



2021 Consultation on assumptions to be used for valuations under section 143 and section 179 of the Pensions Act 2004

Consultation document

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February 2021

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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 5pm on Thursday 18 March 2021.
- 1.3. The proposals are described in detail in section 4. The changes are as follows:
 - to use the SAPS "S3" Series mortality tables,
 - to use the CMI 2019 mortality projections model,
 - to amend the discount rate compositions for certain tranches of benefit, and
 - to amend the calculation of the expenses.
- 1.4. The Board proposes to introduce these changes for valuations with an effective date on or after 1 May 2021, 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.

- 3.3. The current assumptions were set following a review of market pricing carried out in Q2 2018, following which the section 143 assumptions came into effect on 13 June 2018 and the section 179 assumptions came into effect on 1 November 2018.
- 3.4. In December 2020, we held discussions with the eight active participants in the bulk annuity market.
- 3.5. Three of the insurance companies provided us with quotes as at 30 September 2020 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 2020 had been a busy year within the annuity market, despite the market turbulence resulting from the Covid-19 crisis.
- 3.7. On the basis of the discussions held and the model scheme valuations, we came to the view that the differences between the section 143 basis and current buy-out bases were material enough to merit amending the assumptions. The exact impact to an individual scheme will depend on their size and composition, with a larger impact for schemes with a higher proportion deferred members with pension accrued after 5 April 1997. In fact, for the average scheme that has typically claimed on us, we do not expect these changes to materially impact their overall liabilities given the assumption changes generally offset each other. The changes we propose to make are summarised in the next section.

4. Section 143 and section 179 assumptions

Mortality

- 4.1. We propose to move to the Self-Administered Pension Scheme (SAPS) "S3" mortality series. Furthermore, we propose to adopt the amounts weighted dependant SAPS S3 tables for both current dependants and contingent lives. Discussions with insurers indicated that the adoption of the latest S3 tables was reasonable.
- 4.2. In the proposed section 143 basis, we allocate each member to an appropriate S3 table using the bands adopted by the CMI to derive the S3 tables, adjusted to allow for CPI to date.
- 4.3. We propose to move to the CMI_2019 model for mortality improvements. The model has a number of parameters and our proposal is to adopt an initial addition¹ of 0% and a smoothing parameter² of 7.5. Discussions with insurers indicated that this is within the range used, with some indicating that we were at the more optimistic end. In this context 'optimistic' means lower mortality improvements and hence a lower buy-out price.

¹ The initial addition adjusts the starting rate of improvements within the model, enabling the user to adjust the table if their population is different from the population used to calibrate the model.

² The smoothing parameter determines the weight to be placed on recent mortality experience.

4.4. The model requires the long-term rate of mortality improvements to be specified. We believe our existing assumptions remain appropriate.

Discount rates

4.5. We are proposing a few changes to the post-retirement post-97 discount rates so that they better reflect current CPI pricing. In general, the pricing is too penal for non-pensioner members and too optimistic for pensioners. To bring our assumptions more in line with the insurance market, we propose to adjust some of the post-retirement post-97 discount rates components by up to 0.4 percentage points.

Expenses

4.6. We propose to amend the formula for calculating expenses which will serve to increase the estimated wind-up expenses for smaller schemes and decrease it for larger schemes. Additionally, we propose on capping wind-up expenses at £3 million. We have based this proposal on the analysis of actual costs incurred for a sample of 32 schemes who have transferred over the last 2 years. During this analysis we observed that the costs could vary significantly from scheme to scheme based on their complexity. However, this can be reflected in a s143 valuation given schemes can continue to request scheme specific assumptions, if appropriate.

4.7. We propose to slightly reduce the benefit installation/payment expenses. Discussions with insurers indicated that this is at the more optimistic end of the range used. In this context 'optimistic' means lower expenses and hence a lower buy-out price.

Summary of changes

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

Mortality assumptions	Current B8 / A9³	Proposed B9 / A10
Mortality base tables	S2 SAPS tables	S3 SAPS tables
Mortality improvement projections	CMI_2016	CMI_2019
Smoothing parameter for mortality improvement	7.5	7.5
Initial addition for mortality improvement	n/a	0%
Long term rates of mortality improvement	1.5% Males 1.25% Females	1.5% Males 1.25% Females

³ B8 is the current version of the section 143 assumptions. A9 is the current version of the section 179 assumptions.

Discount rates	Current B8 / A9	Proposed B9 / A10
Pensioner pre-97	10 yr FI yield + 0.3%	10 yr FI yield + 0.3%
Pensioner post-97	Max {10 yr FI yield – 1.5%, 5-15 yrs IL yield + 1.1%}	Max {10 yr FI yield – 1.9% , 5-15 yrs IL yield + 1.2% }
Non-pensioners post-retirement pre-97	20 yr FI yield – 0.2%	20 yr FI yield – 0.2%
Non-pensioners post-retirement post-97	Max {20 yr FI yield – 2.6%, Over 5 yrs IL yield + 0.4%}	Max {20 yr FI yield – 2.5% , Over 5 yrs IL yield + 0.7% }
Non-pensioners pre-retirement pre-09	5-15 yrs IL yield + 0.2%	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 + 0.2%}	Max {15 yr FI yield – 2.5%, 5-15 yrs IL yield + 0.2%}
Non-pensioners pre-retirement non-increasing	10 yr FI yield – 0.2%	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.

Expenses	Current B8 / A9	Proposed B9 / A10
Wind-up	3% of liabilities up to £50m; 2% of liabilities between £50m and £100m; and 1% of liabilities in excess of £100m	4% of liabilities up to £5m; 1% of liabilities between £5m and £25m; and 0.5% of liabilities between £25m and £545m* *As a result, expenses are capped at a maximum value of £3m.
Non-pensioner benefit installation / payment	£1,000 per member	£950 per member
Pensioner benefit installation / payment	Age related allowance <60, £900 per member 60-70, £800 per member 70-80, £600 per member >80, £500 per member	Age related allowance <60, £800 per member 60-70, £650 per member 70-80, £550 per member >80, £450 per member

4.9. As part of our latest consultation in 2018, we explored whether it would be appropriate to move away from the current approach of setting the discount rate, and instead base our assumptions on a full yield curve. At that time, no respondent to the consultation supported the idea of using a yield curve for s179 valuations given the onus of this valuation is to differentiate risk rather than place a theoretically correct value on a scheme's liabilities. For the s143 valuations, most respondents were optimistic regarding the operational feasibility of using yield curves; however, there was a mixed view about whether the increased accuracy outweighed the additional complexities. We have again 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 be grateful to know if your views have changed since the previous consultation to inform our thinking for future reviews.

4.10. 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.

Timing

4.11. Given the assumption changes are relatively immaterial for an average scheme, for ease of implementation we propose the revised section 143 and section 179 assumption are both introduced prospectively. Specifically, we propose to introduce these changes for valuations with an effective date on or after 1 May 2021.

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 30 September 2020 for an average scheme (with membership profile in line with that of the schemes recently in PPF assessment), we calculate that the approximate impact will be as follows:

	Pre-97	Post-97	Post-09	Total
Pensioner liabilities	-1.7%	4.0%	n/a	0.0%
Non-pensioner liabilities	-0.9%	-6.0%	-6.3%	-4.3%

5.2. The actual impact for an individual scheme will differ depending on the scheme's duration and membership profile.

5.3. The PPF 7800 index tracks the aggregate section 179 funding position of schemes eligible for PPF protection. As at 30 September 2020, there were 5,318 schemes in the PPF 7800 index, of which 3,373 were in deficit. The changes to the section 179 assumptions would, we estimate, improve the aggregate funding ratio, from 93.5 per cent to 97.6 per cent, and move 261 schemes from deficit to surplus. The deficit of schemes in deficit would reduce from £253 billion to £204 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 May 2021?

- 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?
- 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 at 5pm on Thursday 18 March 2021. 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 <https://www.ppf.co.uk/>
- 7.2. Please respond to the consultation online at <https://www.ppf.co.uk/2021-consultation-valuation-assumptions> or email responses to assumptions@ppf.co.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 <https://www.ppf.co.uk/> by Thursday 29 April 2021. 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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Chief Finance Officer & Chief Actuary
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CR0 2NA
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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). In particular, the assumptions are required to reflect insurance company buy-out pricing terms for PPF compensation.
- 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 and 2 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.⁴

$$\text{Adjusted gilt yield} = \text{Yield C (iii)} - 0.2\%$$

- (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

$$\text{Adjusted yield} = \text{Yield D (iv)} - 0.2\%$$

- (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

$$\text{Adjusted yield} = \text{higher of (Yield E (v) + 0.7\%)} \text{ and (Yield D (iv) - 2.5\%)}$$

- (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:
- 5% inflation; and
 - 0% inflation.

Pensioners: compensation with no increases in payment

$$\text{Adjusted yield} = \text{Yield C (iii)} + 0.3\%$$

Pensioners: compensation increasing in payment

$$\text{Adjusted yield} = \text{higher of (Yield A (i) + 1.2\%)} \text{ and (Yield C (iii) - 1.9\%)}$$

⁴ 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

Part 4 – Mortality for use when undertaking valuations

The mortality baseline in respect of an active, deferred or pensioner member, pre and post retirement, shall be:

Gender of first life	First life	Contingent life
Men	S3PMA	S3DFA
Women	S3PFA	S3DMA

The mortality baseline in respect of current dependants shall be S3DMA (men) and S3DFA (women)

Future changes to mortality in line with CMI_2019_M [1.50%; S=7.5] and CMI_2019_F [1.25%; S=7.5] for men and women respectively (from 2013).

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 for an active, deferred or pensioner member should be based on an individual's pension size⁵ (before application of the compensation cap and 90% reduction) as follows:

Pension size ⁶	First life	Contingent life
Males:		
< 5,500	S3PMA_H	S3DFA
>= 5,500 and < 22,500	S3PMA_M	S3DFA
>= 22,500 and < 45,000	S3PMA_L	S3DFA
>45,000	S3PMA_VL	S3DFA
Females:		
< 1,000	S3PFA_H	S3DMA
>= 1,000 and < 9,000	S3PFA_M	S3DMA
>= 9,000 and < 18,000	S3PFA_L	S3DMA
>= 18,000	S3PFA_VL	S3DMA

⁵ For section 179 valuations, there is no differentiation based on pension amounts and the S3PMA, S3PFA, S3DMA or S3DFA tables are used for all relevant lives.

⁶ 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.

Part 5 – Other assumptions for use when undertaking valuations

5.1 Assumptions for contingent benefits

a) Proportions married

Where the scheme provides for survivor pensions:

For pensioners

Where the scheme makes provision (including discretionary provision) for survivor pensions for “relevant partners” an assumption consistent with 85% (males) or 75% (females) at normal pension age.

Where the scheme only makes provision for survivor pensions for a legal spouse or civil partner, an assumption consistent with 75% (males) or 65% (females) at normal pension age.

Using a proportion married assumption consistent with 85% / 75% (males) or 75% / 65% (females) at normal pension age may require mortality rates for calendar years before 2007 for a “strictly correct” calculation of the proportion married assumption to apply for older pensioners. In such circumstances prudent assumptions should be used.

For non-pensioners

Where the scheme makes provision (including discretionary provision) for survivor pensions for “relevant partners” the assumption must be, at the assumed date of retirement or earlier death, 85% (males) or 75% (females).

Where the scheme only makes provision for survivor pensions for a legal spouse or civil partner, the assumption must be, at the assumed date of retirement or earlier death, 75% (males) or 65% (females).

A “*relevant partner*” is as defined in SI 2005/670, being a person of either sex who was not married to, or in a civil partnership with, the member and who was living with the member as if that person and the member were husband and wife or, in the case of two adults of the same sex, as if they were civil partners. For the purpose of the above, two adults of the same sex are to be regarded as living together as civil partners if they would be regarded as living together as husband and wife were they instead two adults of opposite sex. Schemes that were formerly contracted-out on a protected rights basis may be required to pay a survivor’s pension to a wider category than just the legal spouse.

b) Age difference between member and dependant

Females are assumed to be 3 years younger than males.

c) Children's pensions

No specific additional allowance is to be included for prospective children's pensions. Children's pensions already in payment should be assumed to cease at age 18, or age 23 if currently aged over 17.

5.2 Expenses

This calculation of expenses is intended to give an estimate of the cost of securing a full buyout with an insurance company. The expenses must be applied whatever the investment strategy of the scheme and, in particular, even if all scheme benefits are secured by immediate and deferred annuity policies.

a) Estimated wind-up expenses

4% of liabilities (excluding benefit installation / payment expenses) up to £5 million

plus

1% of liabilities (excluding benefit installation / payment expenses) between £5 million and £25 million

plus

0.5% of liabilities (excluding benefit installation / payment expenses) between £25 million and £545 million

The estimated wind-up expenses will be no more than £3 million for all schemes.

b) Benefit installation / payment expenses

Non-pensioners

An allowance of £950 per member should be made.

Pensioners

An age-related allowance per member should be made, according to the table below:

Age	Expense allowance per member £
< 60	800
60 – 70	650
70 – 80	550
80 +	450

If a member has two or more records, e.g. a pension and a deferred pension, then only one expense allowance (the highest) should be calculated.