

17 April 2013

Mr Peter Rose Chief Executive Officer Southern Response Earthquake Services Ltd 6 Show Place Christchurch 8149 **NEW ZEALAND** 

Dear Peter

Earthquake Claim Liabilities as at 31 March 2013

sked by Southern Response Forment of its insurance "ich emo" We have been asked by Southern Response Earthquake Services Limited ("SRES") to make an assessment of its insurance liabilities as at 31 March 2013. SRES is the Crownowned 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 letter is to provide an estimate of the earthquake claim liabilities for Southern Response Earthquake Services Limited ("SRES") as at 31 March 2013. This valuation is predominantly based on a roll forward of our 31 December 2012 valuation, with some changes to valuation assumptions where emerging experience, or new information in respect of emerging issues, suggests changes are appropriate.

We understand that this advice will be used by SRES in preparing its management accounts. This letter does not deal with the other non-earthquake retained events that were transferred from AMI Insurance Limited to SRES at the close of business on 5 April 2012.

#### Summary of Results

Table 1 summarises our estimates of SRES' earthquake liabilities at 31 March 2013. The line below the table indicates our estimate of the total amount which will be ultimately paid once all claims are settled (including payments already made but excluding SRES CHE expenses). This represents our central estimate of the ultimate liability which is recoverable under SRES's reinsurance treaties. Our recommended provisions incorporate a risk margin which we believe to be consistent with the requirements to establish provisions which incorporate at least a 75% probability of sufficiency.



#### Section 9(2)(b)(ii)

Table 1 - Recommended EQ Provisions at 31 March 2013

Provisions for Outstanding Claims as at	Cat 93	Cat 106	Cat 112		Total	otal	
31 Mar 2013	4-Sep-10	22-Feb-11	13-Jun-11	Major	Minor	Overall	
31 Wat 2013	\$m	\$m	\$m	\$m	\$m	\$m	
Gross Outstanding Claims							
In 31 Mar 2013 Values	306.6	1,012.1	43.3	1,362.0	26.2	1,388.2	
Allowance for Future Inflation	49.1	153.7	10.1	212.9	4.1	217.0	
Inflated Values	355.7	1,165.8	53.4	1,574.9	30.3	1,605.2	
Discount to Present Value	-10.7	-40.3	-1.9	-52.9	-0.9	-53.8	
OSC Discounted to 31 Mar 2013	345.0	1,125.5	51.5	1,522.0	29.5	1,551.4	
Claims Handling							
Gross Central Estimate							
Catastrophe R/I Recoveries	-329.9	-277.8	-49.2	-656.9	-15.0	-671.9	
Aggregate R/I Recoveries	0.0	0.0	0.0	0.0	0.0	0.0	
Net Central Estimate	32.5	904.2	4.9	941.6	15.9	957.5	
Risk Margin					<b>/</b>		
Recommended provision					-		
				~			
Inflated Gross Central Estimate	617	1,487	63	2,167	38	2,204	
(Incl paid to date, excl CHE)				4			

Revisions to apportionment across events emerging through the endorsement and joint review processes continue to result in a shift away from the September 2010 event to the February 2011 other events. The ultimate cost of the September 2010 event is now starting to approach SRES's reinsurance limit of \$600 million for this event.

If the final apportionment outcomes were to lead to a further shift away from September 2010 such that this event drops below \$600 million, there would be implications for the expected reinsurance recoveries, and therefore the net central estimate for all EQ events. In valuations to date, we have been simply allowing the reallocation to run its course without formally projecting what is likely to happen for properties yet to go through the joint review process. Given the number is now only \$17 million above the reinsurance limit, as part of the 30 June valuation, we believe it will appropriate to conduct a more formal projection of the ultimate position by taking a view on the potential ultimate outcomes for properties at 30 June 2013 which had yet to go through the review process.

Table 2 shows the main components of cost underpinning our overall estimate of SRES' ultimate earthquake liabilities.

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#### Section 9(2)(b)(ii)

Table 2 – Estimated Ultimate EQ Liabilities at 31 March 2013 **Primary Contributor to Movement Ultimate Outflows** Claims Cost (Excl Arrow) 3,010 2,976 34 Increase in OOS numbers, increased escalation Arrow's Costs SRES Claims Handling Ultimate Inflows 2 **EQC Contributions** 885 883 Reinsurance Recoveries 1,257 1.254 Minor re-allocation increase to June 2011 and Minor events Gross Outflow (net EQC. ex CHE) 2 252 2 219 32 Net Outflow (net of RI) 1.123 1.093 30 Gross Cum. paid (excl CHE) 80 689 609 Net Liability Central Estimate 948 10 Risk Margin Risk margin maintained at 14.2%, release of margin on payments made in the quarter offset increase Provision Required

Note: 31 December results restated based on correct treatment of EQC payments

The ultimate cost of claims (gross of EQC) has increased by \$34 million before reinsurance and \$30 million after reinsurance and EQC recoveries.

#### **Key Observations**

The increase in estimated liabilities mostly reflects upward pressure on escalation, as we have observed in both Canterbury area escalation data from Treasury as well as the most recent contract values.

Our expectation had been for escalation to be running at around 2% per quarter at this time, and ramping up to 2.5% by mid-2013. However, the latest available experience appears to have been running at 2.5%-3.0% per quarter for each of the last two quarters. As a result we have reflected the greater than expected escalation to increase the size of existing DRAs up to be consistent with contract values reflecting of the "the March quarter". We have also increased our allowance for escalation for the remainder of 2013.

The overall movement of \$34m in the gross ultimate reflects a few things –

- 550 more OOS property claims (+\$7m)
- Virtually unchanged numbers projection for over caps
- A small reduction (about 1%) in overcap claims cost due to movements in zone and repair/rebuild mix (-\$15m)
- An increase in average future inflation from 8.0% to 8.3% (+\$43m), which arises from assuming 10% per annum for the remainder of 2013 (effectively 2.5% per quarter) and retaining our previously adopted inflation assumptions thereafter.

With respect to other material assumptions that drive the valuation result, the emerging experience does not indicate a need for any changes to –

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- the volume of over cap properties
- the assumed level of EQC contributions
- savings from cash settled over cap properties
- minor events and other classes.

#### Land Remediation and Enhanced Foundation Costs

There remains additional uncertainty in regard to the division of responsibility (between EQC and the private insurer) for the costs involved in remediating land to a standard suitable for building on, particularly in TC3. Based on the expected cost of the proposed enhanced foundation solutions, we expect that the current allowance in DRAs of enhanced foundation for TC3 properties costs may be understated by as much 5-10%.

We understand that SRES is currently in discussions with the EQC regarding the division of responsibility for enhanced foundation costs (as an alternative to land remediation). If EQC the agrees to compensate customers for the cost of enhanced foundation solutions, there would be no financial impact from the cost enhanced foundations upon SRES' liabilities (and in fact SRES may experience savings relative to allowances in TC3 DRAs for enhanced foundations). Therefore, until there is clarity about what might be agreed with EQC on this issue, we believe it is appropriate to not adjust the existing valuation basis.

#### Hills Properties

There remains further uncertainty around the cost of engineering solutions for properties in the Hills area. It is emerging that the required solutions for Hills properties may be more complex than previously envisaged. We expect to have more clarity around the potential cost implications by 30 June.

#### Uncertainty of our Estimates

It should be noted that considerable uncertainty still surrounds the projection and valuation of SRES' EQ liabilities. In this regard, some points to be noted include:

- while SRES has progressed most of the way through the damage assessment phase, only a relatively small proportion of the overall incurred cost has been settled. While we have allowed for a "surge" of Over Cap claims from the EQC we note that there is considerable uncertainty around the ultimate impact that this "surge" may have
- the base of reliable information and the understanding of how various aspects will ultimately play out is still developing



• the run-off is, of course, still exposed to the "normal" sources of variability in claims experience; particularly the rate of building cost escalation in Canterbury. In the case of Canterbury, the sheer scale of the construction programme across both residential and commercial sectors and the complexity introduced by the interplay with the cover provided by EQC act to magnify the potential variability of ultimate outcomes (as compared to 'normal' residential property claims).

In response to inherent uncertainties, we have maintained our risk margin at 14.2% of the estimated liability (net of EQC contributions but gross of reinsurance recoveries). Under accounting standards, in response to the inherent uncertainty, it is expected that provisions will contain a margin sufficient to produce at least a 75% probability of sufficiency. While the unique nature of the Canterbury events makes it impossible to derive with any accuracy a precise probability for various levels of risk margin, we are of the view that the margin adopted is sufficient to produce a probability of sufficiency of at least 75%.

#### **Reliances and Limitations**

This letter has been prepared for the use of SRES for the stated purpose. We understand that a copy of the letter may be provided to the Board of SRES. No other use of, nor reference to, our letter other than as required by the Crown, should be made without prior written consent from Finity, nor should the whole or part of our letter be disclosed to any unauthorised person.

Third parties, whether authorised or not to receive this letter, should recognise that Finity will not be liable for any losses or damages howsoever incurred by the third party as a result of them receiving, acting upon or relying upon any information or advice contained in the report.

Our letter should be considered as a whole. Members of Finity staff are available to answer any queries, and the reader should seek that advice before drawing conclusions on any issue in doubt.

Yours sincerely

Section 9(2)(a)





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

# Valuation Results Earthquake Liabilities at 31 March 2013

Southern Response Earthquake Services

17 April 2013

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### **Today's Presentation**

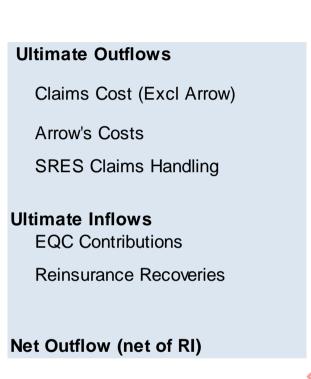
"Headline" Results Adequacy of current DRAs

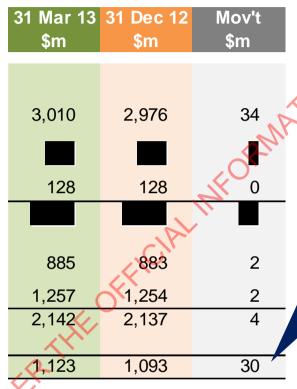
Recent and future Escalation

Implications for Valuation



#### **Headline Numbers**





This increase offsets the release of margins which would have occurred on payments made

Section 9(2)(b)(ii)

- Change in ultimate outflows driven by increase in OOS numbers and higher escalation
- Minor re-allocation of costs to June 2011 and minor events leading to increase in RI recoveries

#### **Ultimate Claim Volumes**

	All	Events Combine	ed
Properties with Buildings Claims	Valuation at 31 March 2013	Valuation at 31 December 2012	Movement
Over Cap			
No Recorded in Data used for valuation	6,983	6,915	68
Future additions	213	293	-80
Estimated Ultimate No to be assessed	7,196	7,208	-12
No assessed as under cap	-317	-330	13
Ultimate No with Over cap damage	6,879	6,878	1
Out of Scope Damage Only			
No in Database	20,772	20,383	389
Estimated further additions	717	553	164
	21,489	20,936	553
Total No of Properties with Claims	28,368	27,813	554

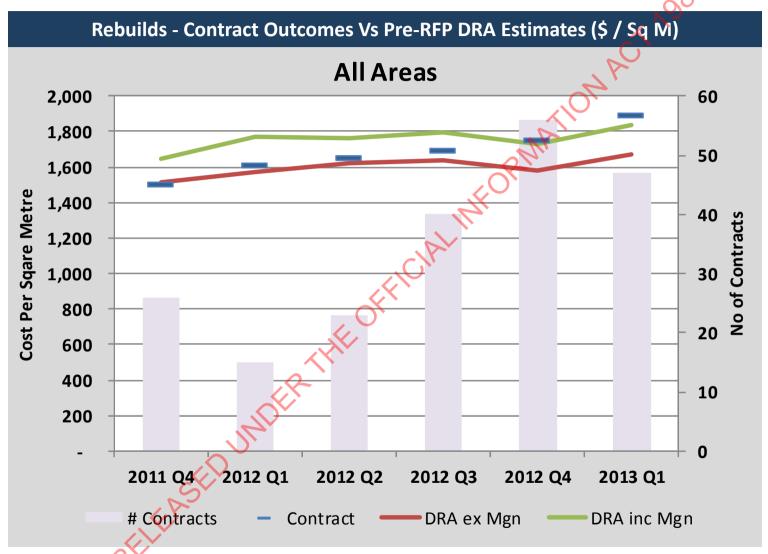
- Over Cap Unchanged
- > OOS Increased allowance in light of continued new reports (+\$6m)

### DRA "Key Phases"

Customer • Scope agreed • Arrow-managed or not? Decision Pre-RFP Incidental revisions to scope and cost Full review of scope **RFP**  Cost adjusted to current values Contract Issued Real test of market conditions Completion Final outcome



### **Contract Outcomes: Escalation apparent**



Note: Costs only include those covered by building contract (i.e. excludes costs such as design and consent fees, Arrow costs)



## Adequacy of the current DRAs Patterns in RFP Revisions

- RFP revisions in range 7-11%
  - with higher increases for DRA's last revised 5+ quarters ago

- Contract outcomes typically around 8-10% better than the RFP DRAs
  - roughly equivalent to contingency margin

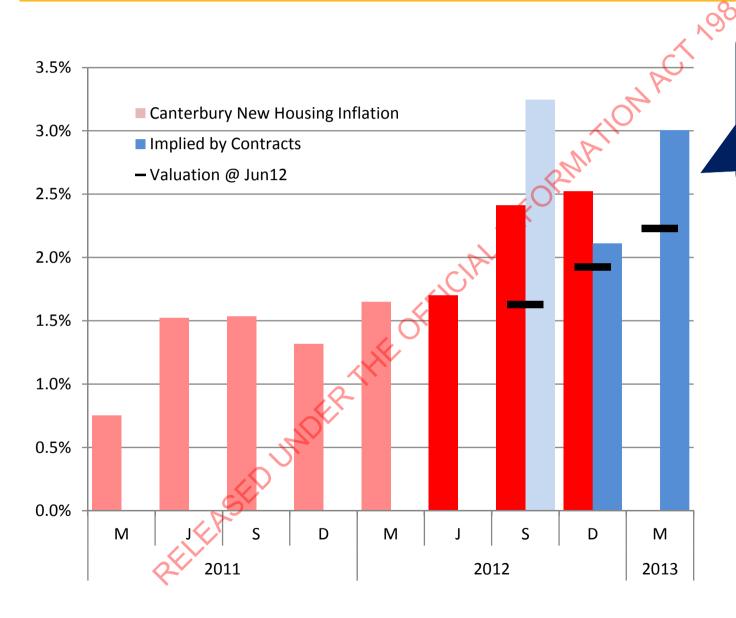
				·	
			RFP Q	uarter	
		Jun-12	Sep-12	Dec-12	Mar-13
ion	0	4	4%		
No of Otrs Since Revision	1	-3%	8%	5%	1%
. Re	2	(A)	8%	7%	19%
nce	3	5 Mi.	7%	6%	6%
s Si	4	15%	9%	7%	6%
Otr	5		15%	14%	6%
Jo	6			23%	9%
No	7				11%
Total		6%	9%	11%	<b>7</b> %

		Contract Quarter								
		Jun-12	Sep-12	Dec-12	Mar-13					
S	0		-11%	-10%	-9%					
Qtrs RFP	1		-8%	-10%	-8%					
of	2				-8%					
No (	3				-3%					
Total			-10%	-10%	-8%					

On balance, net movements from pre-RFP DRA to contracted value have been broadly offsetting



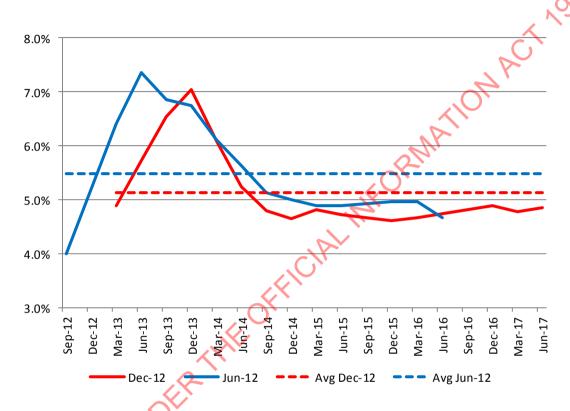
### **Recent Trends in Escalation**



Movement in contract values not dissimilar to NZ Stats figures



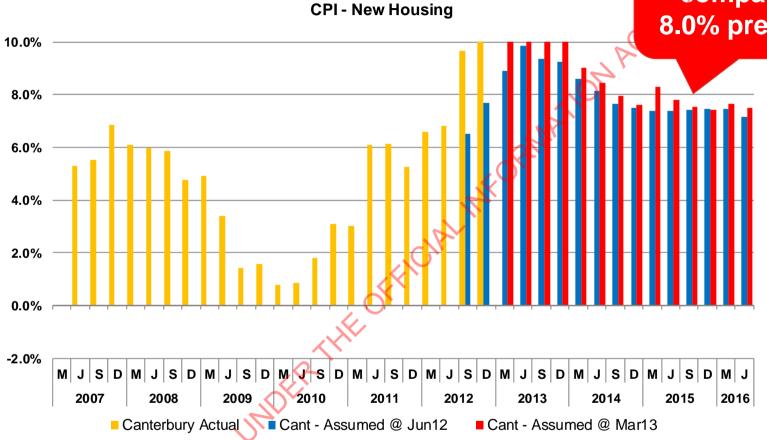
### **Demand surge – how long might it persist?**



- Treasury forecasts of escalation at a national level -
  - Reduced but driven by reduction in the historic series
  - The peak has been pushed back to 2<sup>nd</sup> half 2013 the peak is primarily driven by escalation expected in the Canterbury area and Treasury expect this to be later than previously anticipated

#### **Future Escalation**

Averages 8.3% compared to 8.0% previously



Increased assumption for remainder of 2013, shape held flat at 10% pa until Treasury's expected peak in 4<sup>th</sup> quarter



### **Main Areas of Uncertainty**

- Future Escalation
  - Has rate reached its peak yet?
  - How long will demand surge persist for?
- Enhanced foundations
  - Costs may be higher than allowed for in DRA's
    - → FORS process will give clearer view by June valuation
  - Land damage compensation
    - Potential upside for EQC contributions to offset enhanced foundation costs
- Hills Properties
  - Engineering solutions more complex than envisaged in DRA's



### **Other Factors**

- Unchanged view on
  - Savings on Cash Settlements
  - EQC Contributions
  - OOS claim size
  - Payment pattern (but dependent on "ramp up" happening)
  - Minor events / minor covers
- Discount Rate
  - Minor increase in discount rate



### **Results Summary**

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Cat 93	Cat 106	Cat 112	4	Total	
4-Sep-10	22-Feb-11	13-Jun-11	Major	Minor	Overall
\$m	\$m	\$m	\$m	\$m	\$m
306.6	1,012.1	43.3	1,362.0	26.2	1,388.2
49.1	153.7	10.1	212.9	4.1	217.0
355.7	1,165.8	53.4	1,574.9	30.3	1,605.2
-10.7	-40.3	-1.9	-52.9	-0.9	-53.8
3 <u>45.0</u>	1,1 <u>25.5</u>	5 <u>1.5</u>	1,5 <u>22.0</u>	2 <u>9.5</u>	1,5 <u>51.4</u>
-329.9	-277.8	-49.2	-656.9	-15.0	-671.9
0.0	0.0	0.0	0.0	0.0	0.0
32.5	904.2	<u>4.9</u>	941.6	1 <u>5.9</u>	957.5
617	1,487	63	2,167	38	2,204
	4-Sep-10 \$m 306.6 49.1 355.7 -10.7 345.0 -329.9 0.0	4-Sep-10     22-Feb-11       \$m     \$m       306.6     1,012.1       49.1     153.7       355.7     1,165.8       -10.7     -40.3       345.0     1,125.5       -329.9     -277.8       0.0     0.0       32.5     904.2	4-Sep-10     22-Feb-11     13-Jun-11       \$m     \$m       306.6     1,012.1     43.3       49.1     153.7     10.1       355.7     1,165.8     53.4       -10.7     -40.3     -1.9       345.0     1,125.5     51.5       -329.9     -277.8     -49.2       0.0     0.0     0.0       32.5     904.2     4.9	4-Sep-10 \$m         22-Feb-11 \$m         13-Jun-11 \$m         Major \$m           306.6 49.1 153.7 10.1 212.9 355.7 1,165.8 -10.7 -40.3 -1.9 -52.9 345.0 1,125.5 51.5 1,522.0           345.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	4-Sep-10 \$m         22-Feb-11 \$m         13-Jun-11 \$m         Major \$m         Minor \$m           306.6         1,012.1         43.3         1,362.0         26.2           49.1         153.7         10.1         212.9         4.1           355.7         1,165.8         53.4         1,574.9         30.3           -10.7         -40.3         -1.9         -52.9         -0.9           345.0         1,125.5         51.5         1,522.0         29.5           -329.9         -277.8         -49.2         -656.9         -15.0           0.0         0.0         0.0         0.0         0.0           32.5         904.2         4.9         941.6         15.9



### **Minor Events Summary**

Provisions for Outstanding Claims as at	Cat 97	Cat 99	Cat 103	Cat 107	Cat 111	Cat 114	Cat 117	Cat 122	Total
_	19-Oct-10	26-Dec-10	20-Jan-11	16-Apr-11	6-Jun-11	21-Jun-11	9-Oct-11	23-Dec-11	
31 Mar 2013	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Estimated Gross Incurred Cost before EQC	2.1	14.1	0.9	3.1	4.5	2.0	2.0	17.9	46.5
Expected EQC Share	-0.9	<b>-</b> 2.6	-0.5	-1.8	<b>-</b> 2.9	-0.6	-0.8	-3.0	-13.1
Estimated Gross Incurred Cost after EQC	1.2	11.5	0.4	1.3	1.6	1.4	1.2	14.9	33.4
less paid to 31 Dec 2012	-0.5	-3.7	-0.1	-0.1	-0.1	-0.2	-0.1	-2.4	-7.2
Gross Outstanding Claims									
In 31 Mar 2013 Values	0.7	7.7	0.2	1.2	1.6	1.1	1.1	12.5	26.2
Allowance for Future Inflation	0.2	1.0	0.1	0.4	0.5	0.2	0.2	1.5	4.1
Inflated Values	0.9	8.7	0.3	1.6	2.1	1.3	1.4	13.9	30.3
Discount to Present Value	0.0	-0.2	0.0	-0.1	-0.1	0.0	0.0	-0.3	-0.9
OSC Discounted to 31 Mar 2013	0.9	8.5	0.3	1.6	2.0	1.3	1.3	13.6	29.5
Claims Handling	0.0	0.4	0.0	0.1	0.1	0.1	0.1	0.7	1.5
Gross Central Estimate	0.9	8.9	0.3	1.6	2.2	1.4	1.4	14.3	30.9
Catastrope R/I Recoveries	0.0	-7.2	0.0	0.0	0.0	0.0	0.0	-7.8	-15.0
Aggregate R/I Recoveries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Central Estimate	0.9	1.7	0.3	1.6	2.2	1.4	1.4	6.5	15.9
Risk Margin	0.1	0.0	0.0	0.2	0.3	0.2	0.2	0.0	1.1
Recommended provision	M	1.7	0.4	1.9	2.5	1.5	1.6	6.5	17.1
	7								
Inflated Gross Central Estimate	1.4	12.4	0.4	1.7	2.2	1.6	1.4	16.4	37.5
(Incl paid to date + CHE)									



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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 presentation. 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.

It is not possible to put a value on outstanding claims with certainty. As well as difficulties caused by limitations on the historical information, outcomes remain dependent on future events, including legislative, social and economic forces. 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.

The presentation should be considered as a whole. Members of Finity staff are available to answer any queries, and the reader should seek that advice before drawing conclusions on any issue in doubt.

