

# Consultation on Assumptions to be Used for Valuations under Section 143 and Section 179 of the Pensions Act 2004

July 2009

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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 section 143 and section 179 of the Pensions Act 2004 in line with estimated pricing in the bulk annuity market. In the light of recent developments in the buy-out market, the Board is considering, subject to consultation, making some changes to these assumptions, so as to bring valuations into line with the market.
- 1.2 The Board would like to receive responses to this consultation by 11 September 2009.
- 1.3 In summary the proposed assumptions changes are to:
- increase the yields used to discount future payments by 0.1% p.a in deferment;
  - increase the yields used to discount future payments by 0.3% p.a. in payment;
  - change one of the yields used as a reference point to one with a longer duration;
  - increase the assumption about future longevity improvements for males;
  - reduce the proportion of members who are married or who have relevant partners by 5%.

Other assumptions would be unchanged.

- 1.4 The Board proposes to introduce these changes for valuations with an effective date on or after 31 October 2009.

## **2. Background**

### **2.1 Valuations carried out under section 143 and section 179**

- (i) 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 and approved by the Board.

- (ii) 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 several 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.
- (iii) 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.
- (iv)

## 2.2 Legal background

- (i) According to section 143(2) of the Pensions Act 2004, the Board must obtain an actuarial valuation of the scheme as at the relevant time.
- (ii) In setting assumptions for valuations carried out under sections 143 and 179, the Board must have regard to Regulation 6 of the Pension Protection Fund (Valuation) Regulations 2005 (SI 2005 / 672), as amended, which says:

"Subject to regulation 7, in the case of protected liabilities the value of a protected liability shall be:

  - (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 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."

- (iii) The “relevant time” referred to above is the effective date of the valuation. For a section 143 valuation this is the day before the assessment date. For a section 179 valuation, it is a date of the scheme trustees’ choosing.
- (v) This regulation does not mean that the actuary conducting section 143 and 179 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.
- (v) Assumptions used for valuations under section 143 and 179 have to be appropriate for the relevant time, and therefore need to be kept under regular review as market conditions change.

### 2.3 **Current section 143 and section 179 assumptions**

- (i) The current assumptions were derived after discussions towards the end of 2007 and in early 2008 with 12 insurers who were then active in the buy-out market.
- (ii) A review also took place towards the end of 2008. This review concluded that there was some evidence from insurers that our assumptions should be weaker. The market at that time was, however, very volatile and little business was being done. The Board was wary of drawing any firm inferences from the evidence from such an uncertain market. It therefore decided to keep the assumptions unchanged and announced this by means of an e-mail alert on 9 March 2009.

### 2.4 **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 who would otherwise have to bear a disproportionately high actuarial valuation cost overhead. It is proposed to continue with this simplified approach.

### **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 2.2 of this paper).
  - 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 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 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.
- 3.4 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.

## **4. Discussions around modifying the present assumptions**

- 4.1 During April 2009 several structured discussions about pricing assumptions were held with six currently active participants in the bulk annuities market. A check on our conclusions was carried out in July 2009 with a subset of the six participants. 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 six insurers took place on the basis that any pricing information disclosed by insurers would be kept confidential by the PPF.
- 5.2 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.
- 5.3 Some of the insurers said that their pricing formula was producing prices that were cheaper than under our basis. 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, particularly for pensioners, are too low.
- 5.4 For discount rates, the Board's proposals are:
  - to increase the existing rates by 0.1% p.a. in deferment
  - to increase the existing rates by 0.3% p.a. in payment
  - to change one of the index yields used as a reference point to one with a longer duration; specifically, to move from a 10-year index to a 15-year index for the non-increasing pension assumption.
- 5.5 These discount rate assumption changes are put forward because in combination they are at the high end of the spectrum of discount rate assumptions adopted by insurers.
- 5.6 The first two of the three discount rate changes would be expected to decrease section 143 and section 179 liabilities by around 3% for pensioners and 5% for deferred pensioners.
- 5.7 The effect of the third change would vary according to the slope of the gilts yield curve. Liabilities would increase when the gilts yield curve was downward sloping, and conversely would decrease when the gilts yield curve was upward sloping. The change is necessary to better reflect the duration of bonds that insurers are likely to hold in order to match pensioner liabilities. Based on yields as they stood on 12 June 2009, when the yield curve was upwards sloping, this change would decrease section 143 and section 179 liabilities by around 5%.

- 5.8 Some insurers commented, as they have previously, that we could better reflect their pricing by moving to term-dependent discount rates. This idea was in fact included in the previous s143 assumptions consultation; concerns were expressed by some respondents about the incapability of some current valuation systems to be able to handle such a requirement. The Board thinks these concerns still apply. It therefore proposes that term-dependent discount rates continue not to be adopted for this round of changes, but that an update is sought as part of this consultation.
- 5.9 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. When the Board consulted on introducing an element of scheme-specific mortality last year there was no clear demand for this. It would also require further work to be done to develop an appropriate methodology. The Board proposes not to adopt scheme-specific mortality as part of this round of changes, but again that an update is sought as part of this consultation.
- 5.10 On future mortality improvements, most of the insurers suggested that their allowance for future improvements was greater than ours. To address this, the Board proposes to increase the underpin on annual mortality improvements for males to 1.25% p.a. from 1% p.a.
- 5.11 Unlike the other proposed changes, this change would serve to increase the section 143 and section 179 liabilities. The increase would be around 1%.
- 5.12 Most insurers commented that their assumptions for the proportion of members who are married or who have a relevant partners were lower than ours. The Board proposes to reduce this assumed proportion by 5%.
- 5.13 This change to the assumed proportion married would serve to reduce section 143 and section 179 liabilities by around 0.5%.
- 5.14 One insurer also suggested that the Board should introduce a maximum to the formula for calculating winding-up expenses. This seems likely to reflect reality but the appropriate level for any such cap is difficult to assess. The Board would be grateful for any evidence about whether there is likely to be an upper limit for winding-up costs in practice and, if so, what that upper limit should be. The Board will at the same consult with administrators and other knowledgeable parties about the matter.
- 5.15 The Board proposes to keep all other existing assumptions unchanged.

- 5.16 As a result of a change introduced by new legislation, an additional assumption is required for revaluation in deferment of compensation accrued after 5 April 2009. Such deferred compensation is revalued at the lower of the increase in the Retail Prices Index and 2.5% p.a. over the whole period of deferment. (Pre-6 April 2009 deferred compensation is revalued at the lower of the increase in the Retail Prices Index and 5% p.a. over the whole period of deferment.)
- 5.17 The Board proposes to introduce a discount rate for post 5 April 2009 accrual compensation in deferment. The proposed assumption is to use the higher of:
- the average annualised yield on the FTSE Actuaries' Government Securities Index-Linked annualised Real Yields over 15 years assuming 5% inflation and 0% inflation less 0.3%, and,
  - annualised yield on the FTSE Actuaries' Government 20 year Fixed Interest Index less 2.6%.
- 5.18 The complete set of new assumptions is set out in Appendix 1.
- 5.19 Overall, based on model calculations, the changes are expected to decrease section 143 and section 179 liabilities by around 8% for pensioners and around 10% for deferred pensioners. More detailed analysis may be seen in Appendix 2.

## **6. Effective date for changes to assumptions**

- 6.1 It is proposed that changes are introduced with effect from 31 October 2009. This would work as follows;
- Section 143 valuations would be based on the present assumptions where the valuation date was before 31 October 2009. They would be based on the proposed new assumptions if the valuation date was 31 October 2009 or later.
  - Section 179 valuations would be based on the present assumptions where the valuation date was before 31 October 2009. They would be based on the proposed new assumptions if the valuation date was 31 October 2009 or later.
- 6.2 There would, therefore, be almost no impact on Pension Protection Levies for the year 1 April 2010 to 31 March 2011, because those levies will be set with reference to underfunding as it stood on 31 March 2009, as measured on the existing rather than the proposed new section 179 assumptions. The first year for which Pension

Protection Levies will be significantly affected by the new assumptions would be the year commencing 1 April 2011.

## **7. Effect of the assumptions changes on Pension Protection Levies**

- 7.1 In the Board's Long-Term Risk Model, each scheme's experience from year to year is based on assumptions consistent with those used for the annual valuation of the Pension Protection Fund. When a scheme makes a claim following an employer's insolvency, the rule in the Model for deciding whether or not the scheme enters the Pension Protection Fund is in accordance with section 143 assumptions. The effect of a change to section 143 assumptions so as to reduce section 143 liabilities is that fewer schemes are therefore projected to enter the Pension Protection Fund.
- 7.2 Changes to the section 143 assumptions so as to reduce section 143 liabilities will have the effect of removing schemes that would be expected (on assumptions consistent with those used for the annual valuation of the Pension Protection Fund) only to have a small effect on the Pension Protection Fund. This would not necessitate a re-examination of the Board's decision to raise a pension protection levy estimate of £700 million, indexed to wages, for 2010/11.
- 7.3 As already stated in section 6.2, the assumptions change will barely affect underfunding for the levy year 1 April 2010 to 31 March 2011. For subsequent levy years there may be an effect.

## **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 1 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 31 October 2009?

- 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 a cap on the allowance for winding up expenses?
- Q7. If the cap mentioned in Q6 were to be introduced do you have any comments about what an appropriate cap 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 31 July 2009 and will end on 11 September 2009. 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](http://www.pensionprotectionfund.org.uk).
- 9.2 In the event of any queries, please contact:
- Stephen Rice  
Chief Actuary  
Pension Protection Fund  
1st Floor Knollys House  
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Croydon  
CR0 6SR  
Tel: 020 8633 4942  
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- 9.3 Please e-mail responses to [assumptions@ppf.gsi.gov.uk](mailto: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](http://www.pensionprotectionfund.org.uk) by the end of October 2009. 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

### 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.

Other text is in a black font.

#### 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) + 0.6%**

(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) – 1.9%)**

(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) – 1.9%) 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 **1.25% 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:

<b>Pension size*</b>	<b>Age rating</b>
< 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:

<b>Age (years)</b>	<b>Expense allowance per member (£)</b>
< 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 2

### 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 non-increasing pensions	4.36%	4.46%
Yield in deferment for increasing pensions (pre 6 April 2009)	0.66%	0.76%
Yield in deferment for increasing pensions (post 5 April 2009)	N/A	1.96%
Yield for non-increasing pensions	4.23%	4.97%
Yield for increasing pensions	1.73%	2.47%
Mortality male	PCMA00	PCMA00
Mortality female	PCFA00	PCFA00
Improvement male	mc with a 1% underpin (from 2000)	mc with a 1.25% underpin (from 2000)
Improvement female	mc with a 1% underpin (from 2000)	mc with a 1% underpin (from 2000)
Proportion married male	90%	85%
Proportion married female	80%	75%
Age difference	3	3
Age rating	0	0
<b>Assumed ages (years)</b>		
Pensioner age now	66	66
Deferred age now	46	46
Pensioner NPA	66	66
Deferred NPA	63	63

Yields are as at 12 June 2009

## B. Effect of changes to the section 179 basis

**Effect (expressed as new liability as a proportion of old liability) of s179 assumptions changes on schemes' liabilities for various types of benefit**

	Pre-97 deferred pension	Post-97 deferred pension	Pre-97 pension	Post-97 pension
<b>Effect of changes in financial assumptions</b>	90.32%	88.64%	92.69%	91.31%
<b>Effect of change in mortality improvement assumption</b>	101.91%	101.49%	100.46%	100.73%
<b>Effect of changes to proportion married assumption</b>	99.54%	99.39%	99.44%	99.28%
<b>Combined effect of changes in s179 assumptions</b>	90.67%	89.31%	92.58%	91.29%

**Effect of s179 assumptions changes on schemes' liabilities for schemes with varying proportions of membership**

Pre-1997 pensioner proportion	Post-1997 pensioner proportion	Pre-1997 deferred pensioner proportion	Post-1997 deferred pensioner proportion	Reduction in s179 liabilities as a result of change to assumptions
25%	25%	25%	25%	<b>90.96%</b>
37.5%	37.5%	12.5%	12.5%	<b>91.45%</b>
12.5%	12.5%	37.5%	37.5%	<b>90.48%</b>
12.5%	37.5%	12.5%	37.5%	<b>90.63%</b>
37.5%	12.5%	37.5%	12.5%	<b>91.29%</b>

Pension  
Protection  
Fund

[www.pensionprotectionfund.org.uk](http://www.pensionprotectionfund.org.uk)