

Consultation Document

2011 Consultation on assumptions to be used for valuations under sections 143 and 179 of the Pensions Act 2004

February 2011

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1. Introduction and summary

1.1 The Board of the Pension Protection Fund is responsible for keeping the assumptions used for valuations under sections 143, 156, 158 and 179 of the Pensions Act 2004 in line with estimated pricing in the bulk annuity market. In the light of:

1. the government's proposed change to the measure of inflation used for indexing PPF compensation from RPI to CPI; and
2. recent developments in the buy-out market,

the Board is considering, subject to consultation, making some changes to these assumptions.

1.2 The Board would like to receive responses to this consultation by 21 March 2011.

1.3 The proposed assumptions changes are to:

- reduce the yields used to discount future payments by 0.2% p.a. in payment; and
- increase the assumption about future longevity improvements for males.

Other assumptions would be unchanged.

1.4 The Board proposes to introduce these changes for valuations with an effective date on or after 1 April 2011.

2. Background and Recent Developments

2.1 Developments since assumptions last updated

Consumer Prices Index (CPI)	The government has proposed that PPF compensation will receive revaluation in deferment and increases in payment that will be linked to CPI rather than RPI.
Scheme-specific assumptions in s143 valuations	Version H4 of the s143 methodology guidance introduced the facility for schemes, in particular circumstances, to use different assumptions for s143 valuations from those specified in the s143 assumptions guidance.
Closed scheme valuations (s156 and s158)	There are now in existence some schemes that were more than 100% funded for their s143 valuations and which have completed a PPF assessment period, but were unable to buy out benefits that at least match PPF compensation. These "closed schemes" are required to carry out regular valuations (under s156 of PA2004) to determine their funding position and so ascertain if they should reapply for entry to the PPF under s157 of PA2004. S156 valuations are carried out using s143 assumptions for determining the funding level of the Protected Liabilities.

Where the s156 valuation shows that the scheme is underfunded with respect to Protected Liabilities, the trustees must apply to the PPF for re-entry. A further assessment period commences and a s158 valuation is used to establish if the PPF is required to assume responsibility for the scheme. S158 valuations are carried out using s143 assumptions.

Further information on the first two of these developments is set out below.

2.2 CPI

On 8 July 2010, the Minister of State for Pensions, Steve Webb MP, announced that the Government intended to use the Consumer Prices Index for revaluation and indexation of compensation made by the Pension Protection Fund. This change is expected to apply to revaluation of PPF compensation from 31 March 2011 and to indexation of post April 1997 compensation in payment from 1 January 2012. (Appendix 1 contains a table showing how this affects compensation accrued during different periods of service.)

2.3 Ability of schemes to use scheme-specific assumptions in s143 valuations

2.3.1 Version H4 of the s143 methodology guidance published in June 2010 introduced the facility for schemes, in particular circumstances, to use different assumptions for s143 valuations from those specified in the s143 assumptions guidance.

Different assumptions may be permitted where:

1. it is considered that the assumptions set out in the s143 assumptions guidance are not appropriate to the particular circumstances of a scheme; **and**
2. the result of allowing assumptions more appropriate to the circumstances of the scheme would be a change in the funding level from greater than 100% to less than 100%, or vice versa.

2.3.2 The assumptions where changes may be permitted are the demographic assumptions and expenses. Changes to the discount rates set out in the s143 guidance are not permitted.

2.4 Valuations carried out under sections 143, 156, 158 and 179

2.4.1 The intention behind **section 143** of the Pensions Act 2004 is that a scheme in an assessment period should not transfer to the Pension Protection Fund if benefits at least equal to the compensation provided by the Pension Protection Fund could have been secured with an insurer on the assessment date. 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. The section 143 valuation is therefore essentially a tool used to answer the question, does the scheme have 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 for section 143 valuations as simple as possible. This is particularly true now that schemes have the opportunity (described in 2.3.2 above) to use more detailed assumptions where this may affect the outcome of the section 143 valuation.

- 2.4.2 Closed scheme valuations carried out under **sections 156 and 158** of the Pensions Act 2004 are required to be conducted on similar principles to a s143 valuation for determining the scheme’s funding position in respect of protected liabilities. Closed schemes operate under the provisions applicable to schemes that are winding-up. Closed schemes will therefore have tried to secure levels of benefits at least equal to PPF compensation in the market and failed.
- 2.4.3 The Board calculates the Pension Protection Levy quantum and individual schemes’ levies based on **section 179** valuations conducted by the scheme actuary. A section 179 valuation is in principle very similar to a section 143 valuation but contains some simplifications. A section 179 valuation is justifiably simpler than a section 143 valuation because consistency and simplicity matter more for section 179 purposes than a high level of precision. Also many schemes will never need to undertake the more precise calculations entailed by a section 143 valuation. It should be noted that, for levy calculation purposes, a section 179 valuation is rolled forward from its valuation date to the date used in the calculation for assessing underfunding. Part of this roll-forward methodology serves to adjust for changes in section 179 assumptions between the two dates.

The Pensions Regulator uses a scheme’s section 179 valuation result as one of its triggers for further investigation when reviewing a scheme’s technical provisions.

2.5 Legal background

- 2.5.1 In setting assumptions for valuations carried out under the Pensions Act 2004 the Board must have regard to:

Section 143 valuation	Regulation 6 of the Pension Protection Fund (Valuation) Regulations 2005 (SI 2005 / 672), as amended
Section 156 valuation	Paragraph 5(1) of the Pension Protection Fund (Closed Schemes) Regulations 2007 (SI 2007/865) as amended
Section 158 valuation	Subsection (3) of section 158 of the Pensions Act 2004
Section 179 valuation	Regulation 6 of the Pension Protection Fund (Valuation) Regulations 2005 (SI 2005 / 672), as amended

- (i) The relevant documents define the calculation of total protected liabilities as follows:

(a) for a **section 143 valuation**, the estimated cost of securing scheme benefits calculated in accordance with Schedule 7 of the Act (pension compensation provisions) to the member by means of an annuity purchased at the market rate at the **relevant time**;

(b) for a **section 156 valuation**, the estimated cost of securing scheme benefits calculated in accordance with Schedule 7 of the Act (pension compensation provisions) to the member by means of an annuity purchased at the market rate at the **effective date**;

(c) for a **section 158 valuation**, the board must, as soon as is reasonable practicable, obtain an actuarial valuation (within the meaning of section 143) of the scheme at the **relevant time**;"

(d) for a **section 179 valuation**, the estimated cost of securing scheme benefits in accordance with any guidance issued by the Board in accordance with section 179(4) of the Act, for the member by means of an annuity purchased at the market rate at the **relevant time**.

(ii) The "relevant time" referred to above is the effective date of the valuation and is for a:

Section 143 valuation	the day before the assessment date
Section 156 valuation	a date of the scheme trustees' choosing (within certain specified time constraints)
Section 158 valuation	the day before the application to the Board (under section 157 of PA2004) for them to assume responsibility for the scheme
Section 179 valuation	a date of the scheme trustees' choosing (within certain specified time constraints)

(iii) This does not mean that the actuary conducting these valuations has to obtain quotes from the market. Rather it means that liabilities must be assessed using assumptions that the Board sets having regard to the bulk annuities market.

(iv) Assumptions used have to be appropriate for the relevant time, and therefore need to be kept under regular review as market conditions change.

(v) As the assumptions for determining protected liabilities under section 156 and section 158 are defined in similar terms to those under section 143 the remainder of this document just refers to section 143 and section 179 assumptions.

2.6 Current section 143 and section 179 assumptions

- (i) The current assumptions were derived after discussions with insurers who were active in the buy-out market in April 2009.
- (ii) Further reviews took place in both the spring and summer of 2010. Although these review concluded that there was some evidence from insurers that our assumptions were too weak it was decided to leave them unchanged due to the uncertainty surrounding the Government's announcement to change the linkage of PPF compensation from RPI to CPI. The change to CPI now seems likely to go ahead from 1 April 2011 and we propose to make changes to our assumptions from 1 April 2011.

2.7 Insurers' pricing of bulk annuities business

- (i) Insurers when pricing bulk annuities business adopt a sophisticated cash-flow model and it is very important to them to make the best cash-flow estimates that they can. This leads them to analyse mortality very carefully, using data from a number of different sources, for example,
 - their own experience,
 - the Office for National Statistics,
 - the Continuous Mortality Investigation (part of the Actuarial Profession),
 - organisations that can help them rate scheme members according to rating factors such as post-code, pension size, geography, occupation.
- (ii) They will also think very hard about future mortality improvements, using techniques that project past experience forwards as well as analysis of potential future medical improvements.
- (iii) They use term-dependent discount rates, having regard to the type of investments that they will hold which could be a mixture of gilts, corporate bonds and swaps.
- (iv) Crucially, the price quoted will depend on the required return on capital.
- (v) Also commercial considerations can lead to quotations being adjusted downwards in the interests of improving the likelihood of winning business.
- (vi) The best price obtainable by pension fund trustees for the buy-out of their scheme members' benefits fluctuates considerably from day to day. This is attributable not only to the effect of daily yield changes, but also to the changing appetites for new business amongst insurers.
- (vii) In the interests of proportionality, it would not be appropriate for the Board to specify assumptions with the same sophistication as insurers use. Instead, the Board has specified assumptions that

readily available actuarial valuation software can handle with little difficulty. This would seem appropriate for the many smaller eligible pension schemes which would otherwise have to bear a disproportionately high actuarial valuation cost overhead. It is proposed to continue with this simplified approach particularly in the light of the ability to adopt a different approach where this will clearly impact on the outcome of the s143 valuation (see 2.3 above).

3. Policy principles around setting assumptions for section 143 and section 179 valuations

- 3.1 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 section 2.5 above).
 - 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.
- 3.2 Principle (h) needs some further elaboration. Erring on the side of understating liabilities is appropriate given that market prices fluctuate significantly with varying supply and demand, and given principle (g) regarding the desirability of reasonable stability. Erring on the optimistic side therefore means that for section 143 valuations we mitigate the risk of taking schemes into the PPF that, as at the assessment date, actually could have bought out better benefits in the market. Moreover, the availability of the reconsideration process under section 151 of the Pensions Act 2004 means that a scheme unable to buy at least PPF levels of benefits in the market should generally be able to transfer into the PPF.

- 3.3 There are now around ten closed schemes. These schemes have been unable to buy out PPF levels of benefit in the market despite having funding positions in excess of 100% at the effective date of their section 143 valuation. The PPF has just published section 156 guidance for closed schemes. Section 158 guidance applicable for schemes that then need to apply for re-entry to the PPF will be published later.
- 3.4 The Board's primary responsibility is to maintain section 143 and section 179 assumptions in accordance with Regulation 6 of the Pension Protection Fund (Valuation) Regulations 2005 (SI 2005 / 672), as amended, (set out in section 2.2. of this paper). Nonetheless the Board is aware that any decision to change assumptions has a wider impact; for example, on the Pension Protection Levy and the Pensions Regulator's technical provisions triggers.
- 3.5 Regulation 6 requires similar assumptions for section 179 valuations as for section 143 valuations. Currently section 143 assumptions are indeed very similar to section 179 assumptions, although not identical in that section 143 mortality assumptions are differentiated according to compensation size whereas section 179 mortality assumptions are not. The wording of sections 156 and 158 implies that valuations carried out in accordance with them should use assumptions that are closely linked to assumptions for section 143 valuations.

4. Discussions around modifying the present assumptions

- 4.1 During January 2011 structured discussions about pricing assumptions were held with seven currently active participants in the bulk annuities market. This evidence base is believed to be sufficient for the purpose of resetting the section 143 and section 179 valuation assumptions.

5. Proposed new section 143 and section 179 assumptions

- 5.1 Discussions with the insurers took place on the basis that any pricing information disclosed by insurers would be kept confidential by the PPF.
- 5.2 We were particularly keen to see how insurers were pricing for CPI or intending to price for CPI where no transactions had yet taken place. The fairly unanimous response from insurers was that:
- no bulk annuity deals with CPI linkage had yet been entered into;
 - insurers would currently quote the same prices for CPI and RPI linked annuities.

However, there was an expectation that the CPI market might develop quite rapidly in the next couple of years.

As the assumptions used for s143 and s179 valuations are required to reflect the buy-out market at a particular time we have therefore set our net discount rates on the assumptions that there is no difference in the pricing of CPI and RPI in the current market.

- 5.3 There was a wide range for each of the key assumptions, i.e. discount rates and mortality. Following policy principle (h) in section 3.1, the assumptions proposed have been set by trying to position the Board's assumptions towards the end of the spectrum that produces the lowest value of the liabilities.
- 5.4 Most of the insurers said that although they had been producing prices that were more expensive than under our basis during 2010, this gap had recently reduced. It is always difficult to compare insurance company pricing, based as it is on swaps curves or corporate bond yield curves, with our pricing which is based on gilt yields which are not term-dependent. However, the message from the insurers who were obtaining most business was that the yields we are using for pensioners are too high.
- 5.5 For discount rates, the Board's proposals are to effectively reduce the existing rates by 0.2% p.a. for compensation in payment.
- 5.6 The discount rate change would be expected to increase section 143 and section 179 liabilities by for pensioners and deferred pensioners by just under 3%.
- 5.7 Some insurers commented, as they have previously, that we could better reflect their pricing by moving to term-dependent discount rates. Although this idea has been included in previous s143 assumptions consultation; concerns have been expressed by some respondents about the incapability of some valuation systems to be able to handle such a requirement. The Board thinks these concerns still apply. It therefore proposes to retain the same simple discount structure at the current time. An update from respondents on moving to term-dependent rates is sought as part of this consultation.
- 5.8 There was no consensus on our assumptions for current mortality. All the insurers commented that they would set assumptions on a case-by-case basis using as much information as possible; e.g. postcodes, industry, location, average size of pension. The Board has consulted on introducing an element of scheme-specific mortality in the assumptions in the past. Although this may still be relevant for s179 valuations as there is now the facility for schemes to use scheme specific mortality in cases where this would change the outcome of the s143 valuation the Board proposes to retain the current simple approach.
- 5.9 On future mortality improvements, most of the insurers suggested that their allowance for future improvements for males was greater than ours. To address this, the Board proposes to increase the underpin on annual mortality improvements for males to 1.5% p.a. from 1.25% p.a. This change would serve to increase the section 143 and section 179 liabilities by around 1%.
- 5.10 Most insurers obtain full details of member's status and age of spouse / partner when quoting for business. Most insurers commented that our assumptions for the proportion of members who have relevant partners or legal spouses seemed appropriate based on national statistics.
- 5.11 Some insurers also suggested that the Board could introduce both a minimum and a maximum to the formula for calculating winding-up expenses. Although this seems likely to reflect reality the appropriate level for any such caps is difficult to assess. The Board has decided to retain the

current structure of expenses particularly as different assumptions may be permitted, if relevant, for s143 valuations.

- 5.12 The Board proposes to keep all other existing assumptions unchanged.
- 5.13 The Board is aware that it may need to modify its proposed assumptions as a result of the European Court of Justice ruling on gender discrimination anticipated on 1 March 2011.
- 5.14 The complete set of new assumptions is set out in Appendix 2.
- 5.15 Overall, based on model calculations, the changes are expected to increase section 143 and section 179 liabilities by just under 4%. More detailed analysis may be seen in Appendix 3.

6. Effective date for changes to assumptions

- 6.1 It is proposed that changes are introduced with effect from 1 April 2011 to tie in with the date of the proposed change to CPI. The consultation on the changes in the assumptions closes on 21 March 2011. We hope to publish both the results of the consultation and the new assumptions guidance by the middle of April 2011.
- 6.2 Although there will be a gap where new assumptions may apply but have not been published, in practice valuations are usually carried out sometime after their effective date. We therefore do not consider this is likely to be an issue.
- 6.3 Section 179 valuations with an effective date on or after 1 April 2011 will probably be first used for calculating Pension Protection Levies for the year 1 April 2012 to 31 March 2013.

7. Effect of the assumptions changes on Pension Protection Levies

- 7.1 The Board has taken a decision to raise a Pension Protection Levy of £600m for 2011/12. In doing so, it recognised the likelihood that future compensation levels would be lower as a result of a change in indexation from RPI to CPI. The changes to the section 143 and section 179 bases discussed in this consultation document will not trigger a review of this decision.
- 7.2 The changes to the assumptions for section 143 valuations that are proposed will potentially lead to a small increase in the number of schemes transferring to the PPF, but we would not expect the financial effect to be particularly significant. We would not therefore expect the effect on future levies to be particularly significant either. Furthermore, should a New Levy Framework be adopted from April 2012, the Board will have to weigh the overall effect of several other changes when setting the Pension Protection Levy.

8. Questions

- 8.1 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 in Appendix 2 are reasonable? If not, what would you propose as an alternative set of assumptions?
- Q2. What evidence do you have, in summary, to support your response to Q1?
- Q3. Is it appropriate to introduce the new section 143 and section 179 assumptions with effect from 1 April 2011?
- Q4. Would you support the introduction of term-dependent yields (perhaps based on swaps) at the next review (for either or both of section 143 and section 179 valuations)?
- Q5. Would you think it appropriate, at the next review, to differentiate each member's mortality by post-code (for either or both of section 143 and section 179 valuations)?
- Q6. Would you think it appropriate, at the next review, to introduce minimum and maximum caps on the allowance for winding up expenses?
- Q7. If the caps mentioned in Q6 were to be introduced do you have any comments about what appropriate caps might be?
- 8.2 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.

9. Responding to the consultation

- 9.1 The consultation period begins on 21 February 2011 and will end on 21 March 2011. 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 www.pensionprotectionfund.org.uk.
- 9.2 In the event of any queries, please contact:
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- 9.3 Please e-mail responses to assumptions@ppf.gsi.gov.uk
- 9.4 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.

- 9.5 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.
- 9.6 The Board will publish a summary of responses on the PPF website at www.pensionprotectionfund.org.uk by the end of April 2011. At the same time it will also publish its decision about future assumptions for section 143 and section 179 valuations.
- 9.7 The Board would value any feedback on the effectiveness of this consultation process. If you have any comments then please contact:

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Appendix 1

How change to CPI will affect the revaluation and indexation of PPF compensation

Current position showing revaluation in deferment and increases in payment of PPF compensation

	Relates to compensation earned	Description
Revaluation in deferment	Pre 6/4/2009	Compensation revalues in line with increases in the RPI up to a maximum of 5% pa over the whole period.
	Post 5/4/2009	Compensation revalues in line with increases in the RPI up to a maximum of 2.5% pa over the whole period.
Increases in payment	Pre 6/4/1997	No increases apply.
	Post 5/4/1997	Compensation increases on 1 st January each year based on the increase in the RPI subject to a maximum of 2.5%

PPF compensation revaluation and indexation following the proposed change to CPI

	Relates to compensation earned	Description
Revaluation in deferment	Pre 6/4/2009	Compensation revalues in line with increases in the RPI up to 31 March 2011 and from 31 March 2011 in line with increases in the CPI up to a maximum of 5% pa over the whole period.
	Post 5/4/2009	Compensation revalues in line with increases in the RPI up to 31 March 2011 and from 31 March 2011 in line with increases in the CPI up to a maximum of 2.5% pa over the whole period.
Increases in payment	Pre 6/4/1997	No increases apply.
	Post 5/4/1997	From 1 January 2012 Compensation increases on 1 st January each year based on the increase in the CPI subject to a maximum of 2.5%

(This summary excludes PPF compensation that receives no revaluation in deferment as this applies to very few schemes.)

Appendix 2

Proposed new assumptions to use when undertaking a valuation in accordance with section 143 and section 179

Text in a green font is new.

Text in a red font applies for a section 143 valuation but would not apply for a section 179 valuation. This maintains the existing difference between section 143 assumptions and section 179 assumptions.

Yield 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) – 0.3%**

(i) Yield A should be determined daily as 50% of the sum of the FTSE Actuaries' Government Securities Index-Linked annualised Real Yields over 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) – 0.3%) and (Yield B (ii) – 2.6%)**

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

Compensation not increasing in deferment

For a 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.

Adjusted gilt yield = **Yield B (ii) – 0.1%**

Yield in payment

For both a pensioner and a non-pensioner, for the period from which payments are assumed to commence, the liability must be obtained by reference to the following (adjusted) yields:

Compensation with no increases in payment

Adjusted Yield = **Yield C (iii) + 0.4%**

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

Compensation increasing in payment

Adjusted yield = higher of (Yield D (iv) + 0.1%) and **(Yield C (iii) – 2.1%)**

(iv) Yield D 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.

For the avoidance of doubt, (Yield C (iii) – 2.1%) should be calculated as an arithmetic difference and not a geometric difference.

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%.

Mortality for use when undertaking valuations

The mortality tables to be used in respect of a member and the member's dependant, pre and post retirement, shall be PCMA00 (for males) and PCFA00 (for females), as appropriate, in each case with the medium cohort mortality improvement rates, and with a **1.5% floor (for males)** and a 1% floor (for females) to the annual improvements, all applying from the year 2000.

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 derived rates shall be subject to an age rating based on an individual's benefit size as follows:

Pension size*	Age rating
< 25% x compensation cap at age 65	+ 2
25% - 50% x compensation cap at age 65	0
> 50% x compensation cap at age 65	- 2

* 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.

Other assumptions for use when undertaking valuations

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 does not make provision for survivor pensions for "relevant partners" other than legal spouses, 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 2000 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 does not make provision for survivor pensions for "relevant partners" other than legal spouses the assumption must be, at the assumed date of retirement or earlier death, 75% (males) or 65% (females).

Contracted-out schemes

Note that for schemes which are contracted out on a protected rights basis, statute requires payment of a survivor's pension to a wider category than just the legal spouse. Scheme rules should therefore be treated as including these statutory requirements i.e. assume 85% (males) or 75% (females).

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.

Expenses

The expenses specified in this section 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

3% of liabilities (excluding benefit installation / payment expenses) up to £50 million

plus

2% of liabilities (excluding benefit installation / payment expenses) between £50 million and £100 million

plus

1% of liabilities (excluding benefit installation / payment expenses) in excess of £100 million.

b) Benefit installation / payment expenses

Non-pensioners

An allowance of £500 per member should be made.

Pensioners

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

Age (years)	Expense allowance per member (£)
< 60	450
60 – 70	400
70 – 80	300
80 +	250

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.

Appendix 3

A. Assumptions to illustrate effect of changes to the section 179 basis

	<i>Old S179 assumptions</i>	<i>New S179 assumptions</i>
Yield in deferment for increasing pensions (pre 6 April 2009)	0.52%	0.52%
Yield in deferment for increasing pensions (post 5 April 2009)	1.84%	1.84%
Yield for non-increasing pensions	4.84%	4.64%
Yield for increasing pensions	2.34%	2.14%
Mortality male	PCMA00	PCMA00
Mortality female	PCFA00	PCFA00
Improvement male	mc with a 1.25% underpin (from 2000)	mc with a 1.5% underpin (from 2000)
Improvement female	mc with a 1% underpin (from 2000)	mc with a 1% underpin (from 2000)
Proportion married male	85%	85%
Proportion married female	75%	75%
Age difference	3	3
Age rating	0	0
Assumed ages (years)		
Pensioner age now	66	66
Deferred age now	46	46
Pensioner NPA	66	66
Deferred NPA	63	63

Yields are as at 19 January 2011.

Excludes non-increasing yield in deferment as applies to very few schemes.

B. Effect of changes to the section 179 basis

Increases in s179 liabilities for various types of benefit

Accrual	Deferred Pensioners		Pensioners	
	Pre-09	Post-09	Pre-97	Post-97
Effect of changes in financial assumptions	102.3%	102.9%	102.1%	102.5%
Effect of change in mortality improvement assumption	101.0%	101.7%	100.6%	100.9%

Effect of s179 assumptions changes on schemes' liabilities for schemes with varying proportions of membership (assumes all membership is male)

Deferred Pensioner proportion		Pensioner proportion		Increase in s179 liabilities
Pre-09	Post-09	Pre-97	Post-97	n/a
25%	25%	25%	25%	103.6%
12.5%	12.5%	37.5%	37.5%	103.3%
37.5%	37.5%	12.5%	12.5%	103.8%
12.5%	37.5%	12.5%	37.5%	103.8%
37.5%	12.5%	37.5%	12.5%	103.3%

