2018 Consultation on assumptions to be used for valuations under section 143 and section 179 of the Pensions Act 2004

Consultation document

Contents

August 2018

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1. Introduction and summary

1.1. The Board of the Pension Protection Fund is required under the Pensions Act 2004 to keep the assumptions used for valuations under sections 143, 152, 156, 158 and 179 of the Act in line with estimated pricing in the bulk annuity market. The Board is considering, subject to consultation, making some updates to these assumptions to bring them into line with current market pricing.

1.2. This consultation document sets out our proposed changes. The closing date for responses to this consultation is Friday 21 September 2018.

1.3. The proposals are described in detail in section 4. The changes are as follows:

- to use the CMI 2016 mortality projections model, and
- to use slightly higher discount rates for certain tranches of benefit.

1.4. The Board proposes to introduce these changes for valuations with an effective date on or after 1 November 2018, subject to satisfactory consultation responses.

2. Valuations covered

2.1. This consultation document covers the assumptions used for valuations carried out under sections 143, 152, 156, 158 and 179. Further detail about these valuations is set out in Appendix 1.

2.2. The document focuses on section 143. The changes will also apply to valuations under sections 152, 156 and 158. Under section 179 simplified assumptions are used; however, no changes to these simplifications are being proposed and the changes therefore also apply to these valuations.

3. Review process

3.1. The Board has adopted ten principles to underlie the setting of assumptions for section 143 and section 179 valuations. These are set out in Appendix 2. Two key ones of these are as follows:

- The assumptions should deliberately err on the side of understating the liabilities.
- They should be informed by regular meetings with market participants.

3.2. Erring on the side of understating liabilities means that for section 143 valuations we reduce the risk of taking schemes into the PPF that, as at the date of the employer's insolvency, could have bought out better benefits in the market. Moreover, if a scheme is overfunded on a section 143 basis but is actually unable to secure a buy-out, then it can reapply for entry to the PPF under section 151 of the Pensions Act 2004.

3.3. The current assumptions were set following a review of market pricing carried out in July 2016, and came into effect from 1 December 2016.

3.4. Between April and June 2018, we held discussions with seven of the eight active participants in the bulk annuity market. We were also aware of a small number of pension schemes which were either securing a buy-out quote at the time or were investigating their buy-out position.

3.5. Four of the insurance companies provided us with quotes as at 31 March 2018 for a 'model scheme' that is typical of the kind that has claimed on the PPF in the past.

3.6. The insurance companies agreed that the market is currently extremely competitive, with 2018 looking like it will be one of the most active years for bulk annuity contracts to date. This might have been brought about, to some extent, by

- Recent heavier than expected mortality experience reducing prices
- More CPI assets becoming available to match benefits
- A higher allocation to alternative assets to match liabilities

3.7. On the basis of the model scheme valuations, and the discussions held, we came to the view that the differences between the section 143 basis and current buy-out quotes were material enough to merit amending the assumptions. The changes we propose to make are summarised in the next section.

4. Section 143 and section 179 assumptions

4.1. We propose to move to the CMI_2016 model for mortality improvements. The model has a number of parameters and our proposal is to adopt it in the 'core' form, including the default smoothing parameter[1] of 7.5. Discussions with insurers indicated that this is towards the optimistic end of the range used. In this context 'optimistic' means a lower scaling factor and hence a lower buy-out price.

4.2. The model requires the long term rate of mortality improvements to be specified. We believe our existing assumptions remain appropriate, albeit again at the optimistic end of the acceptable range. We are proposing a few changes to the discount rates so that they can better reflect current pricing. In particular, the pricing for non-pensioner members is further away from the section 143 basis than for pensioners, so we propose to increase the pre-retirement discount rate (for pre-6 April 2009 accruals) by 0.2 percentage points. We also propose to adjust some of the post-retirement discount rates by 0.1 or 0.2 percentage points.

4.3. The following table summarises the mortality tables and the discount rates (with the current basis shown for comparison). We have used a red font for the changes that we propose to make.

[1] The smoothing parameter determines the weight to be placed on recent mortality experience.

Mortality assumptions	Current B7 / A8[2]	Proposed B8 / A9
Mortality base tables	S2 SAPS tables	S2 SAPS tables
Scaling applied to base mortality rates	100%	100%
Mortality improvement projections	CMI_2014	CMI_2016
Smoothing parameter for mortality improvement	n/a	7.5
Long term rates of mortality improvement	1.5% Males 1.25% Females	1.5% Males 1.25% Females

Note that under the CMI_2016 model, the rates are initial rates of mortality. Under the CMI_2014 model they are *central* rates of mortality.

Discount rates	Current B7 / A8	Proposed B8 / A9
Pensioner pre-97	10 yr FI yield + 0.3%	10 yr FI yield + 0.3%
Pensioner post-97	Max {10 yr FI yield – 1.6%, 5-15 yrs IL yield + 0.9%}	Max {10 yr FI yield – 1.5%, 5-15 yrs IL yield + 1.1%}
Non-pensioners post-retirement pre-97	20 yr FI yield – 0.4%	20 yr FI yield – 0.2%
Non-pensioners post-retirement post-97	Max {20 yr FI yield – 2.6%, Over 5 yrs IL yield + 0.2%}	Max {20 yr FI yield – 2.6%, Over 5 yrs IL yield + 0.4%}
Non-pensioners pre-retirement pre-09	5-15 yrs IL yield + 0.0%	5-15 yrs IL yield + 0.2%
Non-pensioners pre-retirement post-09	Max {15 yr FI yield – 2.5%, 5-15 yrs IL yield + 0.0%}	Max {15 yr FI yield – 2.5%, 5-15 yrs IL yield + 0.2%}
Non-pensioners pre-retirement non-increasing	10 yr FI yield – 0.4%	10 yr FI yield – 0.2%

FI has been used as shorthand for the annualised yield on the relevant FTSE Actuaries' Government Fixed Interest Index. Similarly, IL refers to the average of the relevant FTSE Actuaries' Government Securities Index-Linked annualised Real Yields assuming 5 per cent inflation and 0 per cent inflation.

4.4. We have considered using discount rates based on the full yield curve; however, we feel that the structure proposed above provides a better balance between precision and complexity / cost, taking into account the purpose of the valuation. We would however be grateful for views on whether using a yield curve approach for interest and inflation would cause any material operational issues to inform our thinking for future reviews.

4.5. We propose to introduce these changes for valuations with an effective date on or after 1 November 2018.

4.6. We propose to keep other assumptions the same as they currently are. The proposed new section 143 assumptions are set out in full in Appendix 3.

5. Impact

5.1. Taken together, the assumption changes described above will typically reduce the value of section 143 liabilities. Based on calculations as at 31 March 2018 for

[2] B7 is the current version of the section 143 assumptions. A8 is the current version of the section 179 assumptions.

an average scheme (with membership profile in line with that of the PPF as a whole), we calculate that the approximate impact will be as follows:

	Pre-97	Post-97	Post-09
Pensioner liabilities	-2.2%	-4.1%	n/a
Non-pensioner liabilities	-7.0%	-6.6%	-4.2%

5.2. The changes to the mortality assumptions account for around half of the liability impacts. Therefore, the impact is similar across schemes with duration shorter or longer than our notional average scheme as well.

5.3. The PPF 7800 index tracks the aggregate section 179 funding position of schemes eligible for PPF protection. As at 30 June 2018, there were 5,588 schemes in the PPF 7800 index, of which 3,633 were in deficit. The changes to the section 179 assumptions would, we estimate, improve the aggregate funding ratio, from 94.9 per cent to 100.2 per cent, and move 445 schemes from deficit to surplus. The deficit of schemes in deficit would reduce from £200 billion to £149 billion.

6. Consultation questions

6.1. The Board would be grateful to receive responses to the following questions:

Q1. Do you consider that the proposed new section 143 and section 179 valuation assumptions are reasonable? If not, what would you propose as an alternative set of assumptions?

Q2. What evidence do you have to support your answer to Q1?

Q3. Is it appropriate to introduce the new section 143 and section 179 assumptions with effect from 1 November 2018?

Q4 Do you agree that the current basis strikes the correct balance between precision and complexity? If not, how do you think it could be improved?

Q5. Other than discussions with market participants, what sources of information do you think the PPF should be using to ensure that section 143 assumptions remain broadly in line with buy-out pricing?

Q6. Do you have any views on whether using a yield curve approach for interest and inflation would cause any material operational issues?

6.2. The Board would also be interested to receive your comments on any other matter in this consultation document which is not included in responses to the questions above.

7. Process for responding

7.1. The consultation will end on Friday 21 September 2018. Please ensure that your response reaches us by that date. If you would like further copies of this document it can be found at the Valuation Guidance section of the Pension Protection Fund website at http://www.pensionprotectionfund.org.uk

7.2. Please e-mail responses to assumptions@ppf.gsi.gov.uk

7.3. Please state whether you are responding as an individual or representing the views of an organisation. If you are responding on behalf of an organisation please make it clear who the organisation represents and, where applicable, how the views of members were assembled.

7.4. The Board will publish a summary of responses on the PPF website at www.pensionprotectionfund.org.uk by the end of October 2018. At the same time it will also publish its decision about future assumptions for section 143 and section 179 valuations.

7.5. In the event of any queries, please contact:

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7.6. The Board would welcome feedback on the consultation process. If you have any comments, please contact:

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7.7. The requirements of the Freedom of Information Act (2000) state that all information contained in the response, including personal information, may be subject to publication or disclosure. By providing personal information for the purpose of the public consultation exercise, it is understood that a respondent consents to its disclosure and publication. If this is not the case, the respondent should limit any personal information which is provided, or remove it completely. If a respondent requests that the information given in response to the consultation be kept confidential, this will only be possible if it is consistent with the Freedom of Information Act (2000) obligations and general law on this issue. Further information about the Freedom of Information Act (2000) can be found on the website of the Ministry of Justice.

Appendix 1: Valuations covered

i. A section 143 valuation is carried out during a PPF assessment period. The assets and liabilities for the section 143 valuation are established in accordance with section 143, the Pension Protection Fund (Valuation) Regulations 2005 (SI 2005 / 672), as amended, and guidance issued by the Board. The valuation is carried out by an actuary appointed by the Board and the valuation is approved by the Board.

ii. A section 152 valuation is carried out following an application for reconsideration under section 151 of the Pensions Act 2004.

iii. Section 156 valuations must be carried out on a regular basis by a scheme that has been granted authorisation by the Board to run as a closed scheme having demonstrated that it was over 100 per cent funded at a section 143 valuation.

iv. A section 158 valuation is carried out by a scheme that has been running as a closed scheme, following an application to commence a further assessment period under section 157.

v. Valuations carried out under section 152, 156 and 158 are required to be conducted on similar principles to a section 143 valuation. Legislation requires that protected liabilities are calculated as the estimated cost of securing scheme benefits calculated in accordance with Schedule 7 of the Pensions Act 2004 (PPF pension compensation provisions) to the member by means of an annuity purchased at the market rate.

vi. The key purpose of these valuations is to assess whether a scheme has sufficient funds to buy out levels of benefit at least equal to PPF compensation in the market. For a large number of schemes this position will be relatively clear cut. This is a key consideration for keeping the assumptions used as simple as possible. Certain assumptions may be varied, upon request to the PPF, to take account of a scheme’s specific circumstances. This is a further reason for maintaining simplicity in the standard assumptions.

vii. Section 179 valuations are carried out on a regular basis by all schemes eligible for PPF protection and the results are used in the calculation of PPF levies.

viii. A section 179 valuation is in principle very similar to a section 143 valuation but contains some simplifications – consistency and simplicity matter more than a high level of precision. The PPF levy calculation requires each section 179 valuation to be rolled forward from its effective date to a later date. More complex valuation assumptions would tend to lead to more complex roll-forward calculations, and hence higher costs associated with performing such calculations.

Appendix 2: Policy principles around setting assumptions

The Board has adopted the following ten principles to underlie the setting of assumptions for section 143 and section 179 valuations:

a) Compliance with the regulations (see Appendix 1).
b) Seeking evidence from confidential dialogue with market participants.
c) Seeking anecdotal evidence from consultants of the state of the market; a significant shift would indicate the need for a review of assumptions.
d) If the need for a review under principle (c) has not been invoked, nonetheless reviewing the market by speaking to market participants every year to eighteen months.
e) Proportionality (balancing the degree of precision with the cost, taking into account the purpose of the valuation).
f) Adoption of new tables and techniques as appropriate, having regard to the principle of proportionality.
g) Reasonable stability in the assumptions over time; i.e. frequent changes are undesirable.
h) Deliberately erring on the side of understating liabilities; i.e. assessing section 143 liabilities at a level that is believed for most schemes to be somewhat below the best market price.
i) Consulting with the pensions industry to check proposals.
j) Providing sufficient notification of changes.

These principles are not binding but the Board has made a commitment to follow them as far as possible.

Appendix 3: Proposed new assumptions for section 143 and section 179

Changes from the existing assumptions are highlighted. We do not propose to make any changes to Parts 1, 2 and 5 and so these sections are not shown below.

Part 3 – Financial basis for use when undertaking valuations

3.1 Calculation of yields as at the effective date of valuation

Yields should be measured as at the close of business on the effective date of the valuation. For any dates where yields are not available the yields for the nearest preceding date should be used. Yields should be calculated to the nearest 0.01%. Expressions of the form (Yield Z - k%) should be calculated as an arithmetic difference and not a geometric difference.

3.2 Yields in deferment

Compensation increasing in deferment and accrued prior to 6 April 2009

For each non-pensioner, where compensation which accrued prior to 6 April 2009 increases in deferment, the liability for the period of deferment must be obtained by discounting the benefit at normal pension age at the adjusted net index-linked gilt yield shown below. As this yield implicitly allows for increases to normal pension age no allowance should be made for increases to benefits between the relevant date and normal pension age.

Adjusted net index-linked gilt yield = Yield A (i) + 0.2%

(i) Yield A should be determined daily as 50% of the sum of the FTSE Actuaries' Government Securities Index-Linked annualised Real Yields 5 to 15 years assuming:

a) 5% inflation; and
b) 0% inflation.

Compensation increasing in deferment and accrued after 5 April 2009

For each non-pensioner, where compensation which accrued after 5 April 2009 increases in deferment, the liability for the period of deferment must be obtained by discounting the benefit at normal pension age at the adjusted yield shown below. As this yield implicitly allows for increases to normal pension age no allowance should be made for increases to benefits between the relevant date and normal pension age.

Adjusted yield = higher of (Yield A (i) + 0.2%) and (Yield B (ii) – 2.5%)

(ii) Yield B should be determined daily as the annualised yield on the FTSE Actuaries' Government 15 year Fixed Interest Index.

Compensation not increasing in deferment

For each non-pensioner, where compensation does not increase in deferment, the liability for the period of deferment must be obtained by discounting the benefit at normal pension age at the adjusted gilt yield shown below.[3]

Adjusted gilt yield = Yield C (iii) – 0.2%

(iii) Yield C should be determined daily as the annualised yield on the FTSE Actuaries' Government 10 year Fixed Interest Index.

3.3 Yields in payment

Separate yields are used for pensioners and for non-pensioners post retirement. For the period from which payments are assumed to commence, the liability must be obtained by reference to the following (adjusted) yields.

Non-pensioners: compensation with no increases in payment

Adjusted yield = Yield D (iv) – 0.2%

(iv) Yield D should be determined daily as the annualised yield on the FTSE Actuaries' Government 20 year Fixed Interest Index.

Non-pensioners: compensation increasing in payment

Adjusted yield = higher of (Yield E (v) + 0.4%) and (Yield D (iv) – 2.6%)

(v) Yield E should be determined daily as 50% of the sum of the FTSE Actuaries' Government Securities Index-Linked annualised Real Yields over five years assuming:
a) 5% inflation; and
b) 0% inflation.

Pensioners: compensation with no increases in payment

Adjusted yield = Yield C (iii) + 0.3%

Pensioners: compensation increasing in payment

Adjusted yield = higher of (Yield A (i) + 1.1%) and (Yield C (iii) – 1.5%)

Part 4 – Mortality for use when undertaking valuations

The mortality baseline in respect of a member and the member's dependant, pre and post retirement, shall be S2PMA (men) and S2PFA (women), with future changes in line with CMI_2016_M [1.50 per cent] and CMI_2016_F [1.25 per cent] for men and women respectively (from 2007). For the avoidance of doubt the core parameterisation should be used including the core smoothing parameter of 7.5.

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[3] This assumption only applies to schemes that do not provide for any revaluation of benefits for, or in respect of, any member. If one or more members receive revaluation on any part of their pension then this assumption does not apply to that scheme

These mortality tables are published by the Continuous Mortality Investigation. For each individual, the set of mortality rates used shall be those applicable to that individual's year of birth.

The mortality table used should be based on an individual's pension size[4] (before application of the compensation cap and 90% reduction) as follows:

Pension size[5]	**First life**	**Contingent life**
Males:		
< 10% x compensation cap at age 65	S2PMA_H	S2PFA_H
10% - 50% x compensation cap at age 65	S2PMA_M	S2PFA
>= 50% x compensation cap at age 65	S2PMA_L	S2PFA_L
Females:		
< 5% x compensation cap at age 65	S2PFA_H	S2PMA_H
5% - 20% x compensation cap at age 65	S2PFA	S2PMA_M
>= 20% x compensation cap at age 65	S2PFA_L	S2PMA_L

[4] For section 179 valuations, there is no differentiation based on pension amounts. The S2PMA table is used for all male lives and the S2PFA table is used for all female lives.

[5] For pensioners and non-pensioners, the table used for the contingent life is based on the pension size of the first life. For dependants with pension in payment, the table used is based on the size of the dependant's pension. For non-pensioners include revaluation to the relevant time only, where appropriate, and include the pension equivalent of any lump sum entitlement using the annualised value of a lump sum factors available on the PPF website.