Emily Brown

From: Grant.Mitchell@cfs.coop

Sent: 27 February 2009 12:19

To: BAS Modelling

Subject: Modelling Consulation

My overarching concern is that, whilst individually each recommendation looks reasonable, the cumulative effect could be unduly onerous on the actuary, particularly given the very broad definition of what is meant by a "model". This concerns me both as an actuary (heading a GI pricing function) and wearing my other hat as a business manager responsible for a P&L account, and therefore not wishing to pay for time spent by actuaries on unconstructive work. I feel that the additional burden imposed by this standard could well make actuarial resource uncompetitive in some areas when compared with other resource that is not so strictly regulated.

In response to the specific questions asked,

1) I do believe that the purpose as set out will help ensure that users can place a high degree of reliance on actuarial information.
2) I think that the definition will encompass the full range of models - my view is that the definition is very broad and will encompass many spreadsheets etc that would not necessarily be termed "models" by many actuaries currently. This breadth of scope is in danger of making the standard unduly onerous.
6) Whilst the aim of the principles of relevance and parsimony is laudable, I'm not sure how practical it is. In many cases, it may not be known how material is the effect of a particular degree of complexity until the model has been built, so some degree of judgement will be necessary in advance as to which elements are likely to be material. It should be acceptable for an actuary to make reasonable judgements in good faith even if these subsequently turn out to be incorrect. Also, models are often taken on by third parties (non-actuaries) and used for purposes well beyond that originally envisaged. The approach of relevance and parsimony can only reflect the uses to which the actuary expects the model to be put, but this may limit alternative potential future uses.
7) 5.28 & 5.29 seem unduly onerous - some groupings are so standard (eg grouping the age of motor policyholders by complete years) that I would not expect to have to justify them or compare with alternatives.
5.42 - in many cases, the assumptions used in models may be derived and specified by senior management as a central planning scenario - it isn't clear how the actuary would attempt to give a statistical definition in that case. Equally, the actuary may wish to use inputs purely for a "what if" scenario test and again statistical definitions of the assumptions would not seem to add value.
5.51 - I agree that a best estimate should be derived using assumptions independent of the purpose of the model.
8) I think it is right that in documenting the model, reference should be made to any shortcomings in the data, notwithstanding the requirements of the reporting TAS. However, I don't think it is practical to require an estimate of the effects of data shortcomings, or for compensating adjustments to avoid bias - if the data is missing or unknown, it may not be possible to estimate the effect of including or omitting it directly. If the effect is likely to be material, the best that could be achieved may be to scenario test to produce a range of possible effects.
9) I do not believe that this should be a requirement as it would be too difficult in practice. The aim of grouping data is to simplify the model - a requirement to quantify the effects of the grouping would effectively require a separate version of the model with ungrouped data, thereby negating the benefit of simplification.
10) I agree that a best estimate should be derived using assumptions independent of the purpose of the model.
11) I agree that biased estimates do depend on context. I think it is reasonable to require an actuary to derive a best estimate alongside a prudent estimate in order to consider explicitly the level of prudence that is built in and whether this is appropriate in the context. I don't necessarily believe that the best estimate needs to be presented in every case as it depends whether this would be of benefit to users in the particular context - I think this would be more of a matter for the reporting standard to define.
12) There may be many point estimates in a model and I think it would be practically very difficult to use a range in conjunction with each one. Also there is a danger of spurious accuracy around how likely it is that

the true answer would fall within the range. In the case of assumptions that are specified for the actuary, for example by senior management, there is no real concept of a range. I suggest that the requirement should be for the actuary to consider the degree of uncertainty around each point estimate and whether the use of a range would aid the understanding of the user.
13) I agree with the principles outlined.
14) I am not aware of any types of model that cannot be implemented in such a way that they exhibit reproducibility.
15) I don't agree that the TAS should include a principle concerning back testing. In many cases past data may not be available and even where it is the model may show deviation from the past that is entirely appropriate given changing circumstances. The use of back testing introduces a danger of anchoring to the past rather than encouraging the actuary to consider the possible range of outcomes in the future.
16) I think it would be reasonable to require users of external models to explain the judgements and inputs they have made. A more complete description of the model is desirable where practical but in many cases may not be so. I think this is reasonable if the actuary can document the limitations of the checks he has been able to perform and the key assumptions he has had to make. The actuary should state why they consider it reasonable to rely on the external model.
17) I agree that requirements for robustness and reasonable would not be appropriate for the reasons stated. However, I consider paragraphs 6.50 and 6.51 to be somewhat misleading in their description of a 1 in 200 year event - the requirement of the model would be to estimate an event that might be expected to occur with a probability of 0.5% in the next year (for a 1 year model). This is not necessarily the same as an event that would be expected to occur once in the next 200 years, and certainly not as one that would have been expected to occur once in the last 200 years.
18) I think that the requirement for sensitivity testing outlined in 7.29 would be unduly onerous. A model may contain a large number of assumptions and for each of those there may be a large (or infinite) number of possible scenario tests that could be carried out. It is unreasonable to expect the actuary to document why he has not carried out sensitivity tests in every case and the lengthy description that might be required would not be of benefit to the user.
I agree with the principle outlined in 7.41. In particular, the information should contain discussion of the uses to which it is envisaged the model would be put, and any limitations or constraints on possible extensions of use for which the model would not be appropriate.
20) I agree with the advantages and disadvantages outlined in the consultation.
21) I do not believe that the TAS should identify specific types of limitation that should be explained, as these will differ widely between different types of model. Rather than being prescriptive, the emphasis should be on encouraging the actuary to consider the limitations that apply in a particular case.

Other comments: I am not clear how the TAS would apply to models built by multi-disciplinary teams, or build by a non-actuary but then handed over to an actuary.

Regards

Grant Mitchell
Head of Motoring & Pricing

General Insurance
The Co-operative Insurance
11th Floor, Miller Street
Manchester M60 0AL
t: 0161 903 4406
e: Grant.Mitchell@cfs.coop