

Board for Actuarial Standards - Towards a conceptual framework: consultation paper

Comments from Faculty of Actuarial Science & Insurance, Cass Business School, City University

Overall comment:

We felt that this was a carefully thought through document which should greatly assist the Actuarial Profession in setting standards. We do, however, have some small comments to make on chapters 7 and 8 of the paper.

Comments on Chapters 7 and 8

Paragraphs 7.2 and 7.6

The distinction made in paragraph 7.2 between the three classes of risk or uncertainty is a real one, and the document does well to focus attention on it from the start of the chapter. We feel, though, that there is a tendency to assume that every uncertain situation must belong exclusively to one of the three categories, whereas in practice it might be more usual to find a mixture of categories 2 and 3. In the situations described in paragraph 7.6, for example, the mortality probabilities during times of war or epidemic can reasonably be represented as a sum of a predictable element (from category 2) and an exceptional element (from category 3). Even in the case of the exceptional element it is not always fair to say that there is *no basis whatever* for assigning a probabilistic structure.

Paragraph 7.10

Paragraph 7.10 might reasonably refer to the concept of Value at Risk and the 5th percentile of the estimated distribution.

Paragraph 7.11

Paragraph 7.11 appears to make the distinction between deterministic and stochastic models solely on the basis of whether scenario generation is employed in the analysis of the model. There are, however, some stochastic models which are mathematically tractable, leading to predictions which can be derived analytically without resorting to scenario generation; in such cases it may also be possible to explore the effect of changing the values of the input parameters (as part of a sensitivity analysis), all without resorting to random number generators.

Paragraph 7.23

Paragraph 7.23 indicates that actuaries in the past placed a great deal of confidence in the projected mortality probabilities, but are worried that such confidence is no longer reasonable given current trends. We wondered if analysis has been performed to test whether the confidence expressed in the past was in fact justified. It is at least conceivable that the present lack of faith is a reflection of an eternally unpredictable element in the mortality probabilities, the existence of which was previously ignored but is now being recognised.

Paragraph 8.41

This paragraph refers to the reporting of the outcome of a set of scenarios in relation to a stochastic valuation and recommends that the expectation of the undiscounted cash flows be revealed, by which it presumably means the sample mean of the cash flows resulting from the various scenarios. The sample mean, however, is notoriously susceptible to influence from individual large values and may not be entirely representative of the sample. In the case of a highly skewed distribution, for example, a mean of £100m may be generated even though two-thirds of the scenarios result in a lower cash flow. It might be as well to request that the median also be reported, in those cases where the distribution is highly asymmetric.

Paragraph 8.52

We are not sure that it is obvious what is required under heading (d). If a report announces that there is a 10% chance that a scheme's assets will be inadequate to cover its liabilities, We are unsure what further commentary could be provided by way of interpretation. We agree that a statement such as "only one person in a million has DNA which matches this sample" would benefit from additional commentary, but this presumably does not apply in all cases.

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