

# Board for Actuarial Standards: Consultation Mortality Improvement Assumption used in TM1

## HYMANS ROBERTSON'S RESPONSE TO CHAPTER 5 OF THE FSA'S CONSULTATION ON PRODUCT PROJECTIONS AND TRANSFER VALUE ANALYSIS (CP12/10)

In May 2012 the Financial Reporting Council (FRC) published a joint consultation paper with the Financial Services Authority (FSA) on Product Projections and Transfer Value Analysis. We have responded separately to chapter 2 of the FSA part of the consultation ('Personal pensions – mortality assumptions for Key Illustration Features'). This is Hymans Robertson LLP's response to chapter 5 of the consultation ('Assumptions for Statutory Money Purchase Illustrations').

### Hymans Robertson's Views

Hymans Robertson LLP provides advice on Statutory Money Purchase Illustration (SMPI) calculations, and produces SMPs for a number of occupational pension scheme clients. We do not, however, provide financial advice to individuals and are not therefore involved in providing Key Features Illustrations for personal pensions.

We welcome the publication of the consultation paper and support the aims it sets out to achieve. In our response to the Board for Actuarial Standards (BAS) on Actuarial Standard Technical Memorandum 1 (TM1) in 2010 we supported the interaction between the FSA Handbook and TM1.

We do have some concern, however, that CP12/10 proposes that TM1 specifies the way in which the unisex mortality assumptions are blended. If TM1 has to be updated again for consistency with the proposed approach, this will impose extra (potentially significant) costs on providers and scheme administrators who have already upgraded their systems to implement the changes introduced in version 2.0 of TM1. We have carried out our own analysis of two alternative approaches to blending the unisex annuity rate and concur with the Board for Actuarial Standard's indication in its *Answers to FAQs for Practitioners*, Q. 5.7, published on 10 May 2012, that "*the resulting annuity rates should not differ significantly*", and so propose that the current flexibility in version 2.0 of TM1 remains.

We have provided our response to the particular questions raised in Appendix 1 of this paper. Details of our analysis on the variations in approaches to blending unisex annuity rates are contained in Appendix 2.

### Enquiries

If you have any comments on this response, please address them to Stuart Vincent or Stuart Morgan, whose contact details are below.

Email: [stuart.vincent@hymans.co.uk](mailto:stuart.vincent@hymans.co.uk)

Direct line: 020 7082 6172

For and on behalf of Hymans Robertson LLP

Email: [stuart.morgan@hymans.co.uk](mailto:stuart.morgan@hymans.co.uk)

Direct line: 020 7082 6332

For and on behalf of Hymans Robertson LLP

## Appendix 1 – Response to Questions

### 1 Do you agree that the assumptions in AS TM1 should be consistent as far as possible with those specified in COBS 13 Annex 2 of the FSA Handbook.

We are in agreement with the principle that the assumptions stipulated in AS TM1 should be consistent with the assumptions specified in the FSA Handbook for projections. If these assumptions differ then the annual pension projections which members receive on their SMPI statements will differ from those given at point of sale. Not only is this confusing, but it could have the effect of making the projections irrelevant to members.

However, an important observation is that the FSA's intermediate projection rate is a fixed accumulation rate rather than a maximum rate. Most defined contribution pension schemes will offer a range of investment funds and it is highly unlikely that they will be able to justify setting the expected accumulation rate for each fund at a maximum rate which is the same as that stipulated as the FSA's intermediate rate (whether it is 5% or otherwise). On this basis, SMPI projections calculated under TM1 will produce a lower projection than under the intermediate rate provided by insurers on their point of sale projections (all else being equal). It will therefore be difficult to achieve complete consistency between the FSA's handbook and TM1 by updating TM1 to specify a maximum accumulation rate that is the same as the FSA's intermediate projection rate.

### 2 (a) Should AS TM1 continue to specify a maximum accumulation rate?

In our response to the Board for Actuarial Standards (BAS) consultation on the exposure draft of TM1 in May 2011 we encourage movement away from setting a maximum accumulation rate at an overall level. Instead, we suggest that TM1 requires users to consider each asset class separately and make an appropriate assumption for the long term accumulation rate on each class (which should be capped to ensure that higher-risk assets are not viewed too optimistically). The accumulation rate used for each member should then be based on a blend of the assumptions depending on a member's own asset choice.

### (b) If AS TM1 continues to specify a maximum accumulation rate, should it be the same as the FSA's intermediate projection rate?

It is important for TM1 to specify a maximum accumulation rate to avoid providers viewing the return on high-risk assets too optimistically. However, as noted in our response to Question 1, we think that it will be difficult to achieve consistency between illustrations produced using a maximum accumulation rate in TM1 and the FSA's intermediate projection rate.

### (c) If your answer to (b) is 'No', what rate should be specified in AS TM1?

As noted earlier, we support the principle of consistency between the assumptions in TM1 and the FSA's handbook. We encourage the FRC not to specify a maximum accumulation rate of 5% on the basis that it is a conservative cap for a long term assumption. We do not recommend any changes to the current 7% cap, but suggest that it is reviewed regularly.

### 3 Should the wording for the mortality assumption in AS TM1 be changed along the lines of the wording proposed in Chapter 2?

We encourage the FRC not to change TM1 to specify the way that the mortality rates are blended to produce unisex annuity rates. If TM1 is updated again for consistency with these instructions, it will impose extra costs on those firms, providers and scheme administrators that have already upgraded systems to implement the revised assumptions in version 2.0 of TM1, but using a different, equally valid approach to deriving those rates. These costs would be incurred despite the Board of Actuarial Standards' indication that "*the resulting annuity rates should not differ significantly*" under alternative approaches. Updating systems again may also cause delays in providing compliant projections to members.

We have carried out our own analysis of two different approaches to blending male and female rates to derive unisex annuity rates (one method is as specified in Chapter 2 of CP12/10 and the other is a valid alternative permitted under version 2.0 of TM1, and endorsed by the FRC's response to Q. 5.7 as published in May 2012). The outcome of this analysis is that the two approaches differ by at most 0.1% (see Appendix 2 for details). Further, all versions of TM1 to date specify that projected pension amounts should be rounded down to 3 significant figures or rounded down to the next lower multiple of £10 if the projection is under £1000 and not an exact multiple of £10. With this in mind, the actual difference between the approaches for blending annuity rates will be lost when rounding the projected pension figure.

Following this consultation, should the FRC still wish to strengthen the wording in TM1 to specify an approach to blending the unisex mortality assumptions, we strongly recommend that there is a caveat in TM1 that allows providers to use an alternative method providing they can demonstrate that the alternative method will have no material impact on the result.

**4 Given the proposed nature of the changes to AS TM1, do respondents envisage any difficulties with a four-week consultation for an exposure draft of a revised version of AS TM1?**

We do not envisage any difficulties with a four-week consultation for an exposure draft of a revised version of TM1. We encourage the FRC to contact respondents to this and earlier consultations on TM1 so that they are made aware when the exposure draft is released and of the four-week deadline.

**5 Do you agree with our proposal for the timing of any changes?**

We agree that any changes should come into effect from 6 April 2013. We also encourage the FRC to allow a period of grace after releasing a revised version of TM1 to allow providers and scheme administrators sufficient time to upgrade their systems. This approach was taken following the release of version 2.0 of TM1.

**6 Do you have any comments on the impact assessment for our proposals?**

We support the aims of the impact assessment for your proposals subject to our comments noted in the above responses.

## Appendix 2 – Analysis of the impact of stipulating the approach for blending a unisex annuity rate

This Appendix justifies our suggestion not to stipulate an approach for blending unisex annuity rates in TM1.

### Change in mortality basis

Version 2.0 of TM1 specifies that “*The mortality of the member and the member’s spouse must be derived from 50% of each of the tables PCFA00 and PCMA00 (as published by the Actuarial Profession). For statutory illustrations produced with illustration dates in the range 6 April 20YY to 5 April (20YY+1), mortality improvements must be derived from a blend of 50% of each of the CMI mortality projection models CMI\_(20YY-1)\_F[1.25%] and CMI\_(20YY-1)\_M[1.25%]. For each person, the set of mortality rates used must be those applicable to that person’s year of birth.*”

Under these assumptions, there are several approaches for generating an annuity rate that blends the male and female mortality assumptions. We have analysed the impact on annuity rates of using the following two different approaches to blending these mortality assumptions.

For completeness, we have analysed the results using a net discount rate of -0.6% and +0.4%. These rates have been derived using the approach stipulated in TM1 using market conditions as at 15 February 2012 and 15 February 2011 respectively.

### Approach 1

To calculate the sum of the following two sets of  $q_x$  (probability of death) factors for each age and year of birth using the assumptions:

- 50% of PCMA00 including improvements based on CMI(20YY-1)\_M[1.25%], and
- 50% of PCFA00 including improvements based on CMI(20YY-1)\_M[1.25%].

This is the approach proposed in CP12/10.

### Approach 2

Create a unisex base table by calculating the sum of the following two sets of  $q_x$  factors;

- 50% of PCMA00, and
- 50% of PCFA00,

and then create a unisex improvement table based on age and year of birth using the assumptions;

- 50% of CMI(20YY-1)\_M[1.25%], and
- 50% of CMI(20YY-1)\_M[1.25%].

This is a valid approach following the wording in version 2.0 of TM1.

### Result

The tables below show joint life annuity rates at age 65 (for selected years of birth) which have been calculated under each of the approaches stated above. For ease of comparison we have show a percentage difference between each annuity rate and a £ difference assuming a projected pension of £30,000 p.a..

We have presented results obtained using a net discount rate of -0.6% and +0.4%

**Net discount rate -0.6%**

Year of birth	Annuity at age 65 using approach 1	Annuity at age 65 using approach 2	Difference (%)	£ difference for a projected pension of £30,000 p.a.
1994 (age 18 in 2012)	30.322	30.316	-0.02%	£6
1967 (age 45 in 2012)	27.959	27.953	-0.02%	£6
1957 (age 55 in 2012)	27.079	27.067	-0.05%	£15
1947 (age 65 in 2012)	26.238	26.214	-0.09%	£27

**Net discount rate +0.4%**

Year of birth	Annuity at age 65 using approach 1	Annuity at age 65 using approach 2	Difference (%)	£ difference for a projected pension of £30,000 p.a.
1994 (age 18 in 2012)	36.202	36.193	-0.03%	£9
1967 (age 45 in 2012)	32.960	32.950	-0.03%	£9
1957 (age 55 in 2012)	31.766	31.750	-0.05%	£15
1947 (age 65 in 2012)	30.634	30.603	-0.10%	£30

**Conclusion**

The percentage difference in the annuity rates calculated under the different methods are very small and we believe that the differences are sufficiently small not to affect member's projections or their retirement planning. In particular, TM1 specifies that projected pension amounts should be rounded down to 3 significant figures or rounded down to the next lower multiple of £10 if the projection is under £1000 and not an exact multiple of £10. With this in mind, the actual difference between the approaches for deriving blended annuity rates will be lost when rounding the projected pension figure.

There are other approaches to the production of blended annuity rates. However, any acceptable variation would have a similarly negligible impact on member's projections.