



Government Actuary's Department
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PENSION SCHEMES ACT 1993

**Rebates and reduced rates of National
Insurance contributions for members of
contracted-out pension schemes**

Consultation by the Government Actuary

19 September 2005



INVESTOR IN PEOPLE

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About this consultation

The proposals described in this document will represent, in due course, an important part of the Government Actuary's report in relation to the rebates and reduced rates of National Insurance contributions for members of contracted-out pension schemes. That report will be accompanied by a report to Parliament by the Secretary of State for Work and Pensions setting out what, if any, changes should be made to the rebates and reduced rates of National Insurance contributions, in the light of the Government Actuary's report. These proposals should be considered in the light of the specific responsibilities of the Government Actuary under the legislation that provides for my report. This consultation exercise is not required by legislation, although it has become established practice and is a central part of the process.

This document can be downloaded in pdf format from the GAD website at www.gad.gov.uk/Pensions/Contracting_out.htm. To enquire about this document, please contact:

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Written responses to this consultation will be accepted by post or email to the above address. Please respond by **Monday 12 December 2005**.

If you have any comments about the consultation process, please contact:

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You may wish to refer to the Government's Code of Practice on written consultations. You can find it through the Cabinet Office website at:

<http://www.cabinetoffice.gov.uk/regulation/consultation/documents/pdf/code.pdf>



Executive summary

The Pension Schemes Act 1993 requires that, at least once every five years, the Secretary of State for Work and Pensions presents to Parliament a report by the Government Actuary on the appropriate level of rebates and reduced rates of National Insurance contributions for members of contracted-out pension schemes. These rebates and reduced rates of contribution represent the cost of providing benefits of equivalent actuarial value to the additional state pension benefits that are forgone by contracted-out workers, by virtue of their being contracted-out of the additional state pension during the quinquennium covered by the Government Actuary's report.

In line with the timescale established at previous contracting-out reviews, I intend to provide my next report by March 2006. Having considered my report, the Secretary of State for Work and Pensions will decide on the rebates to apply for the quinquennium from 6 April 2007 to 5 April 2012, and will lay the appropriate orders at least one year before 6 April 2007.

My proposals reflect the continued low levels, by historical standards, of real interest rates, sustained improvements in pensioner longevity and the potential for greater expectations of continued improvements in longevity since my previous report was laid before Parliament in March 2001.

The proposals in this report would produce reductions in National Insurance contributions for contracted-out salary-related pension schemes that are about 15% larger than they would have been if I had retained the assumptions which were used for setting the rebate for the current quinquennium from April 2002 to April 2007. Where the legislation provides for rebates that are related to the age of the contracted-out worker, the effect of my proposed assumptions is to produce average rebates for workers approaching state pension age that are up to about 30% larger than they would have been. At younger ages, the average increase I am proposing is smaller, and my proposals would reduce slightly the rebates at the very youngest ages.

Although my assumptions have an important impact on the estimated cost of the benefits forgone, the most important determinant of rebate levels is the amount of the pension that is being given up as a result of contracting out. The existing rules for the calculation of benefits under the State Earnings-Related Pension Scheme (SERPS), and therefore also under the State Second Pension (S2P), mean that the average rate at which additional pension benefits will be accrued for the quinquennium from 2007/08 to 2011/12 is less than the average rate at which the benefits are being accrued for the current quinquennium from 2002/03 to 2006/07. This offsets the effect of my proposed changes in the assumptions. As a result, the reduction in the rate of National Insurance contributions for members of contracted-out salary-related schemes will increase only modestly – from 5.1% to 5.2% – if my proposals are accepted in full. There is a similar effect for members of contracted-out money purchase schemes and appropriate personal pensions.

The rebates that result from my proposed assumptions are expected, on the assumptions made, to provide pension benefits to those contracted out that are no less valuable than the additional pension forgone, but are not intended to guarantee that contracting-out is always the most favourable option for each individual worker or individual pension scheme.



The Secretary of State for Work and Pensions will consider whether to make any adjustments to the rates I propose in my report, including any caps or incentives that should be applied to the proposed rebates.

Written responses to this consultation exercise are invited and must reach me by **Monday 12 December 2005**. Responses should be sent to:

2007-2012 Contracting-out Review Team
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Government Actuary

19 September 2005



Introduction

The Pension Schemes Act 1993 (“the 1993 Act”) makes provision for the members of pension schemes that are contracted out of S2P (and the sponsoring employers of those schemes) and those with appropriate personal pensions to pay reduced rates of National Insurance contributions or to receive payments from HM Revenue and Customs (HMRC) (“rebates”¹). Separate provisions apply in relation to membership of salary-related contracted-out schemes (“COSRS”), to membership of money purchase contracted-out schemes (“COMPS”), and to membership of appropriate personal pensions (“APPs”).

The 1993 Act requires that the rebates are reviewed at intervals of not more than five years. The Government Actuary is required to report on “changes ... in the factors ... affecting the cost of providing benefits of an actuarial value equivalent to that of the benefits, which ... are forgone by or in respect of members of salary-related contracted-out schemes”. Similar requirements apply for other types of contracted-out arrangement.

In March 2001 my reportⁱ on the draft orders setting the rebates for the current quinquennium, covering the period from 6 April 2002 to 5 April 2007, was laid before Parliament by the then Secretary of State for Social Security, along with the relevant draft orders (ii, iii and iv) and his own report^v. The relevant sections of the 1993 Act require such orders to be made at least one complete tax year before they come into effect. It is anticipated, therefore, that the Secretary of State for Work and Pensions will wish to lay draft orders before Parliament shortly before April 2006 in relation to the rates of reduction in National Insurance contributions and rebates to apply from 6 April 2007 until 5 April 2012. My report on “the cost of providing benefits of an actuarial value equivalent to the benefits ... forgone” for each type of contracted-out arrangement will need to be laid before Parliament at the same time.

This consultation document sets out the approach I intend to adopt in my report to Parliament.

It is envisaged that, with effect from 6 April 2007, the assumptions adopted for calculating rebates in respect of members of contracted-out pension arrangements will also be used:

- (a) to place a value on individuals’ rights under the State Earnings-Related Pension Scheme and the State Second Pension for the purpose of pension sharing orders on divorce in accordance with Part IV Chapter II of the Welfare Reform and Pensions Act 1999, and
- (b) to determine the cost of restoring an individual’s additional state pension rights as provided for in Paragraph 5(3C)(c) of Schedule 2 to the Pension Schemes Act 1993.

¹ Later in this consultation document, and in more general discussions of contracting out, the term “rebates” is often used to refer colloquially to either the payments made to occupational or personal pension schemes, and/or the reductions in National Insurance contributions, as appropriate to the context.

A list of questions on which feedback is being sought in this consultation exercise is in Appendix H. A full list of all those to whom the consultation document is being sent is shown in Appendix I.

Please note that your reply will not be treated as confidential unless you ask for it to be so treated. If you are happy for your views to be made publicly available and you reply by email, you may need to amend appropriately the standard e-mail confidentiality disclaimer. If you are not replying solely on your own behalf, please also state whose interests you are representing in your reply.

If you do ask that your response not be treated as public, we will endeavour to ensure its confidentiality. However, you should note that the Government Actuary's Department is subject to the Freedom of Information Act. Your response contributes to the formulation of government policy, and as a result it has a qualified exemption from the requirements of the Act, since it is in the public's ongoing interests for free and frank opinions contributing to government policy to remain confidential. Nevertheless, there may be some instances where their interests would be better served by the information's release.

Section 1 Legislative background

- 1.1 Chapter II of Part III of the Pension Schemes Act 1993 (sections 40 to 49 inclusive) makes provision for members of pension schemes that are contracted-out of S2P (and the sponsoring employers of those schemes) and those with appropriate personal pension schemes to pay reduced rates of National Insurance contributions and/or to receive payments from HM Revenue and Customs (HMRC). Separate provisions apply in relation to reductions in contributions in respect of membership of salary-related contracted-out schemes (sections 41 and 42), to reductions in contributions and rebates in respect of membership of money purchase contracted-out schemes (sections 42A, 42B and 45B), and to rebates in respect of membership of appropriate personal pensions (sections 43 to 45B inclusive).
- 1.2 Section 48A of the Pension Schemes Act 1993 describes the benefits that those members who are contracted out by any route will give up as a result of being contracted out. In effect, no additional pension will be paid to workers in respect of the periods for which they were contracted out from April 1997 to April 2002.
- 1.3 However, with effect from April 2002, these provisions were modified slightly by the Child Support, Pensions and Social Security Act 2000, which reformed the State Earnings-Related Pension Scheme (SERPS) through the introduction of the State Second Pension (S2P). In particular, section 34 of that Act amended sections 42(1)(a)(ii), 42B(1)(a) and 45A(1)(a) of the Pension Schemes Act 1993 to alter the reference to the benefits given up as a result of membership of a contracted-out pension scheme or an appropriate personal pension. Reference is now made not only to section 48A, but also to Schedule 4A to the Social Security Contributions and Benefits Act 1992, which was inserted by section 31(3) of and Schedule 4 to the Child Support, Pensions and Social Security Act 2000. The effect is to stipulate that, following the introduction of S2P, in certain circumstances only a part of the additional pension will be given up by those contracted out, with the benefit being given up defined in paragraphs 6 and 7 of Schedule 4A to the 1992 Act. Appendix A contains further details of how the additional pension forgone is determined.
- 1.4 Sections 42(2), 42B(1) and 45A(1) of the Pension Schemes Act 1993 have the effect of requiring reconsideration of rates of rebate and/or reductions in National Insurance contributions at intervals of not more than five years. Section 42(1)(a)(ii) requires the Government Actuary to report not only on the rates of reduction in National Insurance contributions applying under section 41, but also on “changes ... in the factors ... affecting the cost of providing benefits of an actuarial value equivalent to that of the benefits, which ... are forgone by or in respect of members of salary-related contracted-out schemes”. Similarly, section 42B(1)(a) requires the Government Actuary to report, broadly, on “the cost of providing benefits of an actuarial value equivalent to that of the benefits, which ... are forgone by or in respect of members of money purchase contracted-out schemes”. And section 45A(1)(a) requires the Government Actuary to report, broadly, on “the cost of providing benefits of an actuarial value equivalent to that of the benefits, which ... are forgone by or in respect of members of appropriate personal pension schemes”.

- 1.5 As mentioned above, the same sections of the Act require any order by the Secretary of State for Work and Pensions to vary the rate of reduction in National Insurance contributions or rebates, to which the Government Actuary's reports would relate, to be made at least one complete tax year before they come into force. Hence for new rebates to apply from 6 April 2007, the relevant orders and the Government Actuary's reports must be laid before Parliament by 5 April 2006.
- 1.6 Generally speaking, the factors affecting the costs of providing the benefits forgone are not affected by the exact nature of the benefits given up. In addition, although Schedule 4A to the Social Security Contributions and Benefits Act 1992 described the benefits given up by those contracted out of S2P in a new way, there was, in effect, no change in the benefit given up by members of contracted-out occupational pension schemes.
- 1.7 Paragraph 7 of Schedule 4A to the Social Security Contributions and Benefits Act 1992 provides that, for members of appropriate personal pension schemes, the benefit given up under S2P is not a single proportion of earnings in the range between the lower and upper earnings limits (see paragraph A.8 of Appendix A). Although this difference affects the quantum of the rebate by altering the amount of benefit given up, it does not affect the economic or demographic assumptions appropriate for assessing the actuarial value of the benefit given up. Hence the rebate rates described in Section 6 and shown in Appendix E, Appendix F and Appendix G can be applied to "band 3" earnings without adjustment, and to "band 1" and "band 2" earnings after adjusting them by an appropriate scaling factor (band earnings are defined in paragraph A.4 of Appendix A).
- 1.8 Paragraph 2(5) of Schedule 4A to the Social Security Contributions and Benefits Act 1992 enables a "second appointed year" to be specified at a future date, in or after which additional pension will accrue only on earnings in "band 1", i.e. up to the "low earnings threshold", for those attaining "pensionable age" (commonly referred to as "state pension age", or "SPA") after a prescribed date. However, such a measure would not affect the benefits defined as being given up by those contracted-out, where the additional pension and the amount given up would continue to be calculated as described in Appendix A, using the formulae set out in paragraphs 5, 6 and 7 of Schedule 4A with no limitation to earnings in "band 1".
- 1.9 Schedule 9 to the Welfare Reform and Pensions Act 1999 introduced considerable changes to the parts of the Social Security Contributions and Benefits Act 1992 which deal with National Insurance contributions, as did the Social Security Act 1998. In effect, from April 2000, primary (employees) and secondary (employers) National Insurance contributions were not payable on earnings between the lower earnings limit and the "primary threshold" and the "secondary threshold" respectively. From April 2001, both the primary and secondary thresholds have been aligned with the single person's tax allowance, somewhat above the lower earnings limit.

- 1.10 Since the entry level for contributory state benefits, including S2P, continues to be set at the lower earnings limit, rebates for members of contracted-out pension arrangements continue to be based on earnings in the range from the lower earnings limit to the upper earnings limit – “upper band earnings” or “the relevant part” in legislation. The necessary amendments to the Pension Schemes Act 1993 reflecting this approach were made by Part II of Schedule 9 to the Welfare Reform and Pensions Act 1999. These amendments allow offsetting of amounts of reductions of contributions in the first instance against National Insurance contributions on behalf of the individual member of the contracted-out scheme and then against other liabilities for National Insurance contributions that the employer may have. In the event that there is any remaining amount to be offset, this may be met by the payment of an appropriate amount by way of refund to the employer by HMRC.
- 1.11 Section 7 of the Welfare Reform and Pensions Act 1999 permits different rebates to be set for contracted-out money purchase schemes and for appropriate personal pensions according to whether or not such arrangements are stakeholder pension schemes. Generally, whether or not a pension arrangement is a stakeholder pension scheme should only affect the cost to the arrangement of “providing benefits of an actuarial value equivalent to that of the benefits ... forgone” to the extent that it may affect the expense deductions. However, there is evidence (see the report from the Pensions Commission^{vi}) that charges under stakeholder and non-stakeholder plans have tended to converge. Therefore I do not propose to recommend different rebates for members of stakeholder schemes compared with members of the same type of arrangement that is not a stakeholder scheme.
- 1.12 In assessing the actuarial value of the benefits given up, reference should be made to the nature of any survivors’ pensions payable. The only change to the legislation affecting either the nature of contracting-out or the benefits forgone since the last contracting-out review took place, as reported to Parliament in March 2001, is the Civil Partnership Act 2004, which comes into effect on 5 December 2005. Under this Act same-sex couples will be able to make a formal, legal commitment to each other by forming a civil partnership. At present same-sex couples have no such formal legal recognition of their relationships. In broad terms, as a result of the Act, civil partners will be treated in the same way as married couples for the purpose of calculating benefit entitlement under S2P. Given the small numbers of people to whom the Civil Partnership Act 2004 is expected to apply (see the Regulatory Impact Assessment that accompanied the Act^{vii}) and the nature of the existing assumptions, principally the proportion of contracted-out workers assumed to be married, any change in the rebates on account of the Act will be very small.

Section 2 Development of actuarial assumptions

- 2.1 In setting the assumptions used to calculate the contracting-out rebates I have had regard to the fact that the decision to contract out is an option taken by or on behalf of workers, and so:
- 2.1.1 The contracted-out worker has already chosen to forgo additional pension benefits by the National Insurance Fund (NIF) from State Pension Age, or the COSRS or COMPS of which the worker is a member has accepted the responsibility of providing benefits which are considered to be of equivalent actuarial value to the additional pension benefits forgone by the worker, in exchange for the rebates received.
- 2.1.2 Therefore, the rebates I have calculated are not set at a level that *guarantees* that the accumulated rebates will be sufficient to provide the same level of additional pension benefits as that forgone from the NIF (so, for example, the rebates are not calculated on the assumption that they will be invested in index-linked gilts of appropriate duration). The rebates are calculated so that the accumulated value of the rebates is *expected*, on the assumptions made, to be sufficient to provide benefits of at least the same level as the additional pension benefits forgone.
- 2.2 The rebates will apply over a period of five years, from April 2007 to April 2012, and during this period individuals and schemes could change their decision whether or not to contract out. I have taken this into account by having regard to the history of movements in investment markets, and a reasonable range of expected market movements over the period that the rebates will apply for – rather than just the position of investment markets at the time that my report is being prepared.
- 2.3 It is my clear intention that the proposed assumptions should not be unnecessarily complex, so that advisors to schemes or to individuals will be in a position to understand the implications of contracting-out or not contracting-out for their clients, without significant additional investigations. Appropriate advice will be particularly important as the proposed rebates have not been pitched at a level to guarantee that all workers will benefit by contracting-out. For APPs in particular, a key factor in the contracting-out decision is the amount of risk that a contracted-out worker wishes to accept.
- 2.4 From time to time, it may be considered appropriate to grant additional incentives to contract out, or to restrict the levels of contracted-out rebates at certain ages – but those are matters for the Secretary of State for Work and Pensions, once he has considered my report.

Section 3 Economic Factors

Yield on appropriate investments after SPA (net of price increases)

- 3.1 The obligation of the National Insurance Fund (NIF) to pay additional pension benefits represents a liability that has some similarities to index-linked UK government bonds (index-linked gilts). In particular, both cash-flow streams are increased in line with increases in the Retail Prices Index (RPI). However, the NIF does not pay the additional pension benefits forgone by contracted-out workers (in respect of the periods for which the workers were contracted out) and so the cost of providing pension benefits after retirement from COSRS, COMPS and APPs may be more appropriately determined by reference to the yield on corporate borrowings of appropriate term and security, rather than by reference to gilt yields.
- 3.2 I also note that the current level of long-term index-linked gilt yields^{viii} is low by historical standards, and has not increased as was assumed at the time of the contracting-out review for the current quinquennium from 2002/03 to 2006/07. There are reasons why the current relatively low yields on conventional and index-linked gilts may continue, not least the demand from some pension schemes and insurance companies for government bonds and similar assets that reduce risk relative to their liabilities. The needs of some investors for an increased proportion of assets that have less risk relative to their liabilities is one possible explanation of why there is little evidence in the current structure of the gilt yield curve to indicate that gilt yields are implicitly expected by the market to rise over the medium or long term, even though the current level of index-linked gilt yields is at a historic low.
- 3.3 In fact, current forward rates (and in particular current forward real rates) appear very low (relative to historic levels, and also relative to the yield on other assets, such as equities) and this may indicate an unprecedented degree of risk-aversion in the marketplace.
- 3.4 Appendix B gives a brief summary of information from the financial markets, and other economic variables, at the time this consultation is being prepared. The key economic variables that I have considered are:
 - 3.4.1 The current yields on longer dated high-quality corporate bonds – about 5% a year^{ix}.
 - 3.4.2 The future rate of RPI inflation implied by the current yields on index-linked and conventional UK government bonds. This is about 2.8% a year at the end of July 2005, although the implied forward rate of RPI inflation is more than 3% a year.
 - 3.4.3 Historic relationships between the levels of short term interest rates, inflation and economic growth – and a reasonable range of future expectations for these variables.

- 3.5 In my opinion, these factors indicate that it is still appropriate to recognise that bond yields are at unusually low levels at present due to a higher than usual degree of risk-aversion in the marketplace. **Therefore, I intend to use an assumed rate of investment return after retirement (relative to price increases) of 2% a year for those retiring in 2007/08, rising steadily to 3% a year over a 20 year period, so that it is assumed to reach 3% a year for those retiring in 2027/28.** For the current quinquennium the assumption was that the real rate of return relative to prices would be 2% a year for those reaching SPA in 2002-03, rising to 3.5% a year for those reaching SPA in 2017-18 and later years.

Q1 Do you agree that the proposed assumption is consistent with my interpretation of the legislation that provides for my report? If you do not, could you please indicate how you would develop an alternative assumption?

Rate of investment return before SPA, relative to earnings increases

- 3.6 For the period before SPA I consider that the rebates will normally be invested in a range of asset classes. Investors in riskier assets such as equities (and other asset classes like property) will have an expectation that these assets will produce higher returns in the longer term than are available from appropriate government bonds (which are generally thought of as 'risk-free' – in the sense of offering virtually certain payments, which may provide a close match to certain liabilities). Financial economics theory provides a rationale for this observed effect:
- 3.6.1 The returns on equities are less predictable than the returns on government bonds, and, in particular, market values of equities can fluctuate sharply and unpredictably over short periods of time without any corresponding changes to the value of the liabilities.
- 3.6.2 Therefore, investors with a choice between an equity asset and a government bond should only invest in equities if they expect that equities will give a higher return than government bonds (to compensate for the lower certainty about what that actual return on equities will be).
- 3.7 It is usually expected that the longer the term until the investor's retirement age the larger the proportion of retirement savings that are invested in riskier assets such as equities. I consider that the contracting-out rebates will be invested in diversified portfolios, for the same reasons that apply to most retirement savings. Indeed, there is an argument that many contracted-out workers would maintain portfolios with higher equity proportions – since they might be considered more risk-tolerant than the average investor. A judgement has to be made as to the extent to which any such higher expected rates of return should be allowed for in determining the "cost of providing benefits of an actuarial value equivalent to that of the benefits ... forgone". The higher expected rates of return available on investments that are 'riskier' compared with the expected return that is available on government bonds can give a broad indication of the 'market price of risk'. Like any other market price, it is subject to fluctuations due to supply and

demand – and, as the average degree of risk-aversion in the marketplace increases, the market price of risk will tend to increase.

- 3.8 Most investments will therefore have an upside and a downside risk², even though most investors would be more concerned with downside risk – and typically the ‘risk’ they refer to is downside risk. The market price of risk is a measure of the additional expected return of an investment that the average market participant is willing to give up to protect themselves from the downside risk of the same investment. Thus, the market price of risk is usually positive³ and the expected return on the ‘risky’ asset is usually higher than the expected return on the risk-free asset – since the average investor is usually risk-averse, and requires some compensation for making the risky investment. Although equities are thought of as ‘risky’, and government bonds as risk-free, in practice the return on any investment strategy is never known with certainty at the outset, and so there is some degree of uncertainty about the returns on all assets (and hence there is no asset that is entirely risk-free, in particular with regard to meeting a given set of liabilities).
- 3.9 The decision to contract out is made, among other reasons, on the basis that it allows the contracted-out worker or scheme to access the upside risk of investing rebates in the financial markets. The downside risk, of poorer than expected returns on the invested rebates, is in effect accepted as a consequence of the contracting-out decision. If a worker or scheme wants to be protected against this specific downside risk, the simplest option available to them is not to contract out. Therefore, it does not follow that the rebates should provide full compensation at the market implied risk premium for the protection voluntarily given up. This is particularly the case for investors who have a different investment horizon (timeframe) from the average market participant.
- 3.10 Therefore, I intend to make an estimate of the equity risk premium expected over the period that the rebates will be invested, and to allow for this in calculating the contracting-out rebates. A worker, or a scheme, as (or more) risk-averse as the average market participant may not consider that they are best served by contracting-out. It is more consistent with my interpretation of the legislation to propose rebates that a more risk-tolerant worker or scheme would accept as an alternative to the additional state pension benefits forgone. The Secretary of State for Work and Pensions has appropriate responsibility for determining any adjustments to the proposed rates that I calculate in my report, including whether any incentives and caps should apply.

Q2 **What is your best estimate of a reasonable range over the long term for the equity risk premium that should be taken into account in calculating the cost of benefits forgone by those contracted out?**

² Downside risk is the risk to the investor that the investment returns are less than expected. Upside risk is the risk that the investment returns more than expected. Risk is an opportunity as much as a cost, in appropriate hands.

³ This means that the average investor must be “paid” to take risk. In finance literature this payment (to hold equities instead of government bonds) is known variously as the risk premium, the market premium or the equity risk premium.

- 3.11 I have considered a range of research available on the appropriate value of the equity risk premium, although it needs to be borne in mind that there is a wide variety of approaches to how it should be estimated. The standard financial economics textbook^x considers that the reasonable range of the market premium for the United States is about 6% to 8.5% a year. More recent studies have criticised the methodology that has usually been adopted to analyse the historic data on equity returns, and concluded that the ranges typically quoted have been too high. A paper by Fama and French^{xi} takes a different approach to analysing historic equity data, and concluded that a more appropriate forward-looking estimate of the equity risk premium for the United States would be between 2.6% to 4.3% a year.
- 3.12 The experience of the world's stock market has been considered by Dimson, Marsh and Staunton^{xii}. The authors' conclusions are broadly consistent with the conclusions of Fama and French for the US, but they consider that the expected risk premium for other countries may be lower than for the US. They also suggest that taking a world view of the equity risk premium might be more appropriate when considering the future. They suggest a forward-looking, geometric mean risk premium of about 3% a year, and a corresponding arithmetic mean risk premium of about 4% a year.
- 3.13 The ranges calculated appear to correspond broadly with expectations in the UK (although expectations are likely to be influenced strongly by published academic papers). More recently, the Pensions Commission^{xiii} adopted a real rate of return for equities relative to prices (before expenses) of 6% a year – 4% a year in excess of the assumed real rate of return on index-linked gilts. They also assumed that investment expenses represent a reduction in the gross return by 0.65% a year for equities, 0.25% a year for corporate bonds and 0.1% a year for gilts.
- 3.14 Taking the available evidence into account, and recognising the limitations of the evidence, I have considered that:
- 3.14.1 the typical investment portfolio for the contracted-out worker will be broadly bond-based approaching SPA – with increasing proportions of the portfolio in equity investments at younger ages; and
 - 3.14.2 it is appropriate to factor in the effects of the rising real yields I have anticipated in paragraph 3.5, when considering how including an equity risk premium will impact on the assumed real return on the diversified portfolio.

Therefore I propose to use a real rate of return before retirement relative to prices starting at 2% a year (for those near SPA) and rising to 4% a year (for each year to SPA) for those more than 30 years from SPA. These figures are assumed to be net of investment management expenses.

- 3.15 Additional state pension benefits are linked to increases in the Average Earnings Index (AEI) for the period between the year to which the earnings relate and the year before SPA. Each year the Secretary of State for Work and Pensions publishes a "Revaluation of earnings factors order", based on the increase in the AEI over the 12 months to the preceding September. The revaluation rate specified by the 2005 order, published on 10 February 2005, was 4.1%. The increase in the RPI over the same 12 month period (i.e. the period over which the increase in the AEI was measured for the purposes of the order) was 3.1%.
- 3.16 The Office for National Statistics (ONS)^{xiv} updates such earnings statistics on a monthly basis, but the increase in the AEI over the last year varies relatively widely from month to month. However, the more recent 2005 figures do not appear to indicate that price or earnings inflation has picked up. Historical data^{xv} over longer periods indicates that the relationship between growth in the AEI and the RPI is not smooth over the short term, but that the two indices clearly have a relationship in the longer term. Over the fifteen years from 1990 to 2004 the average annual growth in the AEI exceeded the average annual growth in the RPI by around 1½ % a year. Over the year 2004 the growth in the AEI in excess of the growth in RPI was closer to 1% a year.
- 3.17 I propose to use a rate of real growth in the AEI of 1% a year in the short term (affecting the rebates of those close to SPA) and a higher longer term real rate of growth in the AEI of 1.5% a year. Given that the purpose of my report to Parliament is to consider the contracting-out rebates for the five year period from April 2007 to April 2012, I only propose to vary the assumptions by retirement-year, rather than by retirement-year and investment-year.
- 3.18 **The overall effect of the proposed assumptions is that the rate of return in excess of increases in the AEI before retirement is assumed to be about 1% a year for those at the oldest ages, rising to 2% a year (for each year before retirement) for those aged 50 and rising further to 2½% a year (for each year before retirement) for those aged 35 or less.** For the current quinquennium, it was assumed that the real rate of investment return before SPA relative to earnings would be 2% a year at all ages.

Q3 Taking account of the equity risk premium that you indicated is appropriate, an appropriately diversified portfolio and a consistent allowance for growth in the AEI and the RPI, what assumed real rate of investment return pre-retirement would you consider appropriate?

Q4 Do you agree that it is appropriate to adopt a relatively simplified economic assumption base? If you do not, what level of complication do you consider necessary?

Nominal rate of investment return

3.19 An assumption about future nominal rates of return is required in respect of the period of one year immediately before attainment of SPA, when there is no earnings-linked revaluation of the additional pension benefit given up. It is also required when making allowance for the fact that rebates (or part of the rebates) for COMPS and APPs are paid by the National Insurance Contributions Office after the end of the tax year of the earnings to which the rebates relate. **I propose that a rate of return of 5% a year is used, for consistency with the assumptions already proposed.**

Revaluation of Guaranteed Minimum Pensions (GMPs) for early leavers

3.20 In previous years I have assumed that the level of fixed rate GMP revaluation (for leavers from COSRS, where such schemes have elected for the fixed rate option, over the period that the rebates are in force) is set at $\frac{1}{2}\%$ above the annual rate of assumed earnings increases. For leavers in the current quinquennium, this meant that the rate of revaluation was set at 4.5% a year. **An appropriate rate of revaluation for fixed rate GMPs for leavers from COSRS over the quinquennium from 2007/08-2011/12, for the period from leaving to retirement, would be 4% a year.**

Q5 Do you agree that these two additional assumptions are consistent with the other assumptions previously outlined? If you do not, could you please indicate what assumptions you would propose here?

Section 4 Demographic Factors

- 4.1 Five specific sets of demographic assumptions are needed in order to calculate the rebates, as follows:
- 4.1.1 mortality for members of contracted-out pension arrangements, both before and after SPA (although longevity after SPA is more significant than mortality before SPA);
 - 4.1.2 mortality for widow(er)s and surviving civil partners of members of contracted-out pension arrangements;
 - 4.1.3 proportions of members of contracted-out pension arrangements who are either married or have a civil partner at death;
 - 4.1.4 probability of remarriage for widow(er)s of members of contracted-out pension arrangements or of surviving civil partners forming subsequent civil partnerships; and
 - 4.1.5 age differences between spouses or civil partners and members of contracted-out pension arrangements.

Mortality of members of contracted-out pension arrangements and their spouses or civil partners

- 4.2 GAD produces the official national population projections for the United Kingdom and its constituent countries at the request of, and after consultation with, the Registrars General of England & Wales, Scotland and Northern Ireland. The assumptions on which they are based are agreed in consultation with the statistical offices of the four countries. The primary purpose of the projections is to provide an estimate of future population which is used as a common framework for national planning in a number of different fields. They are normally prepared every second year, but an 'interim' set of 2003-based national projections was produced on 30 September 2004. These are the latest set of national projections available. The next set of full projections will be 2004-based and are scheduled for publication on Thursday 20 October 2005.
- 4.3 The population projections incorporate projections for mortality improvements both before and after SPA. The same methodology was used for this purpose in the 2002-based (and 2003-based⁴) GAD population projections as had been used for previous projections. However, the target rate for mortality improvements for the 25th year of the projections was increased from the rate of 0.75% a year assumed previously to 1% a year for the 2002-based projections, and in the longer term the rate of improvement was assumed to halve thereafter over 25 years rather than 10 years assumed previously.

⁴ The mortality assumptions used for the interim 2003-based projections were the same as those for the full 2002-based projections.

- 4.4 Some adjustment to the base population mortality tables, which are derived from the experience of the population as a whole, is usually necessary when using them to estimate the mortality experience of the working population. At the previous review an assumption was made that the mortality rate of the contracted-out population was 85% of the mortality rate of the then most recently available population mortality study (the 1998-based GAD projections). The rationale for the 85% adjustment was that the evidence from the NIF at the previous review suggested that the ratio of the actual mortality experience of the population over SPA who were contracted out to the expected mortality experience (on the unadjusted 1998-based GAD projections) was about 85%.
- 4.5 Based on administrative data from the National Insurance Contributions Office, I have again made a comparison of the mortality of pensioners who have been contracted out with the mortality of the general population as shown in the most recent, 2003-based, projections. This analysis has been done on both a “lives” and an “amounts” basis⁵; this is necessary because the experience usually shows that those with larger pensions tend to live longer. However in this case the “amounts” effect is limited because rebates are calculated by reference to earnings up to the upper-earnings limit (“UEL”). The results of my investigation suggest that, on the “amounts” basis, the ratios of actual mortality rates to expected population mortality rates for those who have been contracted out are around 83% for men and 91% for women. This might suggest retaining the assumption that mortality will be 85% of that of the general population.
- 4.6 The Continuous Mortality Investigation (CMI), under the auspices of the UK actuarial profession, analyses data provided by a large number of life insurance companies. This allows the CMI to produce data on the mortality experience of a wide range of different products sold by these companies, and standard mortality tables based on these data. Particular groups which have been considered include “life office pensioners” (members of occupational pension schemes under which the benefits are insured through life offices) as well as holders of “retirement annuities” (broadly individuals who have bought annuities with the proceeds of personal pensions or similar products).
- 4.7 It should be noted that life office pensioners represent only a small proportion of members of occupational pension schemes. This means that the CMI experience may not be directly applicable to those who are contracted out. Although the CMI has carried some analysis of the mortality of members of large self-administered pension schemes, this was quite limited in scope and did not include the preparation of standard tables. It did however suggest that the mortality of larger occupational schemes might tend to be heavier than that shown in the main CMI tables.

⁵ A mortality investigation on a “lives” basis considers how likely a death is at each age for each person. An investigation on an “amounts” basis weights the observed experience by the amount of pension in payment – i.e. it considers “deaths” of units of pension.

- 4.8 The most recent CMI standard tables (the “92” series) for “life office pensioners”, relating to data for the period 1991-1994, are the PMA/PFA92 and PML/PFL92 tables for males and females on amounts and lives bases, respectively^{xvi}. The tables on an “amounts” basis (PMA/PFA92) indicate that the average pensioner lives longer than the tables on a “lives” basis (PML/PFL92) since, as noted above, those in receipt of higher pensions tend to live longer.
- 4.9 Like the GAD population projections, the CMI tables contain in-built allowances for projected improvements in longevity with the passage of time. Since the “92” series of CMI tables was originally published in 1999 evidence has emerged to suggest that the rate of improvement in male pensioner mortality (in particular) was significantly faster than anticipated in the projection factors that formed part of the tables. On 10 December 2002 the CMI issued a revised set of mortality projections, which can be applied to the base tables of the “92” series^{xvii}. There were three sets of revised projections, incorporating different assumed levels of future mortality improvement, and these are known as the long, medium and short cohort improvement projections.
- 4.10 Appendix C contains a comparison of annuity rates (using a constant discount rate of 2% a year for all the annuity calculations shown) on the various tables discussed in this section. The graphs indicate that the different longevity tables influence the shape of the annuities resulting in broadly the same way. The graphs indicate that a mortality assumption of 85% of that used in the 2003-based GAD population projections is more prudent than the unadjusted projected “92” series tables, but not as prudent as the cohort adjustments.
- 4.11 As noted in paragraph 4.2, the next set of GAD population projections (2004-based), incorporating updated mortality assumptions are due to be issued on Thursday 20 October 2005. It seems appropriate to take account of the most up-to-date projections in calculating rebates. **I therefore propose to assume that the mortality of members of COSRS will be 85% of the mortality rates in the 2004-based GAD population projections.**

For COSRS or their advisors:

Q6 Is the proposed mortality assumption for COSRS, of 85% of the mortality rates to be assumed for the forthcoming, 2004-based, population projections, appropriate?

- 4.12 Workers in money-purchase contracted-out schemes (COMPS and APPs) will generally purchase an annuity from an insurance company at retirement. I understand that insurance companies appear to be pricing their annuity products using the “92” series CMI tables with allowances for medium cohort improvements – and that their regulators and providers of capital will generally expect them to take this approach and to establish technical reserves on a still more conservative basis.

- 4.13 The twelfth survey of Occupational Pension Schemes by the Government Actuary^{xviii} indicated that only 11% of defined contribution occupational pension schemes paid scheme pensions from their own resources – although it is not clear what annuity conversion bases were commonly adopted by these schemes. It also appears that many of the schemes in this position were in the financial sector, and so they may have different capabilities to pay annuities to their occupational scheme’s pensioners than would generally be available to other employers. A further 29% used a combination of resources, depending on the circumstances.
- 4.14 It should also be noted that salary-related schemes can also contract out on a defined contribution basis – by granting a protected rights underpin to the defined benefits offered. Such schemes will usually pay pensions at retirement from the scheme’s resources as COSRS would, although they are treated as COMPS for the purposes of determining rebates.
- 4.15 **Taking these factors into account, I propose to use the CMI PMA/PFA92 tables with the medium cohort improvements on a year of birth basis⁶ to calculate the cost of annuities at SPA in my proposed rebates for those workers contracted-out by money purchase schemes.**

Q7 Is the proposed differential between the longevity assumptions for money-purchase and salary-related schemes appropriate?

- 4.16 If a further series of mortality tables is published by the CMI, either for pensioners of insured schemes, or for self-administered pension schemes, in time for publication of my report early in 2006, I would expect to take the results of those investigations into account, if appropriate.
- 4.17 Assumptions are also needed about the mortality of spouses or civil partners of members of contracted-out pension arrangements. Factors such as class selection and mortality by amounts rather than by lives will apply here nearly as strongly as for the assumption about mortality for members of contracted-out arrangements. **Hence I propose to assume that the mortality of spouses is the same as that of workers (of the same sex). I do not intend to make allowance for any differences between the longevity of spouses and surviving civil partners.**

Q8 Do you agree that the same underlying longevity table is appropriate for workers and their spouses or civil partners?

⁶ The mortality rates vary by sex, age and year. Therefore, the mortality rates assumed for a given individual for a particular age as they grow older will depend on the year in which they attain that age, or equivalently, will depend on their year of birth.

4.18 **Previously no allowance has been made for deaths before SPA for members contracted-out by COMPS and APPs, and my proposal is to continue with this assumption.** I am required to propose rebates to meet the cost of providing benefits of the same 'actuarial value' as the additional state pension benefits given up. If allowance were made for mortality before SPA, the rebates would not, on the assumptions made, be sufficient to provide benefits at SPA of equivalent actuarial value to the additional pension benefits forgone.

Q9 Do you agree that it is appropriate not to allow for deaths before SPA for members of money purchase arrangements?

Other demographic factors

4.19 Assumptions are also needed about a range of factors which affect the actuarial value of the additional state pension given up by widow(er)s or surviving civil partners of members of contracted-out pension arrangements as a result of their being contracted out. These factors are: the proportions of members and former members of contracted-out arrangements who are married or in a civil partnership at death; age disparities between husbands and wives or between civil partners; and, for widow(er)s and surviving civil partners, the rates of remarriage or forming subsequent civil partnerships, as appropriate.

4.20 **For members of COSRS after SPA, I propose to use proportions married based on the 2003-based GAD marital status projections for England and Wales^{xix}.** These projections provide sex- and age-specific proportions married for each year until 2066 and are the latest such projections available. **For COSRS members before SPA, a downward adjustment is made to allow for widow(er)s who do not have qualifying children and so receive no benefit. I also propose to assume that husband-wife age disparities are broadly in line with the experience for the population of Great Britain as revealed in the latest (2001) census. These assumptions will be deemed to include appropriate allowance for civil partners.**

4.21 Remarriage after SPA by widow(er)s of those with additional pension rights does not affect their inherited survivor's additional pension, and therefore no allowance for remarriage after SPA is needed in valuing the additional state pension rights given up. **For those contracted-out through a COSRS, I propose to allow for remarriage by widow(er)s before SPA using the same general approach as adopted at the previous review.**

Q10 Do you agree with the proposed approach to these assumptions? Please indicate any alternative approaches that you would prefer to see adopted.

4.22 If allowances for proportions married at SPA of less than 100% were used in assessing the rebates for money purchase arrangements, the amount available to buy an annuity, which would have to offer a contingent pension to a spouse or civil partner, would be expected to be less than that needed to replace the additional state pension benefits given up. **Therefore, I propose to assume that all members of contracted-out money purchase arrangements (both COMPS and APPs) are married or have a civil partner at SPA, and that the proportion then declines in line with the assumed mortality for the spouse or civil partner.**

Q11 Do you agree that it is appropriate to assume that 100% of contracted-out members of money purchase arrangements at SPA have a spouse or civil partner?

Section 5 Allowance for expenses and other factors

Factors relevant to salary-related contracted-out schemes

- 5.1 I consider that it is appropriate to make an allowance in the COSRS rebate for the additional expenses incurred by schemes as a result of the requirements of the contracting-out regime. Since the abolition of the formal requirement for periodic Reference Scheme Test certification, these direct additional expenses are likely to be small for most COSRS. Also, any such expenses are not likely to be proportional to the size of the scheme or to the amount of contributions being paid into it. Therefore any allowance for expenses in determining the reduction in National Insurance contributions must be broad-brush.
- 5.2 In order to allow for the costs associated with being contracted-out to be covered by moderately-sized schemes, I propose to continue with the allowance of 0.2% of “upper band earnings”, as used in the current quinquennium.

| |
|--|
| Q12 Do you agree with the proposed approach for expenses for COSRS? |
|--|

- 5.3 As the actuarial value of the additional state pension benefit given up varies by the age and sex of the scheme member involved, it is necessary to weight the rates calculated as appropriate for each age and sex to produce a single rate that can be applied as a reduction in National Insurance contributions. Weightings (by age and sex) should be applied to the rebates calculated for all ages and each sex to produce a single COSRS rebate (in line with the requirements of the legislation). These weightings are based on administrative data from the National Insurance Contributions Office and analysed by the Department for Work and Pensions (DWP) Information and Analysis Directorate.
- 5.4 The trends in the data are extrapolated to the period over which the new rebates will apply. The same general approach as was adopted in 2002-2007 is used in making this projection. Broadly, an increase in the assumed average age of the population of COSRS or an increase in the female proportion of the population of COSRS tends to increase the COSRS rebate.
- 5.5 The tables in Appendix D show the weights that I propose to adopt, based on the approach outlined, together with the weights adopted for the current quinquennium. The tables indicate that I have continued to assume that the average age of the membership of COSRS is increasing, although the average age of male members appears to be less than anticipated at the time of the previous review. It appears that the proportion of COSRS membership that is female is continuing to rise. The data available does not allow a sophisticated analysis of all the trends but I have looked at the limited data available, and two main trends emerge:
- 5.5.1 the proportion of public sector COSRS membership that is female is far higher than that for private sector COSRS, and is also increasing more quickly; and

- 5.5.2 the average age of female members in public sector COSRS is older than that of female members in private sector COSRS, while the reverse is true for male members (although the difference is very slight for male members).
- 5.6 Legislation does not allow a distinction between the COSRS rebate for private sector schemes and public sector schemes. The level of the COSRS rebate to public sector pension schemes is akin to an accounting adjustment within the whole of government accounts, since the employer rebate represents a reduction in the payroll cost of government departments but with a corresponding reduction in income to the NIF. As such, there is an argument that less weight should be given to the membership of public sector COSRS in deriving the weighting, although I do not propose to do so for the quinquennium from 2007/08 to 2011/12.
- 5.7 The COSRS rebate for the current quinquennium from 2002/03 to 2006/07 includes a contingency margin of 7.5% of the rebate in order to help protect schemes that have an older than average membership profile. I believe that a contingency margin should be retained.

Q13 Do you agree that an explicit contingency margin in the COSRS rebate is consistent with the requirements of the legislation?

- 5.8 The introduction of the Pension Protection Fund (PPF) from 6 April 2005 will also impact on the expenses of private sector COSRS. However, this only increases the costs of contracting out if the schemes would reduce the benefits offered (and therefore any pension protection levy) as part of any decision to cease contracting out. In practice, I intend to consider the levy as being covered by the contingency margin.
- 5.9 **Accordingly, I propose to retain an explicit margin of 7.5% of the rebate calculated on the basis of the demographic and economic assumptions proposed but excluding the expense allowance mentioned in paragraph 5.2 above.** This margin does not, of course, necessarily guarantee that contracting-out is appropriate for all salary-related schemes.

Factors relevant to appropriate personal pensions

- 5.10 Stakeholder pensions are subject to a limit on the charges they may levy. Although the same restrictions do not apply to personal pensions, there is evidence that personal pension charges have tended to converge toward the stakeholder level.

5.11 Regulation 14 of the Stakeholder Pension Schemes Regulations 2000 (as amended from 6 April 2005 by the Stakeholder Pension Schemes (Amendment) Regulations 2005) has the effect of limiting the charges that can be deducted by stakeholder schemes to:

5.11.1 1/365% of the value of the fund for each day, for existing members at 6 April 2005; and

5.11.2 for other members:

5.11.2.1 3/730% of the value of the fund for each day during the first 10 years of membership; and then

5.11.2.2 1/365% of the value of the fund for each day thereafter.

5.12 This is the legal expression of the policy that for a stakeholder pension in force at 6 April 2005 the only charge up to retirement age should be an annual charge levied as a proportion of the assets held in the fund, and that the maximum level of the annual charge is to be 1% a year, or, for contracts taken out on or after 6 April 2005, 1.5% a year for the first 10 years of membership and 1% a year thereafter.

5.13 However, some employers may be able to arrange more favourable terms for their employees, although this would be more difficult for individuals seeking to contract out and for smaller employers. Nevertheless, the expense allowance for APPs should not be set at a rate to subsidise the most inefficient forms of pension provision.

5.14 **Given this, I propose to continue to make a single allowance for expenses in recommending a rate of rebate for members of APPs, whether registered as stakeholder pension schemes or not, of a 1% a year reduction in the rate of return before retirement – in other words, I am assuming an annual management charge of 1% a year.**

Q14 Is it reasonable to make the same allowance for expenses for all APPs, whether registered as stakeholder pension schemes or not?

Q15 Is an allowance for an annual management charge of 1% on all forms of APP too high?

5.15 In addition, I propose to allow a 4% loading on the annuity factor, derived from the economic and demographic assumptions described previously, for the expenses of annuity purchase, and the profit margin of the insurer – since these are ‘factors affecting the cost of providing’ pension benefits from APPs. This may be compared with the loading of 2% applied for calculating the rebates for the current quinquennium.

Q16 Is a 4% allowance for an annuity purchase charge in the rebates appropriate?

5.16 Rebates to APPs are paid by the National Insurance Contributions Office after the end of the tax year to which the earnings relate. **In order to allow for this I propose to increase rebates by the nominal rate proposed in paragraph 3.19 for one year to allow for the period between the middle of the year to which the earnings relate and the date by which it is expected that most rebates will have been paid into the pension arrangement.**

Factors relevant to contracted-out occupational money purchase schemes

5.17 In broad terms, COMPS might be regarded as including two types of occupational pension scheme: schemes that provide pure DC benefits and schemes (often large) that provide DB benefits and which switched from COSRS status in 1997. Data indicates that the majority of COMPS rebates are being paid to the latter type of scheme. I therefore propose a continuation of the current regime, under which there is an addition of 0.2% of upper band earnings to the age and sex-specific rebate calculated. I consider that it is appropriate to allow for annuity purchase expenses of 4% (the same as for APPs) in calculating the underlying COMPS rebates at each age.

Q17 Is it appropriate to treat APPs and COMPS in the same way, when considering the allowance for annuity purchase expenses?

Q18 Should I make an allowance for an explicit annual management charge in calculating the rebates to COMPS?

Q19 Such a charge would presumably be at a lower level than 1% a year (as for APPs). Would it be appropriate to equalise the allowances for annual management charges on both APPs and COMPS, at this lower level (say ½% a year)?

5.18 For members of money purchase contracted-out occupational pension schemes there are both reductions in National Insurance contributions and rebates paid after the end of the tax year by the National Insurance Contributions Office. Both reductions in contributions and rebates must be invested within the scheme to provide 'protected rights' for the member. **To allow for the payment of the rebates after the end of the tax year, I propose, on the same basis as for APPs, to allow for one year's interest at the nominal rate of 5% a year proposed in paragraph 3.19 on the portion of the total paid after the end of the tax year.**

Section 6 Sample rebates and sensitivity analysis

Proposed rates of reduction in National Insurance contributions for members of salary-related contracted-out schemes

- 6.1 On the basis of my proposed assumptions, as set out in previous sections of this document, the reduction in National Insurance contributions for members of contracted-out salary-related pension schemes for the quinquennium from 2007/08 to 2011/12 will be 5.2% of upper band earnings. If I retained the same assumptions as were adopted for calculating rebates for the current quinquennium (from 2002/03 to 2006/07), the reduction in National Insurance contributions for members of contracted-out salary-related pension schemes would have been 4.5% of upper band earnings. Therefore, the effect of the changes in the assumptions that I am proposing is to produce an increase in the COSRS rebate of just over 15% (i.e. $(5.2 / 4.5 - 1) \times 100$).
- 6.2 The reduction in contributions applying during the current quinquennium is 5.1% of upper band earnings. The main reason why, on the same assumptions, this would fall to 4.5% in the next quinquennium is that the average accrual rates for additional pension under SERPS/S2P are falling from each period to the next. The graph in paragraph A.1 of Appendix A illustrates how, under SERPS/S2P, the accrual rate for additional pension benefits depends on the year that a worker reaches SPA: in general the later the year in which SPA is reached, the lower the rate of accrual of pension. In each successive quinquennium, the year in which the workforce reach SPA will on average be later, and therefore they will, on average, have a lower rate of additional pension accrual. Also, in each successive quinquennium fewer women have a pensionable age lower than 65 (for whom the rebate will be higher).
- 6.3 The following table summarises the effect of the various changes to the assumptions:

*Reduction in National Insurance contributions as a percentage of upper band earnings**

| | |
|---|-------------|
| Reduction adopted for quinquennium 2002/03 to 2006/07 | 5.1% |
| Effect of declining additional pension accrual rates and increases in SPA for women | -0.6% |
| Effect of changing mortality and other demographic assumptions | +0.4% |
| Effect of changing economic assumptions | |
| pre-retirement rate | -0.2% |
| post-retirement rate | +0.3% |
| Effect of changing weighting | +0.1% |
| Reduction proposed for quinquennium 2007/08 to 2011/12 | 5.2% |

*figures do not add up due to rounding

Sensitivity of the COSRS rebate to the proposed assumptions

6.4 The table below illustrates how the level of reduction in National Insurance contributions which would be recommended for members of COSRS is sensitive to the economic assumptions proposed:

Reduction in National Insurance contributions as a percentage of upper band earnings

| Annual rate of pre-retirement return relative to earnings | Annual rate of post-retirement return relative to prices | | |
|--|---|-------------|-------------|
| | 1.5% - 2.5% | 2.0% - 3.0% | 2.5% - 3.5% |
| 0.5% - 2.0% | 6.0% | 5.6% | 5.3% |
| 1.0% - 2.5% | 5.5% | 5.2% | 4.9% |
| 1.5% - 3.0% | 5.1% | 4.8% | 4.6% |

6.5 The effect of using different assumptions for the longevity of members of COSRS and their spouses is shown in the following table.

Reduction in National Insurance contributions as a percentage of upper band earnings

| Longevity assumption | |
|---|-------------|
| 85% of UK population mortality (1998-based) – existing | 4.9% |
| 85% of UK population mortality (2003-based) – proposed | 5.2% |
| “92” series CMI tables, with medium cohort improvements | 5.5% |

Proposed rates of rebates for members of appropriate personal pensions

6.6 The table in Appendix E sets out the proposed rebate rates as a percentage of upper band earnings for members of APPs calculated on the assumptions set out in the earlier sections of this document. The rates shown are applicable to earnings in band 3 as defined in Schedule 4A to the Social Security Contributions and Benefits Act 1992 (i.e. that band of earnings on which additional pension, broadly, continues to accrue at 20% following the introduction of S2P). Rebates paid must be on a unisex basis, notwithstanding the differences in pensionable age for women born before 1955, and other actuarial factors which might mean that “the cost of providing ... benefits ... forgone” may differ for women and men. These differences have become smaller over time, due to the rise in female pensionable age and improving male longevity (particularly since I assume that all contracted-out workers are married at SPA).

- 6.7 I consider that in order to fulfil the requirements of the legislation, the rebates proposed in my report to Parliament should be set at the higher of the levels applying to men and to women. The rates shown in Appendix E for 2007/08 are the rates applying for men up to age 51⁷ (up to age 55 for the year 2011/12), and then for women up to age 58 (59 in 2010/11 and 2011/12), which is the oldest age at which a woman accrues additional pension rights and is thus able to contract out. Male rates then apply at ages up to 63.
- 6.8 At most ages the resulting rebate rates shown in Appendix E are higher than those that apply in the current quinquennium, although at the youngest ages the rebates have reduced somewhat. This pattern is largely a result of the proposed assumptions about investment return before retirement. It should be noted that, as with COSRS (see paragraph 6.2), the fall in the rate of accrual of additional pension acts to reduce the proposed rebate rates at older ages compared with the equivalent rates for the current quinquennium.
- 6.9 Any tax relief paid into the APP by HMRC would be in addition to rebates set out in Appendix E.
- 6.10 The tables in Appendix F show the effect of altering certain key assumptions on rebates for the middle year of the quinquennium (2009/10) for a selection of ages, and for both sexes.
- 6.11 The rates shown in Appendix E and Appendix F (and Appendix G, referred to in the following paragraph) do not include the effect of any cap on rebates. In the current quinquennium rebates for APPs are capped at 10.5% of band 3 earnings. If a cap at this level is retained, at higher ages rebates will be paid at the rate of 10.5% of earnings in band 3, rather than the rates shown in the table in Appendix E. Any cap would need to apply consistently to earnings at other bands (i.e. 21% of earnings in band 1, and 5.25% of earnings in band 2, if the cap remains at 10.5%).

Proposed rates of reductions in National Insurance contributions and rebates for members of contracted-out money purchase schemes

- 6.12 The table in Appendix G sets out the proposed total rebate rates as a percentage of upper band earnings for members of COMPS, calculated on the assumptions set out in the earlier sections of this document. As with rebates for members of APPs, it is appropriate to set the rebate at the higher of the levels applying to men and to women. The rebates shown assume that the level of rebate applicable at the lowest age (2.5% of upper band earnings) is delivered as a reduction of National Insurance contributions during the year. At ages older than the lowest age, any excess of the total rebate is assumed to be paid by the National Insurance Contributions Office as an age-related rebate after the end of the year in question. Allowance for interest, as mentioned in paragraph 5.18 earlier, is applicable only to this age-related part.
- 6.13 As with the proposed rebates for APPs, at most ages the COMPS rebates are higher than those that apply in the current quinquennium, although at the youngest ages the rebates have reduced somewhat.

⁷ This is age last birthday at the start of the relevant tax year.

Section 7 References

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www.archive.official-documents.co.uk/document/cm50/5076/5076.pdf
- ^{vi}Appendix C (p76) to “Pensions: Challenges and Choices; The First Report of the Pensions Commission” published by The Stationery Office – copies can be ordered from www.tso.co.uk/bookshop.
- ^{vii}Final Regulatory Impact Assessment: Civil Partnership Act 2004
www.dti.gov.uk/access/ria/pdf/ria-civilpartnerships2004.pdf
- ^{viii}Yield curves can be downloaded from the website of the Bank of England at <http://www.bankofengland.co.uk/statistics/yieldcurve>. Some economic indicators as at 1st August 2005 are in Appendix B also.
- ^{ix}Gross redemption yields on “iBoxx £ Corporates AAA 15+” and “iBoxx £ Corporates AA 15+” indices at end-July 2005.
- ^x“The Principles of Corporate Finance”: Brealey and Myers, 7th edition.
- ^{xi}“The equity premium”: Eugene F. Fama & Kenneth R. French. The Journal of Finance, Volume LVII, No.2, April 2002.
- ^{xii}“Triumph of the Optimists: 101 Years of Global Equity Returns”: Princeton University Paper, 2002. A related research paper “Global Evidence on the Equity Risk Premium” was subsequently published in the Journal of Applied Corporate Finance: Fall 2003, Volume 15, Number 4.
- ^{xiii}Appendix C (p 72) to “Pensions: Challenges and Choices; The First Report of the Pensions Commission” published by The Stationery Office – copies can be ordered from www.tso.co.uk/bookshop.
- ^{xiv}www.statistics.gov.uk.
- ^{xv}“The Abstract of Statistics for Benefits, Contributions and Indices of Prices and Earnings 2004 edition”: http://www.dwp.gov.uk/asd/other_stats.asp Department for Work and Pensions.
- ^{xvi}Continuous Mortality Investigation Reports No. 16 & 17. Available from the website of the UK Actuarial Profession at:
http://www.actuaries.org.uk/Display_Page.cgi?url=/cmi/cmi_reports.html.
- ^{xvii}CMI Working Paper 1 “An interim basis for adjusting the “92” series mortality projections for cohort effects”, issued on December 10th 2002. Also available from the website of the UK Actuarial Profession at:
http://www.actuaries.org.uk/Display_Page.cgi?url=/cmi/cmi_workingpapers.html

^{xviii}“Occupational Pension Schemes 2004; The twelfth survey by the Government Actuary”: available from the GAD website at:

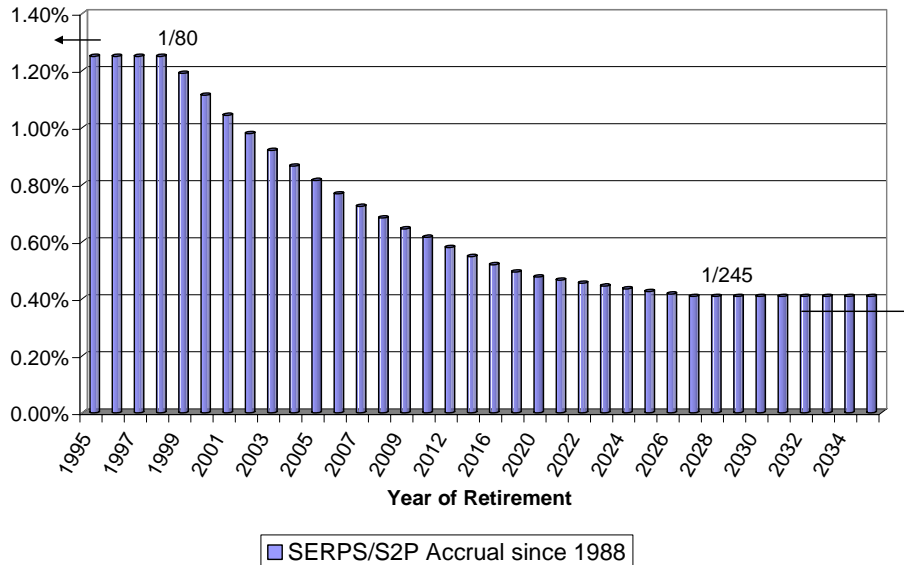
<http://www.gad.gov.uk/Publications/docs/Final%20Report%2016Jun2005.pdf>

^{xix}“Marital status projections for England & Wales” GAD 2003-based, published March 10th 2005: http://www.gad.gov.uk/marital_status_projections/background.htm

Appendix A Additional pension benefits under the State Second Pension (S2P) and the effect of contracting out

A.1 The accrual rate of additional pension benefits (as a proportion of “upper band earnings”) since 1988 under SERPS/S2P is shown in the following table (before allowing for the variable accrual rates under S2P). The target is, in broad terms, to provide a pension after a full working life of 20% of average earnings, although higher rates of accrual apply for retirements in earlier years.

Rate of additional state pension accrual since 1988 under SERPS



A.2 The Child Support, Pensions and Social Security Act 2000 included a number of changes to how additional pension is calculated, which took effect from tax year 2002/03 (formerly the calculations were on the basis known as SERPS, and the new basis is known as S2P). The main changes were:

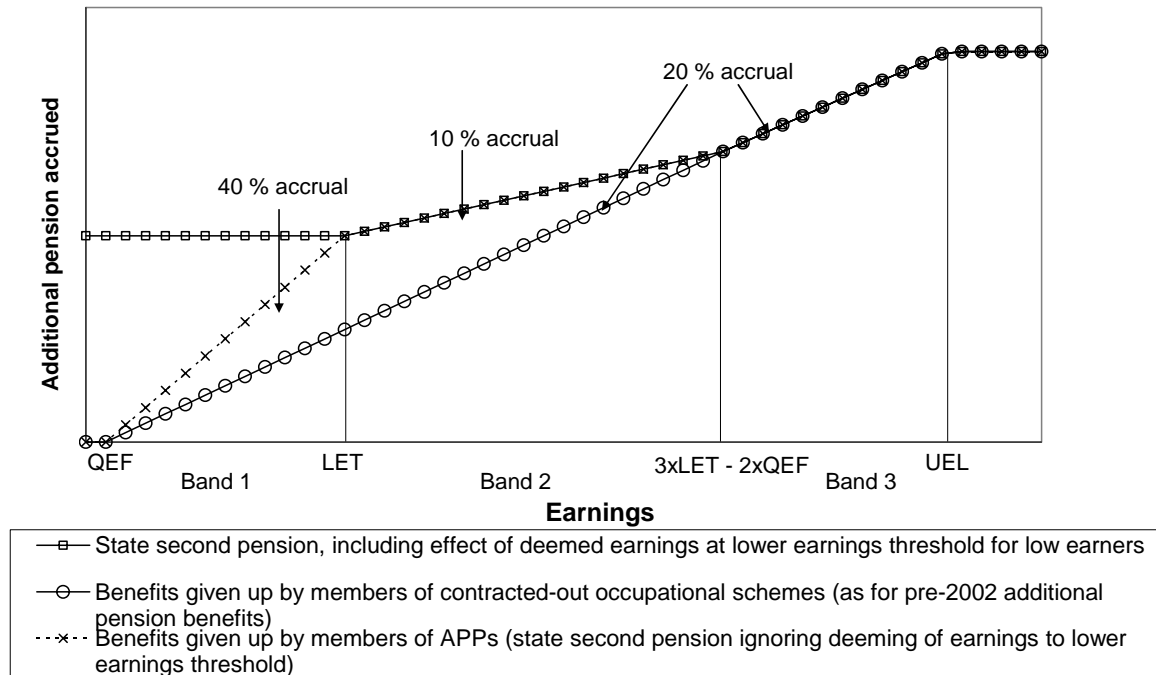
- A.2.1 the introduction of three different accrual rates on different bands of earnings;
- A.2.2 treating those earning between the annual lower earnings limit (the “qualifying earnings factor” or “QEF”) up to the “low earnings threshold” – £12,100 a year in 2005/06 – as though they earned the low earnings threshold; and
- A.2.3 treating qualifying carers and people with long-term disabilities who have no earnings or earnings below the annual lower earnings limit, as if they had earnings at the level of the low earnings threshold.

A.3 The introduction of three different accrual rates affects the consideration of rebates for contracting-out, while the other measures – such as deeming of earnings at the low earnings threshold for those with lower earnings and credits for people with long-term disabilities and for carers – do not.

- A.4 The state second pension accrues on earnings (actual or treated as earned) between the lower earnings limit (LEL, also the qualifying earnings factor, QEF) and the upper earnings limit (UEL). Earnings between the lower earnings limit and the upper earnings limit are initially divided into three bands. Band 1 is from the annual lower earnings limit to the low earnings threshold (LET). Band 2 is from the low earnings threshold plus £1 to $(3 \times \text{LET} - 2 \times \text{QEF})$. This is £27,800 in 2005/06. Band 3 is from the top of the second band plus £1 to the upper earnings limit. The low earnings threshold is increased each year in line with the annual increase in average earnings. Rounding rules apply to the calculation of the low earnings threshold and the calculation of the top of Band 2.
- A.5 The accrual rates for additional pension from the state are, under S2P, double, half and equal to the previous SERPS accrual rates on bands 1, 2 and 3 of earnings respectively. Thus, for example, for retirements in the year 2009/10 and later, the additional pension under S2P will be based on 40%, 10% and 20% of earnings in bands 1, 2 and 3 respectively.
- A.6 The top of the second band is likely to increase faster than earnings, because the low earnings threshold increases in line with earnings and the lower earnings limit, and thus the QEF, increases in line with prices, which is likely to be more slowly than earnings. The upper earnings limit is increased broadly in line with prices. Thus, the top of the second band will exceed the upper earnings limit after a number of years. There will then only be two bands, as the upper earnings limit will continue to apply. On the assumption that earnings increase at 1.5% a year faster than prices, this cross-over will occur approximately in the year 2014/15. If there are further increases in the upper earnings limit over and above price inflation, this will delay the time when the top of the second band will exceed the upper earnings limit.
- A.7 After the introduction of the state second pension, contracted-out salary-related schemes (COSRS) and contracted-out money purchase schemes (COMPS) rebates continue to reflect the previous SERPS accrual rates. This is covered in part III of Schedule 4A to the Social Security Contributions and Benefits Act 1992, which is inserted by section 31(3) of and Schedule 4 to the Child Support, Pensions and Social Security Act 2000. In particular, paragraph 8(3) of Schedule 4A stipulates that rebates will be based on actual earnings without any deeming of earnings to the level of the low earnings threshold as will occur for additional pension. Members of COSRS and COMPS earning below £27,800 (in 2005/06) will receive a state second pension top-up from the National Insurance Fund. This will be based on the difference between what their state second pension (based on the low earnings threshold if they earn less than that) would have been and what their SERPS entitlement would have been, if they had not been contracted out.

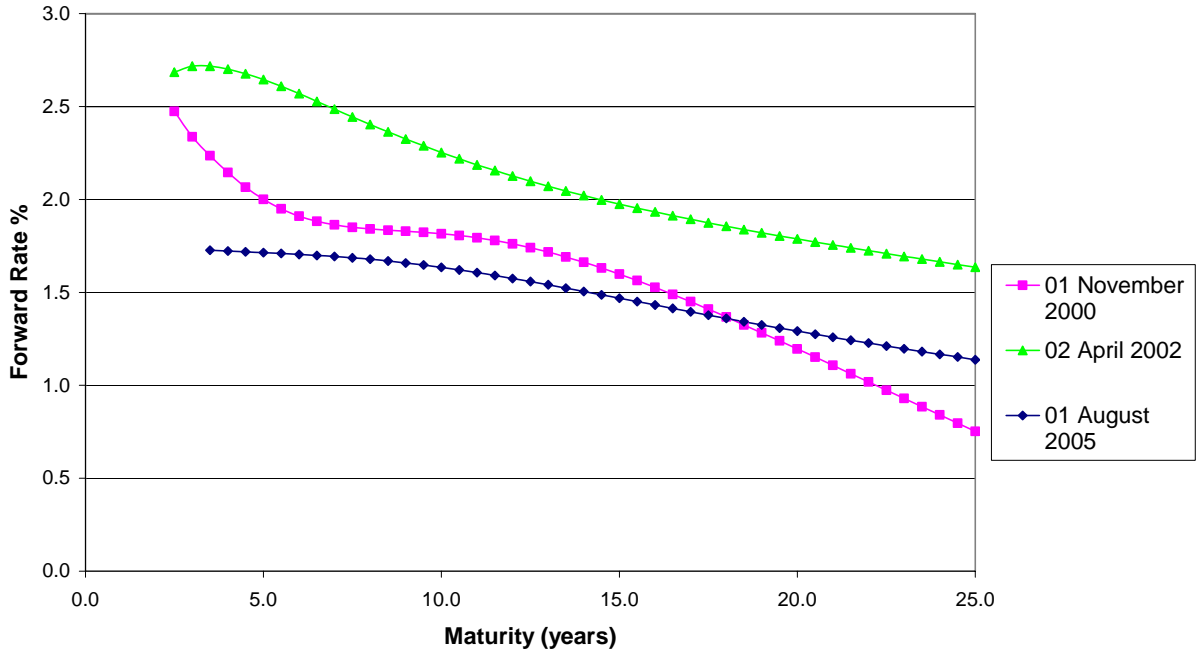
- A.8 Following the introduction of the state second pension, appropriate personal pension scheme (APP) rebates reflect the state second pension accrual rates structure (i.e., the doubling and halving of the accrual rates in earnings bands 1 and 2 respectively). However, rebates are based on actual earnings (i.e. without any deeming of earnings at the low earnings threshold). Those with an APP who earn less than the low earnings threshold in a year will receive a state second pension top-up from the National Insurance Fund based on the difference between the low earnings threshold and their actual earnings in a year.
- A.9 The graph below illustrates the pattern of benefits which now accrue under the state second pension, and the pattern of benefits given up by members of contracted-out pension arrangements.

State second pension accrual

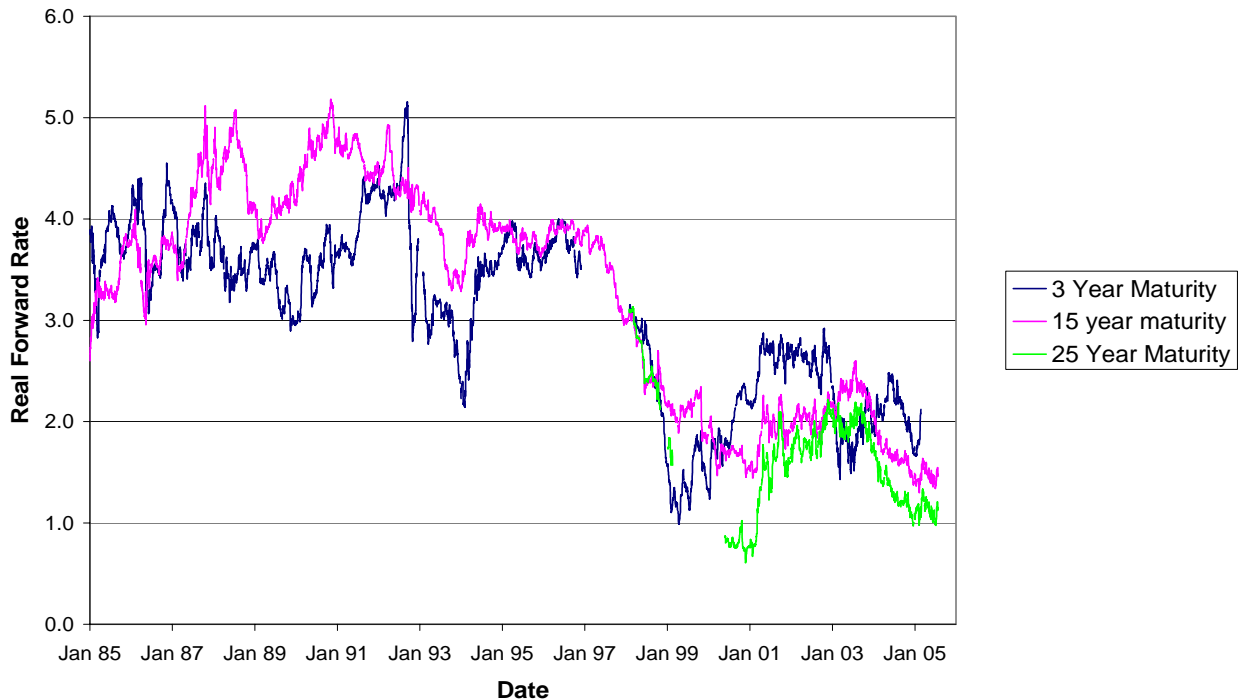


Appendix B Selected economic indicators

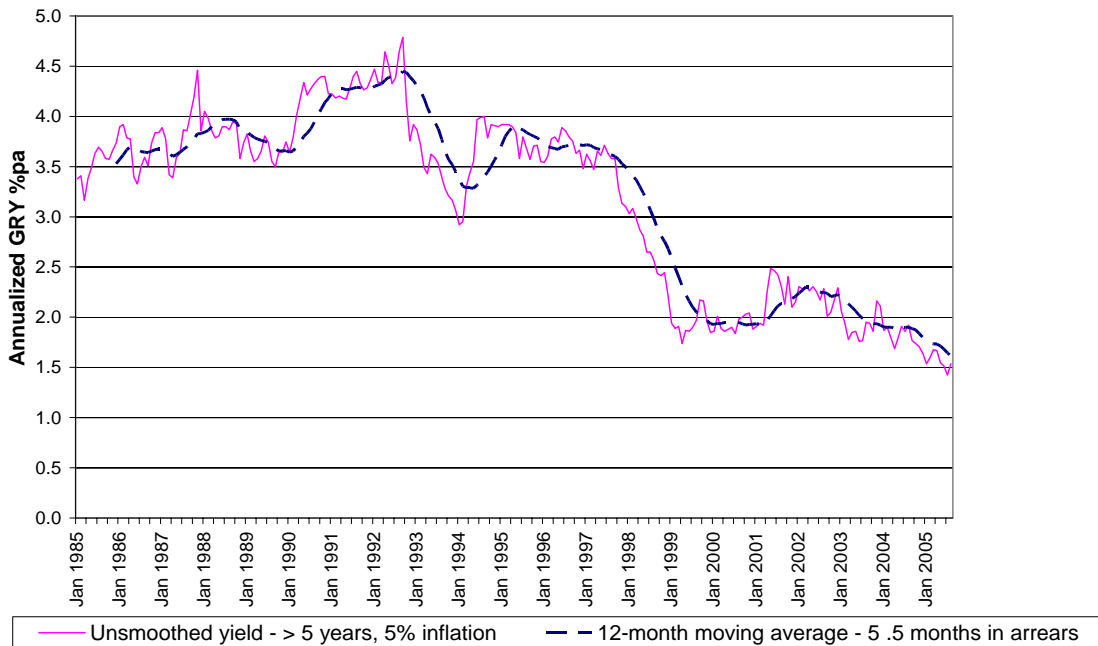
B.1 Instantaneous real forward rates by maturity, at selected dates:



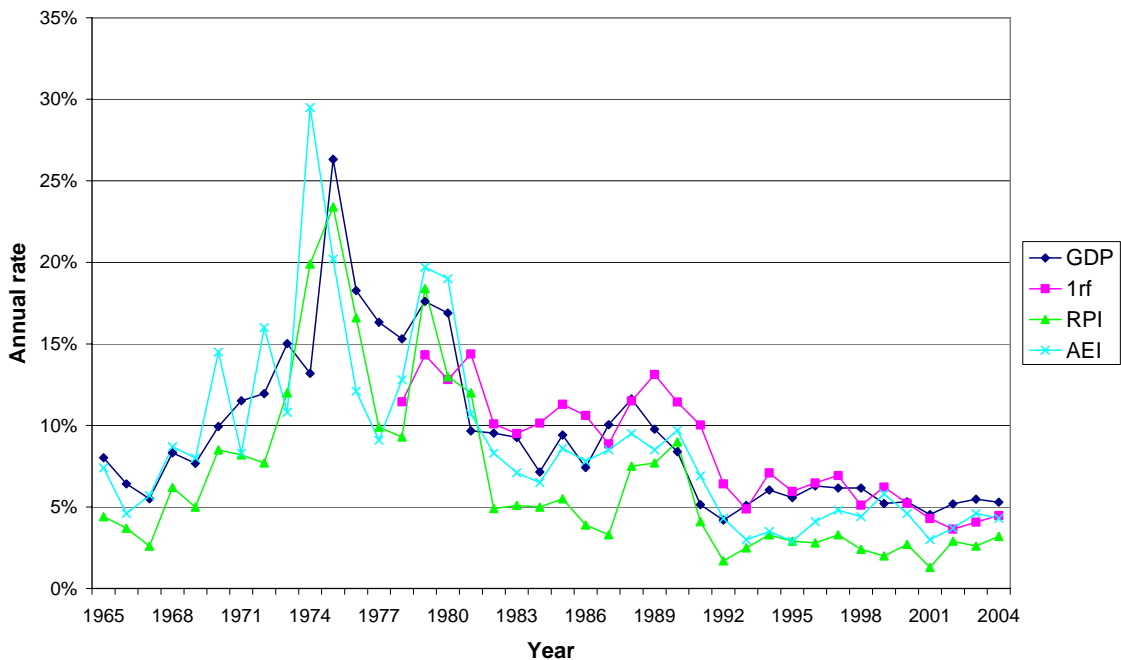
B.2 History of instantaneous real forward rates, at selected maturities:



**B.3 Gross redemption yield on index linked gilts:
(over 5 years, assuming 5% a year inflation)**



B.4 History of selected economic variables for the UK:

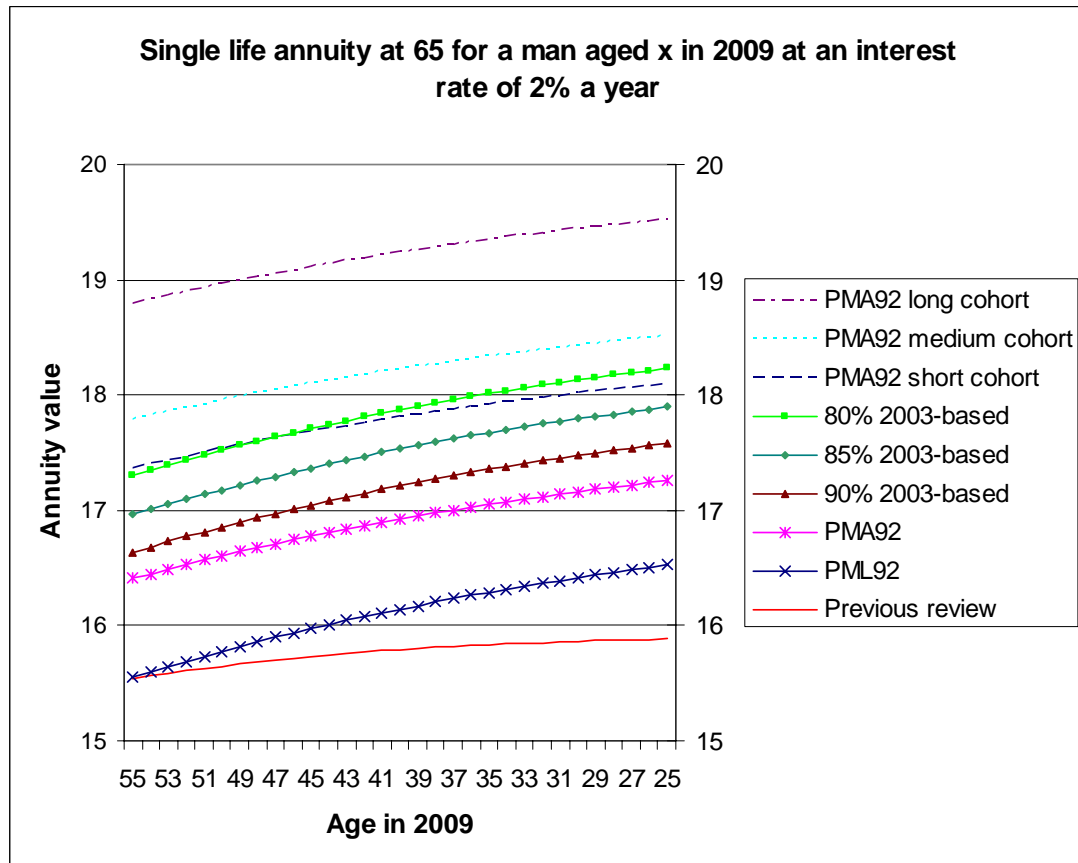
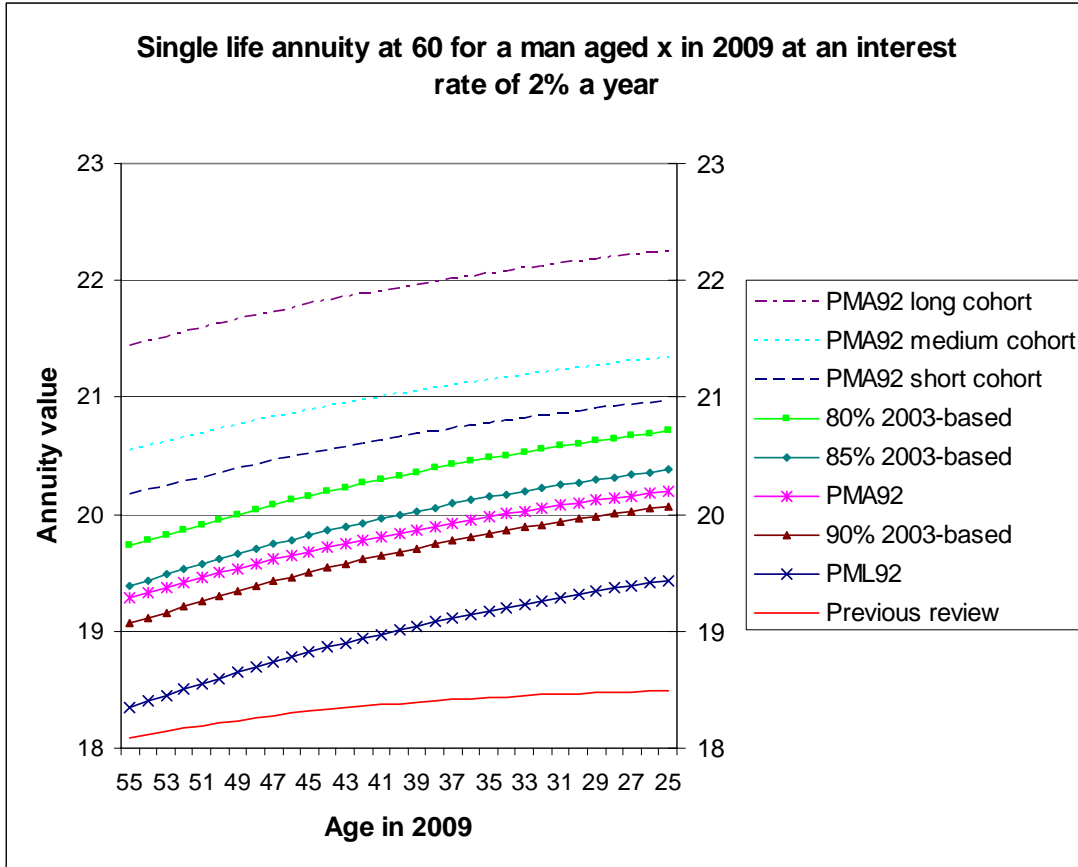


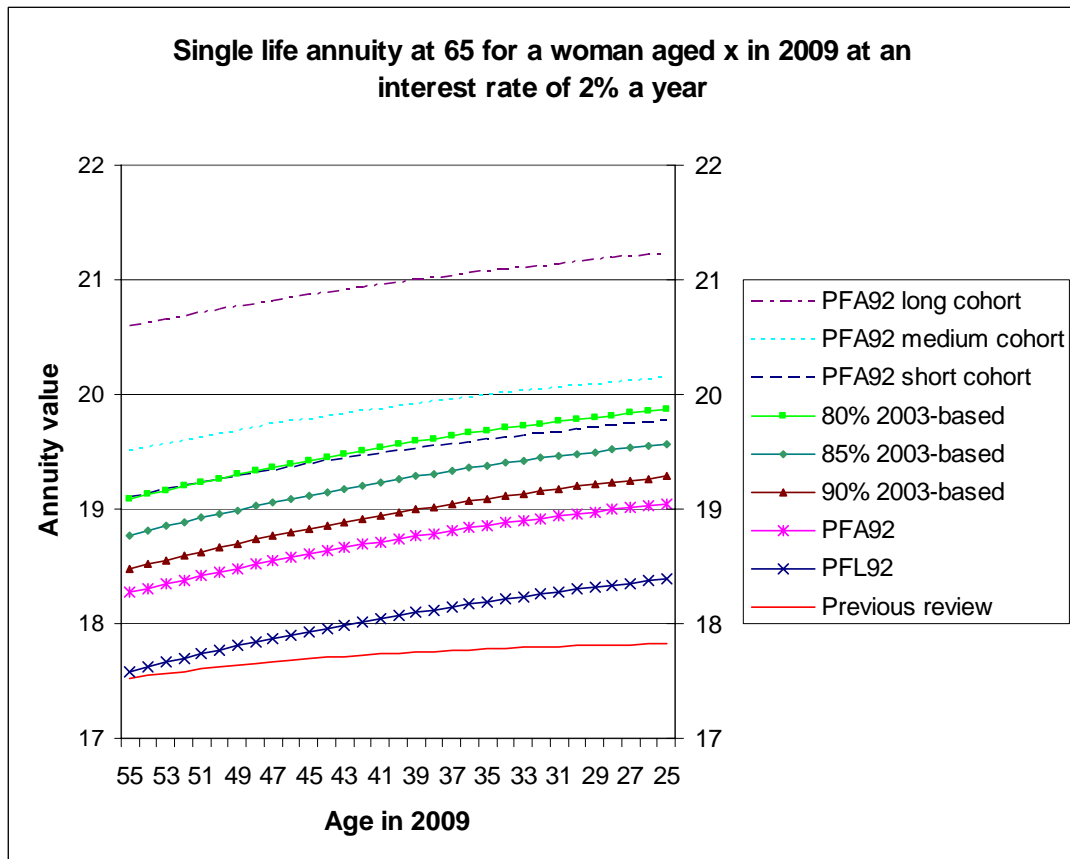
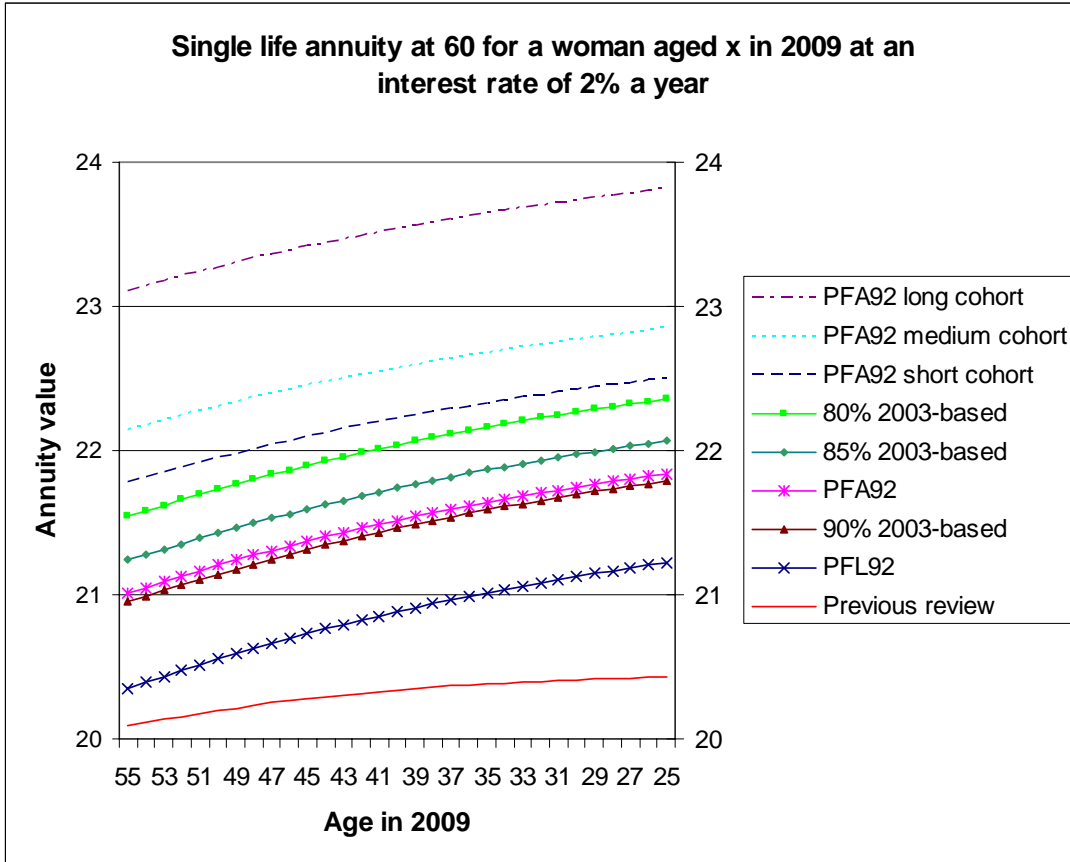
Note: “GDP” is the annual increase in GDP at market prices; “1rf” is the one year risk-free rate of interest estimated from the nominal spot yield; “RPI” and “AEI” are the annual increases in the retail prices index and the average earnings index respectively.



Appendix C Annuities on selected longevity tables

- C.1 For annuity values at SPA the PA92 tables give annuity values that exceed those from the GAD population projections. Using 85% of GAD mortality, the annuity values will tend to be midway between those from the PA92 (baseline improvements) and PA92 medium cohort tables.
- C.2 For illustrative purposes, the graphs in this section of the document show annuities for single lives. As such, the graphs do not fully represent the effect on the rebates of the different longevity assumptions – the differences between joint life annuities from each longevity table would tend to be less significant than for single lives. In particular, joint life annuities for males and females tend to have very similar values.
- C.3 The annuities shown below have been calculated on the basis of a net discount rate of 2% a year.





Appendix D Weighting used to determine a single contracted-out salary-related scheme (COSRS) rebate

D.1 Proportions of earnings of COSRS members in each age band and sex (see paragraph 5.5)

| Age | Proposed weights | | Weights used for current quinquennium | |
|-----------------------------|------------------|-------|---------------------------------------|-------|
| | Men | Women | Men | Women |
| 16-19 | 0.000 | 0.000 | 0.000 | 0.000 |
| 20-24 | 0.019 | 0.012 | 0.012 | 0.007 |
| 25-29 | 0.034 | 0.030 | 0.037 | 0.024 |
| 30-34 | 0.047 | 0.052 | 0.053 | 0.035 |
| 35-39 | 0.075 | 0.080 | 0.093 | 0.073 |
| 40-44 | 0.082 | 0.102 | 0.113 | 0.102 |
| 45-49 | 0.081 | 0.111 | 0.102 | 0.097 |
| 50-54 | 0.058 | 0.091 | 0.080 | 0.072 |
| 55-59 | 0.037 | 0.068 | 0.054 | 0.033 |
| 60-64 | 0.018 | 0.004 | 0.012 | |
| 65+ | | | | |
| Total | 0.450 | 0.550 | 0.557 | 0.443 |
| Weighted average age | 41 | 43 | 42 | 41 |

Appendix E Rebates to Appropriate Personal Pensions (APPs)

Percentage of earnings applicable to band 3 ("20% accrual rate band"), with no cap
(see paragraphs 6.6 to 6.10)

| Age last birthday at start of tax year | Tax year | | | | |
|---|----------|---------|---------|---------|---------|
| | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 |
| 15 | 3.9% | 3.9% | 3.9% | 3.9% | 3.9% |
| 16 | 4.0% | 4.0% | 4.0% | 4.0% | 4.0% |
| 17 | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% |
| 18 | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% |
| 19 | 4.2% | 4.2% | 4.2% | 4.2% | 4.2% |
| 20 | 4.2% | 4.2% | 4.2% | 4.2% | 4.2% |
| 21 | 4.3% | 4.3% | 4.3% | 4.3% | 4.3% |
| 22 | 4.4% | 4.4% | 4.4% | 4.4% | 4.4% |
| 23 | 4.4% | 4.4% | 4.4% | 4.4% | 4.4% |
| 24 | 4.5% | 4.5% | 4.5% | 4.5% | 4.5% |
| 25 | 4.6% | 4.6% | 4.6% | 4.6% | 4.6% |
| 26 | 4.6% | 4.6% | 4.6% | 4.6% | 4.6% |
| 27 | 4.7% | 4.7% | 4.7% | 4.7% | 4.7% |
| 28 | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% |
| 29 | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% |
| 30 | 4.9% | 4.9% | 4.9% | 4.9% | 4.9% |
| 31 | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 32 | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 33 | 5.1% | 5.1% | 5.1% | 5.1% | 5.1% |
| 34 | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% |
| 35 | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% |
| 36 | 5.4% | 5.4% | 5.4% | 5.4% | 5.4% |
| 37 | 5.5% | 5.5% | 5.5% | 5.6% | 5.6% |
| 38 | 5.7% | 5.7% | 5.7% | 5.7% | 5.7% |
| 39 | 5.8% | 5.8% | 5.8% | 5.8% | 5.8% |
| 40 | 5.9% | 5.9% | 5.9% | 5.9% | 5.9% |
| 41 | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| 42 | 6.1% | 6.1% | 6.1% | 6.1% | 6.1% |
| 43 | 6.2% | 6.2% | 6.2% | 6.2% | 6.3% |
| 44 | 6.3% | 6.3% | 6.3% | 6.4% | 6.4% |
| 45 | 6.6% | 6.4% | 6.5% | 6.5% | 6.5% |
| 46 | 6.9% | 6.7% | 6.6% | 6.6% | 6.6% |
| 47 | 7.2% | 7.0% | 6.8% | 6.7% | 6.7% |
| 48 | 7.5% | 7.3% | 7.1% | 6.9% | 6.8% |
| 49 | 7.8% | 7.6% | 7.4% | 7.2% | 7.0% |
| 50 | 8.2% | 8.0% | 7.8% | 7.6% | 7.4% |
| 51 | 8.6% | 8.4% | 8.1% | 7.9% | 7.7% |
| 52 | 9.4% | 8.8% | 8.5% | 8.3% | 8.0% |
| 53 | 10.5% | 9.6% | 8.9% | 8.6% | 8.4% |
| 54 | 11.7% | 10.6% | 9.7% | 9.0% | 8.8% |
| 55 | 13.0% | 11.8% | 10.7% | 9.8% | 9.1% |
| 56 | 14.4% | 13.1% | 11.9% | 10.8% | 9.9% |
| 57 | 15.3% | 14.5% | 13.2% | 12.0% | 10.9% |
| 58 | 16.4% | 15.4% | 14.6% | 13.2% | 12.0% |
| 59 | 12.1% | 11.7% | 11.3% | 14.4% | 13.3% |
| 60 | 12.6% | 12.2% | 11.8% | 11.4% | 11.0% |
| 61 | 13.1% | 12.6% | 12.2% | 11.8% | 11.4% |
| 62 | 13.6% | 13.1% | 12.7% | 12.2% | 11.8% |
| 63 | 14.5% | 13.6% | 13.1% | 12.7% | 12.3% |

Appendix F Sensitivity analysis for APP rebates

F.1 Sensitivity of APP rebates to economic assumptions

Percentage of earnings applicable to band 3 ("20% accrual rate band") by sex and age last birthday at start of tax year 2009/10, with no cap (see paragraph 6.10)*

| Rate of investment return pre-retirement relative to earnings increases | Rate of investment return post-retirement relative to price increases | | | | | | | | |
|---|---|----|-------|-------------|-----------|--------------|-------------|----|-------|
| | 1.5% - 2.5% | | | 2.0% - 3.0% | | | 2.5% - 3.5% | | |
| 0.5% - 2.0% | Men | 20 | 5.6% | Men | 20 | 5.2% | Men | 20 | 4.9% |
| | | 30 | 6.1% | | 30 | 5.8% | | 30 | 5.4% |
| | | 40 | 7.0% | | 40 | 6.6% | | 40 | 6.2% |
| | | 50 | 8.9% | | 50 | 8.3% | | 50 | 7.8% |
| | | 58 | 11.9% | | 58 | 11.2% | | 58 | 10.5% |
| | Women | 20 | 5.6% | Women | 20 | 5.2% | Women | 20 | 4.9% |
| | | 30 | 6.1% | | 30 | 5.7% | | 30 | 5.4% |
| | | 40 | 7.0% | | 40 | 6.6% | | 40 | 6.2% |
| | | 50 | 8.8% | | 50 | 8.3% | | 50 | 7.8% |
| | | 58 | 15.7% | | 58 | 14.6% | | 58 | 13.6% |
| 1.0% - 2.5% | Men | 20 | 4.5% | Men | 20 | 4.2% | Men | 20 | 4.0% |
| | | 30 | 5.2% | | 30 | 4.9% | | 30 | 4.6% |
| | | 40 | 6.3% | | 40 | 5.9% | | 40 | 5.5% |
| | | 50 | 8.3% | | 50 | 7.8% | | 50 | 7.3% |
| | | 58 | 11.6% | | 58 | 10.9% | | 58 | 10.2% |
| | Women | 20 | 4.5% | Women | 20 | 4.2% | Women | 20 | 4.0% |
| | | 30 | 5.2% | | 30 | 4.9% | | 30 | 4.6% |
| | | 40 | 6.3% | | 40 | 5.9% | | 40 | 5.5% |
| | | 50 | 8.3% | | 50 | 7.8% | | 50 | 7.3% |
| | | 58 | 15.7% | | 58 | 14.6% | | 58 | 13.6% |
| 1.5% - 3.0% | Men | 20 | 3.7% | Men | 20 | 3.4% | Men | 20 | 3.2% |
| | | 30 | 4.4% | | 30 | 4.2% | | 30 | 3.9% |
| | | 40 | 5.6% | | 40 | 5.3% | | 40 | 5.0% |
| | | 50 | 7.8% | | 50 | 7.3% | | 50 | 6.9% |
| | | 58 | 11.4% | | 58 | 10.6% | | 58 | 10.0% |
| | Women | 20 | 3.6% | Women | 20 | 3.4% | Women | 20 | 3.2% |
| | | 30 | 4.4% | | 30 | 4.2% | | 30 | 3.9% |
| | | 40 | 5.6% | | 40 | 5.3% | | 40 | 5.0% |
| | | 50 | 7.8% | | 50 | 7.3% | | 50 | 6.9% |
| | | 58 | 15.7% | | 58 | 14.6% | | 58 | 13.6% |

*Figures in bold are the rates on the proposed assumptions.

F.2 Sensitivity of APP rebates to longevity assumptions

*Percentage of earnings applicable to band 3 ("20% accrual rate band") by sex and age last birthday at start of tax year 2009/10, with no cap (see paragraph 6.10)**

| Longevity assumption | | | |
|---|-------|-----------|--------------|
| 85% of UK population mortality (1998-based projection) | Men | 20 | 3.8% |
| | | 30 | 4.4% |
| | | 40 | 5.4% |
| | | 50 | 7.1% |
| | | 58 | 10.0% |
| | Women | 20 | 3.9% |
| | | 30 | 4.5% |
| | | 40 | 5.4% |
| | | 50 | 7.2% |
| | | 58 | 13.5% |
| 85% of UK population mortality (2003-based projection) | Men | 20 | 4.2% |
| | | 30 | 4.8% |
| | | 40 | 5.7% |
| | | 50 | 7.5% |
| | | 58 | 10.5% |
| | Women | 20 | 4.2% |
| | | 30 | 4.8% |
| | | 40 | 5.8% |
| | | 50 | 7.6% |
| | | 58 | 14.1% |
| PxA92 medium cohort for scheme members and spouses | Men | 20 | 4.2% |
| | | 30 | 4.9% |
| | | 40 | 5.9% |
| | | 50 | 7.8% |
| | | 58 | 10.9% |
| | Women | 20 | 4.2% |
| | | 30 | 4.9% |
| | | 40 | 5.9% |
| | | 50 | 7.8% |
| | | 58 | 14.6% |

*Figures in bold are the rates on the proposed assumptions.

F.3 Sensitivity of APP rebates to expense assumptions

*Percentage of earnings applicable to band 3 ("20% accrual rate band") by sex and age last birthday at start of tax year 2009/10, with no cap (see paragraph 6.10)**

| Expense assumption | Sex | Age | Rebate |
|---|-------|-----------|--------------|
| No expense loading | Men | 20 | 2.7% |
| | | 30 | 3.4% |
| | | 40 | 4.5% |
| | | 50 | 6.6% |
| | | 58 | 10.0% |
| | Women | 20 | 2.7% |
| | | 30 | 3.4% |
| | | 40 | 4.5% |
| | | 50 | 6.6% |
| | | 58 | 14.0% |
| 1% annual charge, 2% loading on annuity purchase price (as used for rebates for quinquennium 2002-03 to 2006-07) | Men | 20 | 4.2% |
| | | 30 | 4.8% |
| | | 40 | 5.8% |
| | | 50 | 7.6% |
| | | 58 | 10.7% |
| | Women | 20 | 4.1% |
| | | 30 | 4.8% |
| | | 40 | 5.8% |
| | | 50 | 7.6% |
| | | 58 | 14.3% |
| 1% annual charge, 4% loading on annuity purchase price | Men | 20 | 4.2% |
| | | 30 | 4.9% |
| | | 40 | 5.9% |
| | | 50 | 7.8% |
| | | 58 | 10.9% |
| | Women | 20 | 4.2% |
| | | 30 | 4.9% |
| | | 40 | 5.9% |
| | | 50 | 7.8% |
| | | 58 | 14.6% |

*Figures in bold are the rates on the proposed assumptions.

Appendix G Rebates to Contracted-Out Money Purchase Schemes

Percentage of earnings applicable to band 3 ("20% accrual rate band"), with no cap
(see paragraph 6.12)

| Age last birthday at start of tax year | Tax year | | | | |
|---|----------|---------|---------|---------|---------|
| | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 |
| 15 | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% |
| 16 | 2.6% | 2.6% | 2.6% | 2.6% | 2.6% |
| 17 | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% |
| 18 | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% |
| 19 | 2.8% | 2.8% | 2.8% | 2.8% | 2.8% |
| 20 | 2.8% | 2.8% | 2.8% | 2.8% | 2.9% |
| 21 | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% |
| 22 | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| 23 | 3.0% | 3.0% | 3.0% | 3.1% | 3.1% |
| 24 | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% |
| 25 | 3.2% | 3.2% | 3.2% | 3.2% | 3.2% |
| 26 | 3.3% | 3.3% | 3.3% | 3.3% | 3.3% |
| 27 | 3.3% | 3.3% | 3.3% | 3.3% | 3.3% |
| 28 | 3.4% | 3.4% | 3.4% | 3.4% | 3.4% |
| 29 | 3.5% | 3.5% | 3.5% | 3.5% | 3.5% |
| 30 | 3.6% | 3.6% | 3.6% | 3.6% | 3.6% |
| 31 | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% |
| 32 | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% |
| 33 | 3.8% | 3.8% | 3.8% | 3.8% | 3.8% |
| 34 | 3.9% | 3.9% | 3.9% | 3.9% | 3.9% |
| 35 | 4.0% | 4.0% | 4.0% | 4.0% | 4.0% |
| 36 | 4.2% | 4.2% | 4.2% | 4.2% | 4.2% |
| 37 | 4.3% | 4.3% | 4.3% | 4.3% | 4.3% |
| 38 | 4.4% | 4.4% | 4.4% | 4.4% | 4.4% |
| 39 | 4.5% | 4.5% | 4.6% | 4.6% | 4.6% |
| 40 | 4.7% | 4.7% | 4.7% | 4.7% | 4.7% |
| 41 | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% |
| 42 | 4.9% | 4.9% | 4.9% | 5.0% | 5.0% |
| 43 | 5.1% | 5.1% | 5.1% | 5.1% | 5.1% |
| 44 | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% |
| 45 | 5.5% | 5.3% | 5.3% | 5.4% | 5.4% |
| 46 | 5.8% | 5.6% | 5.5% | 5.5% | 5.5% |
| 47 | 6.1% | 5.9% | 5.8% | 5.6% | 5.6% |
| 48 | 6.4% | 6.2% | 6.1% | 5.9% | 5.8% |
| 49 | 6.7% | 6.5% | 6.4% | 6.2% | 6.0% |
| 50 | 7.1% | 6.9% | 6.7% | 6.5% | 6.4% |
| 51 | 7.5% | 7.3% | 7.1% | 6.9% | 6.7% |
| 52 | 8.3% | 7.7% | 7.5% | 7.3% | 7.1% |
| 53 | 9.4% | 8.5% | 7.9% | 7.7% | 7.4% |
| 54 | 10.7% | 9.6% | 8.7% | 8.0% | 7.8% |
| 55 | 12.1% | 10.9% | 9.8% | 8.9% | 8.2% |
| 56 | 13.7% | 12.3% | 11.1% | 10.0% | 9.1% |
| 57 | 14.6% | 13.9% | 12.5% | 11.3% | 10.2% |
| 58 | 15.8% | 14.8% | 14.1% | 12.7% | 11.4% |
| 59 | 11.3% | 10.9% | 10.6% | 13.9% | 12.8% |
| 60 | 11.8% | 11.5% | 11.1% | 10.7% | 10.4% |
| 61 | 12.4% | 12.0% | 11.6% | 11.2% | 10.9% |
| 62 | 13.0% | 12.6% | 12.1% | 11.7% | 11.4% |
| 63 | 14.0% | 13.2% | 12.7% | 12.3% | 11.9% |

Appendix H Questions for consultation

- Q1 Do you agree that the proposed assumption is consistent with my interpretation of the legislation that provides for my report? If you do not, could you please indicate how you would develop an alternative assumption? (Paragraph 3.5)
- Q2 What is your best estimate of a reasonable range over the long term for the equity risk premium that should be taken into account in calculating the cost of benefits forgone by those contracted out? (Paragraph 3.10)
- Q3 Taking account of the equity risk premium that you indicated is appropriate, an appropriately diversified portfolio and a consistent allowance for growth in the AEI and the RPI, what assumed real rate of investment return pre-retirement would you consider appropriate? (Paragraph 3.18)
- Q4 Do you agree that it is appropriate to adopt a relatively simplified economic assumption base? If you do not, what level of complication do you consider necessary? (Paragraph 3.18)
- Q5 Do you agree that these two additional assumptions are consistent with the other assumptions previously outlined? If you do not, could you please indicate what assumptions you would propose here? (Paragraph 3.20)
- Q6 Is the proposed mortality assumption for COSRS, of 85% of the mortality rates to be assumed for the forthcoming, 2004-based, population projections, appropriate? (Paragraph 4.11) (for COSRS or their advisors)
- Q7 Is the proposed differential between the longevity assumptions for money-purchase and salary-related schemes appropriate? (Paragraph 4.15)
- Q8 Do you agree that the same underlying longevity table is appropriate for workers and their spouses or civil partners? (Paragraph 4.17)
- Q9 Do you agree that it is appropriate not to allow for deaths before SPA for members of money purchase arrangements? (Paragraph 4.18)
- Q10 Do you agree with the proposed approach to these (other demographic) assumptions? Please indicate any alternative approaches that you would prefer to see adopted. (Paragraph 4.21)
- Q11 Do you agree that it is appropriate to assume that 100% of contracted-out members of money purchase arrangements at SPA have a spouse or civil partner? (Paragraph 4.22)
- Q12 Do you agree with the proposed approach for expenses for COSRS? (Paragraph 5.2)
- Q13 Do you agree that an explicit contingency margin in the COSRS rebate is consistent with the requirements of the legislation? (Paragraph 5.7)

- Q14 Is it reasonable to make the same allowance for expenses for all APPs, whether registered as stakeholder pension schemes or not? (Paragraph 5.14)
- Q15 Is an allowance for an annual management charge of 1% on all forms of APP too high? (Paragraph 5.14)
- Q16 Is a 4% allowance for an annuity purchase charge in the rebates appropriate? (Paragraph 5.15)
- Q17 Is it appropriate to treat APPs and COMPS in the same way, when considering the allowance for annuity purchase expenses? (Paragraph 5.17)
- Q18 Should I make an allowance for an explicit annual management charge in calculating the rebates to COMPS? (Paragraph 5.17)
- Q19 Such a charge would presumably be at a lower level than 1% a year (as for APPs). Would it be appropriate to equalise the allowances for annual management charges on both APPs and COMPS, at this lower level (say ½% a year)? (Paragraph 5.17)

***Appendix I* List of consultees**

Association of British Insurers
Association of Consulting Actuaries
Association of Pension Lawyers
Bank of England
Cabinet Office, Better Regulation Task Force
Confederation of British Industry
Department for Social Development in Northern Ireland
Department for Work and Pensions
Department of Health and Social Security Isle of Man
Financial Services Authority
HM Revenue and Customs (HMRC)
HM Treasury
Institute of Directors
Investment Management Association
Main Official Committee on Occupational Pensions (MOCOP)
National Association of Pension Funds
Pension Protection Fund (PPF)
Pension Research Accountants Group
Pensions Commission
Pensions Management Institute
Pensions Ombudsman
Pensions Policy Institute
Society of Pension Consultants
The Pensions Advisory Service (TPAS)
The Pensions Regulator (TPR)
The UK Actuarial Profession
Trades Union Congress
UK Debt Management Office

Appendix J Glossary

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| Accrual rate | the rate at which rights build up for each year of pensionable service in a defined-benefit scheme |
| Active member | a member of an occupational pension scheme who is at present accruing benefits under that scheme in respect of current employment |
| Actuary | a professional adviser on financial questions involving probabilities relating to mortality and other contingencies, who advises on the management of assets and liabilities by analysing past events, assessing the present risks involved and modelling what could happen in the future |
| Additional Pension (AP) | the pension benefit from the state, in addition to the basic pension, related to an employee's earnings; in the context of the contracting out rebates review, additional pension usually means the additional pension benefits forgone by members of contracted out pension arrangements |
| AEI | the index of average earnings |
| Annuity | a series of payments, which may be subject to increases, made at stated intervals until a particular event occurs – this event most commonly being the death of the person receiving the annuity |
| Appropriate Personal Pension (APP) | a personal pension scheme which can be used to contract out of S2P |
| Buying-out | the purchase by pension scheme trustees of an insurance policy in the name of a member, in lieu of entitlement to benefit from the scheme, following termination of the member's pensionable service |
| Contracted-Out Money Purchase Scheme (COMPS) | an occupational pension scheme, possibly a defined-benefit scheme, although more usually a money-purchase scheme, which is contracted out on a money-purchase basis, that is where the minimum payments are made towards protected rights |

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| Contracted-Out Salary-Related Scheme (COSRS) | an occupational pension scheme which is contracted out on a salary-related basis, that is by providing benefits (section 9(2B) rights – a reference to section 9(2B) of the Pension Schemes Act 1993) which are broadly equivalent to or better than those specified under the reference scheme test; prior to 6 th April 1997, a COSRS was contracted-out by reference to the provision of a benefit at least as big as a statutorily defined amount called a guaranteed minimum pension (GMP) |
| Contracting out | using a pension scheme, which meets certain conditions, to provide benefits in place of the State Earnings-Related Pension Scheme (SERPS) or the State Second Pension (S2P) |
| Contracting out rebates | the amount by which the employer's and the employee's National Insurance contributions are reduced or rebated in respect of membership of a contracted-out pension scheme |
| CPI | the index of consumer prices |
| Defined Benefit (DB) benefits | benefits defined in scheme rules as being independent of the contributions payable, and not directly related to the investments of the scheme; such benefits are most commonly based on both earnings and length of service, or they may be based on one of these factors, or be a flat-rate benefit |
| Defined Benefit (of a pension scheme) | a scheme where all the benefits (other than benefits secured by additional voluntary contributions) are on a defined-benefit basis |
| Defined Contribution (DC) benefits | benefits for an individual member calculated by reference to contributions paid into the scheme in respect of that member, usually increased by an amount based on the investment return on those contributions |
| Defined Contribution (of a pension scheme) | a scheme where all the benefits are on a defined-contribution basis |
| DWP | Department for Work and Pensions |

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| Government Actuary's Department (GAD) | a UK government department providing actuarial advice to mainly public sector clients in the UK and abroad; the Government Actuary is the head of the department, and has certain statutory roles in pensions and social security |
| Guaranteed Minimum Pension (GMP) | the minimum pension which a contracted-out occupational scheme (other than one contracted-out on a protected rights basis) should provide as one of the conditions for contracting-out for service before 6 th April 1997 |
| Her Majesty's Revenue and Customs (HMRC) | the new government department responsible for the business of the former Inland Revenue and HM Customs and Excise |
| Lifestyle Investments | an asset allocation strategy used mainly by defined-contribution schemes, whereby a member's investments are adjusted depending on age and term to retirement (typically, as retirement approaches the assets are switched from equities to bonds and cash) |
| Low earnings threshold (LET) | The upper limit of band 1 earnings for the purpose of State Second Pension accrual. It is increased each year in line with earnings. |
| Lower Earnings Limit (LEL) | the minimum amount, approximately equivalent to the single person's basic state pension, which must be earned in any pay period in order to obtain entitlement to contributory National Insurance benefits such as the basic state pension (also the lower limit of the earnings required for accrual of State Second Pension) |
| Member | a person who has been admitted to membership of a pension scheme and is entitled to benefit under the scheme (whether now or in the future) – this term includes former spouses of members who have gained their rights as a result of a pension credit following pension sharing on divorce |
| Money Purchase | please see <i>defined-contribution benefits</i> |
| Money Purchase Scheme | please see <i>defined-contribution</i> |

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| National Insurance Fund (NIF) | established in 1948 to pay Social Security benefits to individuals who had paid qualifying national insurance contributions; the NIF is financed by receipt of national insurance contributions and meets the cost of contributory benefits such as retirement pension, incapacity benefit and jobseeker's allowance; HMRC has overall responsibility for the NIF |
| Normal Pension Age (NPA) | the earliest age at which a member is entitled to receive benefits on his/her retirement from employment to which the scheme relates, ignoring any special provisions as to early retirement on grounds of ill-health or otherwise (section 180 of the Pension Schemes Act 1993) |
| Occupational Pension Scheme | a scheme organised by an employer or on behalf of a group of employers to provide pensions and/or other benefits for or in respect of one or more employees on leaving service or on death or retirement |
| Occupational Pensions Regulatory Authority (Opra) | please see " <i>The Pensions Regulator</i> ", which in April 2005 replaced Opra (an independent body set up under the Pensions Act 1995 that regulated occupational pension schemes) |
| Open Scheme | a pension scheme which admits new active members: TPR refers to such schemes as "active" schemes |
| Participating Employer | an employer some or all of whose employees have or had the right to become members of an occupational pension scheme |
| Pension Fraction | an alternative term for accrual rate – the fraction of pensionable earnings for each year of pensionable service which forms the basis of the pension in a defined-benefit scheme |
| Pensionable Service | the period of service taken into account in calculating benefits |
| Protected Rights | the benefits from a scheme contracted out on a money purchase basis deriving from at least the minimum contributions or minimum payments (amounts equivalent to the reduction in National Insurance contributions available for contracted-out employees), which are provided in a specified form as a necessary condition of contracting out |

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| QEF | Qualifying earnings factor, equal to the lower earnings limit (LEL) |
| Reference Scheme Test | comparison of benefits provided by a COSRS with those under the standard scheme specified in the Pension Schemes Act 1993 to ensure that they are at least equivalent, in order to permit contracting-out |
| RPI | the retail prices index |
| Scheme Actuary | the named actuary appointed by the trustees or managers of an occupational pension scheme under the Pensions Act 1995 |
| SPA | State Pension Age |
| Sponsoring Employer | See participating employer |
| Stakeholder Pension | a defined-contribution scheme able to accept contributions after April 2001 meeting certain standards set by HMRC and TPR – employers with five or more employees are generally required to give employees access to a stakeholder pension in a specified manner (unless an alternative pension scheme of a suitable standard is offered); such a scheme may either be established as an occupational pension scheme or as a contract-based arrangement where each member has a contractual agreement with the scheme provider |
| State Earnings-Related Pension Scheme (SERPS) | The State Earnings-Related Pension Scheme – please see <i>State Second Pension</i> |
| State Pension Scheme (S2P) | the additional pension element of the state pension scheme, being a pension related to employees' average earnings throughout their working lives; S2P was introduced with effect from 6 th April 2002 as a reform of the state earnings related pensions scheme (SERPS) |
| The Pensions Regulator (TPR) | an independent body set up under the Pensions Act 2004 that regulates occupational pension schemes, replacing Opra from April 2005 |
| Upper band earnings | Earnings between the lower and earnings limits. |

Upper Earnings Limit (UEL) the upper limit for the accrual of state earnings-related pension or the state second pension, equal approximately to seven times the threshold for paying National Insurance contributions – also, until April 2003, the maximum amount of earnings on which National Insurance contributions were payable by employees

Many definitions are taken, with permission, from the PMI/PRAG publication “Pension Fund Terminology”.