

Christchurch Earthquake Liabilities

AMI Insurance

Update - 7 September 2011

Prepared by 

withheld under section 9(2)(a)



This Material



- This material sets out some briefing notes for AMI management on our latest revisions to the valuation of AMI's EQC losses
- This review has been largely triggered by the revelations by EQC last week of a large increase in the expected volumes of houses with over \$100k damage
- The opportunity has been taken at the same time to incorporate
 - ▶ The latest DRA experience (to 30 August)
 - ▶ Updated views on what parts of the DRA are to be included in estimating potential EQC contributions
 - ▶ Some estimates of potential savings generated where customers elect not to take rebuild option

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Recommended provisions



Provisions for Outstanding Claims as at 30 June 2011	Cat 93	Cat 106	Cat 112	Total			Previous Overall \$m	Overall Change
	4-Sep-10	22-Feb-11	13-Jun-11	Major	Minor	Overall		
	\$m	\$m	\$m	\$m	\$m	\$m		
Gross Incurred Cost in 30 June \$	573.9	1,048.6	82.6	1,705.0	17.7	1,722.7		
less paid to 30 June 2011	-33.5	-14.3	0.0	-47.8	-0.5	-48.3		
Gross Outstanding Claims								
In 30 June 2011 Values	540.4	1,034.2	82.6	1,657.2	17.2	1,674.4	1,614.6	59.8
Allowance for Future Inflation	32.0	59.5	4.3	95.8	0.7	96.5	87.5	8.9
Inflated Values	572.3	1,093.7	86.9	1,752.9	17.9	1,770.8	1,702.1	68.8
Discount to Present Value	-30.4	-59.2	-4.6	-94.1	-0.8	-95.0	-90.4	-4.5
OSC Discounted to 30 June 2011	541.9	1,034.5	82.3	1,658.8	17.1	1,675.9	1,611.7	64.2
Claims Handling	■	■	■	■	■	■	■	■
Gross Central Estimate	■	■	■	■	■	■	■	■
Catastrophe R/I Recoveries	-538.4	-569.9	-72.3	-1,180.7	-6.8	-1,187.5	-1,177.4	-10.0
Aggregate R/I Recoveries	0.0	-2.0	-4.1	-6.1	-2.0	-8.1	-8.1	0.0
Net Central Estimate	13.8	482.3	7.5	503.5	8.6	512.1	458.3	53.8
Risk Margin	■	■	■	■	■	■	■	■
Recommended provision	■	■	■	■	■	■	■	■

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- Changes result in an overall increase in provision of \$73m



Summary of Changes in valuation basis



- Overall Change:
 - Net Central Estimate +\$54m Provision +\$█m
- Which comprises (Approximate values only):
 - ▶ Responding to latest reported experience and latest DRA information including adjustments to definition of what is covered by EQC withheld under section 9(2)(b)(ii)
 - Net Central Estimate +\$67m Provision +\$█m
 - Main contributor is additional volume of Over cap properties
 - ▶ Allowing for anticipated savings on customers choosing other than rebuild option
 - Net Central Estimate -\$53m Provision -\$█m
 - Data on this aspect quite immature. Adopted basis probably conservative
 - ▶ Building in potential for additional Over cap claims to emerge (in response to analysis of information released by EQC)
 - Net Central Estimate +\$41m Provision +\$█m
 - While EQC data indicates that the number of houses with over \$100k damage is much higher than originally estimated, we expect the vast majority of these will involve damage which only “breach the cap” by up to \$75k. Hence, these will have much lower size than existing Over Cap claims

Revisions to DRA based model

Main Changes



- Claim Volumes
 - ▶ Volume of completed DRA's nearly 2300, compared 1700 at end of July
 - ▶ Increase in number of reported Over Cap properties from 5700 to 6100
 - ▶ Virtually no change in total number of AMI properties with damage
- Claim Size
 - ▶ EQC contribution calculation changed to encompass most parts of DRA costs. Now, only OOS costs and demolition or repairs are excluded when estimating what is covered by EQC
 - ▶ This acted to:
 - reduce the number of claims going Under Cap
 - increase expected EQC contribution
 - Reduce the overall net average claim size
- These changes increase the provision by \$[REDACTED]m, largely driven by the increased volume of over cap properties
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 - ▶ The cost allocated to the September event has seen the cost for this event increase (reason for this still being investigated, but any change here will not materially change the overall answer)

Savings due to Customer's selected settlement option



Table below summarises assumptions and estimates of ultimate savings. In the absence of definitive data on settlements made to date, the assumptions here may be on the conservative side, resulting in savings of \$53m

	Hills	Red	Orange	Green	White	WaiMak	Other	Total
Cash Out	0	11	6	4	0	9	1	31
Rebuild	141	773	278	181	0	269	61	1703
Repair	79	80	81	120	1	17	27	405
Under Cap	11	45	11	50	0	18	10	145
	231	909	376	355	1	313	99	2284
Not Yet Done	715	459	718	1646	10	73	209	3830
Total	946	1368	1094	2001	11	386	308	6114
Rebuilds								
No. rebuilds done	141	784	284	185	0	278	62	1734
Future	436	396	542	858	0	65	131	2428
	577	1180	826	1043	0	343	193	4162
% Choosing Buy new house / cash	10%	50%	25%	5%	0%	45%	5%	26%
No Subject to saving	58	590	207	52	-	154	10	1,070
Saving per prop \$000	40	40	40	40	0	40	40	40
Total saving \$m	2,308	23,600	8,260	2,086	0	6,174	386	42,814
Repairs								
No. repairs done	79	80	81	120	1	17	27	405
Future repairs	245	40	155	556	10	4	57	1067
	324	120	236	676	11	21	84	1472
% Choosing Option 2	0%	100%	50%	0%	0%	90%	0%	
No Subject to saving	-	120	118	-	-	19	-	257
Saving per prop \$000	25	25	25	25	25	25	25	25
Total saving \$m	0	4,800	4,720	0	0	756	0	10,276
Total savings	2,308	28,400	12,980	2,086	0	6,930	386	53,090



Impact of EQC View of Damaged Houses

[REDACTED]

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Summary of EQC Loss position



Gleaned from press releases

	EQC Losses \$m		
	Gross	RI	Net
4-Sep-10	4,020	2,500	1,520
22-Feb-11	6,170	2,500	3,670
June et al	1,420	-	1,420
	11,610	5,000	6,610
Claims Handling			400
Other			60
			7,070

• Notes

- ▶ Sep 10 event running close to top of EQC's r/l cover
- ▶ Feb 11 event running about 50% above r/l limit
- ▶ These results similar to AMI position relative to its r/l covers

Guess of Breakdown of Gross Cost

Total from above	11,610								
less									
Land Damage	1,800	From press release							
Contents	1,000	guess, needs to be confirmed							
Other	-	is there anything else?							
	2,800								
Buildings Damage	8,810	feels high?							

Comments:

presume these come from actuarial review
net of GST

Include or exclude risk margins?

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EQC Statistical Survey



- **Survey basis**

- ▶ Study is based on extrapolating results from a sample of 732 EQC assessments to estimate overall costs for 170,000 damaged houses
- ▶ Survey design aims to reduce bias by stratifying the sample across 72 cells (12 regions * 6 categories of damage severity) where damage severity is as classified by the EQC rapid assessments
- ▶ Because the sampling is designed to be unbiased across the full range of EQC liabilities, there are limited numbers of claims sampled in region where AMI's liabilities mainly sit (i.e. the seriously damaged houses). For example, there are only 155 assessments for properties which were classified as Severe or Rebuild – a very small number on which to base a view of average claim size

- Care therefore needed in placing too much weight on these results for assessing implications for AMI's liabilities. This point is emphasised when some of the key findings are placed in context.
- In this regard, it is worth noting that EQC's actuary did not rely at all on findings in this report in valuing EQC's liabilities.

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EQC Study – key findings



- Some of key findings summarised below
- Survey produces
 - ▶ Higher estimate of no of over cap properties
 - ▶ But much lower average size
 - ▶ Implies an average EQC contribution on over cap properties of ~\$123k
- Direct use of the \$value of insurer over cap costs to “imply” AMI share would produce AMI liability of around \$800m – much lower than what AMI valuation indicates

<i>Derived from EQC Statistical Study</i>				
	Number	Size 000s	Cost \$m	
Total number of houses in Ch	187,000			From EQC analysis
Claim Frequency	0.0007			From EQC survey
Houses with Damage Claims	169,609			
No insured by AMI with damage	50,700	30%		AMI share app
	Number	Size 000s	Cost \$m	
No with \$0-\$10k damage	62,000	2.700	167	By deduction
No with \$10k -<\$100k damage	100,000	27.946	2,795	From EQC stat study p22
No of Houses Over Cap (Cost of 1st Cap)	25,000	100.000	2,500	Derived from additional information supplied by D. Baird
Added 2nd event EQC contributions	25,000	23.000	575	Derived from EQC statistical study (p.11)
			6,037	Total in EQC study (p.11) -lower than EQC press release?
Estimated insurer over cap costs	25,000	99.28	2,482	Total as estimated on p11 of EQC report
This implies gross average size for over cap claims of		222.28		Which looks very low

Analysis of EQC experience on AMI insured properties - approach



- EQC has largely completed its fieldwork for September claims with any indication of material amounts of damage
- In the last 2 months, EQC has completed a significant volume of assessments for the February event
- We have examined the EQC status of AMI insured properties and extrapolated the emerging patterns to estimate the number of properties which EQC might ultimately classify as Over Cap, using two bases:
 - ▶ Basis 1: the patterns on completed EQC assessments is repeated for all open claims (i.e. no bias in damage severity by order of assessment – in our view a conservative assumption)
 - ▶ Basis 2: the proportions of open claims classified as Over Cap will be materially less (i.e. reflecting the fact that there has been a priority process by which assessments have been done)

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Potential Additional Over Cap Claims Projection of AMI experience



Basis 1: Open claims develop similar to finalised claims

Current AMI Claim Type (Multiple Items)	Projection Basis 1: Open claims similar to finalised experience				
	EQC Over Cap Category			Under Cap	Total
	Both	Sep Only	Feb Only		
No of Properties					
Finalised	2,116	558	828	13,086	16,588
Serious	1,145	316	390	977	2,828
Moderate	763	164	271	3,238	4,436
Minor	208	78	167	8,871	9,324
	0	0	0	0	0
Partially Finalised	1,456	324	562	9,495	11,836
Serious	729	192	238	864	2,023
Moderate	596	93	238	3,360	4,288
Minor	130	38	85	5,271	5,525
	0	0	0	0	0
Open	1,130	101	590	19,623	21,444
Serious	360	17	180	762	1,320
Moderate	552	36	249	4,458	5,295
Minor	218	48	161	14,402	14,829
	Projected Number of Over Cap properties				7,664

This projection is derived from EQC data on AMI insured properties by examining EQC's views of what proportion of claims are over cap and making assumptions about what will happen to claims where EQC assessments not yet complete



Over Cap Properties



Basis 2: Finalised claims are biased towards more severely damaged properties

Current AMI Claim Type (Multiple Items)	Projection Basis 2: Finalised experience biased to more serious damage				Total
	EQC Over Cap Category			Under Cap	
	Both	Sep Only	Feb Only		
No of Properties					
Finalised	2,116	558	828	13,086	16,588
Serious	1,145	316	390	977	2,828
Moderate	763	164	271	3,238	4,436
Minor	208	78	167	8,871	9,324
	0	0	0	0	0
Partially Finalised	1,294	151	410	9,981	11,836
Serious	726	91	189	1,017	2,023
Moderate	475	44	167	3,601	4,288
Minor	92	15	53	5,364	5,525
	0	0	0	0	0
Open	552	53	254	20,585	21,444
Serious	218	10	97	995	1,320
Moderate	242	18	106	4,929	5,295
Minor	92	26	51	14,660	14,829
	Projected Number of Over Cap properties				6,216

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Projection of EQC Classification - results



- Basis 1 produces an ultimate volume of properties classified by EQC as Over cap of around 7,700 – which is consistent with the EQC Survey’s results
- Basis 2 produces an ultimate volume of properties classified by EQC as Over cap of around 6,200 – which is not materially higher than the current volume with AMI
- There are however some quite big differences in the detail:
 - ▶ The EQC projection suggests that between 1,100 and 1,500 of the 6,100 properties currently classified as Over cap by AMI have been or will be classified by EQC as Under Cap
 - ▶ By comparison, the DRA experience suggests only about 400 of current Over Cap claims move to Under Cap
 - ▶ In the EQC projection, the reduction in Over Caps is more than offset by between 1,600 and 2,700 properties which are currently either OOS only or EQC only being classified by EQC as Over Cap
- These differences seem extreme and we therefore have some concerns about placing too much weight on the EQC data
- Nevertheless, the experience implied by the EQC assessments is at least directionally consistent with the increasing volumes of Over Cap properties which AMI has seen in the last month or so.
- We therefore believe it is prudent to make some allowance in the valuation for an additional flow of Over Cap claims

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Allowing for future Over Cap development

Adopted basis



- Our approach is still largely driven by AMI's own DRA experience, but
- In response, we have:
 - ▶ Continued to use the DRA experience to project the ultimate profile of properties currently classified as Over Cap by AMI
 - ▶ Adopted a "mid-range" estimate from the EQC projection to estimate the number of additional Over Cap properties which might emerge in the future
- Overall, we have allowed for EQC to ultimately classify as Over cap a total of about 7,000 AMI insured properties and hence to "trigger" a need for the policyholder to claim on AMI for the additional buildings damage
- Note that we would expect:
 - ▶ the majority of these to be "transfers" of properties currently classified by AMI as Out of Scope only and hence it is the incremental liability on top of the amount set aside for the OOS damage which needs to be added
 - ▶ The pattern apparent in existing DRA's will continue where Arrow's assessment is that there is a proportion of these claims which can be repaired within the EQC cap and hence AMI's liability on these would not change
- The following slide summarises our costing for the additional liability arising from this component.

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Additional Over Cap Activity

Projected Net Cost



- ‘Adopted’ basis assumes that these additional claims will be at the lower end of the claim size distribution. Our estimates have been based on blending DRA data with the EQC survey results. Note that we have assumed that the EQC estimate of damage excludes a number of elements which are normally included in a DRA estimate
- Our basis has allowed for:
 - ▶ 936 additional over cap properties which translates to:
 - 400 additional claims for September
 - 900 additional claims for February
 - ▶ The September claims are estimated to have an average net size of \$51k and February claims are estimated to have an average net size of \$33k
 - ▶ This produced an overall additional Over Cap cost of \$50m (before deduction of OOS liability already accounted for – which amounts to about \$13m)

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Reliances & Limitations



We have relied on the accuracy and completeness of all data and other information (qualitative, quantitative, written and verbal) provided to us for the purpose of this report, including data provided by the Earthquake Commission. We have not independently verified or audited the data but we have reviewed it for general reasonableness and consistency. It should be noted that if any data or other information is inaccurate or incomplete, we should be advised so that our advice can be revised, if warranted.

Limitations : Uncertainty

Because the information available at this early stage is very limited our assessment of the loss estimates for the Christchurch earthquakes is subject to significant uncertainty. Data is relatively sparse and there are also issues of data veracity. This uncertainty is in addition to the inherent uncertainty in any estimates of claim reserves which is due to the fact that the ultimate liability for a claim is subject to the outcome of events yet to occur. Deviations from our estimate, perhaps material, are normal and are to be expected.

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.

In our judgement, we have employed techniques and assumptions that are appropriate, and the conclusions presented herein are reasonable, given the information currently available. However, it should be recognised that future claim emergence will likely deviate, perhaps materially, from our estimates.

Limitations: Nature of Assumptions

In the absence of comparable past events from which development patterns could be drawn, and given the immaturity of the development of claims, there is considerable uncertainty surrounding most of the assumptions underlying the estimates set out in this document. The fact that specific point estimates are set out should not be interpreted as meaning that there is not considerable uncertainty attaching either to individual assumptions and/or the overall result.



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