

Consultation response

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Actuarial Mortality Assumptions: Discussion Paper Hewitt response

Introduction

We set out below our response to the consultation on the recent Discussion Paper on “Actuarial Mortality Assumptions”. Comments in respect of the specific questions raised in Section 7 of the Discussion Paper are set out in the appendix to this document.

General comments

We welcome the publication of the Discussion Paper, which we feel is a good summary of the issues currently affecting actuaries and the users of actuarial advice when considering assumptions for mortality. In particular we agree with BAS that:

- Assumptions about future mortality are inevitably subject to high levels of inherently unquantifiable uncertainty, and communication of this uncertainty is key;
- Differences between the future mortality rates that are assumed in various actuarial calculations and those that actually occur can have adverse effects on the users of actuarial advice whether the assumptions are over- or underestimates; and
- There are significant practical difficulties in introducing standards that specify limits on assumptions.

However we would caution BAS that:

- Predicting future mortality rates is a complex area, and as such, disclosures should be proportionate – too much detail will confuse rather than aid the user. The discussion paper seems to be leaning towards requiring a level of disclosure which in our view would be excessive;
- In particular, the degree of inherent uncertainty means that extensive communication about the detail of (for example) the sources and extent of uncertainty would be inappropriate, impossible to validate, and would obscure the message; and
- BAS should avoid introducing standards in this area which are too prescriptive and not robust to future changes in (for example) projection methodologies, in what we expect to be a rapidly changing area in future.

Appendix – Responses to specific questions

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?

We agree with BAS that both the over- and underestimation of future mortality rates may have a significant impact on the users of actuarial advice. However, to a large extent the whole chapter could be regarded as a statement of the obvious, and the same comments could be applied to the difference between any assumption and the actual outcome.

The emphasis on this issue in the Discussion Paper suggests inappropriately that the difference between assumed and actual mortality is in some way different. Despite the uncertainty about future mortality rates, it is important to remember that the uncertainty about and potential impact of future investment returns is far more significant for a typical pension scheme.

Question 2

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

We agree that communicating the inherent uncertainty involved in mortality assumptions should be of prime importance. However we believe that the uncertainty is such that any quantification of the extent and impact would be spurious.

With regard to the specific suggestion in paragraph 3.19, we do not believe that expressing uncertainty in terms of equivalent changes in discount rates will improve understanding, and indeed we feel that in many circumstances this would introduce further confusion as it is possible that changes in discount rates and mortality rates could happen simultaneously. We would therefore not support a requirement to do this. However, expressing the impact of changes in mortality assumptions on relevant metrics (the present value of the liabilities and/or the required contributions in a pensions context for example) is desirable, and we believe that this is already reported by actuaries in many cases.

As noted above, communicating the *extent* of the uncertainty is more difficult. In particular (unlike with equity returns for example) it is difficult to specify a function which captures the uncertainty which may arise from all the sources listed in paragraphs 3.11 to 3.15. Furthermore, actuaries need to take care when illustrating uncertainty through the use of scenarios that these scenarios (which will have been chosen by subjective judgements) are not taken as “worst case” or “best case” scenarios.

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?

We agree that the use of separate assumptions for base mortality and future changes in mortality is desirable and would support standards that require this. We also agree that it is not desirable to allow for mortality improvements purely by taking margins in other assumptions (for example by reducing the discount rate) as this is not transparent or easy to understand.

However we believe that it should be acceptable to allow a margin for prudence in relation to the assumptions as a whole by (for example) increasing the margin for prudence applied to the discount rate. In particular, we do not believe that adding little allowances for prudence on each of several assumptions is any clearer or more transparent than adding a single margin for prudence to the discount rate. However this would still require a separate (best estimate) assumption for future mortality improvements to be made. Although it is conceivable that this assumption would be nil (i.e. no change to current rates) this should still be clearly disclosed.

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?

See answer to question 2(a) above. In particular we believe that it is the impact on the overall result which is important. The significance relative to other assumptions will in most cases be clear from this, although care should be taken to ensure that users understand that changes relative to particular assumptions will not necessarily occur in isolation.

Question 3

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

We agree with BAS that the use of the phrase "life expectancy" can be misleading and is not generally well understood by the users of actuarial advice. We would support a requirement to accompany its use with a statement confirming (in plain English) the extent to which future changes in mortality rates have been taken account of in the calculation.

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

We suggest that summary statistics should be chosen so that they:

- are simple to understand (which probably means using as few numbers as possible);
- are easy to calculate (to avoid increasing costs); and
- relate to outputs rather than inputs (for a pension scheme the impact on life expectancy is more meaningful than the annual rate of improvement in mortality rates).

The appropriate measure will depend on context, but for a pension scheme might be:

- period life expectancy from the base table without allowance for any improvements (at say retirement age); and
- cohort life expectancy for those reaching that age now and at appropriate future times.

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?

We do not support the use of standard benchmarks of the type described in paragraph 3.60, which we feel will be highly subjective, difficult to specify and likely to require regular updating.

Question 4

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

We agree that standards regarding the communication of mortality assumptions would be desirable and, if appropriately drafted, would improve transparency and aid understanding regarding the inherent uncertainty with such assumptions. The requirements should be proportionate and aim at enhancing understanding rather than imposing unnecessary detail.

We would not support the introduction of standards which try to impose limits on the level of a particular assumption. In particular (as noted in the Discussion Paper):

- For base mortality rates, we agree with BAS that (due to the large amount of variation between populations) any fixed limit would have to be so broad, or have so many exceptions, as to have no practical effect; and
- For future changes in mortality rates, there is a wide range of views as to what may happen in future and any limit is likely to be inappropriate for some circumstances and opens BAS up to the significant risk of setting a limit which is proven to have been inappropriate with the benefit of hindsight.

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?

Without knowing the detail of what these standards may contain it is difficult to answer this question. However, as noted above, we are generally supportive of the introduction of certain limited standards for this reason.

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

This depends on the nature and extent of the possible standards.

Question 5

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?

We would not support such a requirement for a number of reasons, in particular:

- The practical difficulties of determining what is the most “recent applicable published table” in each case;
- The fact that for some populations, a particular historic table (with or without adjustment) may represent the best “fit” to current mortality rates experienced in the population

Whilst we recognise that using a table dating back to 1955 (say) may on the surface appear counter-intuitive, we do not believe that this represents an insurmountable problem with adequate communication.

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.**

We are generally supportive of the possible reporting requirements described in paragraphs 5.41 to 5.48 of the Discussion Paper, subject to our answers to earlier questions. However we would caution BAS against introducing requirements that are too onerous, as too much disclosure can be as unhelpful to users as too little disclosure in many cases.

With regard to paragraph 5.49, whilst we agree that such a statement would be useful to users of actuarial advice, there are practical difficulties in stating that an assumption is "prudent", as this will depend on a number of factors and what may be prudent for one user may not be prudent for another. In particular, the degree of prudence required for pension scheme funding purposes depends critically on the covenant of the sponsoring employer, and it is not for the actuary to make this judgement.

We agree that ideally mortality tables should satisfy the criteria described in paragraph 5.51, but question whether communications to non-actuarial users are the place for discussion of the extent to which a standard table satisfies this criterion.

Similarly, under paragraph 5.52, the requirement to set out the "evidence" for adjustments would be unnecessarily onerous. The actuary and pension scheme trustees can share an understanding that the scheme population is typically "blue collar" and that this has an impact on mortality, without having to go through an exercise to "prove" the social class of members, and a trawl of the research into the impact of social status on mortality rates. We believe it is sufficient to set out the rationale for the adjustments.

We are not supportive of the criteria described in paragraph 5.53 for the reason discussed above. Whilst criteria such as those described in paragraphs 5.54 and 5.55 may be desirable, we think that there may be significant practical problems in setting the criteria. In particular (with regard to paragraph 5.55) it may result in actuaries being less likely to take account of data specific to the population in question when setting assumptions and result in a lower (rather than greater) level of understanding overall. We also note that while experience from smaller populations may not be fully credible, there is an argument that it is better to make partial allowance than no allowance for the difference between actual and standard experience.

We would not support the introduction of a limit on the level of base mortality assumptions to be used for the reason set out in our answer to question 4(a).

Question 6

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.

There is strong evidence that:

- past trends in mortality improvements have been linked to changes in lifestyle factors such as smoking;
- these lifestyle changes have impacted different socio-economic groups differently;
- mortality trends have been different for different socio-economic groups;
- the above are correlated; and
- different socio-economic groups are now at different places in relation to those lifestyle changes such as reduction in smoking levels, so have different potential for future movement

There cannot be evidence now that different socio-economic groups will in future experience different mortality improvements, but past experience is certainly suggestive. What the difference will be is of course much harder to judge.

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.**

Our comments on the possible reporting requirements described in paragraphs 6.51 to 6.58 of the Discussion Paper are as follows:

- 6.51 - We would support such a requirement.
- 6.52 - We would support such a requirement (although quantifying the impact of an approximation would appear to defeat the purpose of using an approximation).
- 6.53 & 6.54 - The required statistics should be kept simple – see response above to question 3(b).
- 6.55 - We would not support such a requirement for the reasons set out in our answer to 3(c) above.
- 6.56 - We would support such a requirement.
- 6.57 - We agree that the uncertainty should be communicated. The rest of what is suggested would be too much; see our comments in response to question 2 above.
- 6.58 - Whilst we think that such a statement would be useful to the users of actuarial advice, we would refer you to our answer to question 5(b) above. We would further point out that it is difficult for any actuary to state with confidence that a particular assumption for future mortality

improvements is “best estimate” given the wide range of views held.

We are generally supportive of the criteria described in paragraphs 6.62 to 6.64, although again we would question the extent to which this would further BAS’s aim of increasing the transparency of assumptions and their comprehensibility to users of actuarial information. We are less supportive of the criteria described in paragraphs 6.60 and 6.61, which (in particular with regard to the criterion in paragraph 6.60) may result in unnecessary complexity and spurious accuracy in some cases.

We would not support the introduction of a limit on the assumption for future changes in mortality rates for the reasons set out in our answer to question 4(a).
