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Modelling the EOC's pension reform proposals

Chris Curry and Adam Steventon
Pensions Policy Institute

Women. Men. Different. Equal.
Equal Opportunities Commission

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PENSIONS POLICY INSTITUTE
PPI

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CONTENTS

FIGURES

TABLES

BOXES

EXECUTIVE SUMMARY

The Equal Opportunities Commission (EOC) has been developing proposals for reform of state pensions policy and commissioned the Pensions Policy Institute (PPI) to provide an independent assessment of the potential costs and distributional implications of these proposals. The two key objectives driving the EOC's proposed reforms of the state pension system are to eradicate gender inequalities in measured poverty among pensioners, and reduce gender inequalities in income between pensioners.

In the proposals analysed:

- The Basic State Pension (BSP) is replaced with a new Universal BSP, or UBSP available from 2010, that is paid to everybody over state pension age. Paying everyone a UBSP would ensure certainty of the most basic level of income for all people in their own right, to provide a solid foundation for saving.
- The level of the UBSP would be set at or above the current level of the BSP (£82, £85 or £90 a week for 2005/6). It would be increased in future in line with average earnings.
- Accruals to the current State Second Pension (S2P) would stop and be replaced by accruals to a targeted Supplementary State Pension (SSP). This is designed to deliver a combined income of £160 maximum from BSP and SSP to those who spend their working lives as carers, parents or low earners.

This report concentrates on state pensions only. It does not cover private pensions and other savings although these will continue to be an important source of retirement income. The interaction between state and private pensions for future pensioners will be critical. However, an aim of the EOC's proposal is to encourage private saving by all those in a position to save, into a scheme that has both employer and government support, in the form of tax relief, similar to the National Pension Savings Scheme.

FINDINGS

Impact on individuals

The EOC's proposals would give a higher state pension to the low paid and those who spend their working lives as parents or carers than to higher earners, who would receive only the UBSP. This is a reversal of the current pensions system, which pays more to higher earners.

The reforms would be redistributive in nature, aiding most those people least likely to make private provision or other savings. The value of total state pension provision would be linked to earnings and not decline during retirement.

Reforms proposed by other organisations have different distributional impacts than the EOC’s:

- A Citizen’s Pension, as proposed by organisations including the National Association of Pension Funds (NAPF), pays the same amount (£109 a week) to all residents over state pension age.
- The Pension Commission’s preferred approach also aims to pay the same amount to every individual but would make the transition from the current system much more gradually. It aims to pay around £130 a week at age 65, reducing at older ages as it would not be linked to earnings in payment.

Lifetime low earners and carers could receive a maximum of £160 a week state pension under the EOC’s proposals with a combination of UBSP and SSP. This is more than they would receive from a Citizen’s Pension at £109 a week, the Pension Commission’s preferred approach, or the current system. Higher earners would receive less from the state because they would not be eligible for SSP.

Median earning women and men could be better off under the EOC's proposed reforms if they also spent some time caring or on low pay. However, median earners are likely to have less state pension than lower earners because they may not be entitled to SSP. Those earning more than £18,000 a year would not accrue any SSP under the EOC's proposals and could receive less from the state than under the other options, unless they spent time caring or on low pay.

Around 7.5 million fewer people would have accrued SSP had it been in place in 2003/4 than accrued State Second Pension (S2P) under the current system. Around 1.5 million more women would have qualified through caring or parental responsibilities but around 3 million fewer women would have qualified because of their higher earnings. Around 6 million fewer men would have qualified because their earnings are too high for them to be eligible for SSP.

The amount of income needed in retirement depends on individual circumstances, and one method of deciding how much is needed is for individuals to aim to have a certain replacement rate, relative to their final salary. Low earners would not need to save voluntarily in order to secure a reasonable replacement rate under the EOC's proposals.

Median and high earners would need to save more under the EOC's proposals if they want to make up for the reduction in their state pension but this extra amount is likely to be relatively modest, compared to the total amount of saving required. For example, compared with the present system, a median earning man would only have to increase his saving marginally from 14% to 15% of his salary, whereas for the high earning man his savings would remain the same at 17%.

The EOC's proposals would mean different things to current and future generations of older people. Making the Basic State Pension universal would have an immediate effect on current pensioner incomes. The other aspects of the proposals – uprating Basic State Pension with earnings and introducing State Supplementary Pension, also linked to earnings – would take some time to come into full effect. Benefits and costs therefore build up gradually over time.

Costs to the state

Like the other proposals considered in this paper and many others proposed elsewhere,[1] the EOC's reforms exceed current Government spending plans.

- In the short term, the EOC's proposals could be cost neutral if the UBSP were set at £85 a week or less and if savings from abolishing contracted-out rebates are used to finance transition.
- The total cost in 2050 to the state of paying UBSP, SSP, Pension Credit and other benefits such as Winter Fuel Allowances could be around 7.9% to 8.3% of GDP (£250 to £265 billion) depending on the level of UBSP.
- For comparison, the cost of the current pensions system, including contracted-out rebates, is estimated to be around 6.6% of GDP (£210 billion) in 2050.
- Increasing state pension age (SPA) to 67 would reduce the cost of the EOC's proposals but would still leave an additional cost on top of current spending plans to be found elsewhere. Costs could range from 7.3% to 7.6% GDP.
- The EOC's reforms would cost about the same as the Pensions Commission preferred approach and the Citizen's Pension.

Finally, this paper gives a useful insight into some of the likely impacts of the proposed reforms, but is not sufficient to look at the impact across the whole range of current and future pensioners. Such analysis is beyond the scope of this paper. But it does illustrate the likely impact on specific hypothetical individuals and the relative costs of the various options.

[1] See www.pensionspolicyinstitute.org.uk for other proposals.

1 INTRODUCTION

Pensions have become a key issue for the Equal Opportunities Commission (EOC) and the organisation has lobbied vocally for improvements to the pensions system, to reduce gender inequalities in retirement income between women and men. The principle objectives driving the Commission's concerns are that they believe pensions policy, in particular state pensions policy, should aim to eradicate gender inequalities in measured poverty among pensioners, and reduce gender inequalities in income between pensioners, with particular emphasis on low earners, parents and carers.

The EOC has been developing a model for reform of state pensions policy and commissioned the Pensions Policy Institute (PPI) to provide an independent assessment of the potential costs and distributional implications of these proposals. The PPI has extensively analysed state pension reform options in the past. The PPI is independent and does not make policy recommendations; it exists to contribute facts and analysis to help all commentators and policy decision makers.

Costs and distributional implications are important considerations for evaluating pension reform options. There are, however, further considerations that this paper does not address:

- What the overall objectives of the state pensions system should be, for example, whether it should pay more to certain groups of people or the same to all.
- The impact of the reforms on private pensions, which can be a significant part of retirement income.
- Practical implementation difficulties, for example in identifying the people who are eligible for the new carer credit.

This paper makes use of the Family Resources Survey 2003/4, which was supplied by the UK Data Archive, University of Essex, and is funded by the Department for Work and Pensions (DWP). The UK Data Archive and the DWP bear no responsibility for further analysis and interpretation.

2 THE EOC'S REFORM PROPOSALS

This chapter describes in detail the reform proposals that the EOC have commissioned the PPI to assess.

The EOC's proposals for state pension reform consist of:

- A Universal Basic State Pension (UBSP), with eligibility determined by a residency test. This will be either at the level of the current BSP or higher, with the level increased each year with average earnings.
- A Supplementary State Pension (SSP) that pays an extra amount to carers, parents and low earners on top of UBSP.
- In addition, Pension Credit would be retained on the same basis as it exists currently, with Guarantee Credit linked to earnings.

One aim of the EOC's proposal is to encourage private saving by all those in a position to save, into a scheme that has both employer and government support, in the form of tax relief, similar to the National Pension Savings Scheme (NPSS).

For consistency with other PPI work, and to allow different estimates to be compared, this analysis assumes that the reforms would be introduced in 2010.

The **Universal Basic State Pension** (UBSP) would be paid to everybody over state pension age who passes a residency criterion. This pension would be introduced overnight in 2010 with immediate effect, so that anybody over state pension age who is receiving less than the full amount of BSP when the reforms are introduced, and who passes the residency criterion, would receive an immediate increase to the full level of the UBSP.

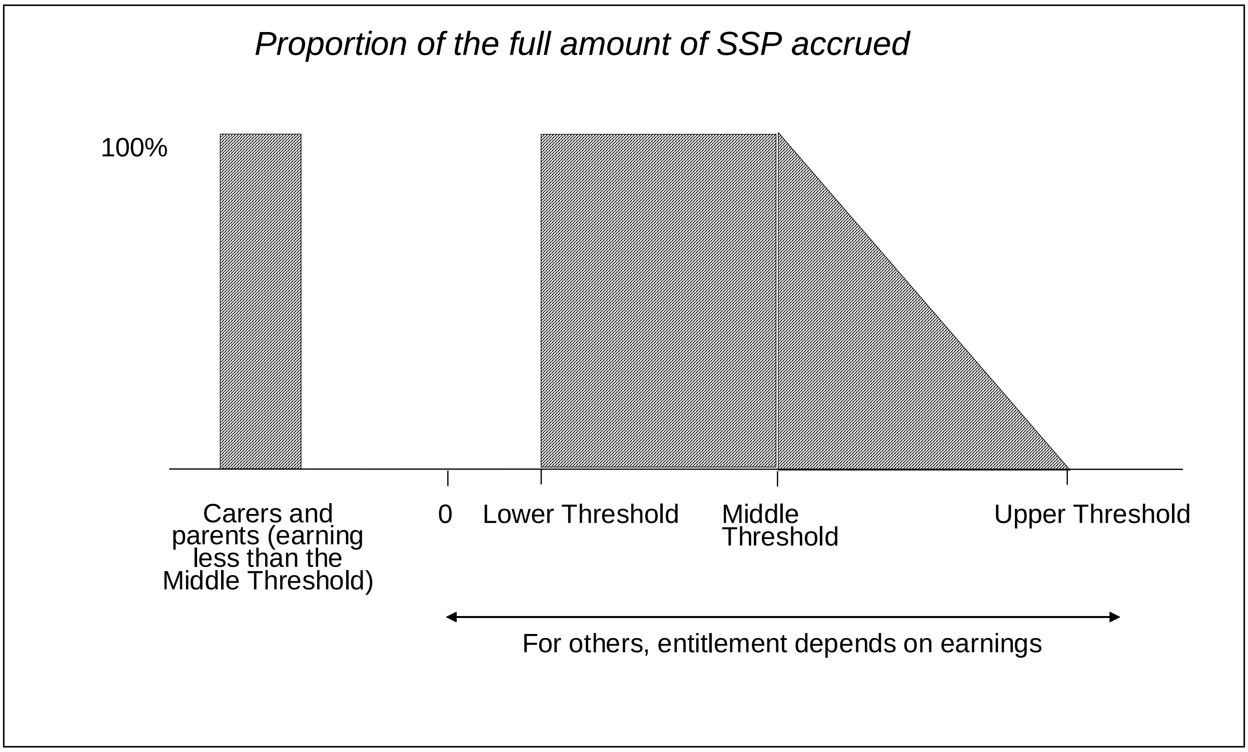
This paper presents analysis based on three alternative levels of the UBSP: £82, £85, and £90 a week, increasing with earnings.

Paying everyone a UBSP would ensure certainty of a basic level of income. Currently, Pension Credit is calculated in such a way that an individual with less than full entitlement to the Basic State Pension suffers pound for pound withdrawal of their entitlement to Pension Credit on any private savings they have made, to bring their income up to the level of the Basic State Pension. Under the EOC's reforms, no one would suffer 100% withdrawal because of their savings in this way.

The current State Second Pension (S2P) would be reformed into a **Supplementary State Pension** (SSP). This would be introduced on an 'accruals' basis, in the same way that the second state pension has been reformed in the past.[2] Anybody currently over state pension age would be unaffected by the introduction of SSP. Anybody currently under state pension age would accrue SSP from 2010, which they would receive on top of any S2P they had accrued before 2010.

Under the EOC's proposals, SSP would only be accrued by carers, parents and low earners (Figure 1).

Figure 1 Eligibility for the Supplementary State Pension (SSP)



- The full amount of SSP would be accrued by workers (whether employed or self-employed) who earn at least a certain amount (the 'Lower Threshold') but no more than the 'Middle Threshold'.
- A graded level of pension would be given to workers earning up to the 'Upper Threshold'. Anybody who earns more than the Upper Threshold would not accrue any SSP.
- Eligible carers and parents of children aged up to age 12 who receive Child Benefit would be credited as accruing the full amount of SSP,[3] provided they do not also earn more than the Middle Threshold.

2 E.g. when S2P replaced State Earnings Related Pension Scheme (SERPS) from 2002.

3 Receipt of credits for parents has been assumed for the purposes of this assessment to depend on the receipt of Child Benefit, since that is how the current system of credits to S2P works. One consequence of this definition is that only one parent would receive the credit to SSP.

- Anybody who earns less than the Lower Threshold would not accrue any SSP, unless they are an eligible carer or parent.

For the purposes of this paper:

- The Lower Threshold is set equal to the current Lower Earnings Limit (£82 a week).
- The Middle Threshold is set equal to the current Lower Earnings Threshold (equivalent to £233 a week).
- The Upper Threshold is set equal to £346 a week (or £18,000 a year).

The Earnings Thresholds are assumed to increase in line with average earnings in future.[4]

For modelling purposes, it has been assumed that:

- A carer qualifies for a credit to SSP provided he or she spends a total of at least 20 hours a week caring (and does not also earn above the Middle Threshold). The carer would qualify regardless of whether he or she spends this period caring for one individual or for several individuals combined.
- A parent qualifies for a credit provided he or she receives Child Benefit for a child under the age of 12 (and does not also earn above the Middle Threshold).
- In addition, those receiving Incapacity Benefit (IB), Severe Disablement Allowance (SDA) or any other carers receiving Invalid Carer's Allowance would be entitled to credit. Recipients of these benefits currently accrue a credit for S2P.

Using a different definition of caring or parenting would lead to costs that differ from those presented in this paper. Similarly, costs would differ if different thresholds for earnings were used.

In the proposals analysed in this paper, the level of SSP is such that anybody who has accrued SSP for their entire working life (i.e. in each year from age 16 to state pension age), and who is entitled to UBSP, would receive a total of £160 a week from UBSP and SSP combined. This level (£160 a week) would be increased from year to year in line with average earnings.

[4] The level of the Lower Earnings Limit is linked in legislation to the level of the BSP, which would increase in line with average earnings under the EOC's proposal.

In reality, earnings vary from year to year, so most people would have some years in which they would build up SSP and some years in which they did not. As a result, most people would receive less than £160 in total.

In this paper, it has been assumed that surviving spouses cannot inherit any of their deceased partner's SSP, because SSP has been targeted at certain groups of people through the way it is accrued and is intended to enable greater independence of provision than under the current system. Making SSP inheritable would lead to higher costs than presented in this paper.[5]

In the current system it is possible to choose to opt out of S2P in exchange for a lower National Insurance contribution. The amount saved in National Insurance is then invested into a private pension scheme – this is known as a contracted-out rebate. Contracted-out rebates are abolished in the proposals analysed in this paper.

In addition, **Pension Credit** would be retained in its current form. The Guarantee Credit would be at £109 a week and would continue to be uprated each year in line with average earnings to aim to ensure a safety net avoidance of poverty.

Savings Credit would be calculated in the same way as today, with the lower threshold for entitlements set at the level of the UBSP. This would mean that the lower threshold would be increased with average earnings rather than prices (as is currently the case), reducing the range of income used to calculate Savings Credit. As a result, the maximum amount of Savings Credit is also reduced, with the consequence that expenditure on Savings Credit would not grow as rapidly as it would under the current pensions system.[6]

One consequence of the way SSP is accrued over the working life is that until state pension age has been equalised in 2020, men and women could accrue a different amount of pension for the same year, all other things being equal. For example, if the UBSP were set at £82 a week:

- A man would receive a maximum SSP of £1.59 a week for every year that he cares (i.e. a total of £78 a week over a full 49 year career from age 16 to age 65, to take his weekly state pension up to £160).
- Women who are currently older than 55 have a state pension age of 60, so they would accrue more for each year of caring. They would receive a maximum of

5 S2P and SERPS can be inherited under the current pensions system.

6 See PPI (2004) *Submission to the House of Commons Work and Pensions Committee's inquiry into the introduction of Pension Credit.*

£1.77 a week (i.e. a total of £78 a week over a full 44 year career from age 16 to 60).

However, this would be only a temporary situation until the state pension ages are equalised in 2020 and effects would be only small. If it is considered to be unequal treatment then, in practice, special transition rules could be put in place, which would be unlikely to have a large impact on the costs.

3 DISTRIBUTIONAL IMPACTS

Different state pension reform proposals have different distributional impacts because they have different objectives:

- The EOC's proposals aim to give a higher state pension (of up to £160 a week) to carers, parents and low earners than to higher earners (who would receive £82 to £90 a week) who are more likely to save and make additional financial provision for their retirement.
- A Citizen's Pension, as proposed by organisations including the National Association of Pension Funds (NAPF),[7] pays the same amount (£109 a week) to all residents over state pension age.
- The Pension Commission's preferred reform approach also aims to pay the same amount to every individual[8] but would make the transition from the current system much more gradually. It aims to pay around £130 a week at age 65, reducing at older ages.[9]

This chapter uses hypothetical examples to illustrate the outcomes of the EOC's proposals, a Citizen's Pension at £109 a week, the Pensions Commission's preferred approach and the current system:

- Low earners and carers could receive more from the EOC's proposals than the other options for reform.
- Median earners could receive less from the state under the EOC's proposals than under the other options, unless they spent some time caring or on low pay.
- High earners would receive less from the state under the EOC's proposals than under the other options for reform.
- Median and high earners would need to save more privately if they want to make up for the reduction in their state pension. This extra amount is likely to be relatively modest, compared to the total amount of saving needed to reach the amount of income they are likely to want. Low earners would not need to save voluntarily under the proposals in order to secure a high replacement rate.
- Making the Basic State Pension universal would have an immediate effect on current pensioner incomes but the other aspects of the proposals – uprating the

7 National Association of Pension Funds (2005) *Towards a Citizen's Pension.*

8 Pensions Commission (2005) *A New Pensions Settlement for the Twenty-First Century*: 21.

9 At SPA for someone with a full BSP and 44 years of contributions/credits to S2P. Pensions Commission: 19.

state pension with earnings and introducing State Supplementary Pension – would take some time to come into full effect.

In order to explore the effect of the proposals, a number of hypothetical examples of individuals with different levels of earnings and different amounts of time in employment and caring were developed. In reality, people have many different life histories, but by choosing a few examples it is possible to analyse the broad impact of the proposals. Box 1 contains further details of the methodology used.

Box 1 Individual analysis

The analysis in this chapter uses the PPI Individual Model to estimate the state and private pension income that different hypothetical individuals would receive at age 65 and at age 75. These individuals are aged 20 in 2005, so they reach state pension age at age 65 in 2050. This gives an indication of the long-term impact of the proposals.

The analysis in this chapter is based on a Universal Basic State Pension (UBSP) set at £85 a week and indexed to average earnings (the middle of the levels analysed for this paper). The conclusions would be similar if the UBSP were at £82 or £90 a week; Appendix C contains the results of analysis based on these two other levels.

Pension income is illustrated in '2005/6 earnings terms' so that the figures are relative to National Average Earnings today.

For the current system, the individual analysis assumes a continuation of current government uprating policy, and so it is consistent with the projections of the future costs of the proposals in Chapter 4. In reality, the current system is unlikely to remain unchanged for the next 50 years and so it is impossible to be certain whether the individuals would be better or worse off under the EOC's proposals compared to the option of no reform.

A range of state pension income is sometimes shown because of uncertainties surrounding Pension Credit:

- The higher end of the range is the state pension income that is received if the individual has no other income (such as private pensions, savings or earnings), and claims Pension Credit.
- The lower end of the range shows the amount of state pension income that would be received if the individual either has enough other income to take him or her above the Pension Credit level, or does not claim Pension Credit.

This paper does not include a full analysis of the impact of the EOC's proposals on the distribution of pensioners' incomes (which is outside the scope of this project). Although analysis of individual examples can give a useful insight into some of the likely impacts of reform, it is not sufficient to give a full indication of the impact across the whole spectrum of individuals who make up the pensioner population at any one point in time without making the analysis unwieldy using a very large number of illustrative cases. For example, the impact on the oldest pensioners, on couples or widows, or people with very little work or caring history are not fully covered by the individuals modelled here. Any comparison of the policies analysed in this paper should therefore consider both the specific individual impacts illustrated by the hypothetical examples, and the relative costs of each option, to give an idea of the generosity of each proposal.

3.1 Low earners and carers receive more from the state

Low earners and carers could receive more from the EOC's proposals than they would under the current pensions system, a Citizen's Pension at £109 a week, or the Pension Commission's preferred approach.

The impact of the reforms on low earners is analysed using a hypothetical **low earning woman** who is assumed to make no private saving. (See Appendix C for results assuming she does save privately). Although the example is a woman, a man who has the same working history as the low earning woman would receive the same pension.[10]

She started work at age 21, working full-time until she spent five years away from work in her late twenties to care for her child. She then returned to work part-time for five years before returning to full-time work until her fifties, when she returned to part-time work and then stopped work altogether to care for an elderly relative. She is currently aged 20, so she illustrates the long-term impact of the reforms.

Her earnings when in work varied with her age, so she had higher earnings in the middle of her working life than at younger and older ages, to reflect typical earnings patterns.[11] At age 50, for example, when she is working full-time, she is earning £10,400 a year, in 2005/6 earnings terms. Around 20% of people aged 50 (both men and women) work and earn less than this.[12]

[10] Excepting possible transitional differences in SSP accruals before state pension age is equalised, but these could be avoided. See p.5 for more details.

[11] See Appendix B for more details of the individuals' assumed work histories.

[12] PPI analysis based on the Family Resources Survey 2003/4. Includes people who work part-time.

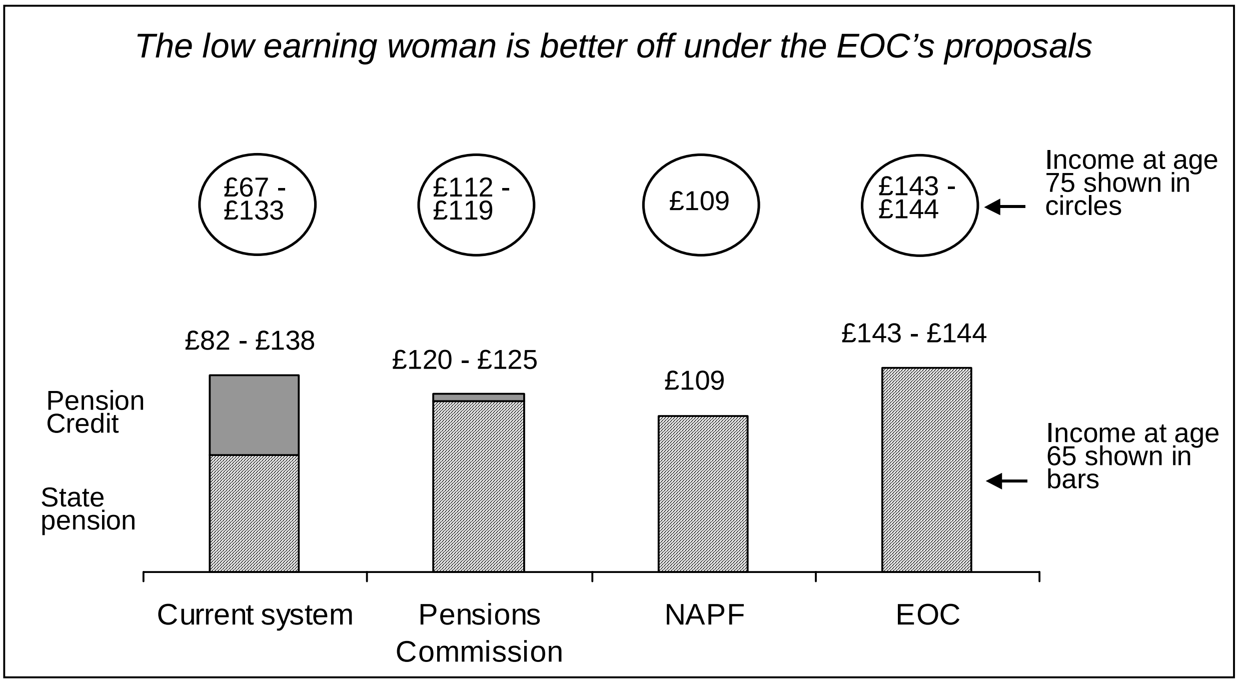
Under the EOC's proposals, she would accrue State Supplementary Pension (SSP) for most of her working life, on top of her entitlement to the Universal Basic State Pension (UBSP). She would be entitled to around £143 a week in UBSP and SSP combined when she reaches age 65 in 2050, in 2005/6 earnings terms. This is less than the maximum possible amount of £160 a week for two reasons. She started work before SSP was introduced, and she does not qualify for SSP in some years when she works part-time because her earnings are too low.

This is still more than she would be entitled to under the other reform options. Her weekly income would be around £138 from the current system, £125 from the Pensions Commission's preferred approach, and £109 from the Citizen's Pension, all lower than the £143 a week she would get under the EOC's proposals (Figure 2).

Unlike the current pensions system, for example, the EOC's option also has the benefit that:

- Her income would not fall relative to average earnings in retirement.
- She would not have to rely on Pension Credit under the proposals. In the current system, there is the risk that she gets less income because either she does not take up Pension Credit, or Pension Credit is made less generous for her before she reaches age 65.

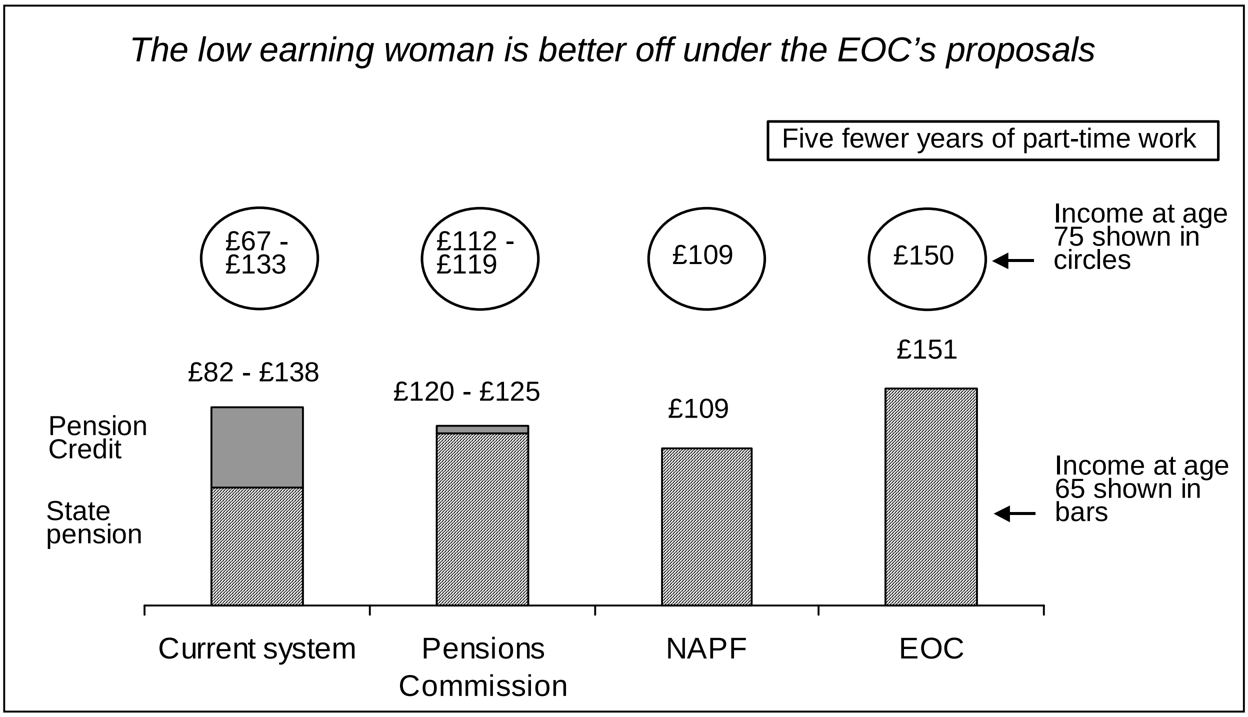
Figure 2 Estimated state pension income for a low earning woman reaching 65 in 2050, £ per week, 2005/6 earnings terms



Note: PPI analysis using the Individual Model.

How much the low earning woman receives under the EOC proposals is closely linked to what she does during her working life. For example, a low earner with five fewer years of part-time work, and so five more years qualifying for SSP, would have a higher pension under the EOC option (Figure 3). As before, she is assumed to make no private saving.

Figure 3 Estimated state pension income for a low earning woman with 5 fewer years of part-time work reaching 65 in 2050, £ per week, 2005/6 earnings terms



Note: PPI analysis using the Individual Model.

The hypothetical **lifetime carer** also had a child in her late twenties but, unlike the low earning woman, she did not return to work after having her child. She had caring responsibilities right the way up to state pension age and is assumed to have made no private saving.

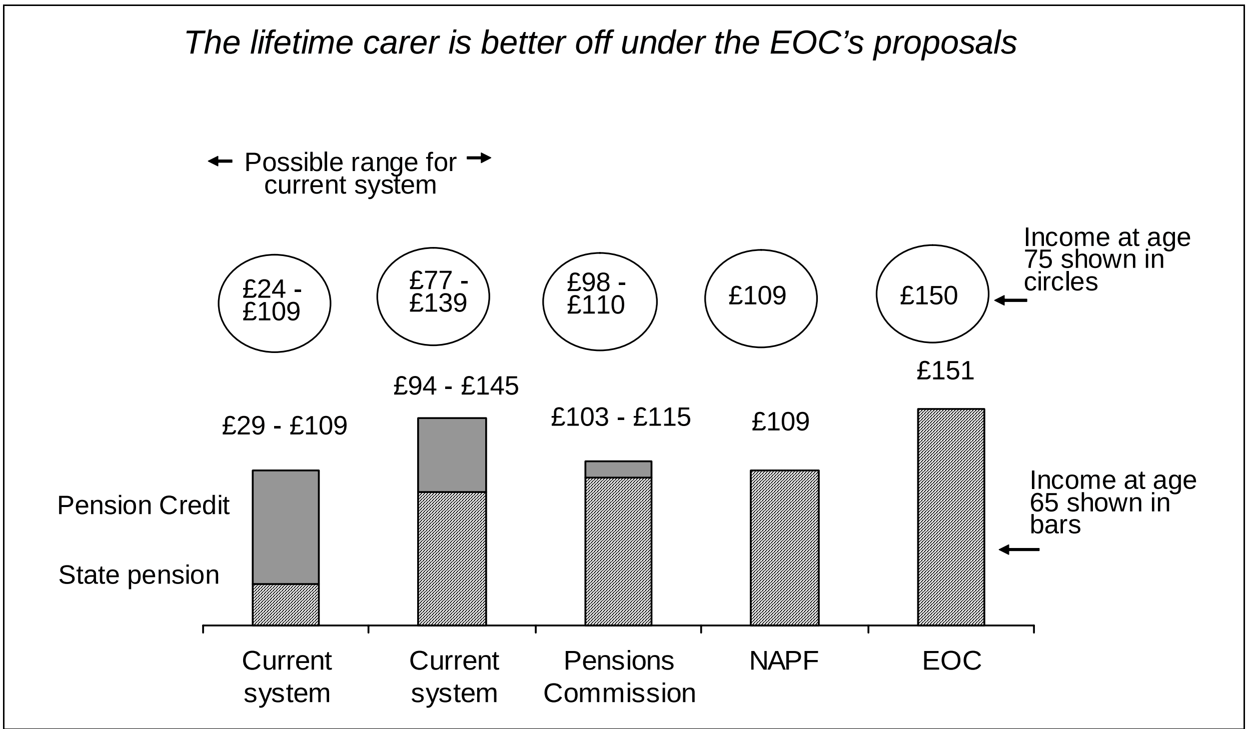
Under the current pensions system, the lifetime carer would receive Home Responsibilities Protection for BSP until her child was 16.[13] Home Responsibilities Protection reduces the number of qualifying years required for a full BSP. What she would receive on top of this would depend on the nature of her caring after this time.

13 See PPI (2005) *The Pensions Primer* for more details on the current pensions system.

The most optimistic case is that she always cares for one person for more than 35 hours a week and is entitled to Carer's Allowance. In this case, she would be entitled to the full amount of BSP and a full set of credits to S2P. At age 65, her BSP and S2P would pay her a total of £94 a week, which could be topped up to £145 a week by Pension Credit.

If on the other hand, her caring did not match the criteria needed to qualify for credits, then she would not accrue any state pension rights under the current system after her child reaches age 16. Her BSP and S2P would be worth £29 a week at age 65, which could be topped up to £109 a week by Pension Credit (Figure 4).

Figure 4 Estimated state pension income for the lifetime carer reaching 65 in 2050, £ per week, 2005/06 earnings terms



Notes: PPI analysis using the Individual Model. See Appendix C for results assuming she does save privately. A lifetime carer reaching pension age from 2059 would receive £160.

Under the EOC's proposals, she is more likely to accrue state pension. She would be entitled to the full UBSP by virtue of her being a UK resident, and she is more likely to receive credits to SSP because of the more generous qualification criteria for carers. She could be entitled to £150 a week, or more. As before, this is less than the maximum £160 a week because she started caring before SSP was introduced but from 2059, a lifetime carer reaching pension age would be entitled to £160.

This is much higher than she would receive under the other proposals because, under the EOC's proposals, SSP aims to pay an additional amount of state pension to carers like her.

3.2 Median earners could receive more or less state support

Median earners could receive more or less pension income from the state under the EOC's proposals than under the other options depending on whether they spent some time caring or on low pay. Median earners are likely to have less state pension than lower earners under the EOC's proposals because of the rules for SSP, whereby it is not accrued by people earning more than £18,000 a year.

Median annual full-time earnings are around £19,000 for women and around £25,000 for men.[14] For this paper, it is assumed that people earning over £12,100 a year would only receive a partial accruals to SSP and people earning over £18,000 a year would not accrue any. So people who earn median earnings through their entire working life would not accrue SSP and would only be entitled to UBSP of £85 a week.

In reality, however, people do not typically spend their entire working life earning at the median level of earnings. Earnings tend to be lower at the beginning and end of their working lives than in the middle, so they could accrue some SSP at younger and older ages. In addition, they could spend some time out of the labour market caring and so receive carer credits to SSP.

In total, 7.5 million fewer people would have accrued SSP had it been in place in 2003/4 than accrued S2P under the current system (Table 1):

- Around 9 million people earned more than £18,000 a year and would have accrued S2P, but if the EOC's proposals had been in place would not have accrued SSP in that year.
- Partly offsetting this, 1.5 million more people would have been awarded a credit to SSP for caring responsibilities than S2P, assuming that the practical difficulties in identifying who would qualify under the new rules were overcome.

The working life of the hypothetical **median earning woman** has been constructed to try to reflect possible variations in career histories. Her working life is the same as the low earning woman, in that she takes time from work to care for her child and an elderly relative and works part-time for a total of 10 years. However, when she does work, she earns more, at female median earnings rather than £10,400 a year. This

[14] Office for National Statistics (2005) *Annual Survey of Hours and Earnings 2005* Table 1.1a.

variation in her career history is sufficient to make her slightly better off under the EOC's proposals than under the other reform options.

Table 1 Estimated number of working age people who would be entitled to accrue SSP if it were in place in 2003/4, in comparison to the number entitled to accrue S2P under the current system (millions)

	Female		Male		Total	
	S2P	**SSP**	**S2P**	**SSP**	**S2P**	**SSP**
Credit: Caring	*	*	*	*	*	0.5
Credit: Parenting	1.5	3.0	*	*	2.0	3.0
Credit: IB or SDA	0.5	0.5	1.0	1.0	1.5	1.5
Qualifying through earnings	10.0	7.0	11.5	5.5	21.5	12.5
Total entitled	12.5	11.0	13.0	7.0	25.0	17.5
Total not entitled	4.5	6.0	5.0	11.0	10.0	17.5

Notes: PPI analysis using the Family Resources Survey (FRS) 2003/4. Figures are rounded to the nearest 0.5m and are rounded independently, so totals may not add. '*' denotes figures of less than 0.5m. [15]

How much better off she is depends on the extent of her private saving, since she is potentially entitled to Pension Credit under the EOC's proposals (as she would be under the current system). To give a conservative estimate of her income from the state, she is assumed to make some voluntary private saving to take her out of Pension Credit. She is assumed to save from age 25 into a low-cost savings vehicle similar to the National Pensions Saving Scheme (NPSS) proposed by the Pensions Commission. She saves at the default rate suggested by the Pensions Commission of 8% of her salary between the Primary Threshold and the Upper Earnings Limit.[16]

In this scenario, the median earning woman would receive around £150 a week at age 65 under the EOC's proposals, from the state and her private pension combined (Figure 5). This is more than she would receive under a Citizen's Pension at £109 a week or under the Pension Commission's preferred approach.

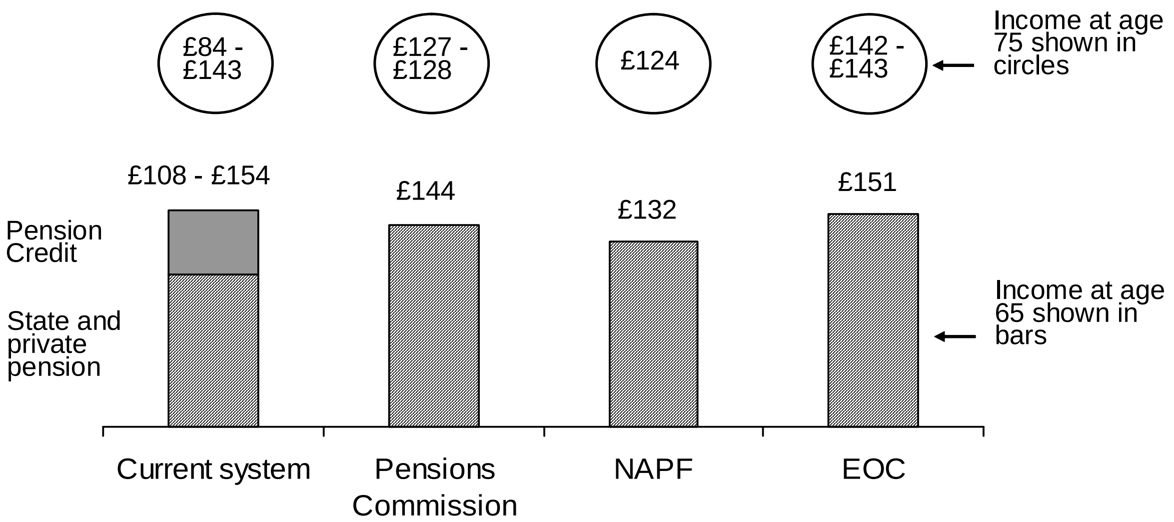
[15] The figures are based on one particular week. Official estimates of the numbers eligible for S2P are available based on whole-of-year administrative data in PPI (2006) *Pension Facts* Table 10, but differ from those shown slightly, which are based on the FRS to allow a fair comparison with the SSP estimates. Figures for S2P include contracted-out equivalent.

[16] Pensions Commission: 36-37. In 2005/6 the Primary Threshold is £94 a week and the UEL is £630 a week.

She could get more under the EOC's proposals than the current system if, under the current system, Pension Credit is made less generous by 2050 or if she does not take up her entitlement to Pension Credit. Where households are only entitled to the Savings Credit part of Pension Credit, less than half of them take up their entitlements.[17]

Figure 5 Estimated pension income for the median earning woman reaching 65 in 2050, £ per week, 2005/06 earnings terms

The median woman is potentially better off under the EOC's proposals



Notes: PPI analysis using the Individual Model. She is assumed to save in NPSS. See Appendix C for results assuming she does not save privately.

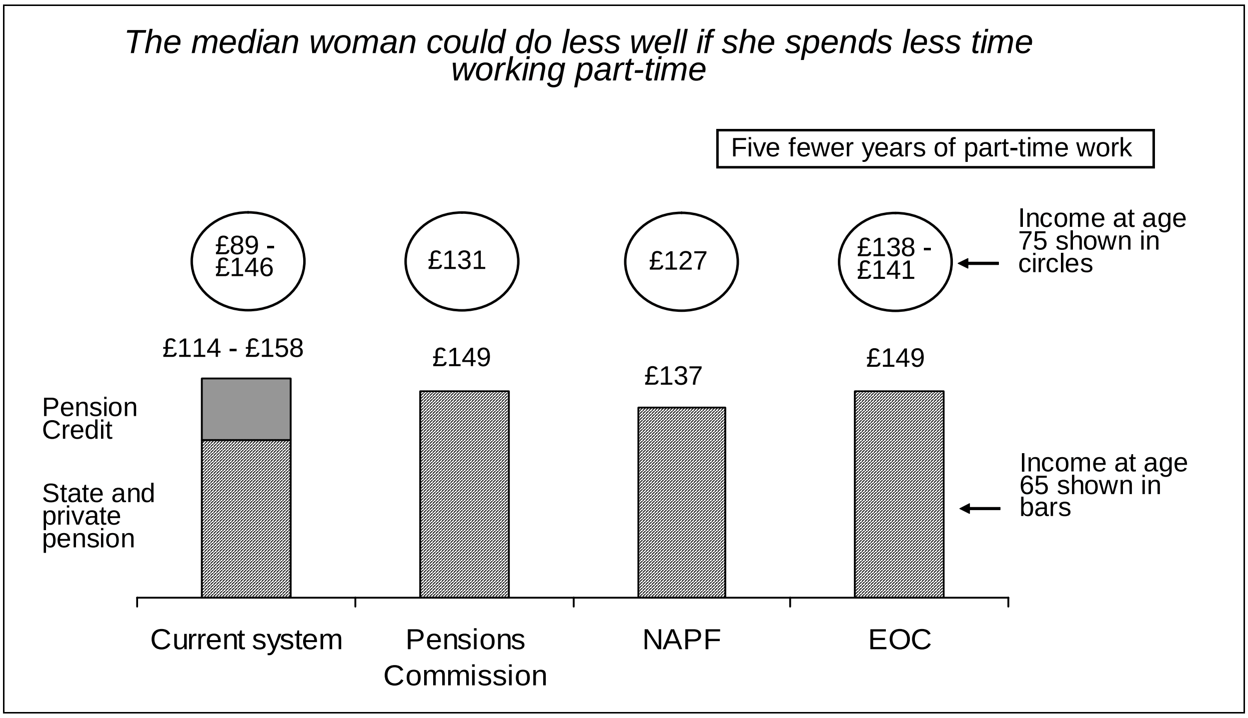
Not all 'median earners' will be in her position, and some do stand to have a lower state pension under the EOC's proposals than in other options. For example, a median earning woman with exactly the same career history but who spends five fewer years in part-time work could potentially do better under the current system than the EOC's proposals (Figure 6). In such cases, one key question is whether they could save enough privately to make up for the reduction in their state pension.

As an illustration, consider a hypothetical **median earning man** (again, a woman who has the same career history and earnings as this man would receive the same state pension). He did not spend time caring, but mainly worked full-time for his entire

[17] DWP (2005) *Income related benefits estimates of take-up in 2003/4.* The median earning woman would be entitled to some Guarantee Credit but only a very small amount, so a comparison with households only entitled to Savings Credit is valid.

career, except for being unemployed for two years and working part-time for five years. He earned more than the median earning woman, as median earnings for men are higher than for women.

Figure 6 Estimated pension income for a median earning women with 5 fewer years of part-time work reaching 65 in 2050, £ per week, 2005/6 earnings terms



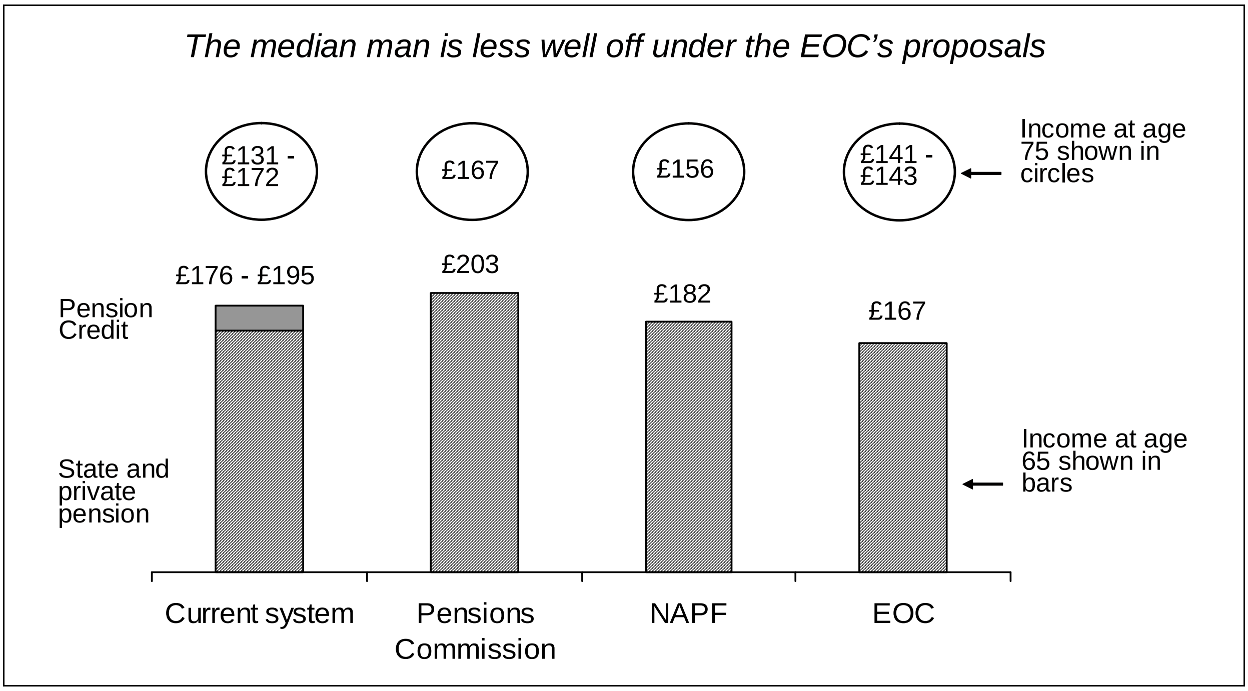
Notes: PPI analysis using the Individual Model. She is assumed to save in NPSS.

He has £7 a week worth of SSP at age 65 (accrued during his period of part-time work), which is paid in addition to the UBSP of £85 a week. If he saved privately (again at the rate of 8% of his salary between the Primary Threshold and the Upper Earnings Limit from age 25 into a low-cost savings vehicle similar to the NPSS) then he would receive a total of around £167 a week from state and private pensions at age 65, under the EOC's proposals. He would receive £180 a week or more under the other proposals (Figure 7). People who earn more than him would be in a similar position, receiving less under the EOC's proposals than under the other systems.

3.3 High earners receive less state support

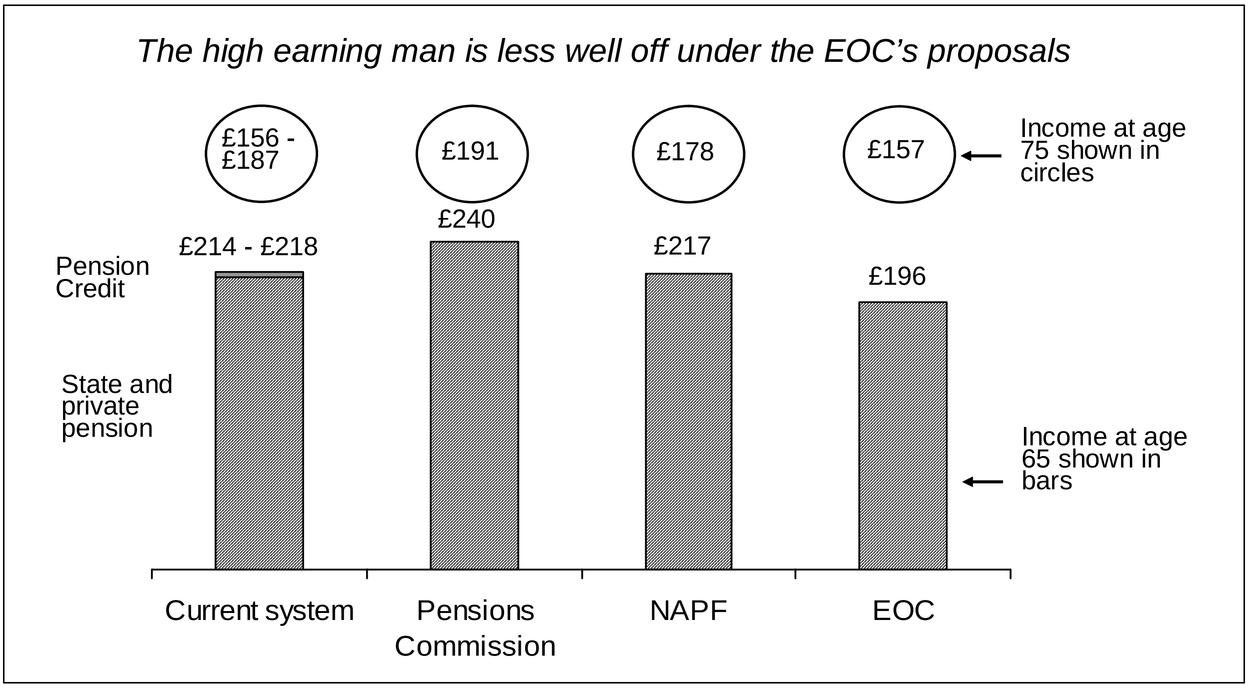
High earners would receive less from the state under the EOC's proposals than under the other options for reform. They would accrue very little SSP on top of the UBSP of £85 a week.

Figure 7 Estimated pension income for the median earning man reaching 65 in 2050, £ per week, 2005/6 earnings terms



Notes: PPI analysis using the Individual Model. The median earning man is assumed to save in NPSS. See Appendix C for results assuming he does not save privately.

Figure 8 Estimated pension income for the high earning man reaching 65 in 2050, £ per week, 2005/6 earnings terms



Notes: PPI analysis using the Individual Model. The high earning man is assumed to save in NPSS. See Appendix C for results assuming he does not save privately.

For example, the hypothetical **high earning man** earns around £50,000 in a typical year (around 10% of full-time working men earn more than this).[18] Relatively modest private saving at the default NPSS level would take his income up to just under £200 a week at age 65. This is less than he would receive under a Citizen's Pension at £109 a week, the Pension Commission's preferred approach, or the current system (Figure 8).

3.4 Private saving required under the reforms

Median and high earners would need to save more privately if they want to make up for the reduction in their state pension. This extra amount is likely to be relatively modest, compared to the total amount of saving needed to reach the amount of income they are likely to want.

The amount of income people aim for in retirement will depend on their own individual circumstances, including how much savings they can make during their working life, and what kind of lifestyle they desire in retirement. As such, every individual is different. One possibility is that individuals aim to have a certain replacement rate (which measures pension income at age 65 relative to final salary) but that a relatively lower replacement rate is needed at higher earnings (Table 2).

Table 2 Estimate of the amount of income that individuals might require in retirement, based on target replacement rates (income at 65 as a proportion of final salary), £ per week, 2005/6 earnings terms

	Final earnings per year £	Target replacement rate %	Targeted weekly pension income £
Low earning woman	9,000	80	138
Median earning woman	13,500	70	181
Median earning man	21,300	67	275
High earning man	50,200	50	482

Notes: The lifetime carer has not been included in this analysis because she has no earnings of her own to save to finance her retirement. The replacement rates are those used for the group modelling in Pensions Commission (2004) *Pensions: Challenges and Choices* Appendix G. An update of this analysis was not included in the Commission's Second Report.

The **low earning woman** would already have more than £138 a week from the state pension under the EOC's proposals and so would not need to make any voluntary saving to reach this level. She would not have to save to reach £138 a week under the current pensions system either, provided that Pension Credit remained in place

[18] Office for National Statistics (2004) *Labour Force Survey April 2004.*

as it does now (and that she was prepared to rely on this fact when deciding how much to save).

The median and higher earners would need to save privately under all of the alternative pensions systems in order to reach their target level of income.

For example, if the **median earning woman** saved from age 25 into a low cost pension scheme like the Pension Commission's proposal for an NPSS, then she would need to save 5% of her total salary every year in order to reach her target level of income of £181 a week under the EOC's proposals. This assumes that she feels confident enough to plan for retirement on the basis that Pension Credit stays in place (Table 3).

This amount could be contributed by herself, her employer, or from a combination of the two. It is less than she would need under the current pensions system, the Pensions Commission's preferred approach and the Citizen's Pension at £109, reflecting her higher state pension under the EOC's proposals.

Table 3 Estimated required saving as a percentage of total salary to reach target income for individuals reaching 65 in 2050, assuming saving starts at age 25, into a low-cost savings vehicle similar to NPSS

Per cent

	Current system	Pensions Commission	NAPF	EOC with a UBSP of £85
Low earning woman	0 to 20	6	10	-
Median earning woman	14 to 20	13	15	5 to 11
Median earning man	14	12	14	15
High earning man	17	15	16	17

Notes: PPI analysis using the Individual Model. A range is sometimes shown because of the uncertainties surrounding Pension Credit. The lifetime carer has not been included in this analysis because she has no earnings of her own to save to finance her retirement. Figures have been rounded to the nearest 1%.

This 5% is only slightly less than the default contribution rate of 8% proposed by the Pensions Commission for NPSS. This comprises 4% from the individual, 3% from their employer and 1% from the government. The 5% is saving on her entire income before tax whereas the 8% is on her net (after tax) earnings above the Primary

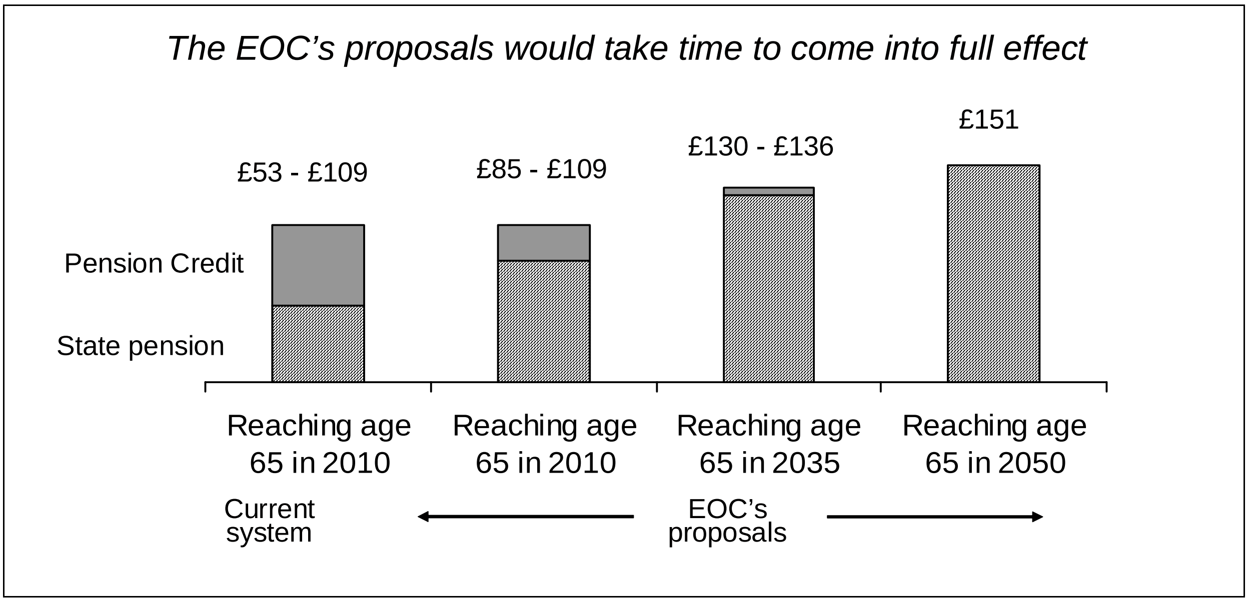
Threshold (£94 a week).[19] 8% saving on her net earnings above the Primary Threshold is equivalent to around 6% of her entire net salary.[20]

In contrast, the **median earning man** and the **high earning man** would need to save more privately in order to make up for the reduction in their state pension. Because the reduction in state pension is small relative to their total targeted income, this extra amount is relatively modest, compared to the total amount of saving required. The median earning man would only have to increase his saving marginally, from 14% to 15% of his salary whereas for the high earning man, his savings would remain the same at 17%.

3.5 Transition

Making the Basic State Pension universal would have an immediate effect on current pensioner incomes but the other aspects of the proposals – uprating the state pension with earnings and introducing State Supplementary Pension – would take some time to come into full effect. Benefits and costs therefore build up gradually over time. For example, the immediate effect on the lifetime carer would be to increase her BSP. Over time, SSP accruals would build up to give her a higher pension (Figure 9). By 2035, most of the conclusions in this chapter regarding who benefits from the EOC's proposals would be in place (see Appendix C).

Figure 9 Estimated pension income at 65 for successive cohorts of lifetime carers, £ per week, 2005/6 earnings terms



Note: PPI analysis using Individual Model. The lifetime carer is assumed to make no private saving. Figures for the current system assume no credits after her child reaches 16.

[19] Including the amount of tax relief paid by the state.
[20] PPI analysis.

4 ESTIMATED COSTS

This chapter considers the cost of the EOC's proposals for state pension reform, and compares them to the costs of the current pensions system, a Citizen's Pension at £109 and the Pensions Commission's preferred approach:

- In the short term, the EOC's proposals could be cost neutral if the UBSP were set at £85 a week or less and if savings from abolishing contracted-out rebates are used to finance transition.
- In the long term, the EOC's proposals could cost the state about the same as a Citizen's Pension at £109 a week and the Pensions Commission's preferred approach.
- Increasing State Pension Age (SPA) to 67 would reduce the cost of the EOC's proposals but would still leave an additional cost on top of current government spending plans to be found elsewhere.

In this paper, 'cost' refers to the annual cost to the state of paying Basic State Pension, SERPS/S2P, Pension Credit, other pension benefits such as Winter Fuel Allowances, and contracted-out rebates. Box 2 contains further details of the methodology used. The methodology differs from that used by the Pension Commission to estimate the costs of their preferred approach (Box 3).

4.1 Short-term costs

In the short term, the EOC's proposals could be cost neutral if the UBSP is set at £85 a week or less and if savings from abolishing contracted-out rebates are used to finance transition. However, it should be noted that the Pensions Commission asserts that any revenue raised in this way should not be spent on increasing state pension provision. [21]

The future cost of the current system is uncertain. Two possible estimates of this cost are the government's estimates and the PPI's base case scenario. In the long term, the cost of the reform proposals can be compared to the PPI estimates for the current system rather than the government estimates, but in the short term the government estimates may be more appropriate (see Appendix A for a discussion of the uncertainties in the cost of the current system).[22]

[21] See Pensions Commission (2005): 26.

[22] The cost estimates all take account of the impact of increasing the SPA between 2010 and 2020. This means a reduction in state spending relative to GDP for the current system, whereas for the other options state spending is estimated to remain roughly constant between these years because of benefit improvements.

Box 2 Costing methodology[23]

In this paper, 'cost' or 'state expenditure on pensions' means the annual cost to the public purse of paying Basic State Pension, SERPS/S2P/State Supplementary Pension, Pension Credit, other pension benefits such as Winter Fuel Allowances, and contracted-out rebates (unless stated otherwise).

Increasing the generosity of the state pension could lead to savings in other forms of state expenditure on older people. The cost estimates include allowances for:

- Reductions in the cost of means-tested benefits: Pension Credit, Housing Benefit and Council Tax Benefit.
- Changes in the amount of income tax paid by older people.

To calculate the change in the amount of income tax paid by older people, tax thresholds are assumed to be uprated with average earnings from 2010, rather than with prices as under current government policy. This reduces fiscal drag (more and more pensioners paying higher rates of income tax), and is consistent with government long-term projections.[24]

The costings assume that the amount of private income people have in retirement is not affected by the reforms. If people choose to save more as a result of the reforms, the EOC's proposals could cost less because the cost of Pension Credit could be lower, and more income tax would be collected.

The EOC's proposals could also have an impact on the cost of tax relief on private pension saving, depending on whether people saved more or less as a result of the reforms. An analysis of the likely size of this effect would be a longer project. Tax relief forms a large part of annual government spending on pensions (up to £21 billion or 1.8% of GDP in 2004/5[25]) and could remain so.[26]

The estimates include an allowance for increases in the cost of Incapacity Benefit that result from an increase in state pension age.

23 For a full technical description of the models, see Steventon (2005) *What will pensions cost in future?* and Appendix B.
24 See, for example, HM Treasury (2004*) Long-term public finance paper: an analysis of fiscal sustainability:* 51.
25 PPI (2005) *Pension Facts* Table 25. Includes National Insurance relief on employer contributions and is net of tax paid on pensions in payment.
26 Steventon (2005) *What will pensions cost in future?*

Box 3 Pensions Commission costings

The estimates of the costs of the Pensions Commission's preferred approach included in this paper have been produced using the PPI's Aggregate and Distributional Models. They use assumptions and a methodology consistent with those used to estimate the costs for the other reform options analysed. The Pensions Commission used a different model, Pensim2, which requires different types of assumptions.[27]

The different assumptions and methodology mean that the estimates differ from those presented by the Pensions Commission. However, the most significant reason for the differences are the different definitions for what counts as state pension spending.

The PPI estimates are of state spending on 'pensions': they therefore include the cost of contracted-out rebates as well as BSP, SERPS/S2P and Pension Credit. They exclude the cost of disability and housing benefits for older people (although an allowance has been made for savings in housing benefits and Pension Credit for the severely disabled – see Box 2).

The Pensions Commission's estimates are state spending on 'pensioners': they therefore include the cost of paying disability and housing benefits for older people but exclude the cost of contracted-out rebates.

The Pensions Commission's estimate of state spending of 8% of GDP in 2050 under their preferred approach (with a state pension age of 67) is equivalent to around 7.5% of GDP on the PPI's definition of spending. This is the same as the PPI estimate for 2050.

Contracted-out rebates are assumed not to be spent on current pensions under the Pensions Commission's preferred approach: *Additional government cash flow generated from these changes* [to contracting-out] *should be used to increase government's contribution to national saving.*[28] They are therefore not used to reduce the cost of transition.

[27] Pensions Commission (2005) Appendix F.
[28] Pensions Commission (2005) Executive Summary: 27.

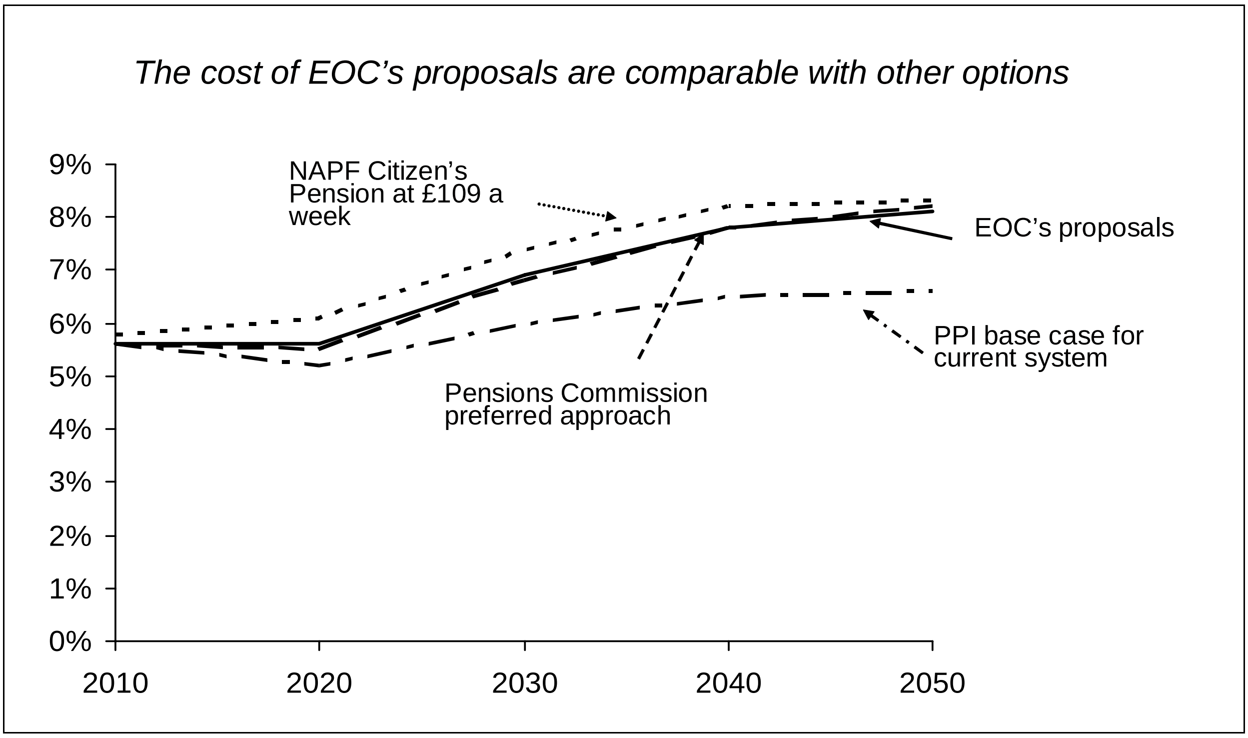
The government's estimate of the cost of the current pensions system in 2010 is £83 billion in 2005/6 prices.[29] In comparison, the EOC's proposals could cost £81 billion if the UBSP were set at £85 a week, or £84 billion if set at £90 a week (Table 4).

4.2 Long-term costs

In the long term, the EOC's proposals could cost the state about the same as a Citizen's Pension at £109 a week and the Pensions Commission's preferred approach (Figure 10 and Table 4).[30] As the benefits and costs of the proposal are phased in slowly, the additional cost of the EOC's proposals before 2050 are very similar to those in the Pensions Commission's preferred approach, and less than those for a Citizen's Pension at £109 a week.

Increasing State Pension Age (SPA) to 67 would reduce the cost of the EOC's proposals but would still leave an additional cost on top of current government spending plans to be found elsewhere, as would the other proposals. (Figure 11 and Table 5).

Figure 10 Estimates of future expenditure on state pensions under different reform options as a percentage of GDP, SPA remaining at 65



Note: The cost of the EOC's proposals are illustrated based on a UBSP set at £85 a week

29 DWP (2005) *Benefit expenditure tables* for the 2005 Pre Budget Report.

30 The differences between the projected costs in 2050 are small in comparison to the uncertainty in any projections that look that far into the future.

Table 4 Projected expenditure on pensions with SPA remaining at 65, as a percentage of GDP and in £ billion, 2005/6 prices

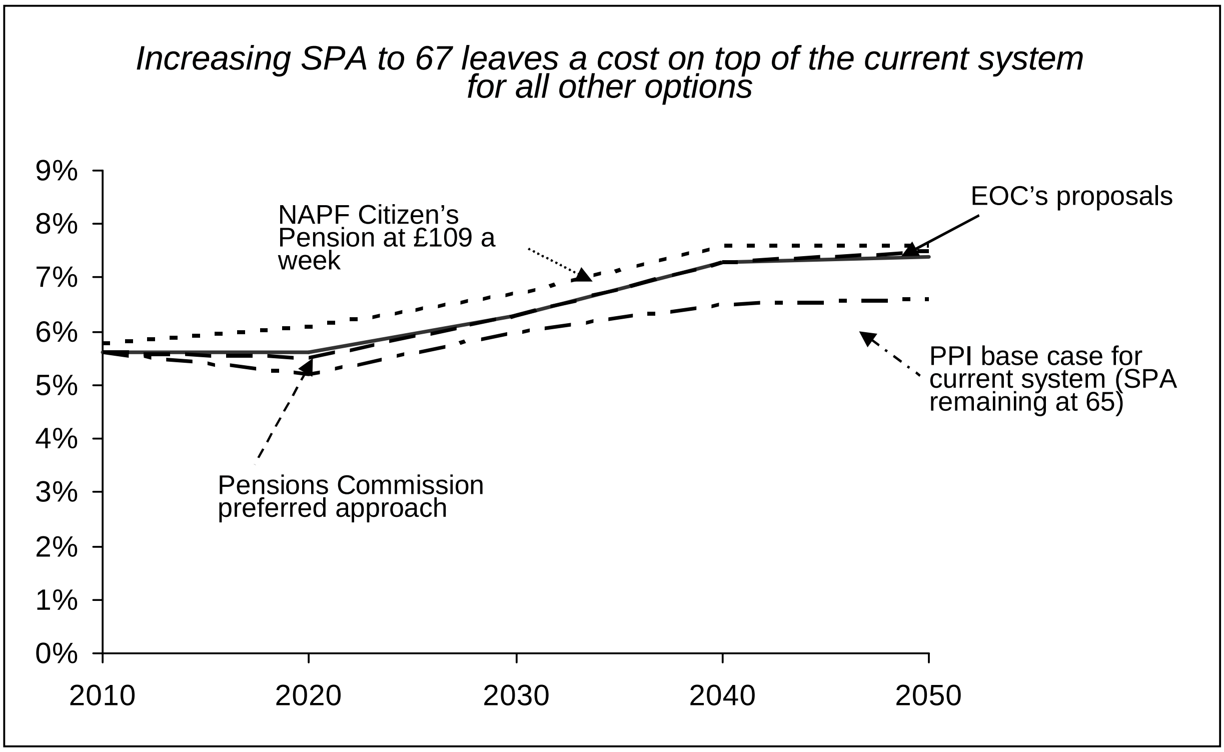
	Current system: PPI base case	Pensions Comm. preferred approach	NAPF Citizen's Pension at £109	EOC's proposals UBSP at £82, S2P of up to £78	UBSP at £85, S2P of up to £75	UBSP at £90, S2P of up to £70
						%
2010	5.6	5.6	5.8*	5.5	5.6	5.8
2020	5.2	5.5	6.1	5.5	5.6	5.8
2030	6.0	6.8	7.4	6.8	6.9	7.1
2040	6.5	7.8	8.2	7.7	7.8	8.0
2050	6.6	8.2	8.3	7.9	8.1	8.3
						£ billion
2010	80	80	84	79	81	84
2020	95	100	110	100	105	105
2030	130	150	160	150	150	155
2040	170	205	215	200	205	210
2050	210	260	265	250	255	265

Table 5 Projected expenditure on pensions with SPA at 67, as a percentage of GDP and in £ billion, 2005/6 prices

	Current system: PPI base case (SPA 65)	Pensions Comm. preferred approach	NAPF Citizen's Pension at £109	EOC's proposals UBSP at £82, S2P of up to £78	UBSP at £85, S2P of up to £75	UBSP at £90, S2P of up to £70
						%
2010	5.6	5.6	5.8*	5.5	5.6	5.8
2020	5.2	5.5	6.1	5.5	5.6	5.8
2030	6.0	6.3	6.7	6.2	6.3	6.5
2040	6.5	7.3	7.6	7.1	7.3	7.5
2050	6.6	7.5	7.6	7.3	7.4	7.6
						£ billion
2010	80	80	84	79	81	84
2020	95	100	110	100	105	105
2030	130	140	150	140	140	145
2040	170	195	200	190	195	200
2050	210	245	245	235	240	245

Notes: For Tables 4 and 5 - PPI estimates. £bn costs are rounded to the nearest £1bn for 2010 and then to £5bn. * 2010 figures for the Citizen's Pension are based on a methodology that is more accurate in the short term. See NAPF (2005) *Towards a Citizen's Pension* Chapter 3 for more details.

Figure 11 Estimates of future expenditure on state pensions under different reform options if SPA increases to 67 by 2030, as a percentage of GDP



Notes: The cost of the EOC's proposals are illustrated based on a UBSP set at £85 a week.

4.3 Contracted-out rebates for higher earners

Under the current pensions system, people can contract-out of the S2P. An individual earns a lower benefit to S2P if they contract-out. To make up for this, the individual and their employer receives a rebate of some of their National Insurance contributions which must be used to invest in an occupational or personal pension scheme. The rebate is calculated by the Government Actuary so that the amount that is expected to be received from investing the contracted-out rebates is broadly the same as would have been received in S2P.[31]

In the version of the EOC's proposals analysed in this paper, contracted-out rebates are abolished.

The EOC asked the PPI to estimate the extra cost to the state of paying an additional benefit to people who earn more than the Middle Threshold (£12,100 a year) and so do not accrue the full amount of SSP. The benefit would only be available on a contracted-out basis, so in order to receive it an individual must have a private pension scheme which can receive the rebate. The rebate would aim to bring their

[31] See PPI (2005) *The Pensions Primer* a fuller description of the current pensions system.

income from BSP, SSP and the additional ‘contracted-out SSP’ combined up to £160 a week.

The cost would depend not only on the level of pension that the rebates could target but also into what kind of arrangement the rebates are paid. For example, if:

- the UBSP were set at £82 a week so that the maximum amount of SSP available is £78 a week (so that UBSP and SSP combined is £160 a week); and
- the rebates were paid into appropriate personal pensions;[32] then

these ‘contracted-out rebates’ for higher earners could increase the cost of the EOC’s proposal by around 2% of GDP in each year, from introduction in 2010 onwards.[33]

32 Based on a particular set of assumptions. For example, the Government Actuary’s calculation of the size of the actuarially-fair contracted-out rebate makes an allowance for expenses that are paid as the rebates are invested. Personal Pensions tend to have higher expense charges than, say, occupational pension schemes, so the rebates are higher to compensate. If the rebates could be paid into a type of pension scheme with lower charges, then they would cost less.

33 PPI analysis based on the Aggregate Model.

5 CONCLUSION

The two key objectives driving the EOC’s proposed reforms of the state pension system are to eradicate gender inequalities in measured poverty among pensioners, and reduce gender inequalities in income between pensioners. PPI modelling of the EOC's suggested model for reform suggest that low earners and carers could receive more income from state pension provision under the EOC’s proposals than from a Citizen’s Pension at £109 a week, the Pension Commission’s preferred approach, or the current system. High earners would receive less while median earners could receive more or less, depending on whether they had spent time as a carer or low earner. Thus the reforms would be redistributive in nature, aiding most those individuals least likely to make private provision.

The UBSP would ensure everyone had certainty of at least a basic level of income in retirement and people would not risk suffering 100% withdrawal on their savings because they do not have a full BSP, thus providing a solid foundation for saving. Lifelong low earners and carers would not need to save voluntarily in order to secure a reasonable replacement rate whereas median and high earners would need to save more under the EOC’s proposals if they want to make up for the reduction in their state pension. But this extra amount of saving is likely to be relatively modest compared to the total amount of saving required and similar to the amounts required by the other proposals considered in this paper.

Like other proposals, the EOC’s proposals would mean the state would have to spend more in future than it currently plans to. However, the proposals could cost the state about the same as the Pensions Commission’s preferred approach and the NAPF Citizen's Pension. In the short term, the EOC's proposals would cost less than the Citizen's Pension because benefits and costs would be phased in over time as rights to SSP were accrued.

APPENDIX A

The costs of the current system

Chapter 4 compares the costs of the EOC's proposals against the cost of the current pensions system. The future cost of the current pensions system is very uncertain, so any comparison must be made with care.

In this paper, 'cost' refers to the annual cost to the state of paying Basic State Pension, SERPS/S2P, Pension Credit, other pension benefits such as Winter Fuel Allowances, and contracted-out rebates. Box 2 in Chapter 4 contains further details of the methodology used.

One source of uncertainty in the cost of the current system is the cost of Pension Credit, which depends on:

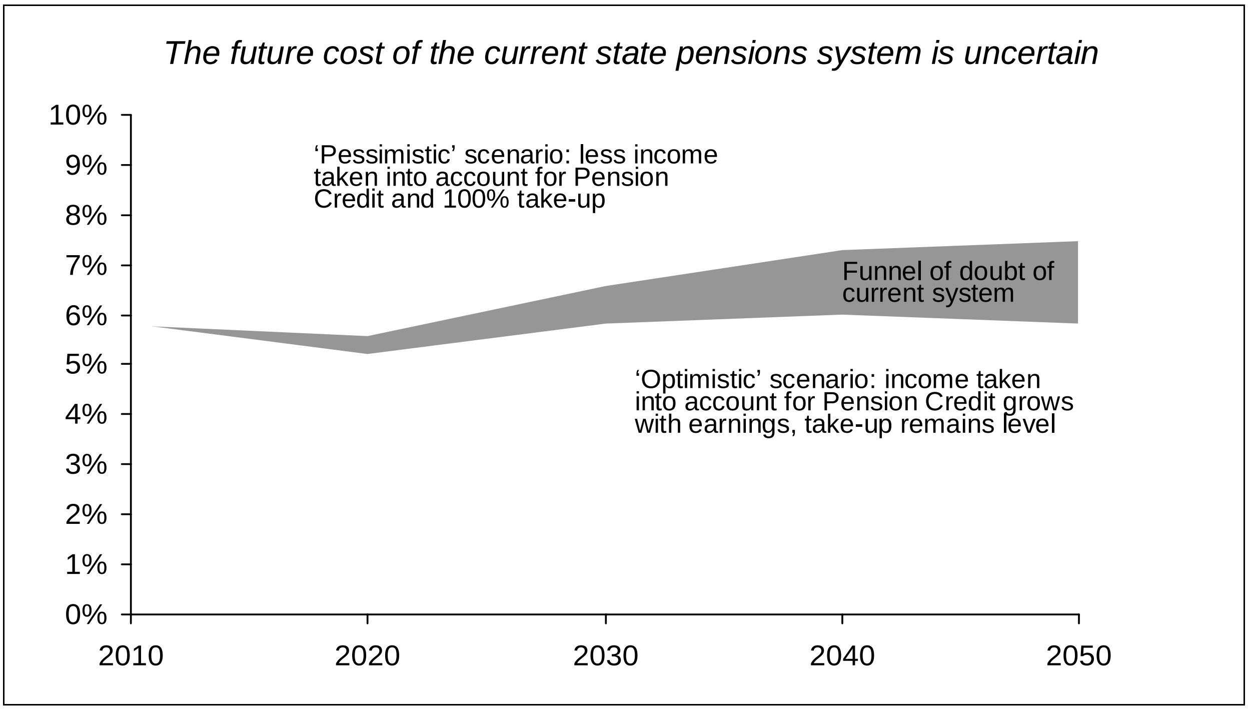
- How much income older people have that is 'taken into account' for the calculation of their eligibility for Pension Credit in future. This cannot be known for certain, as it depends on the performance of private pensions and the extent to which people save and work.
- How many people take up the benefit. Fewer than two-thirds of households with some entitlement take it up.[34]

This uncertainty leads to a large 'funnel of doubt' for the future cost of the current pensions system (Figure A1):

- An 'optimistic' scenario in terms of state expenditure is that the total amount of income older people have taken into account for Pension Credit will grow with average earnings, and take-up will stay at today's levels. In this scenario, the cost of the state pension system in 2050 would be around **5.8% of GDP** (£185 billion).
- A 'pessimistic' scenario is that *state pension* income taken into account for Pension Credit will grow at the rate implied by the PPI's internally consistent projections (more slowly than average earnings) and *private* income taken into account increases with prices (also more slowly than average earnings). If take-up also increases to 100%, then the estimated cost under this set of assumptions in 2050 is **7.5% of GDP** (£240 billion).

[34] DWP (2006) *Income-related benefits estimates of take-up in 2003/4.*

Chart A1 Estimates of future expenditure on state pensions under the current system as a percentage of GDP



Notes: PPI estimates using the Aggregate and Distributional Models. It is theoretically possible for the cost to be lower than the minimum or higher than the maximum shown, but this is unlikely.

An alternative set of assumptions, which seems reasonable and is therefore used for the PPI base case scenario, is:

- Both state and private pension income taken into account for Pension Credit will grow at the rate implied by the PPI's projections of BSP, SERPS/S2P and private pensions (more slowly than average earnings).[35]
- Other income taken into account, including earnings, will grow with average earnings.
- Take-up of the Guarantee Credit safety-net remains at current levels but take-up of Savings Credit increases from just under 40% to around 60% as Savings Credit becomes a more significant part of people's income.

Under this base case scenario, the estimated cost in 2050 of the current pensions system is **6.6% of GDP** (£210 billion) (Table A1).

The government has recently revised its estimates for the current system upwards and they are now much closer to the PPI's base case scenario. It estimates that the

[35] These projections all use the same assumptions and so are internally consistent.

current system will cost around **6.6% of GDP** in 2050[36] (the same as the PPI estimate).

Table A1 Estimated state expenditure on pensions under the current system, as a percentage of GDP and in £ billion, 2005/6 prices

	PPI 'optimistic' scenario	PPI 'pessimistic' scenario	PPI base case scenario	Government projections
				%
2010	5.6	5.8	5.6	6.0
2020	5.2	5.6	5.2	5.5
2030	5.8	6.6	6.0	5.9
2040	6.0	7.3	6.5	6.2
2050	5.8	7.5	6.6	6.6
				£ billion
2010	80	82	80	83
2020	95	100	95	95
2030	125	145	130	125
2040	155	190	170	160
2050	180	240	210	210

Note: PPI estimates are based on the Aggregate and Distributional Model.[37]

It may be more appropriate to compare the *long-term* costs of the EOC's proposal with the PPI's estimates for the current system than the government's. The two sets of costs will be consistent. The PPI uses simpler economic assumptions than the government and a slightly different methodology. In the *short-term*, the cost of the EOC's reform proposals can be compared to government estimates for the current system rather than the PPI estimates. The PPI models have a long-term focus. The government estimates may be more appropriate for the short term (2010) because they can use a different methodology based on data from administrative records.

36 DWP (2005) *Benefit expenditure tables*. The Pensions Commission produced its own estimates of the cost of the current system which are slightly higher, at 6.8% of GDP in 2050, reflecting the fact it used an earlier version of the DWP's modelling tool, Pensim2 and a different methodology.

37 The government estimates are from DWP (2005) *Benefit expenditure tables* for the 2005 Pre Budget Report. Costs can differ as a percentage of GDP but be the same in £ bn terms because the PPI uses simpler economic assumptions, leading to differences in GDP. Costs in £ bn are rounded to the nearest £1 bn for 2010 and to the nearest £5 bn for later years. PPI models produce a lower estimate of cost in the short term because they are based on different estimates of contracting-out. See Steventon, A. (2005) *What will pensions cost in future?* for more details.

APPENDIX B

Assumptions and methodology

The projections in this paper have been produced using the PPI Aggregate Model, Distributional Model and Individual Model. These models have been developed by the PPI to assess the impact of long-term policy options. The Nuffield Foundation has funded the development of the models.

The PPI has published a full description of the technical details of the models.[38]

The Aggregate Model has been used to project future expenditure on Basic State Pension, State Earnings Related Pension, State Second Pension, State Supplementary Pension and contracted-out rebates.

The projections of future expenditure are based on a projection of the UK labour market that assumes a constant rate of earnings growth and constant employment rates, after the state pension age for women has been increased to 65 in 2020. The projections for the current system allow for a continuation of current trends in contracting-out and entitlements to the Basic State Pension.

The Distributional Model has been used to project future expenditure on Pension Credit and also to assess the impact of the reform proposals on the amount of income tax paid by people over state pension age.

The projections of future Pension Credit expenditure are based on a projection of the distribution of pensioners' incomes. This underlying projection is based on the 2003/4 Pensioners' Income Series dataset. To allow consistent analysis, the Distributional Model 'trues-up' its projections to Aggregate Model results. In this way, both models produce the same estimates of total state expenditure on pensions.

The PPI Individual Model has been used to estimate the pension income that seven hypothetical individuals reaching age 65 in the future would receive under the EOC's proposals and the current system.

All projections are ultimately driven by the data and assumptions they use and are subject to considerable uncertainty, even in the short term. The modelling is best interpreted as an illustration of the *possible* differences between the different reform

[38] See Curry, C. (2003) *The Under-pensioned: Technical paper*, and Steventon, A. (2005) *What will pensions cost in future?*

options considered, rather than as what the cost *would* be under each individual option.

Assumptions have been made on future pensions policy and on the UK economy as a whole.

The current state pension system

The projections for the current system in this paper assume that the current state pension system continues, with the same uprating conventions as are used today:[39]

- The Basic State Pension (BSP) and State Second Pension when in payment are increased in line with prices. The BSP remains the minimum level of entitlement to Savings Credit.
- The Guarantee Credit continues to be increased in line with average earnings.
- The Lower and Upper earnings limits for State Second Pension increase in line with prices. The Lower Earnings Threshold (the LET – the 'flat-rate' part of State Second Pension) continues to be increased in line with average earnings. The Upper Earnings Threshold continues to increase to reflect the changes in the LET, ensuring that higher earners receive the same in State Second Pension as they would have received in SERPS. However, when the Upper Earnings Threshold overtakes the Upper Earnings Limit, it is assumed to be uprated in line with prices.
- The base case scenario assumes that Pension Credit take-up:[40]
    - Remains at 85% for people who are entitled to both the Guarantee Credit and Savings Credit components.
    - Remains at 74% for people who are only entitled to the Guarantee Credit component.
    - Increases from the current level of 35% to around 60% for people who are only entitled to the Savings Credit component, as Savings Credit becomes a more significant part of older people's income.

Macroeconomic assumptions

- Prices are assumed to grow by 2.5% each year.
- Earnings are assumed to grow by 2.0% each year in excess of prices.

39 For more details, see *The Pensions Primer*, www.pensionspolicyinstitute.org.uk

40 PPI (2004) *PPI submission to the Work and Pensions Select Committee*. The PPI only updates its modelling assumptions annually to allow different pieces of modelling work to be compared but these take up rates are similar to the latest estimates available in DWP (2006) *Income-related benefits estimates of take-up in 2003/4.*

- The age, sex and marital structure of the population is assumed to follow the Government Actuary's Department's (GAD's) 2003-based population projections.[41]
- Employment rates are assumed to increase for women over age 50 as state pension age increases between 2010 and 2020 to be more in-line with today's employment rates for younger women.
- Contracting-out in the private sector is assumed to halve between now and 2035 as defined benefit schemes are closed down, but to remain at current levels in the public sector.[42]
- Contracted-out rebate rates are calculated as being actuarially neutral assuming the same investment returns, earnings growth and inflation as elsewhere in the models.

Additional assumptions for the Individual Model

- Real investment returns of 3.0% a year before charges.
- Management charges of 1.0% a year.
- Annuity rates are calculated consistently with the assumed investment return and the mortality underlying current market annuity rates, adjusted to allow for future expected mortality improvements.

Further modelling assumptions used for costing the EOC's proposals for state pension reform

In practice, the UBSP would be payable to some persons overseas but not to UK residents who fail the residency criterion. The exact residency criterion has not been determined, so for this paper the same approach has been taken as in other work: it has been assumed that the residency criterion is such that these effects are broadly equal.

Estimates of the number of people entitled to credits for the State Supplementary Pension have been estimated based on one particular week (see Table 1 in Chapter

41 The PPI only updates its modelling assumptions annually to allow different pieces of modelling work to be compared. In October 2005 GAD released a new set of population projections based on estimates of the UK population in 2004. These showed a slight increase in the projected number of people over state pension age. As the increase is slight for all years up to 2050, the new projections are unlikely to have a large impact on the costs presented in this paper.

42 This is the assumption used by GAD to project the cost of SERPS/S2P and contracted-out rebates. GAD (2004) *Update of the Quinquennial Review of the National Insurance Fund as at April 2000*. Other organisations have suggested that Defined Benefit schemes might close more quickly, including the Pensions Commission, which would increase the costs of S2P in the long term and reduce the costs of contracted-out rebates in the short term.

3). Someone who cares for one week may not care for the whole financial year, and so this approach may lead to slight overestimates of the costs.

Illustrative individuals

Typical policy analysis assumes that individuals remain in full-time work at the same earnings level from the day they leave education to the day they reach 65. Rather than use these artificial assumptions, the individuals analysed here illustrate some of the range of characteristics that exist in the working population that affect current and future pension income. They are similar to individuals analysed in previous PPI studies.

The illustrative individuals used are:

- **Low earning woman:** She started work at the age of 21, working full-time until age 28. She then had a career break to care for a child for six years, but the break did not coincide with the financial year, so she lost two credits to BSP and S2P. She returned to part-time work for five years. She then worked full-time until she returned to part-time work for five years in her fifties, and then taking another career break for 5 years in her 50s to care for an elderly relative, for which she received no carer benefits or credits. She returned to full-time work again, until reaching state pension age. When in full-time work, she earned at the 1st decile of the distribution of age-specific earnings for women.[43]
- **Median earning woman:** As the low earning woman but she earned at median age-specific earnings for women when she was in full-time work.
- **Lifetime carer:** Her early career was the same as the low earning woman, but she did not return to work when her child was six years old. She had caring responsibilities for an elderly relative until she reached state pension age.
- **Median earning man:** He worked mainly full-time from age 21, but was unemployed for two years in his twenties and worked part-time between age 55 and age 60. When in full-time work, he earned at median age-specific earnings for men.
- **High earning man:** As the median earning man but he earned at the 9th decile of the distribution of age-specific earnings for men when he was in full-time work.

Typical policy analysis tends to assume that individuals stay on a percentage of the median or average earnings of all workers throughout their working life. The earnings

[43] Decile points divide the earnings distribution into ten groups each of which contain the same number of workers. So, for example, 30% of females earn below the 3rd decile of the female earnings distribution and 60% of females earn below the 6th decile.

levels used here are instead ‘age-specific’, that is, based on the earnings received at different ages. For example, the median earning woman is assumed to have the median earnings of all full-time employed 21 year-old women when she is aged 21, and the median of all full-time employed 22 year-old women when she is aged 22. As earnings tend to be higher in the middle of working life than at younger and older ages, using age-specific earnings in this way should give a more realistic picture.

APPENDIX C

More detailed modelling results

This appendix contains more detailed results of the modelling used in Chapters 3 and 4:

- Tables C1 and C2 contain the results used in the distributional analysis in Chapter 3 in tabular form. They respectively illustrate the individuals on the basis that they do not save privately for retirement and that they save into the National Pensions Saving Scheme (NPSS) proposed by the Pensions Commission.[44] In addition to the results shown in Chapter 3, they also contain analysis based on a Universal Basic State Pension (UBSP) set at £82 a week and £90 a week as well as based on a UBSP set at £85 a week.
- Tables C3 and C4 are equivalent versions of Tables C1 and C2 but assume that the individuals reach age 65 in 2035 rather than 2050.
- Table C5 contains the required savings rates as shown in Table 3 in Chapter 3, but also includes UBSPs set at £82 a week and £90 a week.
- Table C6 is an equivalent version of Table C5 but assumes that the individuals reach age 65 in 2035 rather than 2050.
- Table C7 is a breakdown of the projected costs of the EOC's proposals shown in Table 4 of Chapter 4, with a UBSP set at £85 a week.

[44] Pensions Commission (2005): 36-37.

Table C1 Estimated state pension income range at age 65 and age 75 for individuals reaching 65 in 2050, assuming no private saving, £ per week, 2005/6 earnings terms

£

	Age	Benchmarks: Current system	Benchmarks: Pensions Comm.	NAPF	EOC with a UBSP of: £82	EOC with a UBSP of: £85	EOC with a UBSP of: £90
Low earning woman, less p/t work	65	82 - 138	120 - 125	109	151	151	152
	75	67 - 133	112 - 119	109	150	150	151
Median earning woman, less p/t work	65	86 - 141	121 - 126	109	120 - 132	121 - 131	124 - 130
	75	71 - 135	113 - 119	109	119 - 131	121 - 130	123 - 129
Low earning woman	65	82 - 138	120 - 125	109	143 - 145	143 - 144	145
	75	67 - 133	112 - 119	109	142 - 145	143 - 144	144
Median earning woman	65	85 - 140	121 - 126	109	127 - 136	129 - 135	131 - 134
	75	70 - 135	113 - 119	109	126 - 135	128 - 135	130 - 133
Lifetime carer	65	29 - 109	103 - 115	109	151	151	152
	75	24 - 109	98 - 110	109	150	150	151
Median earning man	65	103 - 151	131 - 132	109	92 - 115	95 - 115	100 - 115
	75	85 - 144	121 - 124	109	92 - 115	95 - 115	99 - 115
High earning man	65	107 - 153	133	109	85 - 111	88 - 111	93 - 111
	75	87 - 145	122 - 125	109	85 - 111	88 - 111	93 - 111

Notes: PPI analysis using the Individual Model. 'State pension income' is BSP, SERPS/S2P/SSP, and Pension Credit. A range is sometimes shown because of the uncertainties surrounding Pension Credit. The lifetime carer is assumed to receive no credits under the current system after her oldest child reaches age 16.

Table C2 Estimated income range from state pensions and NPSS at 65 and 75 for individuals reaching 65 in 2050, assuming saving at the default level into NPSS from 2010, £ per week, 2005/6 earnings terms

£

	Age	Benchmarks: Current system	Benchmarks: Pensions Comm.	Benchmarks: NAPF	EOC with a UBSP of: £82	EOC with a UBSP of: £85	EOC with a UBSP of: £90
Low earning woman, less p/t work	65	94 - 146	132 - 133	122	163	163	164
	75	75 - 138	120 - 123	117	157	158	159
Median earning woman, less p/t work	65	114 - 158	149	137	148	149	152
	75	89 - 146	131	127	137 - 142	138 - 141	141
Low earning woman	65	91 - 144	129 - 131	119	152	153	154
	75	73 - 137	118 -122	116	148	149	150
Median earning woman	65	108 - 154	144	132	149	151	153
	75	84 - 143	127 - 128	124	140 - 144	142 - 143	144
Lifetime carer	65	32 - 109	105 - 117	112	153	154	155
	75	26 - 109	99 - 111	111	151	152	153
Median earning man	65	176 - 195	203	182	165	167	172
	75	131 - 172	167	156	138 - 143	141 - 143	145
High earning man	65	214 - 218	240	217	193	196	201
	75	156 - 187	191	178	154	157	162

Note: See note to Table C1.

Table C3 Estimated state pension income range at 65 and 75 for individuals reaching 65 in 2035, assuming no private saving, £ per week, 2005/6 earnings terms

		Benchmarks			EOC with a UBSP of:		
	Age	Current system	Pensions Comm.	NAPF	£82	£85	£90
Low earning woman, less p/t work	65	79 -130	111 - 123	109	133 - 140	135 - 139	137
	75	65 - 126	104 - 117	109	131 - 139	133 - 138	135 - 136
Median earning woman, less p/t work	65	86 - 134	117 - 127	109	112 - 127	114 - 127	118 - 126
	75	71 - 130	109 - 120	109	109 - 125	111 - 125	116 - 124
Low earning woman	65	79 - 130	111 - 123	109	125 - 135	127 - 134	130 - 133
	75	65 - 126	104 - 117	109	123 - 134	125 - 133	128 - 132
Median earning woman	65	85 -134	116 - 126	109	119 - 131	121 - 131	125 - 130
	75	70 - 129	109 - 120	109	116 - 130	119 - 129	122 - 128
Lifetime carer	65	24 - 109	87 - 109	109	128 - 137	130 - 136	132 - 134
	75	19 - 109	85 - 109	109	127 - 136	129 - 135	131 - 134
Median earning man	65	111 - 149	134 - 137	109	113 - 128	116 - 128	121 - 127
	75	91 - 142	123 - 128	109	109 - 125	112 - 125	116 - 125
High earning man	65	125 - 157	146	109	117 - 130	120 - 130	125 - 130
	75	103 - 149	133 -134	109	111 - 126	114 - 126	119 - 126

Note: See note to Table C1.

Table C4 Estimated income range from state pensions and NPSS at 65 and 75 for individuals reaching 65 in 2035, assuming saving at the default level into NPSS from 2010, £ per week, 2005/6 earnings terms

		Benchmarks			EOC with a UBSP of:		
	Age	Current system	Pensions Comm.	NAPF	£82	£85	£90
Low earning woman, less p/t work	65	89 - 135	120 - 129	119	143 - 145	144	147
	75	71 - 130	110 - 120	116	137 - 142	139 - 141	141
Median earning woman, less p/t work	65	109 - 147	139 - 140	132	134 - 140	136 - 140	140
	75	85 - 138	124 - 128	124	123 - 134	126 - 133	130 - 133
Low earning woman	65	86 - 134	117 - 127	116	132 - 139	134 - 138	137
	75	69 -129	108 - 119	114	128 - 136	129 - 136	132 - 134
Median earning woman	65	102 -143	133 - 136	126	136 - 141	138 - 141	142
	75	81 - 136	119 - 126	120	127 - 136	129 - 136	133 - 135
Lifetime carer	65	24 -109	87 - 109	109	128 - 137	130 - 136	132 - 134
	75	19 -109	85 - 109	109	127 - 136	129 - 135	131 - 134
Median earning man	65	152 -174	175	150	154	157	161
	75	118 -158	149	136	135 - 141	138 - 141	143
High earning man	65	186 - 194	206	170	178	181	186
	75	141 - 172	172	148	150	153	158

Note: See note to Table C1.

Table C5 Estimated required saving as a percentage of total salary to reach target income (as specified in the Pensions Commission First Report) for individuals reaching 65 in 2050, assuming saving starts at 25, into a low-cost savings vehicle similar to NPSS

	Benchmarks			EOC with a UBSP of:		
	Current system	Pensions Comm.	NAPF	£82	£85	£90
Low earning woman, less p/t work	0 to 18	6	9	-	-	-
Median earning woman, less p/t work	12 to 18	11	13	6 to 11	6 to 11	5 to 11
Low earning woman	0 to 20	6	10	-	-	-
Median earning woman	14 to 20	13	15	5 to 11	5 to 11	5 to 11
Median earning man	14	12	14	15	15	15
High earning man	17	15	16	18	17	17

Note: PPI analysis using the Individual Model. A range is sometimes shown because of the uncertainties surrounding Pension Credit. The lifetime carer has not been included in this analysis because she has no earnings of her own to save to finance her retirement.

Table C6 Estimated required saving as a percentage of total salary to reach target income for individuals reaching 65 in 2035, assuming saving starts at 40, into a low-cost savings vehicle similar to NPSS

	Benchmarks			EOC with a UBSP of:		
	Current system	Pensions Comm.	NAPF	£82	£85	£90
Low earning woman, less p/t work	6 to 25	11 to 12	12	-17 o 2	-18 to 1	-19 to 0
Median earning woman, less p/t work	20 to 24	16	18	13 to 17	13 to 17	12 to 16
Low earning woman	7 to 30	13 to 14	15	-17 to 6	-17 to 6	-19 to 4
Median earning woman	24 to 28	19	21	14 to 18	13 to 18	12 to 17
Median earning man	24	20	24	23	23	22
High earning man	26	24	27	26	26	26

Notes: See note to Table C5. A negative required saving indicates that the individual receives more than his or her target income without making any saving.

The costings in Table C7 (below) assume that the amount of private income people have in retirement is not affected by the reforms. If people choose to save more as a result of the reforms, the EOC's proposals could cost less because the cost of Pension Credit could be lower, and more income tax would be collected.

Table C7 Breakdown of the projection of expenditure on pensions in Table 4 (p.25) of the EOC's pensions with a UBSP set at £85 a week, as a percentage of GDP and in £ billion, 2005/6 prices

	BSP/ UBSP	SERPS/ S2P accrued before 2010	SSP	Pension Credit	Other benefits	Offsets For higher Income tax and Lower housing benefits	Total
							%
2010	4.6	0.7	0.0	0.3	0.2	-0.2	5.6
2020	4.5	0.9	0.1	0.2	0.1	-0.2	5.6
2030	5.5	1.0	0.3	0.3	0.1	-0.3	6.9
2040	6.2	0.8	0.6	0.4	0.1	-0.3	7.8
2050	6.3	0.6	1.1	0.3	0.1	-0.3	8.1
							£ billion
2010	66	11	0	4	3	-3	81
2020	80	15	0	5	5	-5	105
2030	120	20	5	5	5	-5	150
2040	160	20	15	10	0	-10	205
2050	200	20	35	10	0	-10	255

Notes: See note to Table 4. Other benefits are those such as Winter Fuel Allowances and the Christmas Bonus. Figures have been rounded independently and so totals may not add because of rounding.

See www.dwp.gov.uk/asd/asd4/LT3.xls for government figures on the current system. These figures will not be exactly consistent with Table C7 because the government and the PPI use different methodologies and assumptions for projecting state pension expenditure (see Appendix B). They do however give a broad indication of how components of expenditure would differ under the EOC's reform proposals from the current pensions system.