



**Board for Actuarial Standards (BAS)  
Discussion Paper**

**Actuarial Mortality Assumptions**

**Response from  
The Pensions Management Institute**



## **PMI response to Board for Actuarial Standards (BAS) Discussion Paper Actuarial Mortality Assumptions**

### **Introduction**

The Pensions Management Institute (PMI) is the professional body for people working in the pensions sector. The PMI's members (currently over 4,200) work as pensions managers, consultants and technical specialists in consultancies and insurance companies. Many are also actuaries, pensions lawyers or company secretaries. Their experience is therefore wide ranging and has contributed to the thinking expressed in this response.

### **The PMI's Response**

PMI support BAS's initiative to investigate whether to publish technical actuarial standards covering mortality assumptions. This is a very important investigation that may have a wider impact as it may shape actuaries' and other others' views on the value BAS can add to actuarial work by means of technical standards. It may also be an early test of whether BAS's framework for setting standards is working.

We believe that mortality standards are necessary and BAS's proposed reporting and criteria standards are a big step in the right direction We hope this consultation will result in standards that are of real value and assistance to actuaries.

### **General comments**

The PMI are of the view that the primary aim of any standard should be to require actuaries to communicate clearly and unambiguously the assumptions about mortality that underlie their advice. This should include illustrating the implications of the assumptions not being borne out in a transparent and comprehensible way. We believe the key principles that should underlie any standards are:

- Actuaries should be able to select/recommend whichever base-table they believe is most appropriate in any given scenario. This is on the proviso that it is justifiable on the basis of credible, evidence-based analysis.
- Actuaries should be able to make/recommend whichever assumption they believe to be most appropriate in the circumstances in respect to future improvements in mortality.



- We believe the best way to communicate mortality assumptions is by illustrating life expectancies to allow the information to be conveyed in an understandable and transparent way.
- Advice should include illustrations of the sensitivity of the outcomes to changes in the assumptions made for base mortality and future improvements.

## **Responses to Section 7 of the consultation**

***Question 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?***

The PMI agree that both under and over-estimating can have a significant effect on pension scheme members and sponsors. For some purposes, it may be possible to “correct” the consequences of any over- or understatement over time (e.g. such as determining contribution levels).

***Question 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?***

We believe appropriate methods are scenario testing and stochastic testing. The *extent* of uncertainty could be communicated by pointing out that some people live to 110 and beyond and that life expectancy in the population at large has increased by [X] years over the last [Y] decades. The *impact* of uncertainty in base mortality can be communicated by stochastic methods. In other words, by providing confidence intervals to quantify how likely it is that a dataset of experience does or does not “fit” a base mortality table. However, for future changes this is less straightforward because at present there is no reliable way of constructing a stochastic model or generating a probability distribution.

***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?***

Transparency is vital, therefore, we agree with BAS that actuaries should always use and disclose separate assumptions for base mortality and future changes.



Similarly, we agree that mortality assumptions should be explicit and not made by taking margins in other assumptions.

***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?***

The type of illustrations envisaged in 2(a) above will communicate the significance of assumptions, but these figures will not illustrate the significance of mortality compared with other assumptions.

***Question 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?***

No.

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

The most useful and accessible statistic for describing this is life expectancy. We agree that period life expectancy is often misleading and that the focus should be on communicating cohort life expectancy.

Changes are best illustrated by illustrating life expectancy for people of a particular age “today” and people of that same age at some appropriate time in the future. Typically, in the pensions arena, this would be life expectancy at 65 for people who are now, say, age 40.

***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 PMI do not believe benchmarks will be of great use.

***Question 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?***



Yes – as there is a clear need for reporting and credibility standards. However, we would not support a standard that addresses limits for mortality assumptions.

***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?***

Yes, we agree reporting standards would play a significant role in increasing transparency and comprehensibility.

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

No comment.

***Question 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 of 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?***

Any standard should require use of the most recent tables unless there is evidence that older tables are a better fit for the specific circumstances.

***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.***

A reporting standard on base mortality will further BAS's aim of transparency and comprehensibility. We believe illustrating life expectancy is the most useful way to achieve these goals. We foresee no major practical difficulties provided the standard is clear as to what actuaries are expected to do in terms of reporting and the disclosures are meaningful to the recipient. BAS's proposals appear to be heading in the right direction.

We agree that any departure from or adjustment to published tables must be evidence-based and based on statistically valid methods, including a sufficiently large dataset of experience.



We question whether compliance with a criteria standard should be subject to an element of materiality. If the recipient of advice is clear about the significance of the mortality assumption, it may be appropriate to relax some of the criteria. We do not believe BAS should produce a limits standard. Ensuring assumptions are evidence-based and derived using statistically valid methods should suffice.

***Question 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.***

We 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.

***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 PMI support BAS's suggestions in 6.51 to 6.58, which are sound and will increase transparency and possibly comprehensibility. However, there are practical problems. For example, in section 6.58, actuaries are asked to provide a statement in their advice about whether their assumptions about future changes are "*a best estimate, a prudent assumption or neither*" and explain why. It is not clear how actuaries can do this, especially in light of BAS's belief that objective judgements are not possible.

It will be useful to have criteria and the proposals in 6.61 to 6.64 are a good start. We question whether future changes in mortality should differentiate between sexes, although this may be appropriate in many cases.

We can see why BAS may consider a limit for prudent assumptions (section 6.66). However, how would BAS derive such a limit, bearing in mind the difficulties with evidence-based judgements? Setting a limit would seem to imply BAS has some knowledge that other actuaries do not. We believe that the reporting and criteria standards should suffice.