

## PPI Submission to the DWP Review: Making auto-enrolment work

### Summary

- I. The Pensions Policy Institute (PPI) promotes the study of pensions and other provision for retirement and old age. The PPI is unique in the study of pensions, as it is independent (no political bias or vested interest); focused and expert in the field; and takes a long-term perspective across all elements of the pension system. The PPI exists to contribute facts, analysis and commentary to help all commentators and decision-makers to take informed policy decisions on pensions and retirement provision.
- II. This submission provides the PPI's analysis and evidence to the DWP review *Making auto-enrolment work*.
- III. Given the wide area for consultation, the large number of stakeholders responding and the short length of time to provide evidence, this response focuses on adding value and evidence in specific areas rather than a comprehensive analysis of every area and possible question that the review has been asked to consider. The main area covered by this response is an updated analysis of the 'suitability', or value, of saving at auto-enrolment levels for different individuals in different circumstances.
- IV. **This analysis only considers the value of saving for specific individuals with a specific set of characteristics and under certain assumptions. The analysis illustrates the potential impacts of policy changes, rather than predicting precise outcomes for individuals, and none of the findings should be generalised as being applicable to the population as a whole. The analysis should not be relied upon for advice or guidance for any individuals.**
- V. This submission concludes that:-
  - Recent policy changes, including changes to the indexation of the state pension, the phasing in and staging of auto-enrolment and the use of a combined contribution charge and annual management charge for NEST have improved the value of saving at the minimum auto-enrolled level for some modelled individuals, but reduced the value of saving for others.
  - In particular, the charging structure of NEST and phasing in and staging of auto-enrolment and the employer contribution significantly reduce the value of saving for those close to pension age.

- The value of saving is sensitive to the rate of return on investment. More cautious investment strategies could reduce volatility, but also reduce the value of saving.
- The value of saving is also sensitive to life expectancy. There is variation in the number of years that individuals will actually spend in retirement, and those who die sooner after receiving a pension will have a lower value of saving than those who die later.
- Individuals at older ages when auto-enrolment is introduced may be more likely to see relatively low value for saving. However, older individuals may be more likely to have pre-existing savings when auto-enrolled, which can help increase the value of saving, depending on the level of pre-existing savings.
- Increasing the earnings level at which contributions become payable, or alternatively introducing a de minimis rule for contributions (where contributions are only paid by those with higher earnings but on a broader band of earnings), will have little impact on the value of saving for the majority of people. For those who are affected, the impact on the value of saving appears to be small, and could be ambiguous as to whether the value of saving is increased or reduced.
- The impact of combining the Basic State Pension and State Second Pension into a single 'Foundation Pension' on the value of saving will depend on the level of the Foundation Pension and how it is indexed. A Foundation Pension introduced at a level equivalent to pension provided by the existing state pension system for someone reaching SPA in 2055 would increase the value of saving in most, but not all, of the examples modelled.
- None of the policy options considered completely overcome the low value of saving associated with eligibility to Housing Benefit. Even with a Foundation Pension the modelled median earning man renting in retirement receives marginally less than the value of his own contributions adjusted for inflation.
- Some individuals who would be auto-enrolled (even if the minimum earnings level for contributions was increased to £10,000), would have a high level of income from the state pension relative to their income while working even if they were not auto-enrolled. These are often the individuals – for examples low earners – who would also have a relatively low value of saving from being auto-enrolled.

## Introduction

1. The Pensions Policy Institute (PPI) promotes the study of pensions and other provision for retirement and old age. The PPI is unique in the study of pensions, as it is independent (no political bias or vested interest); focused and expert in the field; and takes a long-term perspective across all elements of the pension system. The PPI exists to contribute facts, analysis and commentary to help all commentators and decision-makers to take informed policy decisions on pensions and retirement provision.
2. This submission provides the PPI's evidence to the DWP Review: Making auto-enrolment work.
3. Given the wide area for consultation, the large number of stakeholders responding and the short length of time to provide evidence, this response focuses on adding value and evidence in specific areas rather than a comprehensive analysis of every area and possible question that the review has been asked to consider. The main area covered by this response is an updated analysis of the 'suitability', or value, of saving at auto-enrolment levels for different individuals in different circumstances.
4. The PPI's original analysis was undertaken in 2006/7<sup>1</sup> and has been widely discussed and used to illustrate potential outcomes from auto-enrolment. The analysis calculated an 'internal rate of return' on individual pension saving at minimum auto-enrolment levels (allowing for the interaction with the employer contributions, tax relief and post-retirement means-tested benefits), which was then compared to a series of benchmarks to indicate the 'risk' of not seeing good value from saving.
5. The updated analysis is based on individuals making the minimum required contributions when being auto-enrolled, as set out in the 2007 legislation. The analysis models these contributions as going into a scheme with the same charging structure as NEST, although in practice not all schemes receiving auto-enrolled contributions will have this charging structure. All individuals are modelled as single. Individuals who are part of a couple during retirement may see a higher value of saving than single individuals.
6. **This analysis only considers the value of saving for specific individuals with a specific set of characteristics and under certain assumptions. The analysis illustrates the potential impacts of policy changes, rather than predicting precise outcomes for individuals, and none of the findings should be generalised as**

<sup>1</sup> PPI (2006) *Are personal accounts suitable for all?* and subsequent PPI papers and Briefing Notes

being applicable to the population as a whole. The analysis should not be relied upon for advice or guidance for any individuals.

**What is 'suitability', or value, for saving?**

7. One important consideration when giving advice to individuals on any savings product is the criteria that are used to assess whether the product is suitable or not.
8. Two possible criteria that could be used to assess the suitability of saving at minimum auto-enrolled levels are:
  - Whether saving at these levels is the best thing for individuals who stay auto-enrolled. This condition would not be met if another product or form of saving would have been preferable to an auto-enrolled pension, even if an individual would not strictly lose out from being auto-enrolled.
  - A less stringent condition is whether individuals who stay auto-enrolled should not lose out as a result of their saving. This compares the difference between the amount saved and the likely amount eventually received as pension income. It aims for there to be at least a minimum return on saving.
9. The first of these criteria is more consistent with the definition of 'suitability' that the Financial Services Authority (FSA) requires firms to consider when giving advice on investment products to consumers. The FSA definition broadly aims to ensure that, when consumers are being advised about investments, any recommendation takes account of a client's particular circumstances.
10. However auto-enrolment will take place in a low charge and low advice environment, relying on money guidance and information rather than specific advice tailored to individuals' detailed circumstances, which would be more costly to provide.
11. This analysis therefore adopts the second of the suitability criteria as the definition of 'suitability', rather than the FSA definition. The analysis compares the difference between the amount saved and the likely amount eventually received as pension income, and treats auto-enrolment as being 'suitable' if there is at least a minimum return on saving.

**What determines returns from saving?**

12. The combination of compulsory employer contributions<sup>2</sup>, tax relief and expected investment returns could make auto-enrolment relatively attractive for some individuals. But on the other hand, the tax and means-tested benefit systems in retirement could put some people at risk from a low return from auto-enrolment.
13. The minimum employer contribution can be a significant incentive to remain auto-enrolled. For every £1 that an employee contributes, his or her employer will be compelled to contribute at least 77p<sup>3</sup>, unless the employee has opted out.

**The employer contribution**

14. In this analysis, it is assumed that employers do not specifically reduce the salary of the individual being considered in order to recover the expense of the compulsory contributions. If salaries were reduced, then this could reduce expected returns from being auto-enrolled, depending on how the salary reductions were applied.
15. There are a number of ways in which employers could pass on the additional costs of the employer contribution arising from auto-enrolment. These include:
  - Reducing wages
  - Reduced profits
  - Lower pension contributions to other workers (if they are already making contributions)
16. The Pensions Commission suggested that at least some of the additional employer costs would result in lower wage settlements on average<sup>4</sup>.
17. From an individual perspective, the value of the employer contribution, and the impact on expected returns from his or her own contribution, depends on what would happen if he or she decided to opt-out. If the individual's salary would remain the same even if he or she opted-out of auto-enrolled pension saving, then the employer contribution does increase the value of saving. If however, the salary would be increased by opting-out, the employer contribution does not increase the value of saving.

<sup>2</sup> The employer would be compelled to make a contribution provided that the employee does not opt out of auto-enrolment

<sup>3</sup> This is 77p rather than the 75p that would result from a strict 4:3:1 system of individual, employer and Government contributions because of the impact of income tax. The matching would be £1-for-£1 rather than 77p-for-£1 for higher rate taxpayers, due to the greater value of tax relief making the net cost of employee contributions less.

<sup>4</sup> Pensions Commission (2005) A New Pensions Settlement for the Twenty-First Century

18. This analysis takes as its baseline the assumption that if an individual opted-out of pension saving they would not benefit from a higher salary in return. The analysis assumes that auto-enrolment is already in place, and makes comparisons between individual outcomes.
19. This analysis does not therefore take into account the likely impact on wages of auto-enrolment at an aggregate level.

### **The Government Contribution**

20. The Government contribution to auto-enrolment can also be an incentive to save. For every £1 that an employee contributes, the Government would contribute at least 28p<sup>5</sup>. However, retirement income from auto-enrolled saving would be taxable, so some of this Government contribution could be reclaimed by the Government as income tax in later life.
21. While the employer and Government contributions can be incentives to save, means-tested benefits in retirement can be disincentives to save. There are currently a number of means-tested benefits for which pensioners may be eligible:
  - Pension Credit consists of two elements, Guarantee Credit and Savings Credit<sup>6</sup>. Guarantee Credit aims to ensure that the poorest people over age 60 have a minimum level of income. Savings Credit is an additional amount that aims to reward saving for some low-income pensioners.
  - Council Tax Benefit is a rebate scheme which can provide an amount to cover council tax.
  - Housing Benefit is an amount to help with housing costs. It can cover rent and some accommodation-related service charges. It does not cover the cost of buying a home or mortgage payments.
22. All three of these means-tested benefits aim to target state spending where the need is greatest. However, one disadvantage of means-tested benefits is that they can be disincentives to save. This is because, if an individual makes private saving, then the extra income received in retirement can result in lower entitlements to means-tested benefits.

<sup>5</sup> This is 28p rather than the 25p that would result from a strict 4:3:1 system of individual, employer and Government contributions because of the impact of income tax. The matching would be 67p-for-£1 rather than 28p-for-£1 for higher rate taxpayers due to the greater value of tax relief.

<sup>6</sup> For a more detailed description of Pension Credit, see *The Pensions Primer*, available on the PPI website, [www.pensionspolicyinstitute.org.uk](http://www.pensionspolicyinstitute.org.uk)

23. Under the state pension system as of 5 May 2010 around 60% of pensioners are currently entitled to some form of means-tested benefit. By 2050, this could reduce to 55% of pensioners (Table 1). The average entitlement of means-tested benefit in 2010 is £70 per week in 2010 earnings terms and could be around £62 per week in 2010 earnings terms by 2050. This reduction is due to the re-linking of BSP to earnings inflation<sup>7</sup> and the changes in the Pensions Act 2007 which make qualification for BSP easier.

**Table 1: Eligibility for means-tested benefits under system as at 5 May 2010<sup>8</sup>**

	2010	2017	2020	2030	2040	2050
<b>Pension Credit</b>	50%	45%	45%	45%	45%	45%
<b>Housing Benefit</b>	20%	20%	20%	20%	20%	20%
<b>Council Tax benefit</b>	45%	45%	40%	40%	40%	35%
<b>Any means-tested benefit</b>	60%	55%	55%	55%	55%	55%

24. **PLEASE NOTE THESE FIGURES REFER TO THE SYSTEM IN PLACE BEFORE MAY 2010.** The introduction of the ‘triple lock’ for the Basic State Pension from 2011 is likely to further reduce entitlement to means-tested benefits in the future. However, other changes, such as the indexation by CPI of S2P from 2011, and the indexation (and revaluation for deferred pensions) for public sector pension schemes and some private sector pension schemes could increase eligibility. PPI are currently updating models to produce new estimates incorporating these changes.
25. To calculate the expected returns from auto-enrolled pension saving, it is important to consider the interaction between an individual’s private pension saving, the employer and Government contributions with expected investment returns, charges and the tax and means-tested benefits system.
26. Being on Pension Credit in retirement does not necessarily mean that an individual would have received a poor return from being auto-enrolled. For example, an individual who loses eligibility to savings credit if they save, even with a small amount of saving, would still

<sup>7</sup> BSP is assumed to be re-linked to earnings inflation in 2012 in this paragraph and table 1, as these calculations were made in advance of the 2010 General Election. It is also assumed that The Guarantee Credit continues to increase in line with average earnings over this period.

<sup>8</sup> Figures are rounded to the nearest 5%. The PPI usually provides a range of figures for eligibility for means-tested benefits, but only the central scenario is shown here to facilitate comparisons with policy options.

PPI (2007) PPI Projections of future eligibility for means-tested benefits.

have a higher income in retirement if they were auto-enrolled. For every £1 of private pension income received they would 'lose' £0.40 of savings credit. ..But this is at least partially offset by receiving the employer and Government pension contribution (and associated investment returns). If the income from auto-enrolled saving is enough to take individuals clear of savings credit, they would eventually lose nothing for each additional £1 of private pension income.

27. However in some cases where more means-tested benefit would be lost as a result of pension saving (for example, by some individuals eligible for Guarantee Credit or Housing Benefit) the value of saving could be low. It is however hard to predict an individual's value of saving and how it will change as a combination of factors are involved. For example, individuals may move above savings credit levels but remain eligible for Council Tax Benefit and even start to pay income tax.

#### Measuring returns from saving

28. There are two alternative measures commonly used to measure returns on individual saving contributions, after accounting for the interactions with the employer and Government contributions and the tax and benefit systems. They are:
- The net present value (and a similar concept known as 'payback', used by the DWP; and
  - The internal rate of return.
29. The **net present value** of an individual saving £1 in auto-enrolled saving is the total amount received in pension income during retirement as a result of that saving, in today's prices. For example, the net present value, or payback, of a saving of £1 after being auto-enrolled could be £2.81 for a median-earning man with a full National Insurance (NI) record who is aged 25 in 2012 and who retires at age 68 in 2055<sup>9</sup>.
30. An alternative to the net present value is the **internal rate of return**. This is similar to the net present value but is expressed as an annual interest rate. Effectively, it is the nominal interest rate that the individual receives on his or her individual contributions, after allowing for the effects of tax relief, employer contributions, investment returns, charges, income tax and means-tested benefits<sup>10</sup>.

<sup>9</sup> PPI analysis. This individual is assumed to contribute continuously to NEST from age 22 until state pension age. Net present value figures are presented as unrounded numbers in this paper, to enable a comparison between similar figures. However, it should be realised that figures are not accurate to a precision of £1 because of uncertainties around what will happen in future.

<sup>10</sup> Formally, the internal rate of return is defined to be the discount rate that sets the net present value to £1 (i.e. to the value of the contributions paid in). Although net present values are calculated by summing income in real terms in this paper, they could be calculated by discounting payments at any given rate,



It is the same as the 'effective rate of return' used by the Pensions Commission to investigate the expected returns from saving in the National Pensions Saving Scheme (NPSS, renamed 'Personal Accounts' and subsequently NEST)<sup>11</sup>.

31. The modeled median-earning man with a full NI record who is aged 25 in 2012 would have an internal rate of return of around 6.4%<sup>12</sup>. This is higher than inflation which is assumed to be 2.87% a year.
32. All other things being equal, a higher net present value means a higher internal rate of return, and vice versa. One advantage of the internal rate of return is that it shows the gains from saving on an annual basis.
33. The internal rate of return is the approach that is used in this analysis to estimate returns from saving from auto-enrolment.

#### Important note

**It is important to realise that the internal rate of return cannot be compared with investment returns on other forms of saving.** For example, it is **not** possible to say that, if an individual has an internal rate of return of 4% from saving in an auto-enrolled pension, and another savings product such as an ISA has an investment return of 5%, then saving in the ISA is preferable to auto-enrolled saving. This is because the 4% figure for the internal rate of return of saving in auto-enrollment takes account of the impact of means-tested benefits. Means-tested benefits can also affect the value of saving in an ISA, and many other products. The impact of means-tested benefits is not taken into account in the 5% figure for the investment return from the ISA, and so the 4% and 5% figures cannot be directly compared.

There are therefore two types of 'return' that are discussed in this analysis - the internal rate of return and the investment return - and they cannot usually be compared. For clarity, where investment returns are meant, the full term is always used. Sometimes, for brevity and where the context means that there can be no confusion, 'internal rate of return' is abbreviated to 'return'.

34. This analysis uses the PPI's Individual Model<sup>13</sup> to calculate internal rates of return and net present values for a range of illustrative individuals.

rather than necessarily with inflation. The definition of the internal rate of return means that if the net present value is calculated at a discount rate equal to the internal rate of return, then the net present value would be equal to £1.

<sup>11</sup> Pensions Commission (2006) The final report of the Pensions Commission page 21. See also Pensions Commission (2004) Pensions: Challenges and Choices Chapter 6 and Pensions Commission (2005) A New Pensions Settlement for the Twenty-First Century Chapter 7.

<sup>12</sup> Based on the assumptions used in this paper. See annex 1 for further details.

**What is an acceptable return?**

35. As a starting point, a return equal to inflation would imply that the individual is expected to receive back the inflation-protected value of his or her individual contributions. In one sense, this would mean that the individual is not “worse off” from being auto-enrolled. This is the minimum benchmark used by the DWP in the analysis undertaken as part of the Pays to Save workstream in 2008/9.<sup>14</sup>
36. However, it is possible to argue that a return equal to inflation would not be acceptable, and that a higher return than the level of inflation is necessary. For example:
- Saving in a pension product is less flexible than saving in some other products. For example, contributions usually cannot be accessed until retirement. So, an individual may expect a higher return than the level of inflation to compensate for this relative inflexibility.
  - There are risks involved with any long-term savings product. For example, an individual may require a higher expected return to compensate for the risk that the value of his or her investments could fall. An individual with a return equal to inflation would not receive any of the real investment returns on his or her contributions.
  - Individuals may also perceive that there is a political risk in long-term saving, for example changes in future tax rates or reliefs.
37. On the other hand, it is possible to argue that in some cases a lower return than inflation could be acceptable:
- Individuals may perceive that there are risks in not saving for retirement. For many individuals, not saving for retirement could mean a low level of retirement income, relative to income during working life.
  - An individual who has a relatively high disposable income in working life but who has made little savings for retirement may want to smooth his or her consumption over his or her lifetime. This refers to the possibility that an individual may value the extra income in retirement that results from saving more than the reduction in income in working life that results from saving. He or she may choose to save for retirement, even if it means getting back less than he or she puts in, after allowing for inflation.

<sup>13</sup> For more details on the Individual Model see Curry (2003). The Individual Model was used in January 2006 to validate the model that the Department for Work and Pensions uses for its incentives to save calculations. The two models were found to produce broadly similar results if the same assumptions are used. More details are available upon request.

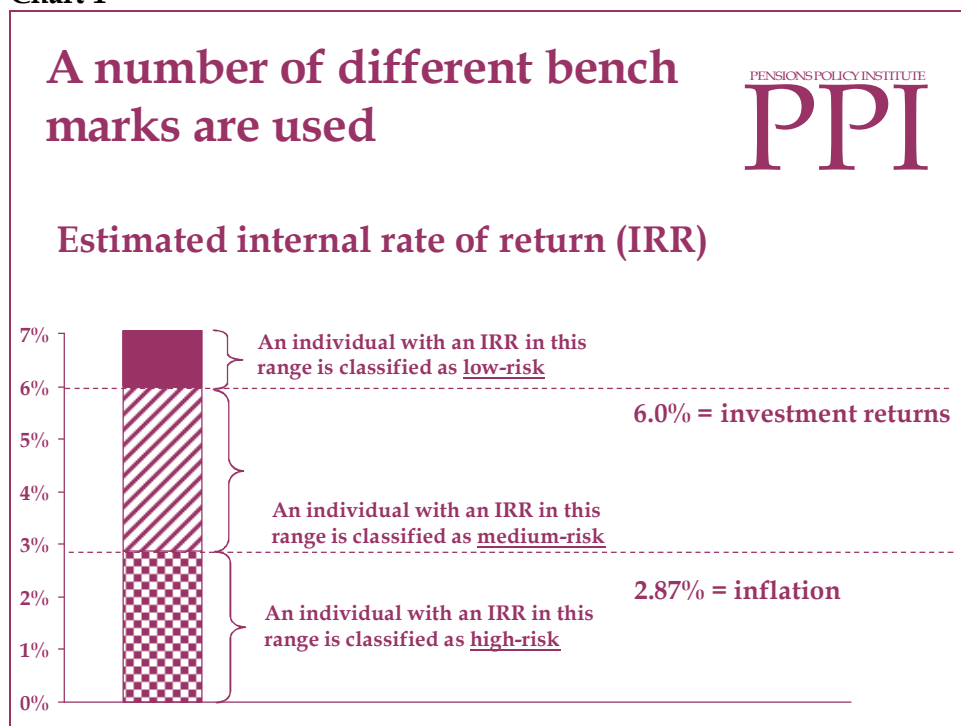
<sup>14</sup> DWP (2009) Research Report No 558 Saving for retirement: Implications of pensions reforms on financial incentives to save for retirement

- An individual could desire the inflexibility of pensions, as a way of taking away the temptation to spend money now.
38. However, there is a risk that, if returns from saving after auto-enrolment are low, then individuals will not perceive that they have benefited from saving in them. All other things being equal, a high return rather than a low return would both make saving more attractive to an individual, and also reduce the risk to future governments that pensioners in future perceive that they have done badly from auto-enrolment, and lobby for compensation.
39. In the absence of a definitive single benchmark, a number of benchmarks are used in this analysis. Based on the value of the internal rate of return, examples are classified by the risk of auto-enrolled saving not being suitable for them (Chart 2):
- An individual is classified as **high-risk** if he<sup>15</sup> has a return of less than inflation. An individual in this situation would not receive the inflation-protected value of his own individual contributions back from auto-enrolled saving.
  - An individual is classified as **medium-risk** if he has a return of more than inflation but lower than the expected investment return. An individual in this situation would receive the inflation-protected value of his own individual contributions plus some credit (but not necessarily total credit) for the real investment returns earned by investing those contributions.
  - An individual is classified as **low-risk** if he has a return that is higher than the expected investment return. An individual in this situation would receive the value of his own individual contributions plus full credit for the real investment returns earned by investing those contributions. In addition, he would receive back some (but perhaps not all) of the value of the employer contribution, the Government contribution and investment returns on the employer and Government contributions.
40. The calculation of the internal rate of return requires an assumption to be made on the expected level of future investment returns. The assumptions used in this paper is a nominal return of 6%. Given an assumption that RPI increases by an annual 2.87%, this implies a real rate of return of approximately 3%. This is different from the assumptions used in the previous analysis, with an RPI of 2.5% and a real investment return of 3%.

<sup>15</sup> To improve readability we have used 'he' or 'his' instead of 'he or she' and 'his or her'

41. However, the categorisation of individuals into the low, medium and high-risk categories used in this analysis is not particularly sensitive to the assumed level of expected investment returns. This is because a higher investment return would increase the upper benchmark used<sup>16</sup>.
42. The median-earning man illustrated above with an internal rate of return of 6.4% a year would therefore be in the low-risk category.

Chart 1



43. Other benchmarks are possible than the ones adopted in this paper. For example:
- The Government have used net present values in a way consistent with the lowest of the benchmarks, equal to the level of inflation. *The analysis shows that people's expected payback from saving will generally be improved as a result of reform, with the large majority of people able to expect a payback of at least £1 plus inflation for each £1 that they save. This is the basis on which we are introducing automatic enrolment.*<sup>17</sup> and *The headline findings of this analysis are that, given these assumptions about the future benefit system and other factors, of those making savings into a defined contribution pension after 2012 with an employer contribution: virtually everybody modelled*

<sup>16</sup> The annex contains more information about the assumptions used in this paper and illustrates the effect of varying the assumptions made

<sup>17</sup> DWP (2006) Financial Incentives to save for retirement paragraph 1.12

*- over 99% - is better off in retirement by saving. In other words, they have more money available to them in retirement than if they hadn't saved; for the vast majority - over 95% - the improvement is greater than the cost of their contributions, even after taking inflation into account;*<sup>18</sup>

- Some other organisations have advocated using a higher benchmark than any of those used in this analysis<sup>19</sup>.
44. The aim of the risk categories used in this paper is to identify the groups of individuals who may be 'at risk' of being auto-enrolled into a pension product that is not suitable for them. It is important to note that the PPI is not arguing that if a minority of people are at high risk of pension saving being unsuitable that auto-enrolment should not be introduced. The Government will need to ensure that these groups are provided with information to help them make a decision about whether they should opt out.
45. It may still be rational for an individual to save in an auto-enrolled pension, even if he or she is in the high-risk category. For example, if an individual has made little saving for their retirement, they may be willing to accept very low returns in order to provide them with some income in retirement on top of state benefits.
46. Conversely, it may not be rational for an individual to remain auto-enrolled, even he or she is classified as 'low-risk'. For example, he or she might be affected by debt or affordability issues.

**Which characteristics affect the 'suitability' of auto-enrolment?**

47. The initial analysis undertaken in 2006/7 highlighted that individuals with different characteristics were more or less likely to find auto-enrolment 'suitable':
- Individuals in their twenties in 2012 with full future working histories could be at low risk of auto-enrolment being unsuitable for them.
  - Individuals in their twenties in 2012 with a combination of low earnings and broken working histories could be at medium risk.
  - Individuals who are likely to rent in retirement could be at high risk of auto-enrolment being unsuitable for them. For these people, staying in a pension after auto-enrolment could mean a large reduction in future entitlement to Housing Benefit.
  - Although the self-employed would not be auto-enrolled,

<sup>18</sup> DWP (2009) Research Report No 558 Saving for retirement: Implications of pensions reforms on financial incentives to save for retirement

<sup>19</sup> For example, Standard Life (2006), Royal London (2006)

periods of self-employment can reduce the value of auto-enrolled saving made during periods of employment.

- Returns from saving in auto-enrolled pensions could be higher for individuals with retirement savings on top of the 4% minimum contributions to a private pension.
- Returns from saving are likely to be higher for individuals who will be married in retirement than for individuals who will be single.

**How has 'suitability' been affected by changes since 2006?**

48. The updated analysis takes account of a number of changes in the pensions policy environment that have happened since the original analysis was undertaken, including:

- Changes to the state pension system:
- An alternative charging structure for NEST
- The staging and phasing in of auto-enrolment and the minimum contribution.

49. The changes to the State Pension system considered include the introduction from 2011 of the BSP 'triple lock' (where the BSP will be uprated annually with the higher of earnings growth, price inflation (the RPI in 2011 and the CPI in subsequent years) or 2.5%), and the indexation of SERPS / S2P in payment by CPI from April 2011.

50. In March 2010 it was announced that the charging structure for NESTs would consist of an initial contribution charge of 2%<sup>20</sup>, and an annual management charge of 0.3% per year. The original analysis assumed that NEST would have a charging structure equivalent to a 0.5% per year AMC. Although in aggregate these charging structures are likely to be broadly similar in the long-run, they may have different impacts on different types of individuals.<sup>21</sup>

51. In January 2010 it was announced that auto-enrolment and the level of the employer contribution would be staged and phased in. This has two components:

- Employers would join the auto-enrolment program over a four-year period, from 2012 to 2016, to ensure that effective systems are in place to support employers in their new duties.
- The minimum contribution will be phased in, at 2% (including 1% from Government and with a minimum 1% from the employer) until September 2016, then increasing to 5% (with a minimum of 2% from the employer) and reaching

<sup>20</sup> It is proposed that the contribution charge is phased out once the initial set-up costs of NEST have been recouped, but as no timetable has been set for this phasing-out, this analysis assumes that the contribution charge remains indefinitely

<sup>21</sup> See PPI (2007) charging structure work for more info

8% (with a minimum of 3% from the employer) from October 2017.

52. These changes will all have an impact on the 'suitability' of saving. The original analysis was conducted on over 200 different individuals. Given the short length of time available to provide evidence the updated analysis covers fewer individuals, concentrating on those previously identified as being in the high and medium risk categories:
- Individuals eligible for housing benefit in retirement
  - Individuals with extended periods of self-employment
  - Individuals with histories of time out of the labour market and low earnings when working
  - Individuals who are already most of the way through their working life (in their late 40s and/or 50s when auto-enrolment is introduced).
53. The analysis also covers the reference median earning man aged 25 when the reforms are introduced.
54. Full details of the individuals modelled and the assumptions used in the modelling are shown in annex 1. Not all of the modelling results are shown in this submission, rather relevant examples have been used to illustrate key findings. The individuals modeled are all assumed to be single in retirement - individuals who are part of a couple when retired would be likely to have a higher value of saving.

**SUMMARY OF INDIVIDUALS MODELLED**

Median-earning man	<ul style="list-style-type: none"> <li>Earning at the 50<sup>th</sup> percentile of the income distribution (approximately £29,000/year in 2010) and has a full NI contribution history.</li> </ul>
Caring woman	<ul style="list-style-type: none"> <li>Earning at the 30<sup>th</sup> percentile of the income distribution (approximately £17,000/year in 2010). She takes caring breaks totaling 11 years throughout her career.</li> </ul>
Median-earning man, renting in retirement	<ul style="list-style-type: none"> <li>Earning at the 50<sup>th</sup> percentile of the income distribution (approximately £29,000/year in 2010) and has a full NI contribution history. He rents in retirement and is assumed to pay £70/week rent.</li> </ul>
Median-earning man with large savings	<ul style="list-style-type: none"> <li>Earning at the 50<sup>th</sup> percentile of the income distribution (approximately £29,000/year in 2010) and has a full NI contribution history. He also has ££77,700 in other savings.</li> </ul>
Caring woman with smaller savings	<ul style="list-style-type: none"> <li>Earning at the 30<sup>th</sup> percentile of the income distribution (approximately £17,000/year in 2010). She takes caring breaks totaling 11 years throughout her career. She also has £18,000 in other savings.</li> </ul>
Low earning woman	<ul style="list-style-type: none"> <li>Earning at the 10<sup>th</sup> percentile of the income distribution (approximately £11,000/year in 2010). She works part-time for 10 years during her career.</li> </ul>
Self-employed man	<ul style="list-style-type: none"> <li>Earning at the 50<sup>th</sup> percentile of the income distribution (approximately £29,000/year in 2010). He works full-time up until age 40 and is self-employed thereafter.</li> </ul>
Unemployed man	<ul style="list-style-type: none"> <li>Earning at the 50<sup>th</sup> percentile of the income distribution (approximately £29,000/year in 2010). He has intermitant periods of unemployment totaling 19 years during his career.</li> </ul>



**Recent policy changes have improved the value of saving for some but reduced it for others**

55. The recent policy changes (as outlined above) have different impacts:

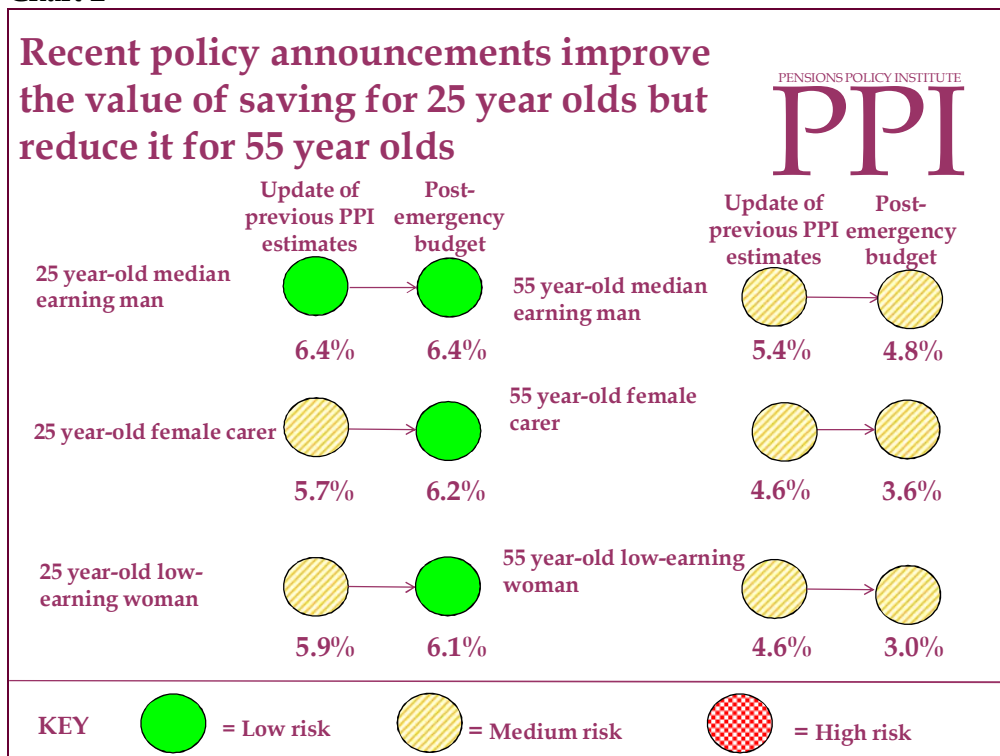
- The introduction of the triple lock for the BSP will result in a higher BSP than compared to the previous policy. This is because it will never be increased by less than average earnings, but in some years may be increased by more than earnings growth (when average earnings growth is less than CPI or 2.5%). In the modelling in this analysis, this translates into an assumed long-term annual increase in the BSP of approximately 4.75% (compared to assumed annual average earnings growth of 4.5%).
- The indexation of S2P in payment to CPI rather than RPI will, in the modelling for this analysis, reduce the amount of S2P received in each year after SPA. This is because the CPI is assumed to increase annually by 2% in the long term, compared to approximately 2.9% for the RPI<sup>22</sup>. The amount of S2P received at SPA is not changed, as before SPA accruals of S2P are still revalued in line with average earnings growth.
- The phasing and staging of auto-enrolment and the employer contribution will reduce the contributions being paid into NEST, from the individual, the employer and the Government. This will also result in lower private pension incomes for individuals.
- The use of a combination charging structure for NEST will have an ambiguous impact on private pension incomes, and outcomes will vary between individuals. For an individual making persistent contributions over a long period of time, there may be little difference in pension income under a combination charging structure compared to an annual management charge (AMC). However, for individuals who contribute for shorter periods of time or who start making contributions at older ages, the contribution charge element of the combination charge will lead to lower pension incomes, compared to an equivalent AMC.

56. Generally speaking, a higher pension income (from either the state or private pension saving) would tend to increase the value of saving. However, this is not unambiguously true, as the precise impact will depend on a number of other factors such as how pension income changes during retirement relative to means-testing and taxation thresholds.

<sup>22</sup> Consistent with the Bank of England target for CPI, and for the differences in calculation method of composition of the RPI and CPI. The DWP have previously used similar assumptions in long-term projections.

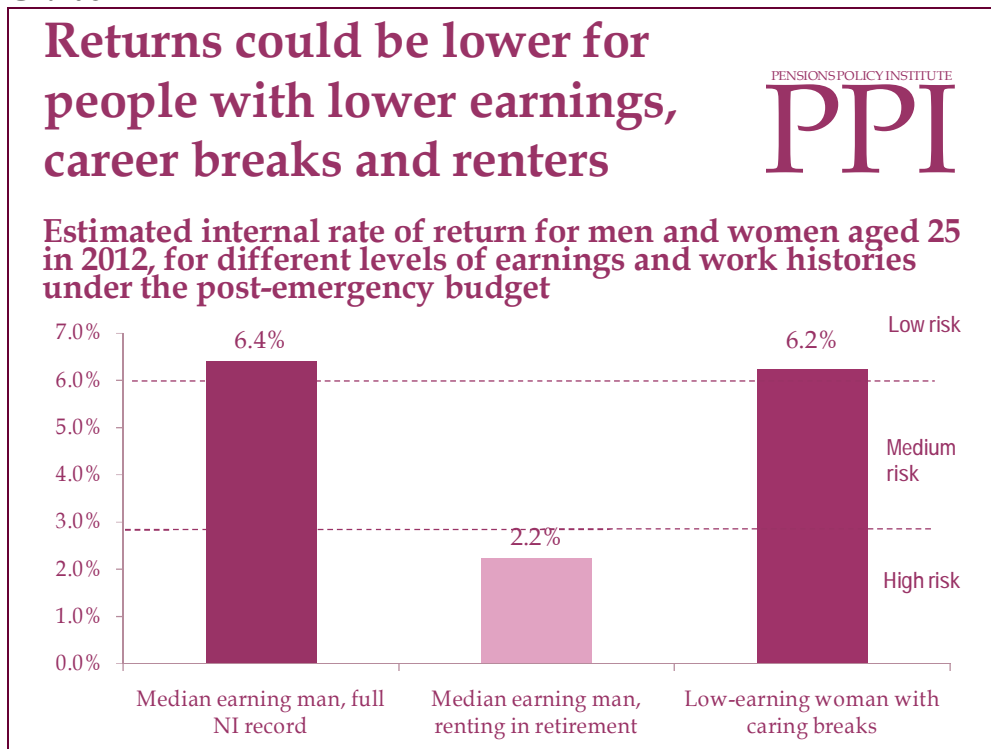
57. As some of these changes increase pension incomes and some decrease pension incomes, and some individuals are more affected by some changes than others, the impact on the value of saving varies between individuals. Chart 2 compares the IRRs of individuals under the system that was in place at the time of the last analysis (rolled forward to 2010) with the system now in place after incorporating the recent policy changes in NEST and state pension indexation.
58. The policy changes tend to increase the value of saving for younger individuals, and reduce the value of saving for older individuals:
- The IRRs of the 25 year old male median earner and 25 year old women with caring breaks are both increased by the policy changes.
  - However, individuals with the same characteristics but aged 55 in 2012 rather than 25 would see lower IRRs after the policy changes.

Chart 2



59. The policy changes do not affect the relative differences in the value of saving between different types of individuals. Individuals with caring breaks, or who rent in retirement, still have lower IRRs than the reference median earner (Chart 3).
- The individual with caring breaks is entitled to a lower state pension and has less private pension income from being auto-enrolled, which reduces her IRR.
  - The individual who rents in retirement is eligible for Housing Benefit, which means that much of the private pension income he receives is offset by the amount of Housing Benefit he loses as a result.

Chart 3



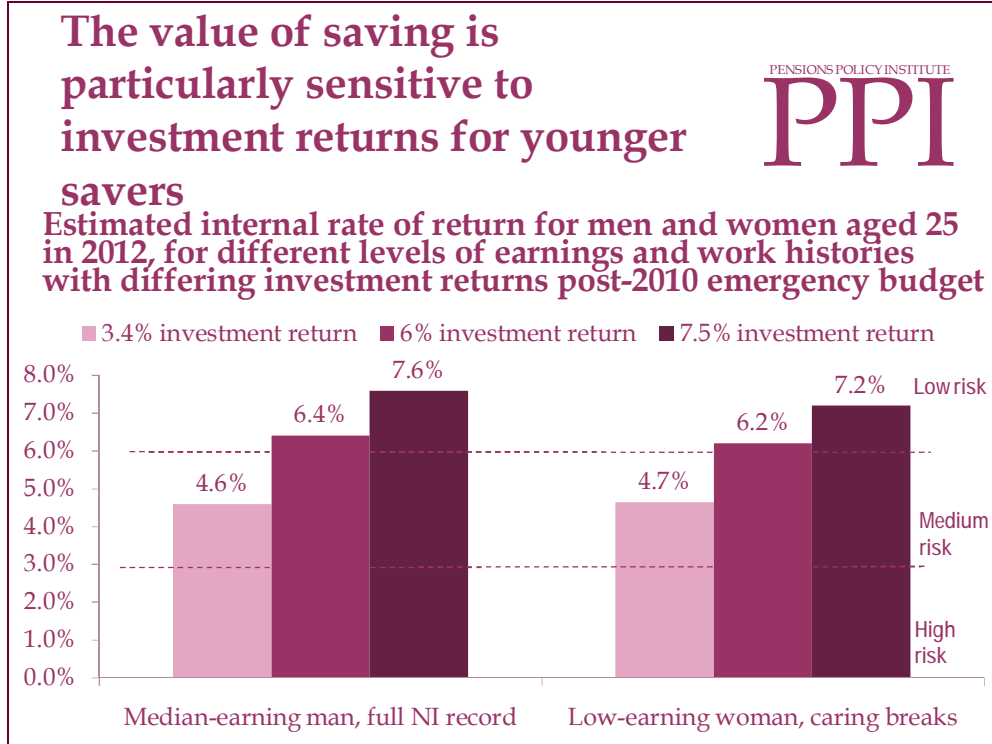
**The value of saving is reduced by low investment returns**

60. An important determinant of the value of saving is the rate of return achieved on investment when accumulating pension assets.
61. The risk categories used in this analysis are set relative to the market rate of return<sup>23</sup> rather than an absolute level – the IRR needed to be in the low risk group is the market rate of return on investments. So if the market rate of return changes, so does the benchmark for the risk groups.

<sup>23</sup> That is, the rate of return achieved on average for all pension saving

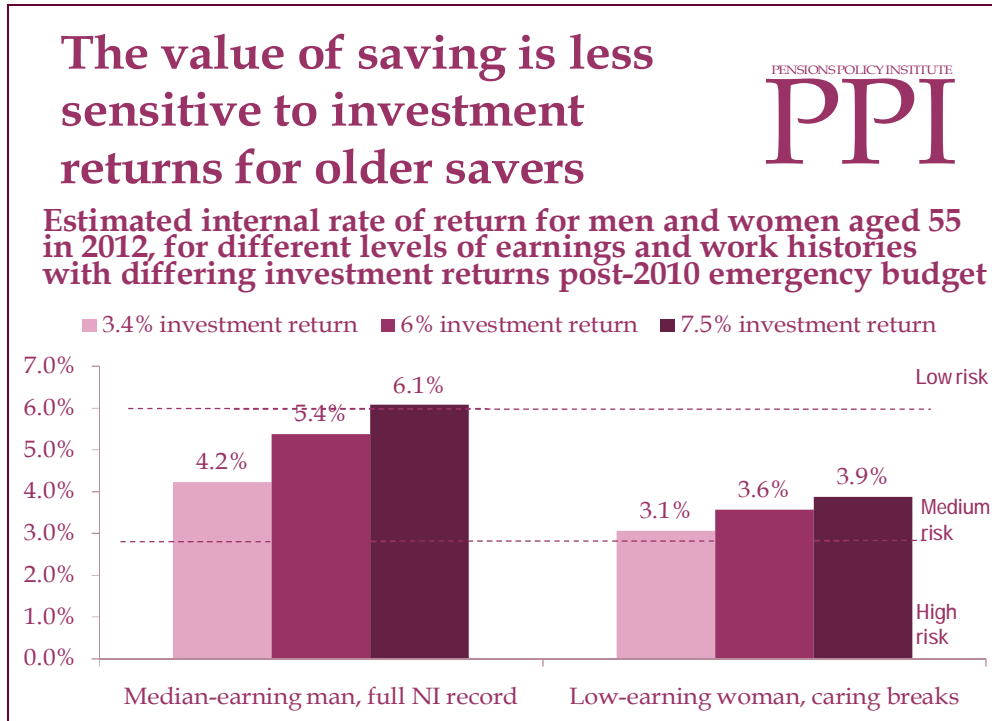
62. However, there will be variation between individuals as to the precise rate of investment return achieved. Often this may be impossible to predict in advance, but in some circumstances – for example if individuals are particularly risk averse or risk taking, or follow very cautious or aggressive investment strategies, they may achieve a rate of return that differs from the market rate used to define the risk groups.
63. For example, some auto-enrolled savers may be cautious investors, and the default fund (or other funds within NESTs) may be more cautious than the market average.
64. The following analysis shows the impact on an individual of achieving a higher or lower investment return than that achieved more broadly in the market:
  - The central assumption used throughout the rest of the analysis is that the nominal rate of return on investments is 6%.
  - The lower return assumption assumes a nominal return of 3.4%. This is based on the minimum return level previously used by the DWP as a benchmark for an acceptable value of saving – achieving a return above the level of inflation after allowing for charges.
  - The higher return assumption assumes a nominal return of 7.5%, 1.5% above the central assumption.
65. Pursuing a more cautious investment strategy can lead to a large reduction in the value of saving (Chart 4):
  - The median earning 25 year old could fall back in to the medium risk category if he only achieved a return on investment of 3.4%.
  - A low earning woman with caring breaks also falls into the medium risk category if she only achieved a return on investment of 3.4%.
  - However, the low earning woman would move further into the low risk category if she achieved a nominal annual investment return of 7.5%.

Chart 4



66. The rate of investment return is less important for older individuals (Chart 5) as there is less time for returns to compound before being turned into a pension income. However, the median earning man could move into the low risk category if he could achieve annual nominal returns of 7.5%.

Chart 5



**Differential mortality will also affect the value of saving**

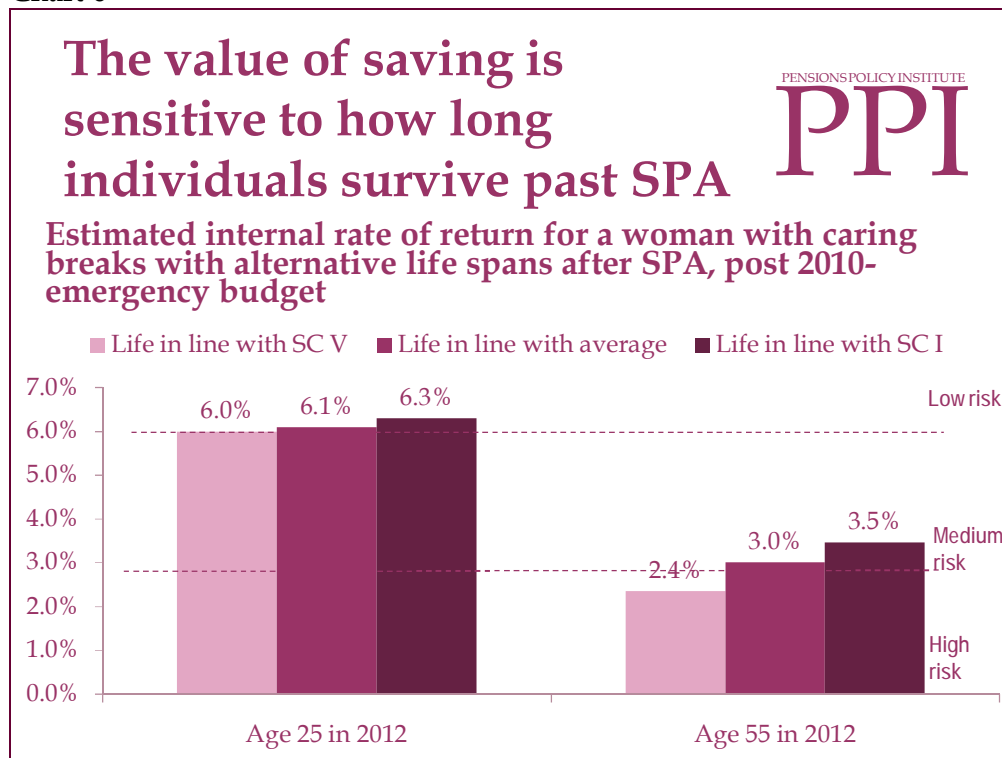
- 67. How long an individual can expect to live for after SPA will also affect the value of saving.
- 68. Although the value of saving is calculated using average life expectancies, in reality there will be a distribution of achieved life expectancy, with some individuals surviving well beyond the average, and some individuals not reaching the average. The longer an individual receives a pension for, the higher the value of saving will be.
- 69. Even though individuals will have different actual lengths of life, it is still reasonable to use an average to calculate the value of saving as the actual life span can not be known at the time that the decision whether to save or not is taken.
- 70. However, there may be some groups where a different 'average' could be used, based on particular characteristics.
- 71. For example, it is well recorded that there are variations in life expectancy by social class. The life expectancy for a man from Social Class I is approximately 2 years longer than the average for all men, and the life expectancy for a man from Social Class V is approximately 2 years shorter than the average for all men.<sup>24</sup>

<sup>24</sup> See PPI (2010) evidence to DWP review of SPA

72. Using a different life expectancy for individuals from different Social Classes can have a significant impact on the value of saving for individuals (Chart 6):

- A low earning woman aged 25 in 2012 would be in the medium risk rather than low risk category if she had Social Class 5 life expectancy rather than the average life expectancy.
- The same woman aged 55 in 2012 would be in the high risk rather than medium risk category if she had Social Class 5 life expectancy rather than the average life expectancy.

Chart 6

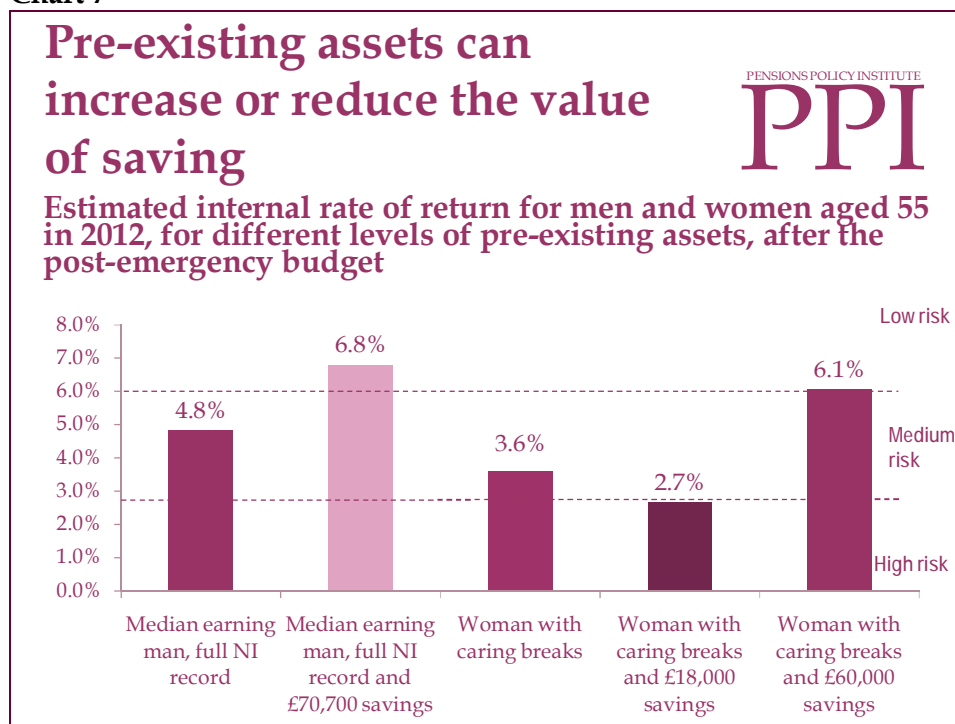


73. This is **not** to say that individuals from different Social Class groups would get a lower value of saving. Rather that there will be variations between individuals as to length of retirement and the actual achieved value of saving. These variations may be significant, particularly for individuals aged 55 in 2012.

**Older individuals have lower values of saving, but may have existing savings**

74. This analysis has highlighted the fact that the value of saving is lower for older individuals than younger individuals (all other things being equal). Recent policy decisions have further worsened the value of saving for older individuals (See for example Chart 2 above).
75. However, it is also the case that older individuals are more likely to have some other form of saving before being auto-enrolled. The median net household financial wealth where the head of the household is aged 55 to 64 was £18,000 in 2006/08, and only £500 for households with a head aged between 25 and 34.<sup>25</sup> The existence of prior savings can, depending on the level of these savings, improve the value of saving from auto-enrolment (Chart 7).

Chart 7<sup>26</sup>



76. A 55 year old median earner with a larger amount of savings (£70,700, equivalent to the third quartile for his age group) would move into the low risk group with an internal rate of return of 6.8%, compared to being in the medium risk group with an internal rate of return of 4.8% if he had no prior savings.

<sup>25</sup> Net household financial wealth excluding households with zero net financial wealth, ONS (2010) *Wealth in Great Britain: Main results from the Wealth and Assets Survey 2006/08*

<sup>26</sup> These figures assume that the pre-existing saving is used to provide an income in retirement rather than spent or kept as a lump sum. See PPI (2006) for further details.



77. However the impact on the value of being auto-enrolled for a 55 year old female carer would depend on the amount of pre-existing savings she has:
- If she has no prior savings before being auto-enrolled she would have an internal rate of return of 3.6%, and be in the medium risk group. She is initially entitled to Savings Credit, and at older ages becomes eligible for Guarantee Credit.
  - If she had the median amount of non-pension savings for her age group (£18,000) she would see a lower value of saving than if she had no prior saving, and be in the high risk group with an internal rate of return of 2.7%. The impact of the initial £18,000 saving is to remove entitlement to Guarantee Credit at older ages, and to reduce entitlement to Savings Credit.
  - If she had the median amount of pre-existing pension saving for her age group (£60,000<sup>27</sup>), then she is not entitled to Savings Credit and so her value of additional saving is high enough to put her in the low risk category.

**How is 'suitability' affected by alternative policy options?**

78. The review is specifically considering a number of potential policy reforms to help make auto-enrolment work better when it is introduced. These include reforms in areas such as:
- The earnings threshold, above which automatic enrolment applies;
  - The introduction of a *de minimis* level for contributions before automatic enrolment applies;
  - The age group to which automatic enrolment should apply;
  - The size of firm to which automatic enrolment should apply;
  - Whether employees should be automatically enrolled on the day they start work or some later date;
  - The availability and capacity of pension providers other than NEST to serve the potential automatically enrolled population; and
  - In the light of these conclusions, whether the policy of establishing NEST, as currently envisaged, is the most effective way to deliver future access to workplace pension saving and income security in retirement.
79. The analysis in this response can provide evidence to assist consideration in the first three of these policy areas. The analysis can also help in the consideration of the potential impact of alternative state pension policies. The PPI has recently undertaken an evaluation for the NAPF of their proposals for a Foundation

<sup>27</sup> ONS (2010) Wealth in Great Britain: Main results from the Wealth and Assets Survey 2006/08

Pension.<sup>28</sup> This analysis builds on that evaluation to consider the impact of introducing a Foundation Pension on the 'suitability' of auto-enrolment.

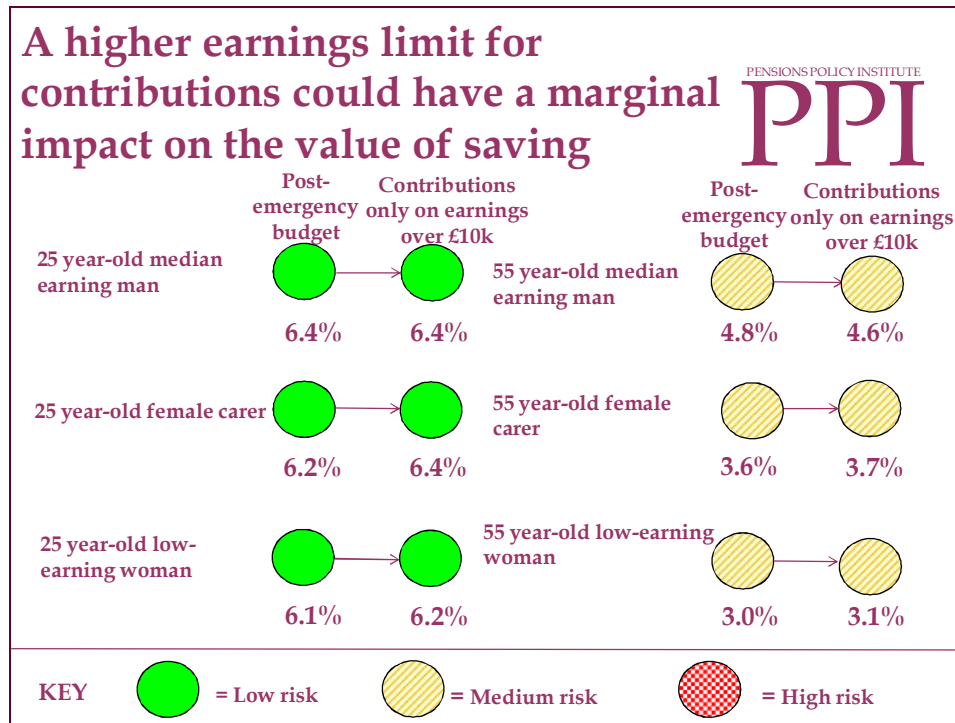
**Earnings level for auto-enrolment and de minimis**

80. One suggestion has been that individuals should only be auto-enrolled and contributions should only be made when earnings are above a higher limit than that currently in legislation (£5,034 in 2006 earnings terms, which is equivalent to approximately £5,720 in 2010 earnings terms). This would mean that individuals with low earnings (who often achieve lower value of saving) would not be auto-enrolled.
81. One alternative would be to only auto-enrol and collect contributions on earnings above £10,000 (in 2010 earnings terms). This would lead to a further 10% (2.5 million) of all individuals in employment not being auto-enrolled. Approximately 10% earn below the existing planned earnings threshold and a further 10% earn between the planned threshold and £10,000.<sup>29</sup>
82. However, every individual who was still auto-enrolled would make (and receive from the Government and their employer) lower contributions than in the existing legislation, and so receive a lower pension income. In many cases this would result in a reduced value of saving, as savings are more likely to be offsetting means-tested benefits. However, changes are relatively small (Chart 8).

<sup>28</sup> See PPI (2010) A Foundation Pension: A PPI evaluation of NAPF proposals and NAPF (2010) Fit for the future: NAPF's vision for pensions

<sup>29</sup> PPI analysis of 2009 ASHE results, table 1\_1a

Chart 8



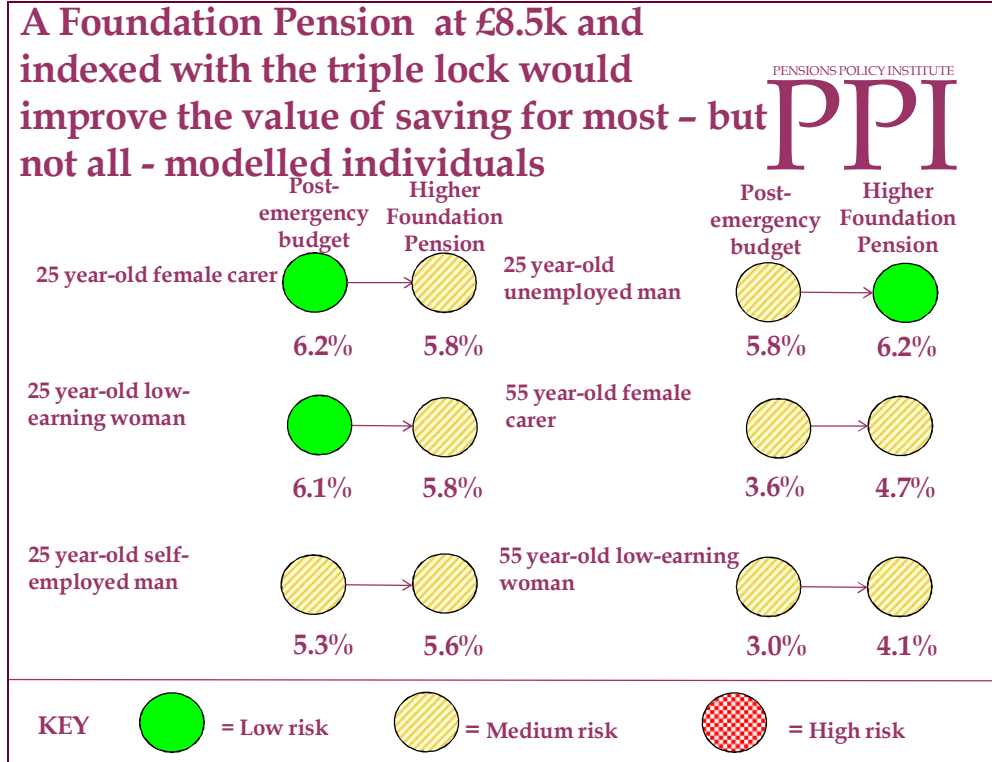
83. Individuals who spend some years not being auto-enrolled as a result of a higher earnings limit for contributions include the carer, who spends some time in part-time work and so earns less than £10,000 in some years, and the low earning woman. In these example (at age 25 and 55) the value of saving is marginally increased by making fewer small contributions, even though total pension income is lower as a result. In some cases this is due to interactions with income tax (lower incomes reduce income tax paid), and in others with the interaction between small amounts of private pension income and eligibility to different means-tested benefits later in retirement.
84. The impact of having a minimum earnings threshold of £10,000 on those earning above this level could be removed by using a de minimis rule – for example, only auto-enrolling individuals earning above £10,000, but set contributions on earnings over the original threshold of £5,000 (in 2006 earnings terms).
85. Introducing a rule such as this would lead to no change in the value of saving for the majority of the individuals modeled in this analysis. Even the carer and low earning woman examples would see very little change in the value of saving (negligible in the figures calculated).

### **Introducing a Foundation Pension**

86. The Foundation Pension<sup>30</sup> is a single state pension combining the current Basic State Pension and State Second Pension, payable to every individual over state pension age if they have accumulated at least 30 years of National Insurance contributions. Once the Foundation Pension has been introduced, individuals would no longer accrue S2P entitlement, or the contracted-out equivalent. Guarantee and Savings Credit would be needed by fewer people, depending on the level of the Foundation Pension. NAPF has proposed introducing a Foundation Pension worth £8,000 a year (in 2010 earnings terms) in 2017.
87. The impact of introducing a Foundation Pension on the value of saving will depend on the level of the Foundation Pension and how it is indexed:
- The proposed level of £8,000 for the Foundation Pension was chosen by the NAPF to replicate the amount received in BSP and S2P by an individual with full BSP and S2P when reaching SPA around 2050. However, since the proposals were made the new Government introduced the triple lock for BSP, which effectively increases the BSP faster than average earnings growth over the long term. As a result, the median earning individual aged 25 in 2025 in this analysis would receive BSP and S2P worth approximately £8,500 a year when reaching SPA in 2055.
  - The original proposal by the NAPF suggested that the Foundation Pension would be increased each year in line with average earnings. This would now be lower than the annual increase in the BSP.
88. The original policy intention behind the Foundation Pension was to speed up the transition to a flat-rate pension system implied in the 2007 reforms, and to pay an initial pension at the same level as the current system would eventually deliver. Given the recent changes in the indexation of the BSP, this would now require a Foundation Pension of £8,500 a year, increased each year with the triple lock.
89. If a Foundation Pension was introduced at £8,500 a year increased in line with the triple lock, nearly all modelled individuals would see an increase in the value of saving (Chart 9).

<sup>30</sup> For further information and a detailed analysis of this option see PPI (2010) *A Foundation Pension: A PPI evaluation of NAPF proposals*

Chart 9



90. The modelled individuals who see a reduced value of saving in this scenario are the 25 year old carer and low earning woman. This is due to a combination of:
- The interaction between the indexations of different parts of the system, and in particular S2P increasing in line with CPI and CTB increasing in line with earnings in the current system (under the current system both have a full S2P). This leads to falls in CTB arising from higher private pension income being offset by increases in CTB due to falls in S2P.
  - The Foundation Pension increasing income high enough to trigger payments of income tax at older ages.
91. Table 2 illustrates this for the 25 year old carer. Without being auto-enrolled, she would be eligible for council tax benefit under both the post-emergency budget pension system and the Foundation Pension. However, as income from the Foundation Pension increases over time, eligibility to council tax benefit reduces over time, and the amount of income tax increases.<sup>31</sup> Under the post-emergency budget system, eligibility to council

<sup>31</sup> The modelling used here assumes that the increase in the income tax personal allowance announced in the Emergency Budget is introduced, but does not allow for any extra increases on top of annual increases in line with average earnings after this. If the personal allowance is increased beyond this (in line with the intention to increase the basic income tax personal allowance from £6,448 to £10,000), the modelled carer would not pay income tax even allowing for the extra income from being auto-enrolled.

tax benefit increases over time, but income is not high enough to trigger income tax payments.

92. After auto-enrolment, eligibility for council tax benefit is reduced in both scenarios. Income is also high enough for income tax to be paid in both scenarios when the carer is aged 68. However, with a Foundation Pension income tax paid is higher throughout retirement, whereas under the post-emergency budget system income reduces to fall below income tax thresholds over time. As a result, the gains from saving are lower under the Foundation Pension system.
93. This illustrates the difficulty in predicting how policy changes will affect the value of saving at an aggregate level – the underlying systems are so complex that the impact will depend very much on specific individual circumstances.
94. As well as changing the value of saving, introducing a Foundation Pension would increase the cost to the state of paying state pensions. Earlier this year the PPI published the estimated cost of both the current system (as it was before the General Election in May 2010) and a Foundation Pension of £8,000 and indexed to earnings, which suggested that a Foundation Pension might add an additional 1.5% of GDP in 2017 to Government spending on state pensions, and an additional 0.9% of GDP by 2050 (before allowing for potential savings from other measures such as ending contracting-out, higher NI contributions and a higher SPA) (Table 3). However, as described above there have been significant changes to the state pension system, other potential changes still to come (such as in SPA, and following on from the Comprehensive Spending Review in October), that mean that the costs of the current pension system and the level indexation and cost of a Foundation Pension might need to be re-evaluated at a later time once the details of these further policy changes have been explored.

**Table 2: Income from different sources for the 25 year old carer under different policy scenarios, 2010 earnings terms**

	2055, age 68	2060, age 73	2065, age 78	2070, age 83	2075, age 88		2055, age 68	2060, age 73	2065, age 78	2070, age 83	2075, age 88
<b>Current system after the 2010 emergency budget</b>							<b>Foundation Pension at £8,500 (2010 earnings terms)</b>				
<b>Income without being auto-enrolled</b>											
<b>State Pension</b>	£174	£169	£164	£160	£157		£187	£190	£193	£196	£199
<b>Private Pension</b>	-	-	-	-	-		-	-	-	-	-
<b>Council Tax Benefit</b>	£10	£11	£11	£12	£12		£7	£7	£6	£5	£5
<b>Less Income Tax</b>	-	-	-	-	-		£1	£2	£2	£2	£3
<b>Net Income</b>	<b>£184</b>	<b>£179</b>	<b>£176</b>	<b>£172</b>	<b>£170</b>		<b>£193</b>	<b>£195</b>	<b>£197</b>	<b>£199</b>	<b>£200</b>
<b>Income after being auto-enrolled</b>											
<b>State Pension</b>	£174	£169	£164	£160	£157		£187	£190	£193	£196	£199
<b>Private Pension</b>	£33	£26	£21	£17	£14		£33	£26	£21	£17	£14
<b>Council Tax Benefit</b>	£4	£5	£7	£9	£10		£2	£2	£2	£2	£2
<b>Less Income Tax</b>	£3	£1	-	-	-		£6	£6	£5	£5	£5
<b>Net Income</b>	<b>£207</b>	<b>£199</b>	<b>£192</b>	<b>£186</b>	<b>£180</b>		<b>£215</b>	<b>£212</b>	<b>£211</b>	<b>£210</b>	<b>£209</b>
<b>Net gain from being auto-enrolled</b>											
	£24	£20	£17	£14	£11		£22	£18	£14	£11	£9

**Table 3: Costs of State Pensions and related benefits under the state pension system in place as at May 2010, and the costs of introducing Foundation Pension at £8,000 in 2010 earnings terms (the level of a 'full' BSP and S2P in 2050) in 2017 (£bn in 2010 earnings terms)**

	2017	2030	2050
<b>Spending on State Pensions and related benefits</b>	89	111	123
<b>% GDP</b>	5.5%	6.5%	6.6%
<b>Extra spending on State Pensions and related benefits after the introduction of the Foundation Pension</b>	+25	+21	+17
<b>Extra Spending as a % GDP</b>	+1.5%	+1.2%	+0.9%

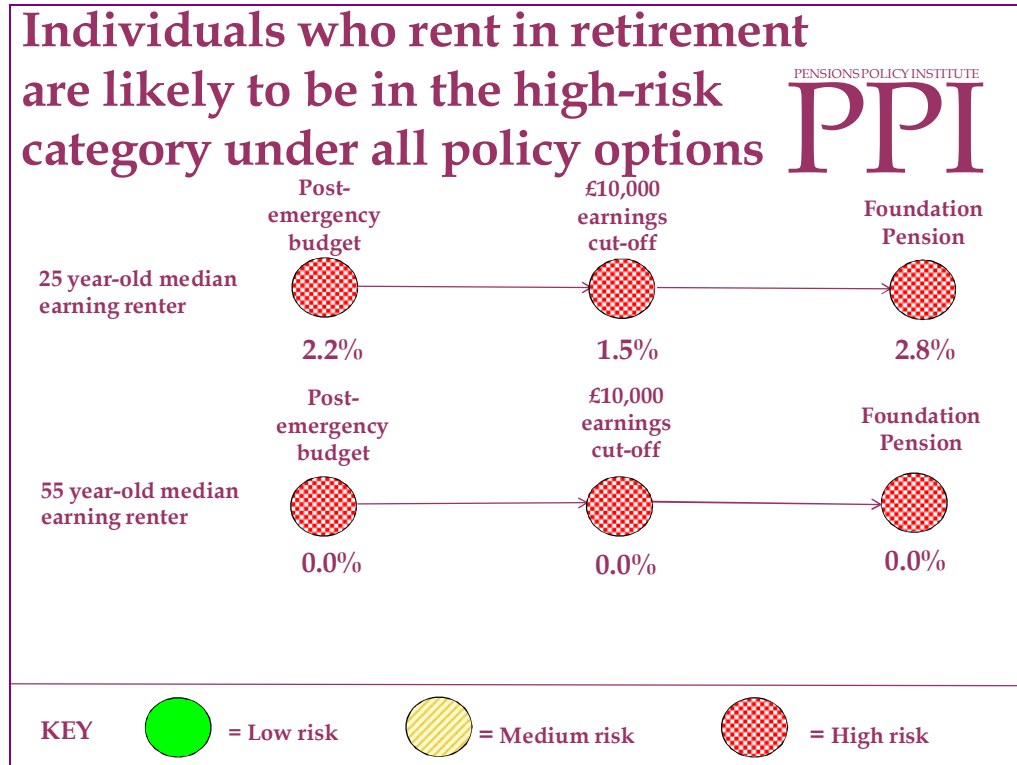
95. Further analysis should compare the relative levels of expenditure as well as the broader impact on individuals, pensioner poverty and the value of saving PPI plans to undertake analysis in these areas in the next few months.

**None of the policy options considered completely overcome issues with Housing Benefit**

96. One of the groups identified in previous research as being most at risk of receiving a low value of saving from being auto-enrolled is those individuals who rent in retirement and who would be eligible for large amounts of housing benefit if they were not auto-enrolled. Under all of the policy options examined in this response, a median earning man who rents in retirement would remain in the high risk category (Chart 10).
- For this individual aged 25 he would get back less than the value of his own contributions after allowing for inflation under the post-emergency budget system and a Foundation Pension, although under a Foundation Pension he is very close to getting his inflation-adjusted contributions returned.
  - For this individual aged 55, he gets an effective 0%IRR from being auto-enrolled under all policies. This is because he sees very little increase in total income after retirement from being auto-enrolled.



Chart 10



#### Potential for oversaving

97. Some individuals who would be auto-enrolled, even with a higher minimum earnings level, would have a high 'replacement rate' even if they did not save (Charts 11 and 12).
98. This is because the combination of the 30 qualifying year rule and the triple lock for BSP, and the introduction and broadening of credits for S2P, mean that state pension entitlements can be relatively generous in future for low earners.
99. The low earning woman has a replacement rate (after allowing for income tax and National Insurance contributions) before saving of over 100%. They may not therefore need to smooth income by saving when working to further increase pension income for retirement.
100. Low earning individuals also tend to have a lower value of saving. Under the post 2010 emergency budget system, the age 55 low earning woman's IRR is only just above the RPI, so she is close to the high risk category if she is single in retirement (Chart 2). She may therefore be less likely to benefit from auto-enrolment than higher earning individuals, who receive a lower replacement rate from state pensions and receive more value from being auto-enrolled.

Chart 11

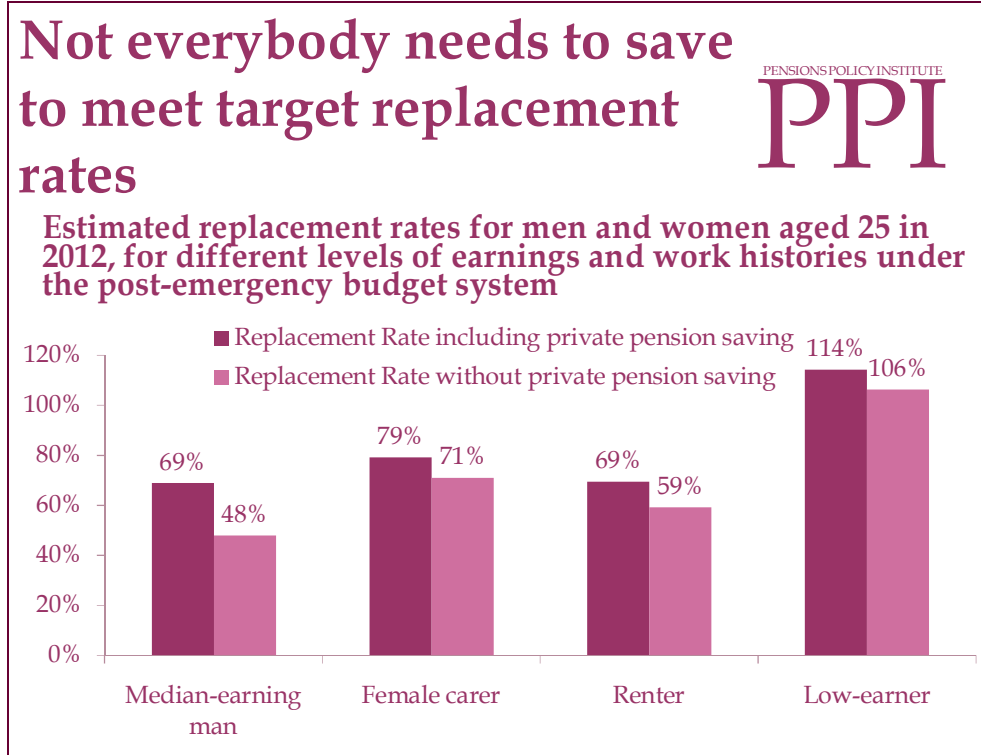
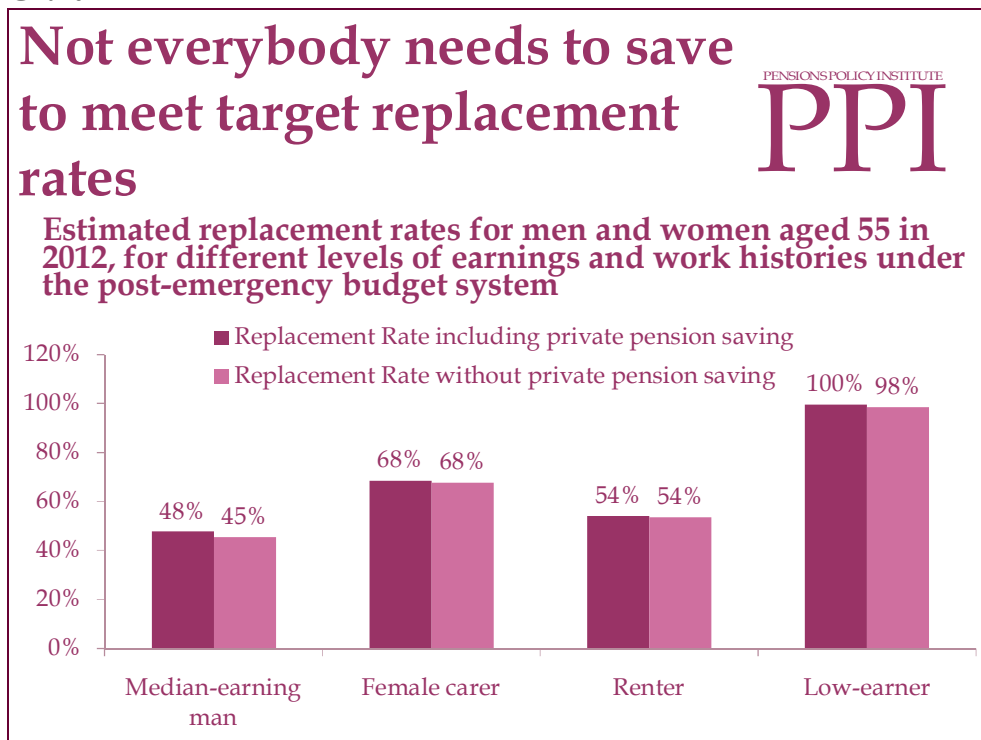


Chart 12



### Annex 1: Individuals modeled and modelling assumptions

**A) Median-earning man:** An individual who is in full-time work from leaving education until retiring at state pension age. He<sup>32</sup> has the maximum number of qualifying years for Basic State Pension (BSP) and State Second Pension (S2P). He contributes to NEST continuously from 2012 until reaching SPA.

**B) Caring woman:** An individual with two short career breaks for caring. She is out of work for six years in her late twenties and early thirties to care for her child, during which she receives credits to BSP and S2P. After six years, she works part-time for five years and then full-time until her mid-fifties, when she is out of work for five years to care for an elderly relative. It is assumed that this second period of caring does not qualify for credits for BSP and S2P, perhaps because she does not care for the 20 hours per week required for a credit. After these five years of caring, she returns to work until she retires at state pension age. She and her employer contribute to NEST while she is working but not during her 11 years of caring.

**C) Unemployed man:** An individual with a total of 19 years of unemployment. When he is unemployed, he receives Jobseekers Allowance or Incapacity Benefit. He contributes to NEST from 2012 when in work.

**D) Median-earning man, renting in retirement:** The same as individual A, except that he is assumed to rent accommodation in retirement. He is therefore potentially eligible for Housing Benefit, if his income is low enough to qualify. He is assumed to pay £70 a week in rent<sup>33</sup>, increasing in line with growth in average earnings.

**E) Self-employed man:** An individual who is employed until age 40 and then becomes self-employed. When he is employed, he stays opted in to NEST. When he is self-employed, he voluntarily opts in, contributing the standard employee amount of 5% of band earnings, including the tax relief component. He does not receive an employer contribution when he is self-employed.

**F) Median-earning man with large savings:** The same as individual A, except that he is assumed to have other private saving on top of his NEST saving, equal to £70,700 in 2010 earnings terms by the time he reaches age 55<sup>34</sup>.

**G) Caring woman with smaller savings:** The same as individual B, except that she is assumed to have other private saving on top of her auto-enrolled saving, equal to around £18,000 in 2010 earnings terms by the time she reaches age 55<sup>35</sup>.

**H) Low earning woman:** An individual earning at the 10<sup>th</sup> percentile for female earners. She works full-time for her entire career except for 10 years part-time work from her mid-thirties. She contributes to a NEST continuously from 2012 until reaching SPA.

<sup>32</sup> For the purposes of illustration some individuals are taken as being male and others female. Males and females have different life expectancies and therefore different internal rates of return. Results for all of hypothetical individuals are included in the appendix, for comparable people of either sex.

<sup>33</sup> £70 is the average amount of rent for today's Housing Benefit claimants, DWP (2006 HB) Table HB1.5

<sup>34</sup> PPI assumption consistent with the 3<sup>rd</sup> quartile of saving among households with a head aged 55 - 64 in the 2006/8 Wealth and Assets Survey

<sup>35</sup> PPI assumption consistent with the median level of saving among households with a head aged 55 - 64 in the 2006/8 Wealth and Assets Survey

## **Modelling assumptions**

This annex describes modelling assumptions used in this report. The modelling uses the PPI's Individual Model that was developed with a grant from the Nuffield Foundation.

## **Individual modelling**

The modelling of the pension pot sizes of hypothetical individuals uses the PPI Individual Model. Detailed assumptions have been made about the individuals' working and saving behaviours and these are described in the boxes above. Throughout, the modelling assumes:

- Future annual price inflation of 2.87%.
- Future annual Consumer Price Inflation of 2%.
- Future annual Triple-lock inflation of 4.75%<sup>36</sup>.
- Future annual earnings growth of approximately 1.5% in excess of prices (nominal annual earnings growth of 4.5%).
- Expected investment returns of approximately 3% in excess of prices, before charges, corresponding to a mixed equity/bond fund (nominal expected investment returns of 6.0%).

## **Post-2010 budget assumptions**

- Annual management charges of 0.5% of assets under management.
- BSP increases in-line with earnings inflation from 2012.
- SERPS/S2P increases in-line with RPI.

## **Post-2010 emergency budget assumptions**

- Annual management charges of 0.3% of assets under management.
- Contribution charge of 2%.
- Phased introduction of employer contributions – 1% from 2012 to 2016, 2% from 2016 to 2017 and 3% thereafter.
- BSP increases in-line with triple-lock inflation from 2011.
- SERPS/S2P increases in-line with CPI.

## **Foundation Pension assumptions**

As with post-emergency budget assumptions, plus:

- Introduction of the Foundation Pension in 2017 £167/week in 2010 earnings terms. This is because the Foundation Pension at £154/week was to replicate the maximum BSP + SERPS/S2P available in 2050, when BSP was due to be earnings linked and SERPS/S2P RPI linked. With BSP now triple-lock linked, the maximum BSP + SERPS/S2P available in 2050 will be £167/week, in 2010 earnings terms.

<sup>36</sup> The Triple-lock increases BSP by the higher of earnings inflation, CPI or 2%.