



ASIC

Australian Securities & Investments Commission

Using web calculators to estimate the cost of rebuilding

**An extract from ASIC's report on
home building underinsurance
'Getting home insurance right'
released in September 2005**

**For a copy of the full report go to our consumer
website, FIDO at www.fido.gov.au/underinsured**

Section 3: Web-based calculators

Findings

- ASIC used the web-based calculators of ten major insurers to obtain estimates of rebuilding costs for five houses. This review found that significant inconsistencies in the figures generated by the calculators.
- ASIC's review found that across the houses tested:
 - the highest degree of variation was a difference of 169% between the lowest and highest estimates of rebuilding costs generated by the calculators, and
 - the smallest variation between the lowest and highest estimates of rebuilding costs for the same house was 42%.
- Calculators using the *elemental estimating* produced either the highest figure or the second highest figure for the sum insured for each house.
- The *cost per square metre* method does not take into account some factors which increase the cost of rebuilding (such as site difficulties or a high level of quality to internal finishes).
- ASIC's review of calculators using the *cost per square metre* method found that:
 - there were significant variations between insurers in the figures used as the cost per square metre, and
 - as at April 2005, two insurers used a figure in the ACT for rebuilding costs that was below \$1090 per square metre (the minimum figure for rebuilding costs identified as at February 2003).
- Consumers using calculators that apply the *cost per square metre* method are at a greater risk of being underinsured.
- Some calculators do not allow the consumer to nominate an amount to cover all types of outdoor features (such as pergolas or garden sheds) covered by their policies.

Recommendations

- Given the inconsistent results currently produced by calculators and the potential for consumers to be underinsured, insurers should provide consumers with access to calculators that are as reliable and comprehensive as possible.
- Where insurers give consumers access to a web-based calculator they should:
 - make clear what costs are covered by the figure generated (i.e. whether it covers the cost of materials and labour as well as supplementary costs),
 - make clear the different amounts apportioned to the cost of materials and labour, and to supplementary costs,
 - identify for the consumer any specific limitations with the calculator, rather than relying on general warnings or disclaimers,
 - ensure that the calculator is updated regularly, and
 - include information on the website advising when the calculator was last updated.
- Insurers should review their web-based calculators to ensure that prompts to consumers to include amounts to cover particular features (such as pergolas or swimming pools) are designed to capture all such features covered by the insurer under their policies.

Why is it important?

'... as at April 2002 it is possible for a domestic building replacement cost estimate to be obtained from at least one company website without cost ... If such a facility as that described becomes generally available to the market, insurers and brokers would be in a position to require potential clients to use the system and insure accordingly.'

Insurance Council of Australia, *Report on Non-Insurance/Under-Insurance in the Home and Small Business Portfolio*, October 2002, p. 25

The more widespread availability of calculators that provide reliable estimates of rebuilding costs would have a significant impact on the capacity of consumers to have adequate levels of cover. Conversely, consumers are at continuing risk of being underinsured where they use calculators that produce figures that are consistently low by comparison with those provided by other insurers, or that cannot take into account features which have a significant impact on rebuilding costs (such as where the house is build on a severe slope).

ASIC's review

Nearly all major home building insurers in Australia now give consumers access to a 'home rebuilding calculator' on their websites.²⁸ Our survey of 15 insurers indicated that policies sold over the internet comprise a very small percentage of total sales, with 5.4% being the highest proportion of sales cited by any company. It is likely that the calculators are used by a higher percentage of consumers in the course of making inquiries about cover.

We reviewed the calculators offered by ten insurers, by using them to generate an estimate for the sum insured. The review was conducted in April 2005. The results are listed in Tables 3.1 and 3.2.²⁹ We used the calculators to produce figures for five distinct homes of varying specifications. The five homes we used were:

- a small fibro home in Canberra,
- a brick veneer home in Canberra,
- a brick veneer home in a southern Sydney suburb,
- a Federation home in inner-city Melbourne, and
- a fibro home in Townsville.

²⁸ We identified calculators on the websites of the following nine major insurers: AAMI, Allianz, APIA, Australian Unity, CommInsure, GIO, NRMA, Suncorp and Westpac. A calculator for a tenth insurer, CGU, was identified on the website of a third party selling CGU policies. However, ASIC understands that this calculator has not been endorsed by CGU, although it was based on information provided by CGU.

²⁹ The results for nine calculators are listed in Table 3.1 as: first, there are two separate instances of insurers using identical calculators (reducing the number of results by two), and, second, one insurer changed their web-based calculator around the time of the survey, moving from a cost per square metre method to an elemental estimating method. The results using both the old calculator—Insurer A (old)—and the new calculator—Insurer A (new)—are included in the table.

For the detailed specifications of each house, see Appendix B.

Each web-based calculator produces a figure for the sum insured. Some insurers provide that supplementary costs will be paid from the sum insured (*global sum insured* policies). Other insurers define the sum insured as only covering the costs of materials and the builder, so that supplementary costs are paid in addition to the sum insured (*sum insured plus benefits* policies).

Those calculators that include supplementary costs in the sum insured should generally produce a higher figure than those calculators where the sum insured only covers materials and labour costs.

How calculators estimate rebuilding costs

In ASIC's review two insurers use the elemental estimating method: Insurer 1 and Insurer A (for its new calculator). These calculators seek information in approximately 30 categories including the size of individual rooms, ceiling heights and the period of construction. The other seven results are based on the cost per square metre method. Their calculators generally ask between four and ten questions (as a minimum, the overall size of the home, the state in which property is located, and type of construction).

The insurers are divided into two groups, according to whether the insurer offered global sum insured policies (five results) or sum insured plus benefits policies (four results). This division results in comparisons between insurers where there are similar assumptions of the costs covered by the sum insured. The estimates of rebuilding costs by insurers offering global sum insured policies are set out in Table 3.1, and for insurers offering sum insured plus benefits policies in Table 3.2.

Table 3.1: Results generated by calculators where sum insured covers rebuilding costs and supplementary costs

	Fibro, ACT	Brick veneer, ACT	Brick veneer, Engadine	Federation, Elwood	Fibro, Townsville
Insurer 1	162,445	287,424	292,717	349,265	198,000
Insurer 2	126,800	298,904	347,440	259,800	171,000
Insurer 3	110,600	287,982	283,816	155,040	154,980
Insurer 4	89,150	209,448	206,383	169,237	131,100
Insurer 5	80,000	222,000	220,000	255,000	120,000
<i>Highest</i>	<i>162,445</i>	<i>298,904</i>	<i>347,440</i>	<i>349,265</i>	<i>198,000</i>
<i>Lowest</i>	<i>80,000</i>	<i>209,448</i>	<i>206,383</i>	<i>155,040</i>	<i>120,000</i>
<i>Difference (\$)</i>	<i>82,445</i>	<i>89,456</i>	<i>141,057</i>	<i>194,225</i>	<i>78,000</i>
<i>Difference (%)</i>	<i>103.1%</i>	<i>42.7%</i>	<i>68.3%</i>	<i>125.3%</i>	<i>65.0%</i>

Table 3.2: Results generated by calculators where sum insured only covers rebuilding costs

	Fibro, ACT	Brick veneer, ACT	Brick veneer, Engadine	Federation, Elwood	Fibro, Townsville
Insurer A (new)	162,500	287,500	291,500	349,500	198,000
Insurer A (old)	121,600	257,742	260,700	196,950	156,000
Insurer B	98,800	230,880	206,140	129,750	127,800
Insurer C	85,500	197,580	192,060	141,300	117,450
<i>Highest</i>	<i>162,500</i>	<i>287,500</i>	<i>291,500</i>	<i>349,500</i>	<i>198,000</i>
<i>Lowest</i>	<i>85,500</i>	<i>197,580</i>	<i>192,060</i>	<i>129,750</i>	<i>117,450</i>
<i>Difference (\$)</i>	<i>77,000</i>	<i>89,920</i>	<i>99,440</i>	<i>219,750</i>	<i>80,550</i>
<i>Difference (%)</i>	<i>90.1%</i>	<i>45.5%</i>	<i>51.8%</i>	<i>169.4%</i>	<i>68.6%</i>

Source: ASIC's review of web-based calculators, March–April 2005.

Range of estimates

The following conclusions can be drawn from these results:

- The smallest variation between the lowest and highest estimates of rebuilding costs for the same house was 42% (for the insurers in Table 3.1) and 45% (for the insurers in Table 3.1).
- The greatest variation between the lowest and highest estimates of rebuilding costs for the same house was 125% (for the insurers in Table 3.1) and 169% (for the insurers in Table 3.1).
- The elemental estimating calculator (Insurer 1) suggested a sum insured that was the highest for three of the five homes tested, and the second highest for the two remaining homes (for the insurers in Table 3.1).
- The elemental estimating calculator (Insurer A's new calculator) suggested a sum insured that was the highest for each of the five homes tested (for the insurers in Table 3.2). A calculator using the cost per square metre method produced figures that were between 45% and 169% lower than the figures produced by the elemental estimating calculator.

Variations of this magnitude are of concern. Depending on the actual costs of rebuilding, individual consumers may be either overinsured or underinsured by a significant margin. However, ASIC's research suggests that the elemental estimating method is more accurate, and those consumers who rely on a calculator using the cost per square metre method are at a greater risk of being underinsured.

Feedback to ASIC from the insurers using the elemental estimating method suggests that it has a superior level of accuracy, particularly where rebuilding costs are increased by the period of construction, the slope of the land, or a superior quality to the interior or fittings. One insurer advised that it had tested its calculator's estimate of rebuilding

costs against the costs actually incurred following total loss claims. It reported that the calculator had generated results that were reliable.

Secondly, the advantages of the elemental estimating method can be examined by changing the features of the home to enable an assessment of the way the calculators take into account factors such as a severe slope or the period of construction.

We conducted a further 'road test' of the elemental estimating calculator used by Insurer 1 as follows:

- The fibro house in Ainslie was tested changing the slope of the site from flat to severe (but leaving all other features identical). This resulted in an increase in the sum insured to \$190,877, or nearly an additional \$30,000.
- The house in Elwood was tested by changing the period of construction from Federation to contemporary. This resulted in a decrease in the sum insured to \$298,732, or nearly \$50,000. Federation homes have a number of features that can increase rebuilding costs (such as extended ceiling heights, ornate cornices, steeper roofs and leadlight windows).

The cost per square metre calculators do not take these features into account in generating a figure for the sum insured. It is axiomatic that consumers with house features that increase rebuilding costs are at risk of being underinsured by a greater extent where they use a calculator of this type.

Our view is that, both in theory and practice, the elemental estimating method is likely to be more accurate, and that increased use of this method will reduce the level of underinsurance.

To the extent that the assumptions and methods underlying web-based calculators are used by the insurer through brochures or by call centre staff, there is a considerable margin for error in the advice provided by insurers to consumers about the appropriate sum insured.

We note that the cost to insurers of obtaining more detailed data on building costs is likely to be greater than existing expenses. However, it would not appear to be prohibitive, given that three insurers currently provide consumers with access to calculators using this information. Note: ASIC is unaware of when each insurer last updated the figures used by its calculator to generate a response. If an insurer had updated its calculator just before ASIC's review then its calculator would be using more recent figures and generate a higher estimate than a calculator using older figures. However, this should not make a significant difference to the results, given that building costs increase by a maximum of 7.9% nationally.

Cost per square metre

There are significant variations between the figures generated by the web-based calculators that use the cost per square metre approach. For

those insurers in Table 3.2 (who offer sum insured plus benefits policies) the sum insured only includes the costs of material and builders.

It is possible therefore to establish the 'dollar per square metre' figure used by the calculator, by dividing the sum insured by the size of the house. For example, using the fibro house in Ainslie, if the sum insured is \$80,000, and the size is 100 square metres, then the cost per square metre used by the calculator is \$800.³⁰

The results for the three insurers using this approach are set out in Table 3.3.

Table 3.3 Cost per square metre figures used by different insurers

	Fibro, ACT	Brick veneer, ACT	Brick veneer, Engadine	Federation, Elwood	Fibro, Townsville
Size (metres ²)	100m ²	222m ²	220m ²	150m ²	150m ²
Insurer A (Old)	1,256	1233	1221	1513	1040
Insurer B	1,028	1112	973	1065	852
Insurer C	895	962	909	1142	783
% difference between highest and lowest figures	40.3%	28.2%	34.3%	42.1%	32.8%

Insurers are using significantly different figures for the cost per square metre in calculating rebuilding costs. These variations may be due to:

- different sources of information on building costs, or
- differences in the regularity with which the insurer updates building figures.

For the two ACT properties, three of the figures are below \$1090 per square metre. The Bushfire Recover Taskforce found that, shortly after the bushfires, building costs were a minimum of \$1090 per square metre.³¹

The continued use of such low figures in April 2005 creates a significant risk that consumers using these calculators will be underinsured.

Updating web-based calculators

The accuracy of the estimate produced by a web-based calculator will also depend on the frequency with which the information used to generate the sum insured is updated.

ASIC's survey of insurers found that there were considerable variations as to how regularly they updated the information used in their calculators. One insurer updated their calculator every six months, the

³⁰ This exercise cannot be undertaken for the figures for the global sum insured group as the sum insured includes an unknown allowance for supplementary costs.

³¹ This issue is discussed in detail in Section 5.

majority updated it annually, and in one instance the calculator was updated after an 18-month interval.

The financial consequences for consumers of a lengthy interval in the period between which calculators are updated can be significant. We note that, since our review in April 2005, one insurer has apparently updated the information used by its calculator to generate responses, resulting in substantial increases in the results. For example, for the ACT properties, the update resulted in increases in the figures for the fibro house of 47.6%, and for the brick veneer house of 30.6%.

Increases of this magnitude do not reflect sudden or recent increases in the cost of materials and labour, and therefore suggest that the calculator was not updated regularly or that the previous figures used were too low. There is a risk that a consumer who used the calculator just before it was updated would be underinsured by a significant amount.

Case study

'The main problem in my mind is that the insurance companies have a very outdated and low price per square metre that they calculate the house value to. We now know that there is no way our house could be rebuilt for what they state in per square metre calculation.' (Case 40)

Where the calculator is updated every 12 months, there can be a 23-month gap between the rebuilding costs at the date the policy is taken out and the date of claim. For example, if a calculator is updated in January 2003 and the policy is taken out in November 2003 then the sum insured will be calculated using building costs from 11 months earlier. If the insured property is a total loss in November 2004, then 23 months will have elapsed (and on average figures building costs may have increased from 6% to 8%, or from \$12,000 to \$16,000, on rebuilding costs of \$20,000).

Gaps in calculator prompts

Virtually all home building policies provide cover for outdoor features of the property, ranging from swimming pools, pergolas and granny flats to clothes lines and blinds attached to the side of the house. There are few limitations in cover for these types of features, except where they are not attached to the property or where they are used for a commercial purpose.

These features need to be specifically identified in any estimate of rebuilding costs (irrespective of the method used). Web-based calculators address this by including a series of specific questions or prompts, asking the consumer to include specific amounts for these costs. The sum insured is then increased by the amounts suggested by the consumer for these features.

However, ASIC's review of websites found gaps in the way insurers informed consumers about the types of features that need to be covered:

- very few insurers provided consumers with a general description of the types of features that need to be included (so that, in the absence of such a description, the consumer may assume that only the listed items are covered), and
- a number of insurers presents the list of options as definitive or exhaustive (so that the consumer does not have the choice of including costs for features apart from those offered by the calculator). In fact the policies offered by these insurer indicate that a broader range of features will be covered.

These practices may lead to the consumer excluding certain items in their estimate of the sum insured, even though those items are covered under their policy. If the figure for the sum insured nominated by the consumer is too low as a result, then the consumer will be underinsured.