

PRIVATE AND CONFIDENTIAL

19 June 2008

The Director
Board for Actuarial Standards
5th Floor, Aldwych House
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London WC2B 4HN

Dear Sir

ACTUARIAL MORTALITY ASSUMPTIONS: DISCUSSION PAPER

This letter sets out Towers Perrin's response to the above consultation.

If you have any questions, please let me know.

- 1. Do respondents have any views on the significance of the adverse effects that the over- or underestimation of future mortality may have on pension scheme members, scheme sponsors, life insurance policyholders and life insurance companies, as set out in section 2?**

We agree that it is important to recognise that there are dangers inherent in under-estimating future mortality, as well as in over-estimating. Reflecting the objective it sought to meet, the recent tPR consultation on mortality did not recognise this as clearly.

- 2. The BAS has discussed some of the issues surrounding mortality assumptions in section 3. In that context:**

- a) Do respondents have views on appropriate methods of communicating the extent and impact of the inherent uncertainty involved in mortality assumptions?**

Different methods of demonstrating uncertainty will be appropriate for different audiences and different purposes. Some clients will want a stochastic analysis of future mortality to assess longevity risk in a manner consistent with their assessment of other economic and market risks. Other clients will find scenarios more helpful.

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Care should be taken with any method used to make it clear that the inherent uncertainty in mortality assumptions is unknown. There is a danger that the use of overly complex models or methods will lead clients to believe that they give the right answer (which they won't).

The focus on the uncertainty around both the base table and future improvements may lead to the uncertainty from random variation being overlooked. For many pension plans this is likely to be significant. Another aspect which is important for plans with a heterogeneous population is the concentration of the potential impact of the risk on a few individuals with high pensions.

b) Do respondents agree that the use of separate assumptions for base mortality and future changes in mortality, not taking the form of margins in other assumptions, would be desirable?

Yes.

c) Do respondents have views on appropriate methods of communicating the significance of assumptions, both in absolute terms and relative to that of other assumptions?

Illustrating the impact of a change in the assumption on the liability is the most relevant indication of the significance of the assumption. The difficulty is determining the suitable range of assumptions to illustrate. This is an area where clients may find scenarios helpful.

3. Some proposals regarding the use of summary statistics and benchmarks in reporting on mortality assumptions are considered in section 3.

a) Do respondents foresee any practical difficulties in communicating the assumptions about subsequent changes in mortality rates underlying life expectancy statistics?

The use of period life expectancy at different points in time is a relatively common way of illustrating the effect of future changes in mortality. It has the advantage of being relatively simple to produce and easy to understand. The drawbacks of this approach are that it does not give clear information about the effect on the liability of the different projection methods that are being compared and that the effect illustrated varies according to which ages and/or points in time are chosen.

The use of an average annual rate of improvement may help to simplify future projections, making them easier to understand, but again this will not give information about the effect on the liability as the effect of the different projections will depend on the age-sex distribution of the plan membership.

b) Do respondents have suggestions for summary statistics that can be used to describe changes in mortality rates?

The use of diagrams and charts (such as heatmaps) may help to illustrate the differences between two different projections over all combinations of age and time period. Again, the difficulty is that it is not easy to infer the impact on a plan's liabilities from such a comparison. Also more complicated statistics will be more time-consuming and costly to produce.

c) Do respondents think that the use of benchmarks is useful, and if so, should the development of standard benchmarks for future changes in mortality be encouraged?

The danger with benchmarks is that they may come to be treated as standard assumptions. Presenting a standard set of scenarios with appropriate future mortality rates would be interesting but challenging and, again, there is a danger that they become accepted as being "right".

4. The BAS would welcome any general comments that respondents may have on the various possibilities for standards set out in section 4. In particular:

a) Do respondents agree that the BAS should set some standards for mortality assumptions?

In our view the BAS should not set standards on what assumptions should be used, but disclosure standards may be helpful.

b) Do respondents agree that reporting standards would play a significant role in increasing the transparency of assumptions and their comprehensibility to users of actuarial information?

Reporting standards are unlikely to directly increase the transparency and comprehensibility of mortality assumptions for the majority of users (trustees, plan sponsors, plan members) without additional explanation. However, there may be a second order effect as it may make it easier for actuaries to collate information about the assumptions being used by plans other than the ones on which they advise.

c) Do respondents have any comments on how to assess the likely impact of possible BAS standards for mortality assumptions?

Introducing any standards will increase costs - either for set up or on an ongoing basis, depending on the level of detail required. Complicated standards may serve to confuse.

5. In section 5 the BAS considers possible standards for assumptions about base mortality.

a) Do respondents believe that it would be desirable for a BAS standard to require the use the most recent applicable published tables, taking into account both the communication problems and the practicality of setting a limit on the tables to be used?

Ideally, the most recent published tables should be used unless there is statistical evidence that an earlier table (whether adjusted or not) is a better fit. There may be practical reasons why using the most recent tables may not be desirable - for example if a valuation is just being completed when a new set of tables is published, so transitional flexibility would be essential.

b) Do respondents have any comments on the proposals for possible requirements for reporting on assumptions about base mortality, criteria that assumptions should meet, or limits that should be observed when setting assumptions? Respondents are asked to focus on:

- **any practical problems that might arise in complying with them; and**
- **whether they would further the BAS's aim of increasing the transparency of assumptions and their comprehensibility to users of actuarial information.**

The requirements in paragraphs 5.41 to 5.46 seem reasonable in the context of a funding valuation, which is already a lengthy and detailed document. These proposals apply to all mortality assumptions. It is not clear how much of this information would need to be presented to plan members, who would generally be less able to assess possible implications, for example to accompany transfer value illustrations.

The intention of paragraph 5.47 is not clear to us.

The requirement for an assumption to be prudent or best estimate will usually be determined by its context. With so much uncertainty on this topic - particularly for small schemes - we suggest that paragraph 5.49 should be removed.

The requirements in paragraphs 5.50 to 5.55 seem a reasonable way to introduce some consistency and rigour into the determination of base mortality rates (although note previous comments on use of most recent tables).

We do not think the BAS should introduce limits on base mortality rates.

6. In section 6 the BAS considers possible standards for assumptions about future changes in mortality.

- a) *Do respondents agree there is no objective basis for differentiating the future changes in mortality likely to be experienced by a particular small group of lives from those likely to be experienced by the population as a whole? If respondents disagree, the BAS would be interested in examples to the contrary, together with supporting evidence.***

Generally we agree that it is spurious to try to apply the factors used to differentiate base mortality rates to assumptions about future changes in mortality. However, there does seem to be some evidence that the rate of improvements for males and females has been different over recent years. Also the ONS longitudinal study does seem to indicate that there may be some differences in the rates of improvement between different socioeconomic classes.

Even if the evidence is not strong enough to justify different assumptions it may be that this is an area where different scenarios could usefully be considered.

- b) *Do respondents have any comments on the proposals for possible requirements for reporting on assumptions about future changes in mortality, criteria that assumptions should meet, or limits that should be observed when setting assumptions? Respondents are asked to focus on:***

- ***any practical problems that might arise in complying with them; and***
- ***whether they would further the BAS's aim of increasing the transparency of assumptions and their comprehensibility to users of actuarial information.***

The requirements in paragraphs 6.51 to 6.55 seem reasonable in the context of a funding valuation, which is already a lengthy and detailed document. These proposals apply to all mortality assumptions. It is not clear how much of this information would need to be presented to plan members - for example to accompany transfer value illustrations.

The intention of paragraph 6.46 is not clear to us.

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The requirement for an assumption to be prudent or best estimate will usually be determined by its context. Again, and more particularly here, with so much uncertainty on this topic, for all schemes, we suggest that paragraph 6.58 should be removed.

More generally, it is not at all clear to us that the criteria proposed for future mortality changes are as helpful as the proposed criteria for base rates, given the highly subjective nature of future mortality assumptions.

We do not think the BAS should introduce limits on base mortality rates.

Yours faithfully

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Consultant