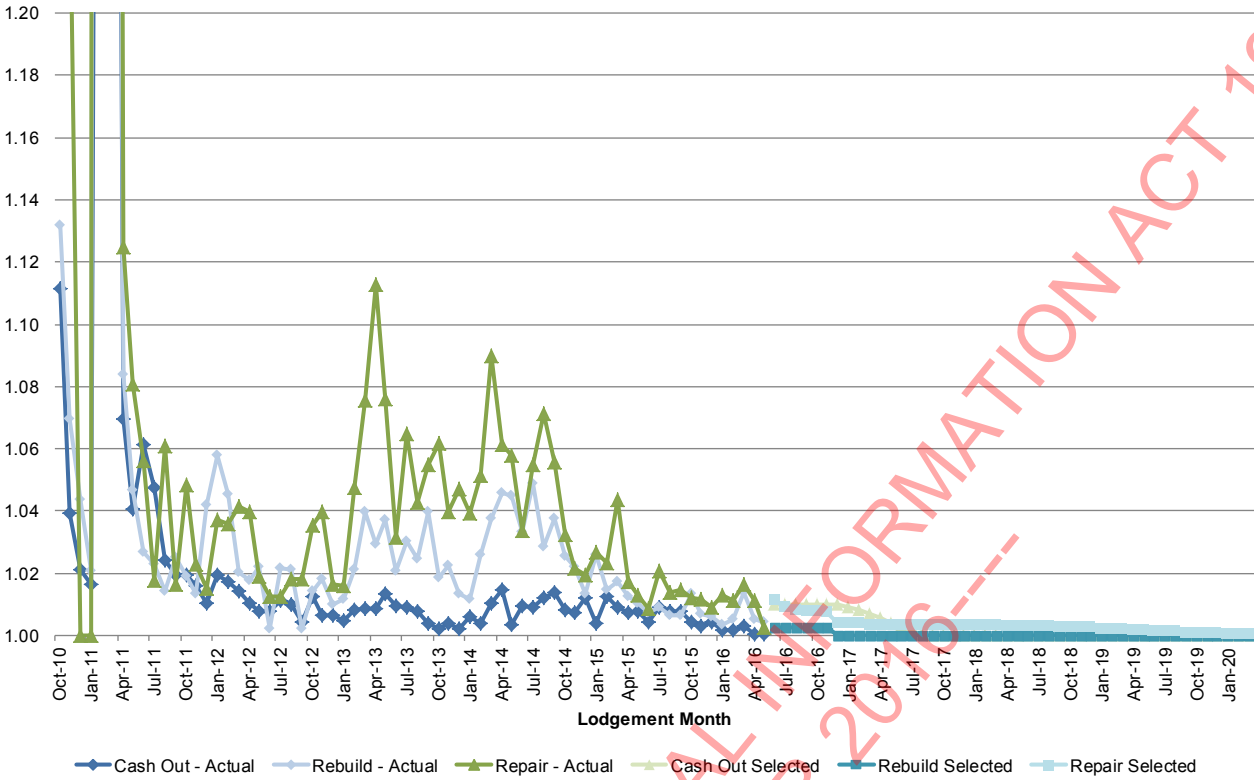
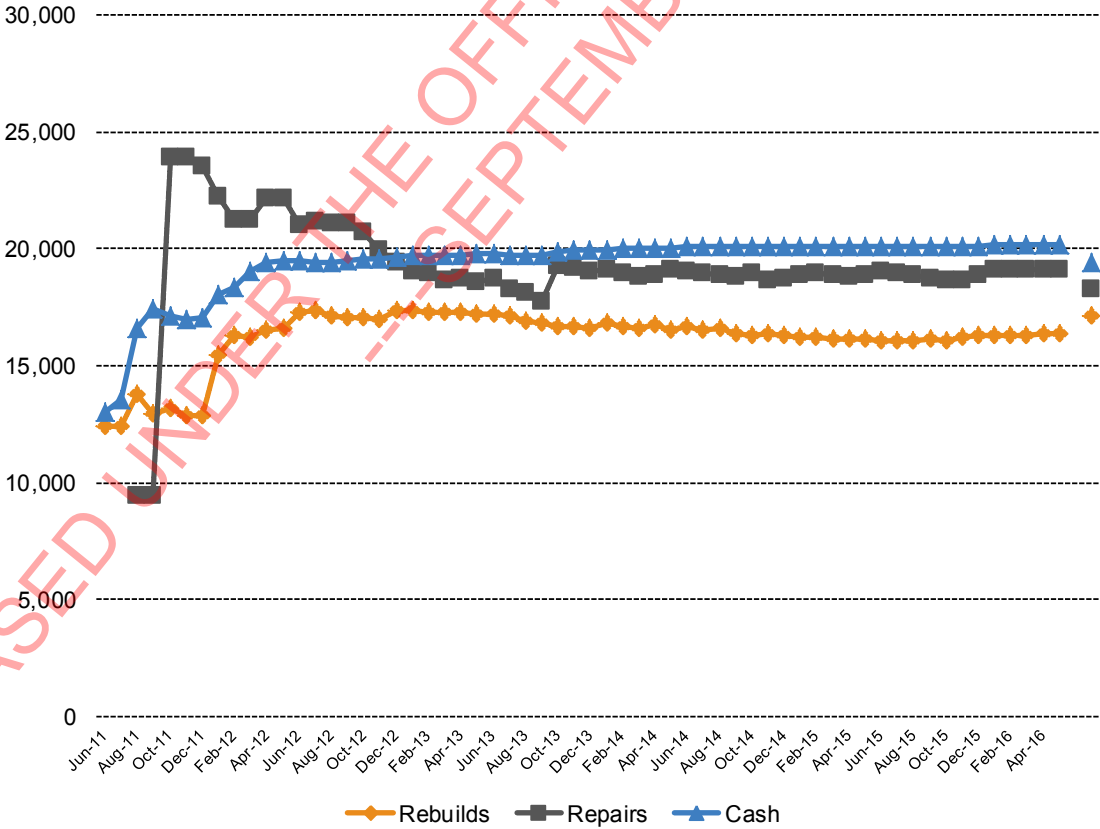


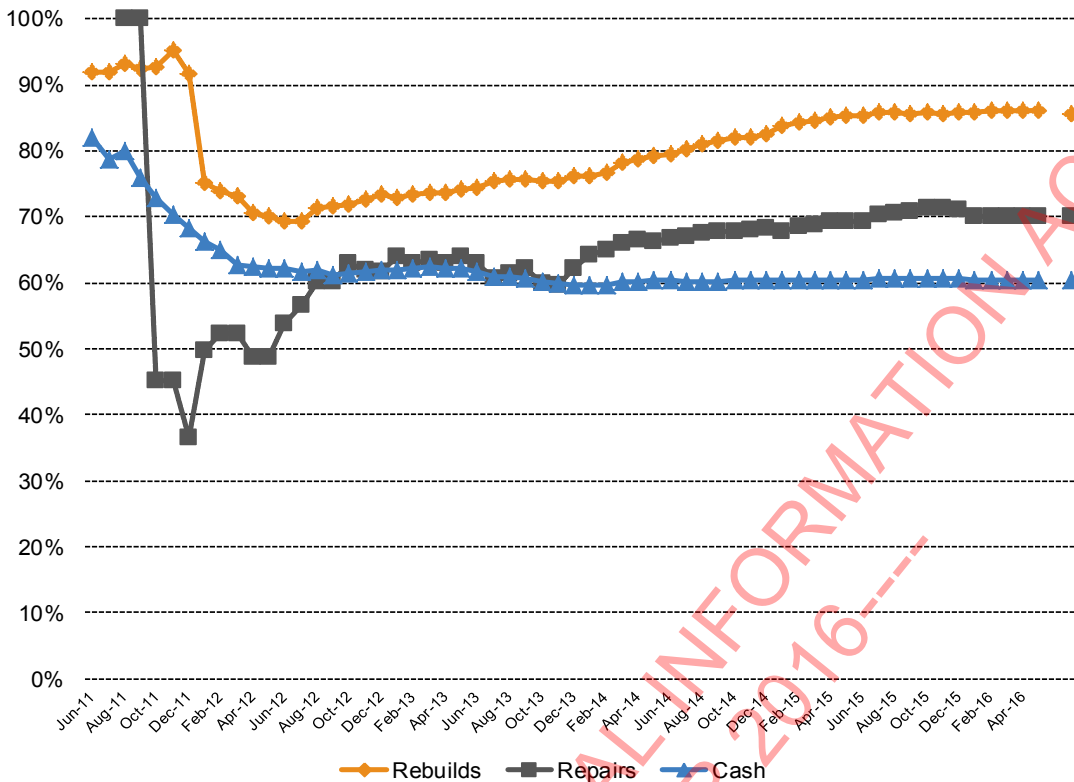
Figure D.4 - Cumulative Average of Full Entitlements



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Figure D.5 - Cumulative % Entitlements Utilised



D.3 Under Cap Claims

Figure D.6 - Under Cap Claim Lodgements

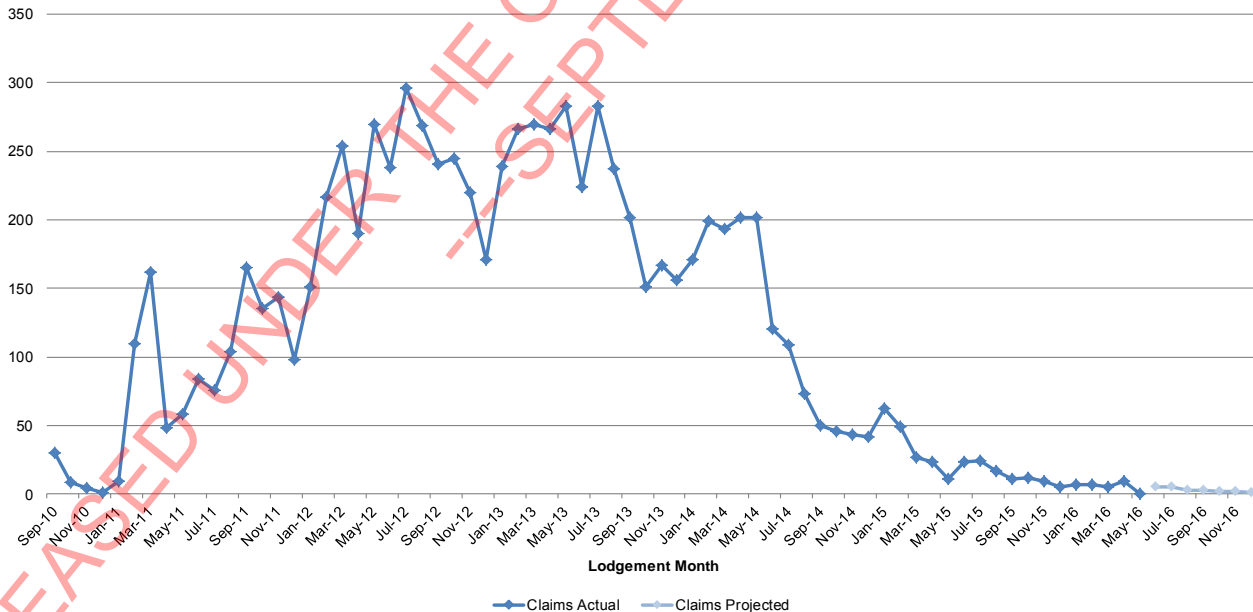


Figure D.7 - Cumulative Average of Full Entitlements

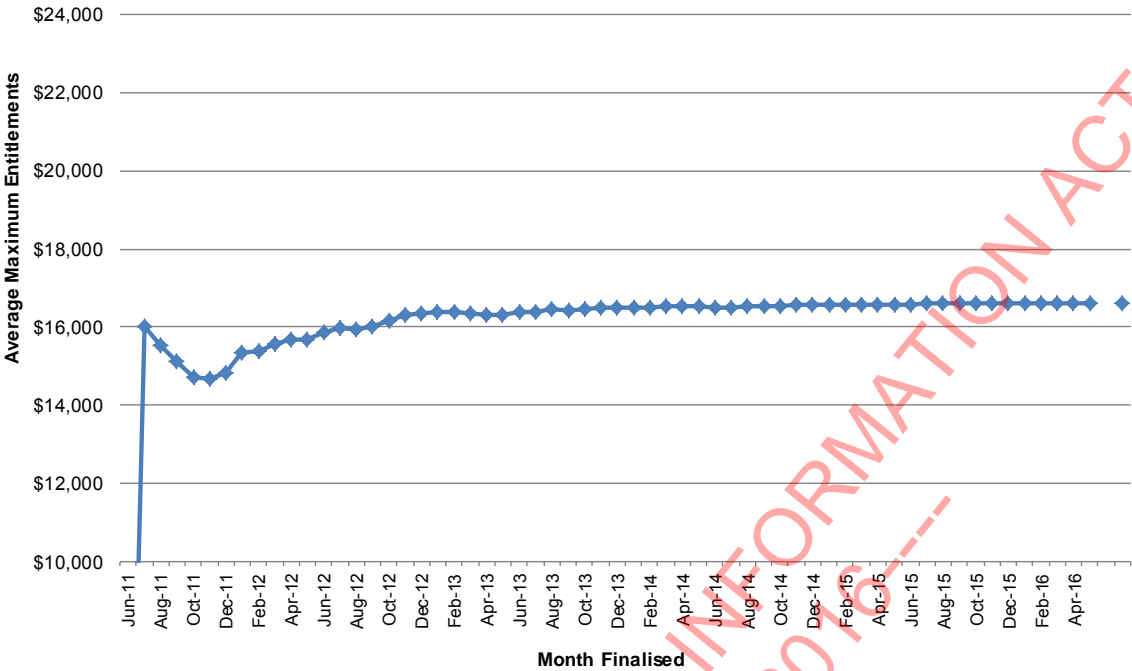
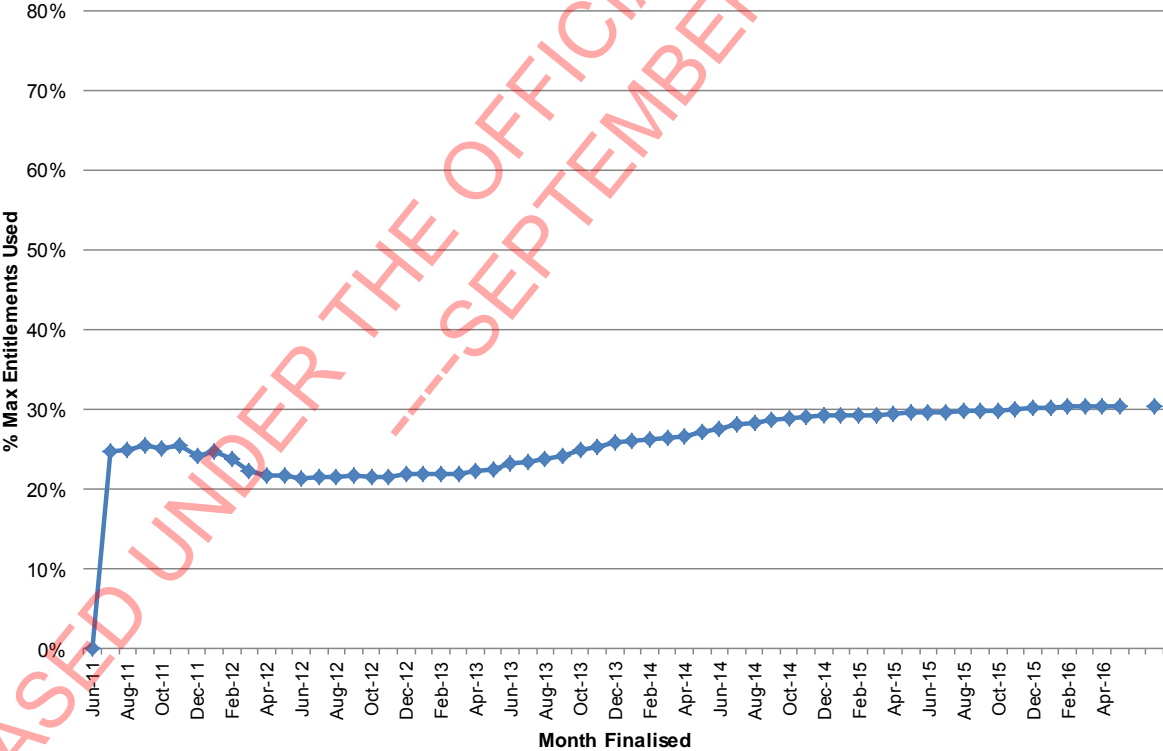


Figure D.8 - Cumulative % Entitlements Utilised



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D.4 Contents Only

Figure D.9 - Chain Ladder Factors

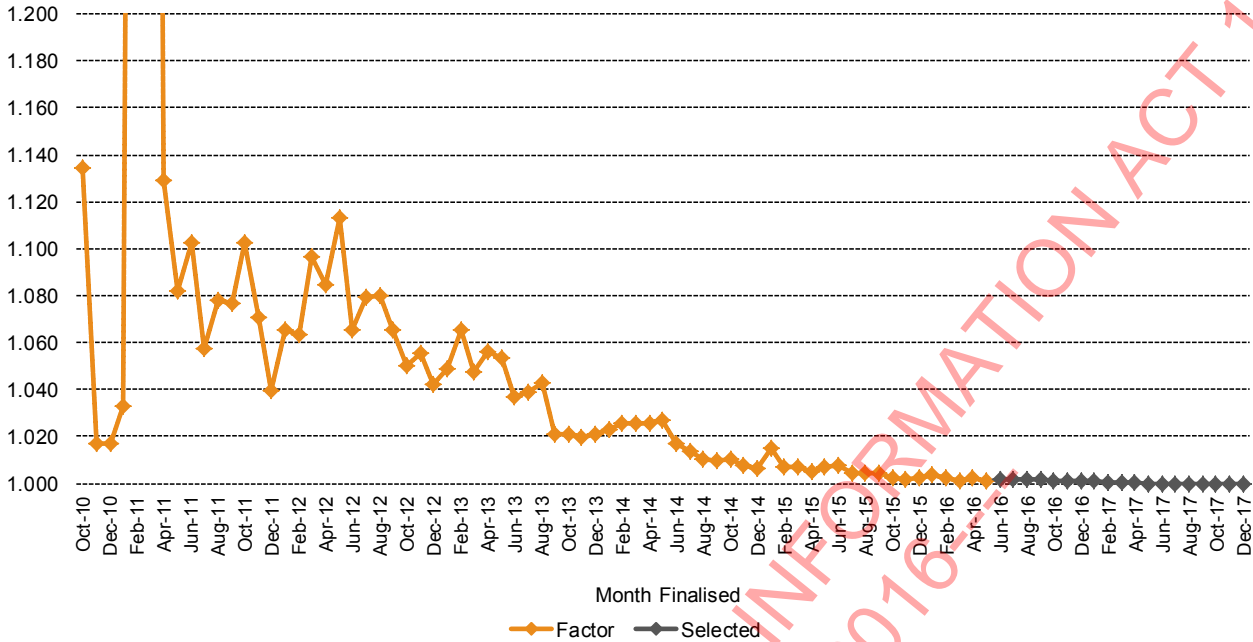
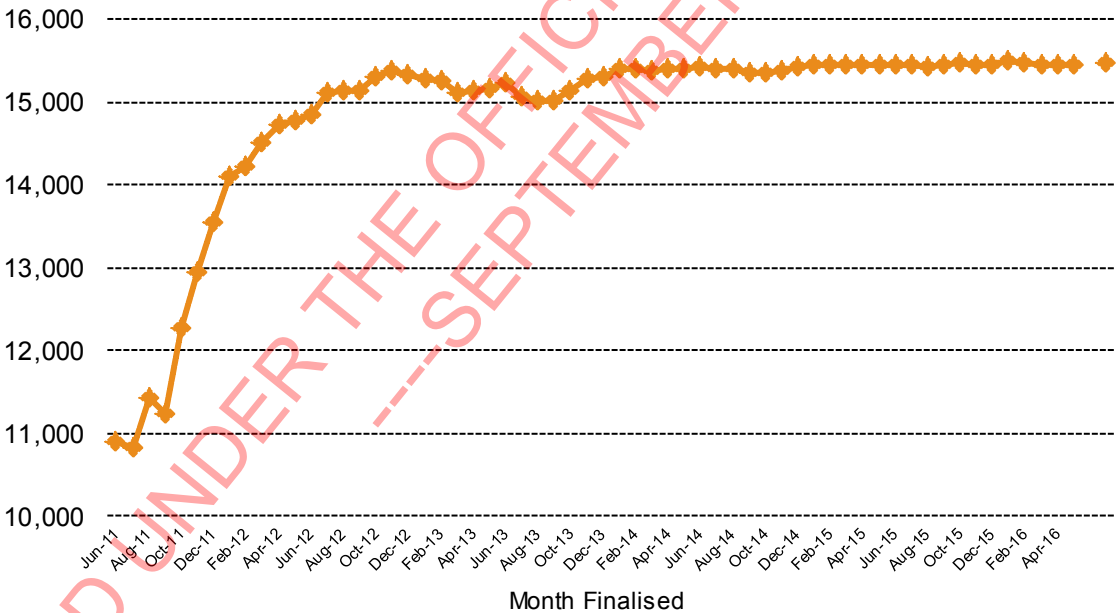


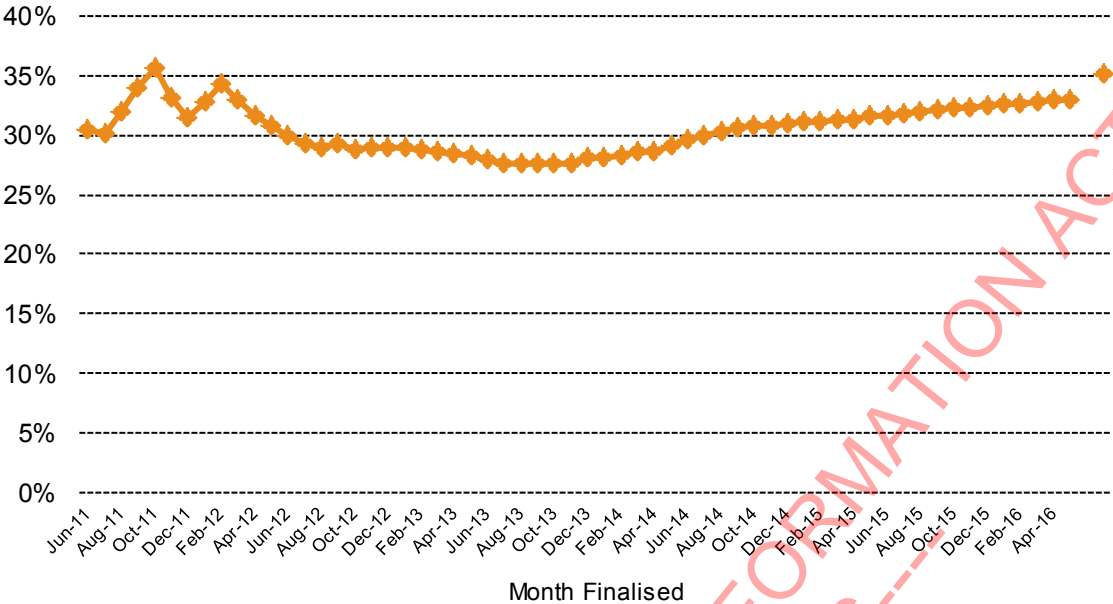
Figure D.10 - Cumulative Average of Full Entitlements



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Figure D.11 - Cumulative % Entitlements Utilised



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## E Other Claim Classes

### E.1 Lost Rent

The loss 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 Active Claim (PPAC) approach to value the Lost Rent claim class in this valuation. This involves:

- Using a chain ladder approach to project future claim lodgements for each event.
- Selecting a finalisation pattern to project the period of time lost rent is being actively paid against the claim.
- Selecting an average claim payment per month while the claim is active.

There have been noticeable differences in finalisation rates and claim sizes for claims lodged during the major EQ events and after the major events. We have made different selections for finalisations and sizes for each of these groups. In general, claims that were lodged close to the September, February and June events remain active for longer periods of time, and average active payment sizes are higher. This pattern reflects the greater extent of damage against the property caused by the more significant EQ events.

For IBNR lost rent lodgements we have adopted an average claim size of \$5,000.



Table E.1- Lost Rent Claim Numbers

Lost Rent Claims						
Month	Cat 93		Cat 106		Cat 112	
	Valid Claims	Chain Ladder Factor	Valid Claims	Chain Ladder Factor	Valid Claims	Chain Ladder Factor
Aug-11	172	1.049	561	1.039	36	1.714
Sep-11	181	1.052	582	1.037	42	1.167
Oct-11	185	1.022	614	1.055	46	1.095
Nov-11	194	1.049	631	1.028	52	1.130
Dec-11	197	1.015	657	1.041	52	1.000
Jan-12	198	1.005	685	1.043	53	1.019
Feb-12	200	1.010	693	1.012	53	1.000
Mar-12	203	1.015	712	1.027	55	1.038
Apr-12	208	1.025	725	1.018	58	1.055
May-12	211	1.014	750	1.034	62	1.069
Jun-12	219	1.038	776	1.035	64	1.032
Jul-12	220	1.005	801	1.032	67	1.047
Aug-12	224	1.018	826	1.031	69	1.030
Sep-12	232	1.036	858	1.039	71	1.029
Oct-12	235	1.013	886	1.033	77	1.085
Nov-12	238	1.013	905	1.021	82	1.065
Dec-12	238	1.000	921	1.018	84	1.024
Jan-13	242	1.017	942	1.023	85	1.012
Feb-13	252	1.041	968	1.028	87	1.024
Mar-13	260	1.032	1,007	1.040	94	1.080
Apr-13	267	1.027	1,037	1.030	96	1.021
May-13	274	1.026	1,065	1.027	97	1.010
Jun-13	283	1.033	1,102	1.035	100	1.031
Jul-13	289	1.021	1,136	1.031	102	1.020
Aug-13	295	1.021	1,165	1.026	102	1.000
Sep-13	300	1.017	1,199	1.029	103	1.010
Oct-13	303	1.010	1,216	1.014	103	1.000
Nov-13	307	1.013	1,235	1.016	105	1.019
Dec-13	313	1.020	1,256	1.017	107	1.019
Jan-14	319	1.019	1,282	1.021	110	1.028
Feb-14	329	1.031	1,313	1.024	110	1.000
Mar-14	337	1.024	1,355	1.032	111	1.009
Apr-14	343	1.018	1,389	1.025	112	1.009
May-14	357	1.041	1,417	1.020	113	1.009
Jun-14	368	1.031	1,457	1.028	115	1.018
Jul-14	373	1.014	1,498	1.028	116	1.009
Aug-14	381	1.021	1,544	1.031	117	1.009
Sep-14	385	1.010	1,568	1.016	118	1.009
Oct-14	387	1.005	1,591	1.015	119	1.008
Nov-14	389	1.005	1,602	1.007	119	1.000
Dec-14	393	1.010	1,614	1.007	121	1.017
Jan-15	396	1.008	1,638	1.015	121	1.000
Feb-15	398	1.005	1,654	1.010	121	1.000
Mar-15	400	1.005	1,678	1.015	122	1.008
Apr-15	406	1.015	1,692	1.008	122	1.000
May-15	408	1.005	1,698	1.004	122	1.000
Jun-15	409	1.002	1,703	1.003	122	1.000
Jul-15	409	1.000	1,704	1.001	123	1.000
Aug-15	409	1.000	1,719	1.009	123	1.008
Sep-15	410	1.002	1,731	1.007	123	1.000
Oct-15	410	1.000	1,740	1.005	123	1.000
Nov-15	410	1.000	1,749	1.005	124	1.000
Dec-15	412	1.005	1,759	1.006	124	1.008
Jan-16	414	1.005	1,767	1.005	124	1.000
Feb-16	414	1.000	1,778	1.006	124	1.000
Mar-16	415	1.002	1,785	1.004	124	1.000
Apr-16	415	1.000	1,793	1.004	124	1.000
May-16	415	1.000	1,804	1.006	124	1.000
Jun-16	416	1.001	1,814	1.006	125	1.004
Jul-16	416	1.001	1,824	1.006	125	1.004
Aug-16	417	1.001	1,834	1.005	126	1.004
Sep-16	417	1.001	1,844	1.005	126	1.004
Oct-16	418	1.001	1,854	1.005	127	1.004
Nov-16	418	1.001	1,864	1.005	127	1.004
Dec-16	419	1.001	1,874	1.005	128	1.004
Jan-17	419	1.000	1,884	1.000	128	1.000
Feb-17	420	1.000	1,894	1.000	129	1.000
Mar-17	420	1.000	1,904	1.000	129	1.000
<b>Ultimate</b>	<b>420</b>		<b>1,968</b>		<b>129</b>	

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Figure E.1 – Average Payment per Active Lost Rent Claim

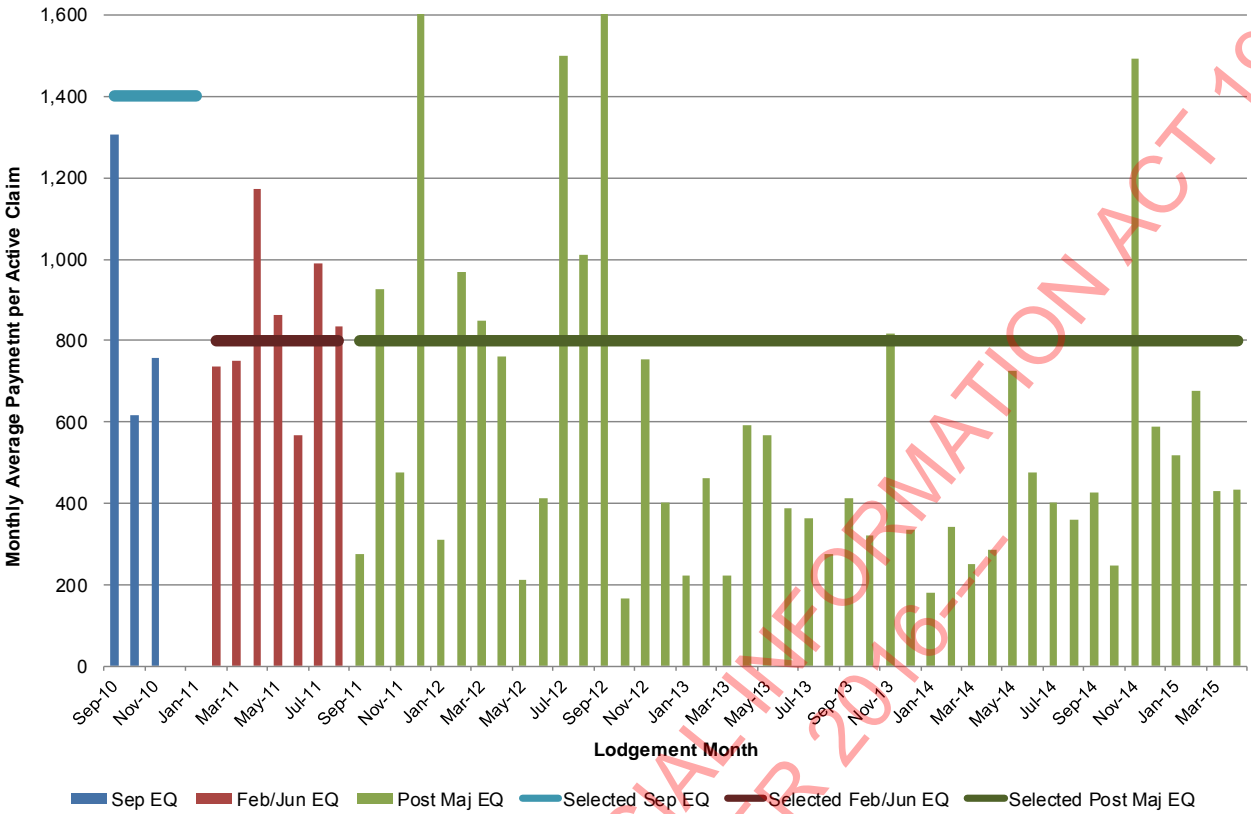


Figure E.2 – Cumulative Lost Rent Finalisations

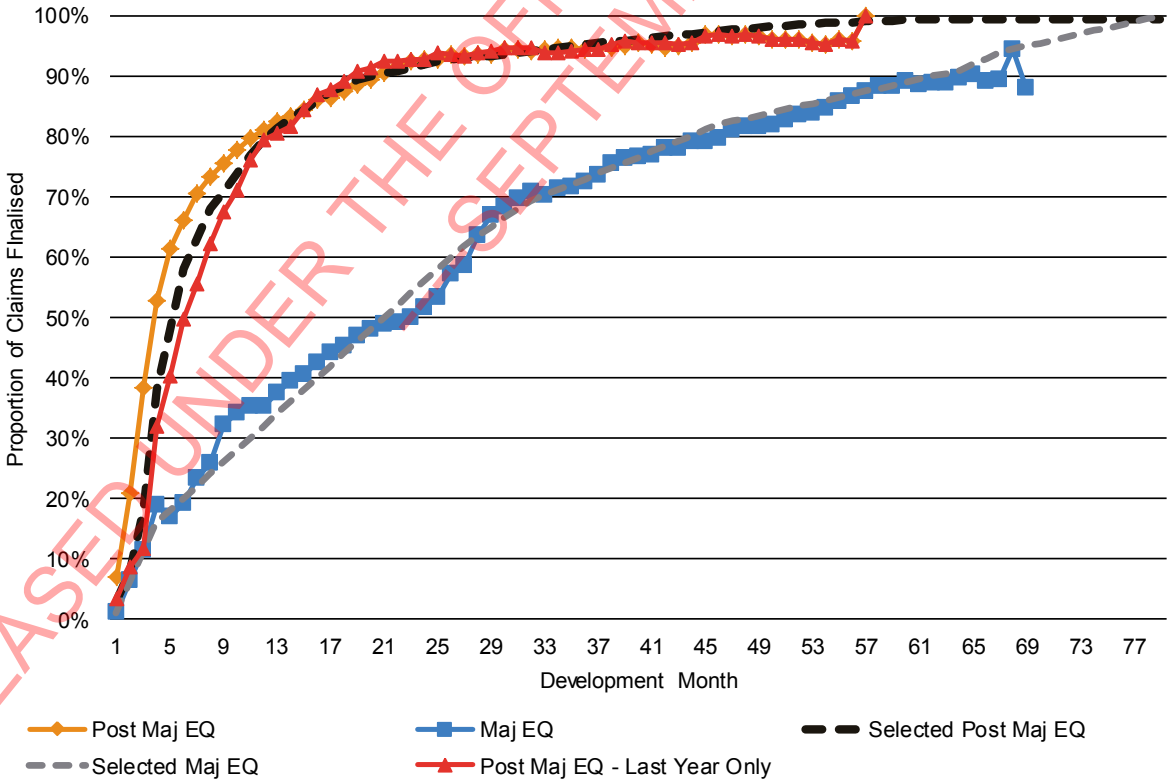


Table E.2 – Lost Rent Implied Payment Pattern for Future Claims

Implied Payment Pattern for Post Major EQ Claims	
Payment Month	Payment
1	776
2	736
3	656
4	496
5	416
6	336
7	296
8	256
9	232
10	208
11	184
12	164
13	148
14	136
15	124
16	112
17	100
18	92
19	84
20	80
21	76
22	72
23	68
24	64
25	60
26	58
27	56
28	54
29	52
30	50
31	48
32	46
33	44
34	42
35	40
36	38
37	36
38	34
39	32
40	30
41	28
42	26
43	25
44	23
45	22
46	20
47	18
48	17
49	15
50	14
51	12
52	11
53	10
54	10
55	9
56	8
57	7
58	6
59	6
60	5
61	5
<b>Future Selected</b>	<b>5,000</b>

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E.2 Others

Table E.3 – Contents Average Claim Size and Numbers

Month	Contents											
	Claims						Size					
	Cat 93		Cat 106		Cat 112		Cat 93		Cat 106		Cat 112	
	Valid Claims	Chain Ladder Factor	Valid Claims	Chain Ladder Factor	Valid Claims	Chain Ladder Factor	Average Size	Chain Ladder Factor	Average Size	Chain Ladder Factor	Average Size	Chain Ladder Factor
Nov-11	275	1.022	703	1.067	35	1.094	4,965	0.987	14,651	0.974	3,613	1.380
Dec-11	278	1.011	748	1.064	38	1.086	4,928	0.993	14,238	0.972	3,334	0.923
Jan-12	280	1.007	776	1.037	42	1.105	4,913	0.997	13,955	0.980	3,617	1.085
Feb-12	285	1.018	792	1.021	46	1.095	4,912	1.000	13,945	0.999	3,524	0.974
Mar-12	288	1.011	810	1.023	47	1.022	4,927	1.003	13,830	0.992	3,468	0.984
Apr-12	292	1.014	825	1.019	48	1.021	4,987	1.012	13,722	0.992	3,418	0.986
May-12	295	1.010	834	1.011	48	1.000	4,949	0.992	13,735	1.001	3,471	1.016
Jun-12	296	1.003	841	1.008	50	1.042	4,932	0.997	13,642	0.993	3,359	0.968
Jul-12	300	1.014	849	1.010	50	1.000	4,898	0.993	13,577	0.995	3,359	1.000
Aug-12	300	1.000	862	1.015	51	1.020	4,913	1.003	13,561	0.999	3,311	0.986
Sep-12	300	1.000	870	1.009	52	1.020	4,913	1.000	13,515	0.997	3,410	1.030
Oct-12	300	1.000	870	1.000	53	1.019	4,913	1.000	13,529	1.001	3,346	0.981
Nov-12	303	1.010	873	1.003	53	1.000	4,893	0.996	13,485	0.997	3,346	1.000
Dec-12	304	1.003	874	1.001	53	1.000	4,884	0.998	13,520	1.003	3,346	1.000
Jan-13	307	1.010	881	1.008	53	1.000	4,902	1.004	13,436	0.994	3,346	1.000
Feb-13	309	1.007	887	1.007	53	1.000	4,975	1.015	13,403	0.998	3,377	1.009
Mar-13	311	1.006	893	1.007	54	1.019	5,016	1.008	13,414	1.001	3,315	0.981
Apr-13	314	1.010	895	1.002	54	1.000	5,049	1.007	13,386	0.998	3,315	1.000
May-13	319	1.016	901	1.007	54	1.000	4,986	0.988	13,334	0.996	3,315	1.000
Jun-13	319	1.000	907	1.007	55	1.019	5,014	1.006	13,353	1.001	4,630	1.397
Jul-13	319	1.000	915	1.009	55	1.000	5,014	1.000	13,353	1.000	4,630	1.000
Aug-13	321	1.006	938	1.025	55	1.000	5,018	1.001	13,174	0.987	4,630	1.000
Sep-13	322	1.003	951	1.014	55	1.000	5,013	0.999	13,045	0.990	4,630	1.000
Oct-13	324	1.006	961	1.011	57	1.036	4,998	0.997	13,008	0.997	4,742	1.024
Nov-13	327	1.009	970	1.009	57	1.000	5,139	1.028	12,957	0.996	4,742	1.000
Dec-13	327	1.000	983	1.013	57	1.000	5,139	1.000	12,943	0.999	4,742	1.000
Jan-14	327	1.000	989	1.006	57	1.000	5,139	1.000	12,911	0.998	4,742	1.000
Feb-14	328	1.003	993	1.004	58	1.018	5,128	0.998	12,907	1.000	4,830	1.018
Mar-14	331	1.009	1,007	1.014	58	1.000	5,099	0.994	12,811	0.993	4,830	1.000
Apr-14	331	1.000	1,013	1.006	59	1.017	5,158	1.012	12,748	0.995	4,814	0.997
May-14	335	1.012	1,019	1.006	61	1.034	5,214	1.011	12,695	0.996	4,814	1.000
Jun-14	337	1.006	1,040	1.021	61	1.000	5,223	1.002	12,553	0.989	4,814	1.000
Jul-14	341	1.012	1,078	1.037	61	1.000	5,236	1.002	12,334	0.983	4,814	1.000
Aug-14	347	1.018	1,117	1.036	62	1.016	5,207	0.995	12,003	0.973	4,819	1.001
Sep-14	349	1.006	1,131	1.013	62	1.000	5,214	1.001	11,926	0.994	4,819	1.000
Oct-14	351	1.006	1,145	1.012	63	1.016	5,184	0.994	11,831	0.992	4,934	1.024
Nov-14	352	1.003	1,160	1.013	63	1.000	5,194	1.002	11,738	0.992	4,934	1.000
Dec-14	353	1.003	1,169	1.008	63	1.000	5,234	1.008	11,743	1.000	4,934	1.000
Jan-15	356	1.008	1,170	1.001	64	1.016	5,199	0.993	11,760	1.001	4,985	1.010
Feb-15	356	1.000	1,177	1.006	64	1.000	5,203	1.001	11,694	0.994	4,985	1.000
Mar-15	360	1.011	1,187	1.008	64	1.000	5,179	0.995	11,656	0.997	4,985	1.000
Apr-15	362	1.006	1,196	1.008	64	1.000	5,418	1.046	11,634	0.998	4,985	1.000
May-15	363	1.003	1,205	1.008	64	1.000	5,407	0.998	11,583	0.996	4,985	1.000
Jun-15	363	1.000	1,216	1.009	64	1.000	5,407	1.000	11,569	0.999	4,985	1.000
Jul-15	364	1.003	1,221	1.004	64	1.000	5,394	0.998	11,576	1.001	4,985	1.000
Aug-15	365	1.003	1,233	1.010	64	1.000	5,379	0.997	11,533	0.996	4,985	1.000
Sep-15	367	1.005	1,242	1.007	64	1.000	5,423	1.008	11,502	0.997	4,985	1.000
Oct-15	368	1.003	1,248	1.005	64	1.000	5,549	1.023	11,471	0.997	4,985	1.000
Nov-15	369	1.003	1,256	1.006	64	1.000	5,541	0.999	11,400	0.994	4,985	1.000
Dec-15	371	1.005	1,262	1.005	64	1.000	5,511	0.995	11,374	0.998	4,985	1.000
Jan-16	373	1.005	1,271	1.007	64	1.000	5,666	1.028	11,366	0.999	4,985	1.000
Feb-16	373	1.000	1,279	1.006	64	1.000	5,666	1.000	11,347	0.998	4,985	1.000
Mar-16	373	1.000	1,282	1.002	64	1.000	5,666	1.000	11,345	1.000	4,985	1.000
Apr-16	374	1.003	1,288	1.005	64	1.000	5,673	1.001	11,318	0.998	4,985	1.000
May-16	374	1.000	1,291	1.002	64	1.000	5,673	1.000	11,329	1.001	4,985	1.000
Jun-16	375	1.003	1,297	1.005	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Jul-16	376	1.003	1,303	1.005	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Aug-16	377	1.003	1,309	1.005	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Sep-16	378	1.003	1,315	1.005	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Oct-16	379	1.003	1,321	1.005	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Nov-16	380	1.003	1,327	1.005	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Dec-16	381	1.003	1,333	1.005	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Jan-17	382	1.003	1,337	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Feb-17	383	1.003	1,341	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Mar-17	384	1.003	1,345	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Apr-17	385	1.003	1,349	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
May-17	386	1.003	1,353	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Jun-17	387	1.003	1,357	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Jul-17	388	1.003	1,361	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Aug-17	389	1.003	1,365	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Sep-17	390	1.003	1,369	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Oct-17	391	1.003	1,373	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Nov-17	392	1.003	1,377	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000
Dec-17	393	1.003	1,381	1.003	64	1.000	5,673	1.000	11,329	1.000	4,985	1.000

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## F Other Factors

The Proteus model directly provides a forecast of construction starts in each future month. The relevant payments relating to the construction are triggered by a series of milestones before and after construction work commences. The assumed payment pattern for Arrow Managed Over Caps corresponds directly to the Proteus construction projections. Payments are spread out over a number of months following the date the building contract is expected to be signed. Details of the determination of the payment pattern for Arrow Managed Over Caps are as follows.

Table F.1- Cost Allocation By Project Stream



9(2)(i)

Table F.2- Payment Pattern

Month	Group Home Builds Payment Pattern	Designer Builds Payment Pattern	All Rebuilds Payment Pattern	Repairs Payment Pattern	Multi Unit Builds Payment Pattern	Repairs + MUB Payment Pattern	Cash / Repurchase Pattern	Out of Scope Pattern	Lost Rent Pattern	Temp Accom Pattern	Contents Pattern	Vehicles Costs Pattern	Other Pattern	Arrow Costs Pattern
Jul-16											8.31%			5.85%
Aug-16											7.71%			5.85%
Sep-16											7.10%			5.85%
Oct-16											6.45%			5.85%
Nov-16											6.24%			5.85%
Dec-16											5.75%			5.85%
Jan-17											5.23%			5.38%
Feb-17											4.94%			5.38%
Mar-17											4.70%			5.38%
Apr-17											4.45%			5.38%
May-17											4.19%			5.38%
Jun-17											3.93%			5.38%
Jul-17											3.68%			3.70%
Aug-17											3.40%			3.70%
Sep-17											3.11%			3.70%
Oct-17											2.81%			3.70%
Nov-17											2.49%			3.70%
Dec-17											2.19%			3.70%
Jan-18											1.91%			1.74%
Feb-18											1.66%			1.74%
Mar-18											1.43%			1.74%
Apr-18											1.23%			1.74%
May-18											1.06%			1.74%
Jun-18											0.91%			1.74%
Jul-18											0.79%			
Aug-18											0.68%			
Sep-18											0.60%			
Oct-18											0.52%			
Nov-18											0.45%			
Dec-18											0.39%			
Jan-19											0.34%			
Feb-19											0.29%			
Mar-19											0.24%			
Apr-19											0.20%			
May-19											0.16%			
Jun-19											0.12%			
Jul-19											0.10%			
Aug-19											0.07%			
Sep-19											0.06%			
Oct-19											0.04%			
Nov-19											0.03%			
Dec-19											0.02%			
Jan-20											0.01%			
Feb-20											0.01%			
Mar-20											0.01%			
Apr-20											0.00%			
May-20											0.00%			
Jun-20											0.00%			

Table F.3 - Selected Future Inflation Rates

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

Quarter	Treasury National Forecast (% pa.)	Selected - Canterbury (% pa.)
Jun-16	4.6%	3.0%
Sep-16	4.3%	3.0%
Dec-16	5.2%	3.0%
Mar-17	4.2%	3.0%
Jun-17	3.4%	3.0%
Sep-17	3.0%	3.0%
Dec-17	3.1%	3.0%
Mar-18	3.0%	3.0%
Jun-18	3.1%	3.0%
Sep-18	3.2%	3.0%
Dec-18	3.2%	3.0%
Mar-19	3.3%	3.0%
Jun-19	3.4%	3.0%



Table F.4 – Discounting Rates

Month	Discounting	
	Spot Rate	Discount Factor
Jul-16	2.23%	0.999
Aug-16	2.22%	0.997
Sep-16	2.21%	0.995
Oct-16	2.20%	0.994
Nov-16	2.19%	0.992
Dec-16	2.18%	0.990
Jan-17	2.17%	0.988
Feb-17	2.16%	0.987
Mar-17	2.15%	0.985
Apr-17	2.14%	0.983
May-17	2.13%	0.982
Jun-17	2.12%	0.980
Jul-17	2.11%	0.978
Aug-17	2.10%	0.977
Sep-17	2.09%	0.975
Oct-17	2.08%	0.974
Nov-17	2.08%	0.972
Dec-17	2.07%	0.971
Jan-18	2.06%	0.969
Feb-18	2.06%	0.967
Mar-18	2.05%	0.966
Apr-18	2.05%	0.964
May-18	2.04%	0.963
Jun-18	2.03%	0.961
Jul-18	2.03%	0.960
Aug-18	2.03%	0.958
Sep-18	2.02%	0.957
Oct-18	2.02%	0.955
Nov-18	2.01%	0.954
Dec-18	2.01%	0.952
Jan-19	2.01%	0.951
Feb-19	2.01%	0.949
Mar-19	2.00%	0.948
Apr-19	2.00%	0.946
May-19	2.00%	0.945
Jun-19	2.00%	0.943
Jul-19	2.00%	0.942
Aug-19	2.00%	0.940
Sep-19	2.00%	0.938
Oct-19	2.00%	0.937
Nov-19	2.00%	0.935
Dec-19	2.00%	0.934
Jan-20	2.00%	0.932
Feb-20	2.00%	0.931
Mar-20	2.00%	0.929
Apr-20	2.00%	0.928
May-20	2.01%	0.926
Jun-20	2.01%	0.924

## G Accounting Disclosures

**Table G. 1- Outstanding Earthquake Claims**

	Jun-16		Jun-15	
	Group	Company	Group	Company
	\$000	\$000	\$000	\$000
Outstanding claims	████	████	████	████
Risk margin	████	████	████	████
Claims handling costs	████	████	████	████
	████	████	████	████

**Table G.2 - Claims Development**

9(2)(i) and 9(2)(j)	Total \$000
Discounted central estimate	████
Claims handling expense	████
Risk margin	████
Gross outstanding claims liabilities	████
Reinsurance receivables (refer Note 17)	████
Net outstanding claims liabilities (refer Note 3)	████

**Table G.3 - Key Actuarial Assumptions - Earthquake**

	Jun-16	Jun-15
	Company	Company
Future Inflation		
Building Cost	████%	████%
Out of Scope	████%	████%
Temporary Accommodation	████%	████%
Other cover types	████%	████%
Claims Handling Expenses	████%	████%
Discount Rate	████%	████%
Risk margin – Outstanding Claims Liabilities	████%	████%
Risk margin – Liability Adequacy Test	n/a	n/a
Average weighted term to settlement from reporting date	0.87 yrs	1.37 yrs



**Table G.4 - Sensitivity Analysis – Impact of Changes in Key Variables**

	Movement in Variable	Net Outstanding claims	
		Jun-16	Jun-15
		\$000	\$000
Inflation Rate	+1% p.a.	5,941	15,379
	-1% p.a.	-5,920	-14,663
Discount Rate	+1% p.a.	-6,740	-14,209
	-1% p.a.	6,899	14,613
Claims Handling Expense	+10% higher	5,054	5,357
	10% lower	-5,054	-5,357
Risk Margin	1%	6,974	10,723
	-1%	-6,974	-10,723

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## H Non-EQ Claims

Table H.5 – Summary of Non-EQ Claims Provision

		Gross	less Paid	Gross	Claims	Gross	Reinsurance	Net	Risk	Recommended
		Incurred Cost	to 30 Jun	Outstanding	Handling	Central	Recoveries	Central	Margin	Provision
				Claims	Expense	Estimate		Estimate		
Events	CAT 121	1,843.0	(1,843.0)	0.0	100.8	100.8	0.0	100.8	0.0	100.8
	CAT 116	3,826.3	(3,815.1)	11.1	311.6	322.7	0.0	322.7	1.1	323.9
	CAT 115	1,629.9	(1,628.9)	1.0	106.4	107.4	0.0	107.4	0.1	107.5
	CAT 108	1,608.9	(1,608.9)	0.0	12.3	12.3	0.0	12.3	0.0	12.3
	CAT 105	1,815.8	(1,815.8)	0.0	30.7	30.7	0.0	30.7	0.0	30.7
	CAT 100	1,687.6	(1,687.6)	0.0	1.4	1.4	0.0	1.4	0.0	1.4
	CAT 98	415.9	(415.9)	0.0	8.2	8.2	0.0	8.2	0.0	8.2
	CAT 96	1,668.0	(1,668.0)	0.0	3.9	3.9	0.0	3.9	0.0	3.9
	CAT 90	920.8	(920.8)	0.0	13.5	13.5	0.0	13.5	0.0	13.5
	CAT 91	2,461.6	(2,461.6)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Per Risk Claims	1,758.8	(1,718.2)	40.6	0.4	40.9	(1,178.0)	(1,137.0)	0.0	(1,137.0)
	<b>Total</b>	<b>19,636.6</b>	<b>(19,583.9)</b>	<b>52.7</b>	<b>589.1</b>	<b>641.8</b>	<b>(1,178.0)</b>	<b>(536.2)</b>	<b>1.2</b>	<b>(534.9)</b>

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