# **PENSIONS POLICY INSTITUTE**



# Case studies for Scottish Widows

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A PPI Technical Paper

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# **Introduction**

The Government published proposals for reform of the state pension system in May 2006<sup>1</sup>.

Scottish Widows has commissioned the Pensions Policy Institute (PPI) to produce a series of case studies illustrating the potential outcomes of the reforms on different illustrative individuals.

For each case study the amount of state pension income and income from Personal Accounts is calculated assuming that the proposals outlined in the White Paper are introduced. Calculations are made at state pension age, and also ten years after state pension age to illustrate how the amount of income received varies through retirement.

It is important to appreciate that outcomes are not certain and depend on a number of assumptions, such as real earnings growth, and charges and investment returns from Personal Accounts.

No series of case studies can be fully representative of the population as a whole. The case studies in this report are all single individuals rather than couples and they all have fairly full contribution histories and long periods of contributions to Personal Accounts. People with fewer years of contributions would be expected to receive less than the individuals illustrated.

The common assumptions used in the case studies, for example how different parts of the state pension system are uprated, rates of inflation, rates of earnings growth, and charges and investment returns from Personal Accounts, are outlined in the appendix to this report.

For each case study a number of specific assumptions are also made, for example whether they work and their age-specific earnings. These are outlined in the case studies themselves.

<sup>1</sup> DWP (2006 WP)

### **Summary of conclusions**

Scottish Widows has commissioned the Pensions Policy Institute to produce a series of case studies illustrating the potential outcomes of the state pension reforms in the White Paper *Security in retirement: towards a new pension system* on different illustrative individuals.

A median-earning man could receive  $\pounds74$  a week (in 2006/7 earnings terms) from a Personal Account at state pension age (68), if he stays opted in from age 22 until retiring three years before state pension age at age 65. This would be on top of a state pension of around £137 a week.

- Working longer, until the new state pension age of 68, could increase his weekly Personal Account income from £74 to £98.
- Opting out of Personal Accounts until age 28 could reduce his weekly Personal Account income from £74 to £66.
- Increasing his contributions to 5.8% of salary, the latest Scottish Widows Average Savings Ratio, could increase his weekly Personal Account income from £74 to £96.

A median-earning woman could receive £51 a week from a Personal Account at state pension age (68), if she stays opted in from age 22 to her retirement at age 65. This is less than the £74 the median-earning man could receive because of her lower earnings and higher life expectancy. This would be on top of a state pension of around £136 a week.

- Taking career breaks for childcare and eldercare and working parttime for 5 years could reduce her weekly Personal Account income from £51 to £30. Her weekly state pension could be reduced from £136 to £128.
- If, in addition to the career breaks and part-time work, she was a low earner, her weekly Personal Account income could be reduced to £22.
- If, in addition to the career breaks and part-time work, she retired at age 60, but still earned median earnings, then her weekly Personal Account income could be reduced to £18.

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A lifetime self-employed person would not receive employer contributions to Personal Accounts and would not be entitled to State Second Pension. If he earned at median earnings and contributed the equivalent of the employee contribution to Personal Accounts from age 22 until retiring at age 65, then he could receive £46 from a Personal Account and £76 from Basic State Pension, at state pension age (68). He could be eligible for Pension Credit unless his business is worth £37,000 or more.

- Opting-in twenty years later could reduce his weekly Personal Account income from £46 to £24.
- Doubling his contributions could double his weekly Personal Account income from £46 to around £93.
- If he worked until age 70, while still contributing to a Personal Account, then he could receive £68 a week from his Personal Account at age 70. If he deferred his Basic State Pension to age 70, then it could be increased from £76 to around £92.

For all of the individuals, income would decrease in retirement, relative to average earnings. This is because, although Basic State Pension would be indexed to average earnings, income from State Second Pension would increase with prices in retirement. Further, a level annuity is assumed to be chosen for Personal Accounts so that payments are fixed in cash terms during retirement.

For example, the median-earning man's weekly income from his Personal Account could reduce from £74 to £48 between the ages of 68 and 78, and his weekly state pension could reduce from £137 to £126 over the same period.

Outcomes from state pensions and Personal Accounts will depend on many factors, including work histories and age. All of the individuals illustrated are aged 22 when the reforms are assumed to be introduced in 2012 and many have relatively full work histories. Income from state pensions and Personal Accounts is likely to be lower for people with broken work histories. Today's older people are likely to receive less from Personal Accounts because there are fewer years in which they can contribute.

## **Background on Pension Credit**

This introductory section gives some background to Pension Credit because it could affect some of the case studies shown in this report.

Pension Credit consists of two elements, Guarantee Credit and Savings Credit. When Pension Credit was first announced, the Government's aim in introducing Guarantee Credit was stated as ensuring that the poorest people over age 60 have a minimum level of income, while the aim in introducing Savings Credit was stated as rewarding saving<sup>2</sup>.

Both Guarantee Credit and Savings Credit are means-tested benefits, so amounts depend on how much income people have. They are awarded on a household basis, so for couples living together the appropriate income to consider is the combination of the two partners' incomes.

The calculation of both Guarantee Credit and Savings Credit eligibility is based on combined state and private income. Some types of capital can also count as 'notional income' in the calculation. So whether the households are eligible can depend on how much they save for retirement and work past state pension age.

The calculation of Guarantee Credit and Savings Credit is complicated. Broadly<sup>3</sup>:

- If the households in the case studies have an income of less than the Guarantee Credit level, they would be eligible to have their income topped up to that level.
- For every £1 of income between the lower threshold for Savings Credit and the Guarantee Credit level, households are eligible for 60p of Savings Credit. Savings Credit is slowly withdrawn for those with incomes between the Guarantee Credit level and the upper threshold for Savings Credit, at the rate of 40p for each additional £1 of income, so that Savings Credit is not received by households with income higher than the upper threshold for Savings Credit.

The thresholds for single pensioners are shown in Table 1 below for the years in which the case studies in this report reach state pension age and age 78.

<sup>2</sup> DSS (2000)

<sup>&</sup>lt;sup>3</sup> For more information, see DWP (2005)

|                        | When the case studies<br>reach state pension age<br>(in 2058) | When the case studies<br>reach age 78 (in 2068) |
|------------------------|---|---|
| Guarantee Credit level | £114  | £114  |
| Lower threshold for    |   |   |
| Savings Credit         | £101  | £103  |
| Upper threshold for    |   |   |
| Savings Credit         | £134  | £130  |

Table 14: Projected Pension Credit thresholds for single pensioners under the White Paper proposals, in £ per week, 2006/7 earnings terms

What combination of Guarantee Credit and Savings Credit a household is eligible for has implications for the marginal withdrawal rate that they face on additional saving:

- If households are eligible for Guarantee Credit but not Savings Credit (for example, if their income is below the lower threshold for Savings Credit), then they face a marginal withdrawal rate of 100% on additional saving. £1 of additional saving will mean £1 less of Guarantee Credit, so no overall gain.
- If households are eligible for Savings Credit, whether or not they are eligible for Guarantee Credit (for example, if their income is between the lower and upper thresholds for Savings Credit), then they face a withdrawal rate of 40% on additional saving.

Pension Credit is a benefit that has to be claimed. Not everybody claims the benefit to which they are eligible<sup>5</sup>:

- Around three-quarters of households who are eligible for the Guarantee Credit element (whether or not they are also eligible for the Savings Credit element) take up their benefit.
- Take-up is lower for households who are only eligible for the Savings Credit element. Less than one-half of such households take up their benefit.

This imperfect take-up means that some households do not have income as high as the Guarantee Credit level.

 $<sup>^4</sup>$  PPI analysis, assuming 2.0% real earnings growth consistent with all analysis in this report

<sup>&</sup>lt;sup>5</sup> Midpoints of ranges of take-up estimates by caseload in DWP (2006 TU)

### **Case studies**

#### Example 1: A single man

The median-earning man works from age 18 to retirement at age 65 in 2055. When in work, he earns at age-specific median earnings for men<sup>6</sup>. He and his employer contribute the minimum amount to a Personal Account<sup>7</sup> from 2012, when he is aged 22, until retirement.

Three variants have also been modelled:

- Variant A: As the main example but he works for three years longer, to state pension age (age 68), still contributing to a Personal Account.
- Variant B: As the main example but he opts-out of Personal Accounts until age 28.
- Variant C: As the main example but he contributes more: 5.8% of gross earnings rather than the Personal Account minimum contribution for employees of 5% of band earnings<sup>8</sup>. The 5.8% is the Scottish Widows Average Savings Ratio, a measure of how much, on average, people are saving for retirement<sup>9</sup>. It represents contributions that are around 30% higher than the Personal Account minimum<sup>10</sup>. His employer still contributes the Personal Account minimum of 3% of band earnings.

**Outcomes under the White Paper proposals** 

On the assumptions used, the main example of a median-earning man would receive around £211 a week at state pension age, made up the full Basic State Pension (BSP) of £76 a week, £61 a week in State Second Pension (S2P) and £74 a week from his Personal Account<sup>11</sup>.

 $<sup>^6</sup>$  Around £18,500 at age 25, increasing to around £27,000 by age 40 and declining at older ages, in 2006/7 earnings terms

 $<sup>^7</sup>$  A total of 8% of gross salary between the Primary Threshold and the Upper Earnings Limit, including the tax relief component

<sup>&</sup>lt;sup>8</sup> Both the 5.8% and the 5% include tax relief

<sup>&</sup>lt;sup>9</sup> It is based on a sample of workers earning more than £10,000 a year and aged between 30 and state pension age, including those who have no pension provision at all, but excluding those who say they have a Defined Benefit pension scheme as their main pension provision Scottish Widows (2006) Appendix A

<sup>&</sup>lt;sup>10</sup> The Personal Account minimum contribution of 5% applies only between the Primary Threshold and the Upper Earnings Limit while the 5.8% contributed by Variant C applies to all earnings. Variant C therefore contributes significantly more than the Personal Account minimum, by around 30%.

<sup>&</sup>lt;sup>11</sup> The median-earning man's combined state pension of £137 at state pension age is slightly higher than the £135 illustrated in the White Paper. The median earning-man works for 47 years rather than the 40 years illustrated in the White Paper. Assuming age-specific earnings also affects his state pension income. DWP (2006 WP) paragraph 3.15.

Working for three years longer (Variant A) would increase his weekly income from his Personal Account, from £74 to £98 (32%) at state pension age. The impact on his state pensions would be small because, even though he works longer, he still stops work at state pension age and does not defer his state pension. However, his income from S2P would be slightly higher as he contributes for three more years.

Delaying contributions by 6 years (Variant B) would decrease his weekly income from his Personal Account, from £74 to £66 (11%) at state pension age. Working for three years longer would more than offset this reduction. Paying higher contributions (Variant C) would increase his weekly income from his Personal Account, in proportion to the increase in his contributions, from £74 to £96 (30%) at state pension age.

For all of the examples, income is expected to decrease over retirement, relative to average earnings. This is because, although BSP is indexed to average earnings, income from S2P is only increased with prices in retirement, and a level annuity is assumed to be chosen for Personal Accounts.

All of the examples are above Pension Credit levels, both at state pension age and at age 78.

|                      | Median-    | Variant A: | Variant B: | Variant C:    |
|----------------------|------------|------------|------------|---------------|
|                      | earning    | working    | delayed    | higher        |
|                      | man        | longer     | savings    | contributions |
| At state pension age | e (age 68) |            |            |               |
|                      |            |            |            |               |
| BSP                  | £76        | £76        | £76        | £76           |
| S2P                  | £61        | £64        | £61        | £61           |
| Personal Account     | £74        | £98        | £66        | £96           |
| Pension Credit       | -          | -          | -          | -             |
| Total                | £211       | £239       | £203       | £233          |
|                      |            | (+13%)     | (-4%)      | (+10%)        |
| At age 78            |            |            |            |               |
| DCD                  | 070        | 070        | 070        | 070           |
| BSP                  | £76        | £76        | £76        | £76           |
| S2P                  | £50        | £53        | £50        | £50           |
| Personal Account     | £48        | £63        | £42        | £62           |
| Pension Credit       | -          | -          | -          | -             |
| Total                | £173       | £192       | £168       | £188          |
|                      |            | (+11%)     | (-3%)      | (+9%)         |

Table 212: Projected pension income, in £ per week, 2006/7 earnings terms

<sup>12</sup> PPI analysis using the Individual Model. Rows may not add due to rounding.

#### **Example 2: A single woman**

The median-earning woman works from age 18 to retirement at age 65 in 2055. When in work, she earns at age-specific median earnings for women<sup>13</sup>. She and her employer contribute the minimum amount to a Personal Account<sup>14</sup> from 2012, when she is aged 22, until retirement.

Three variants have also been modelled:

| Variant A: | As the main example but she has two career breaks. She is out<br>of work for six years in her late twenties and early thirties to<br>care for her child, during which she receives credits to BSP and<br>S2P. After the six years, she works part-time for five years and<br>then full-time until her mid-fifties, when she is out of work for<br>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<br>S2P, perhaps because she does not care for the required 20<br>hours per week. After these five years of caring, she returns to  |
|            | work until she retires at age 65. She and her employer contribute to a Personal Account while she is working but not  |
|            | during her 11 years of caring.  |
| Variant B: | As Variant A but when she is in full-time work she earns at the 3rd decile of the female earnings distribution rather than at the median <sup>15</sup> .  |
| Variant C. | As Variant A but she does not return to work often her five   |

Variant C: As Variant A but she does not return to work after her five years of eldercare but instead takes her Personal Account pension from age 60.

#### **Outcomes under the White Paper proposals**

On the assumptions used, the main example of a median-earning woman would receive around £187 a week at state pension age, made up the full BSP of £76 a week, £60 a week in S2P and £51 a week from her Personal Account.

Taking career breaks (Variant A) would significantly decrease her total weekly pension income, from £187 to £158 at state pension age (a reduction of 16%):

- Her income from S2P would be £8 a week lower (a reduction of 13%), as she is assumed not to receive credits when she is caring for an elderly relative.
- Her income from her Personal Account would be £21 a week lower (a reduction of 41%) because she would have fewer years of contributions and also lower contributions when she works part time.
- Her income from BSP would not be reduced because, although she is assumed not to receive credits when she is caring for an elderly relative, she would still have more than the 30 qualifying years required for a full BSP.

 $^{13}$  Around £17,000 at age 25, increasing to around £20,000 by age 40 and declining at older ages, in 2006/7 earnings terms

<sup>14</sup> A total of 8% of gross salary between the Primary Threshold and the Upper Earnings Limit, including the tax relief component

 $^{15}$  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. The 3rd decile of the female earnings distribution is around £14,000 at age 25, increasing to around £16,000 by age 40 and declining at older ages, in 2006/7 earnings terms.

The combination of career breaks <u>and</u> lower earnings (Variant B) is cumulative: the combination would reduce her total weekly pension income from £187 to £149 at state pension age (a reduction of 20%). Lower earnings would not significantly impact her state pension income because S2P would be almost flat-rate by the time she makes most of her contributions, but it would impact her income from her Personal Account.

Retiring much earlier than state pension age (Variant C) could have a larger impact on her total weekly pension income than having lower earnings during her working life. If she took the career breaks and retired at age 60 rather than at age 65, then her total weekly pension income at state pension age would be reduced to around £140. This is more than the impact of earning at the 3rd decile rather than at median earnings, which would reduce weekly income to  $\pounds149$ .

For all of the examples, income decreases over retirement, relative to average earnings. This is because, although BSP is indexed to average earnings, income from S2P is only increased with prices in retirement, and a level annuity is assumed to be chosen for Personal Accounts.

All of the examples are above Pension Credit levels, both at state pension age and at age 78, except for Variant C. She is eligible for £2 a week of Pension Credit at age 78.

|                      |            |              | Variant B:   | Variant C:     |
|----------------------|------------|--------------|--------------|----------------|
|                      | Median-    |              | career break | career break   |
|                      | earning    | Variant A:   | and low      | and retires at |
|                      | woman      | career break | income       | age 60         |
| At state pension age | e (age 68) |              |              |                |
| BSP                  | £76        | £76          | £76          | £76            |
| S2P                  | £60        | £52          | £52          | £46            |
| Personal Account     | £51        | £30          | £22          | £18            |
| Pension Credit       | -          | -            | -            | -              |
| Total                | £187       | £158         | £149         | £140           |
|                      |            | (-16%)       | (-20%)       | (-25%)         |
| At age 78            |            |              |              |                |
| BSP                  | £76        | £76          | £76          | £76            |
| S2P                  | £49        | £43          | £42          | £38            |
| Personal Account     | £32        | £19          | £14          | £11            |
| Pension Credit       | -          | -            | -            | £2             |
| Total <sup>17</sup>  | £158       | £138         | £132         | £126 to £128   |
|                      |            | (-13%)       | (-16%)       | (-20% to -19%) |

Table 316: Projected pension income, in £ per week, 2006/7 earnings terms

<sup>16</sup> PPI analysis using the Individual Model. Rows may not add due to rounding.

<sup>17</sup> Range shows with and without claiming Pension Credit

Example 3: A single non-standard earner

The non-standard earner illustrated is a man who is self-employed for his entire working life, from age 18 until retiring at age 65 in 2055. When in work, he earns the same amount as median earnings for male employees of his own age<sup>18</sup>. He voluntarily opts-in to a Personal Account from 2012, when he is aged 22 and stays opted-in until his retirement at age 65. He contributes the equivalent of the minimum employee contribution to Personal Accounts (5% of band earnings, including the tax relief component).

Three variants have also been modelled:

| Variant A: | As the main example but he voluntarily opts in to a Personal                              |
|------------|---|
|            | Account 20 years later, at age 42. He stays opted-in until age                            |
|            | he retires at 65.   |
| Variant B: | As the main example but he contributes double the amount                                  |
|            | into a Personal Account (10% of band earnings, including the                              |
|            | tax relief component).  |
| Variant C: | As the main example but he continues working and saving in a                              |
|            | Personal Account until age 70, when he retires. He defers his state pension until age 70. |
|            |   |

**Outcomes under the White Paper proposals** 

On the assumptions used, the main example of a non-standard earner could receive around £126 a week at state pension age, made up the full BSP of £76 a week, £46 a week from his Personal Account and potentially £4 from Pension Credit. He would not receive S2P since he is self-employed for his entire working life.

The value of his business could have a significant impact on his retirement income and on his potential eligibility to Pension Credit, particularly at older ages:

- To be completely above Pension Credit at age 78, his business would need to have been worth £37,000 or more when he retired at age 65 (in today's earnings terms, assuming that he sells his business and buys a single-life, level annuity).
- In the pessimistic example that he has no income in retirement from his business (or no assets from it, which could reduce Pension Credit entitlement) then, by age 78, he could have a large average withdrawal rate on his Personal Account saving. As shown in Table 4 below, his income from his Personal Account is £30 a week at age 78, and his total income, with Pension Credit, is £116 a week. However, if he had not opted-in to a Personal Account, he would still have received Guarantee Credit taking him up to £114 a week (assuming he claimed it). The £30 from his Personal Account saving therefore only increases his overall retirement income by £2, an average withdrawal rate of potentially 93%<sup>19</sup>.

• If he does have some income from his business, but less than the amount that is necessary to take him completely above Pension Credit, then he would be entitled to less Pension Credit. His average withdrawal rate would therefore be less than the 93% that he could face if he had no income at all from his business.

The potential impact of making fewer contributions to Personal Accounts (Variant A) depends on his entitlement to Pension Credit (and therefore how much his business is worth). For example, in the pessimistic scenario that he has no income or assets in retirement from his business, opting in to Personal Accounts at age 42 rather than at age 22 would decrease his weekly income from his Personal Account by £22 at state pension age (from £46 to £24). But his weekly entitlement to Pension Credit could increase by £10 as a result (from £4 to £14), so the overall impact of the later opting in could be only a net decrease in income of £12.

The impact of making contributions at a higher rate (Variant B) depends on entitlement to Pension Credit, although to a lesser extent than in Variant A. In the same pessimistic scenario that he has no income or assets in retirement from his business, doubling his contributions from 5% to 10% of band earnings would double his weekly Personal Account income at state pension age (from around £46 to around £93). This could be enough to take him out of Pension Credit at state pension age, so he would not be eligible for the £4 of Pension Credit that he would otherwise receive. So the overall impact of the higher contributions could be a net increase in weekly income of £43 (an increase of 93%).

Working later beyond state pension age (Variant C) can have a large impact on total pension incomes because it means a higher income from Personal Accounts <u>and</u> increased state pension because he defers his state pension. Deferring BSP by two years (from age 68 to age 70) increases the weekly amount of BSP from £76 to £92 a week (an increase of 21%). The impact could be reduced slightly by Pension Credit, in a similar way to in Variant B above.

For all of the examples, income is expected to decrease over retirement, relative to average earnings. This is because, although BSP is indexed to average earnings, a level annuity is assumed to be chosen for Personal Accounts. In addition, the Savings Credit component of Pension Credit would become less generous over time under the White Paper proposals.

| generate income or assets in retirement, in £ per week, 2006/7 earnings terms |                                      |                                       |                                       |                                |
|---|--------------------------------------|---------------------------------------|---------------------------------------|--------------------------------|
|   | Lifetime<br>self-<br>employed<br>man | Variant A:<br>delayed<br>savings      | Variant B:<br>higher<br>contributions | Variant C:<br>working<br>later |
| At state pension  | 1 age (age 68)                       |                                       |                                       | At age 70                      |
| BSP<br>S2P  | £76<br>-                             | £76<br>-                              | £76<br>-                              | £92<br>-                       |
| Personal<br>Account   | £46<br>£4                            | £24<br>£14                            | £93                                   | £68                            |
| Pension Credit<br>Total <sup>21</sup>   | £122 to £126                         | £14<br>£100 to £114<br>(-18% to -10%) | -<br>£169<br>(39% to 34%)             | £160                           |
| At age 78   |                                      |                                       |                                       | At age 80                      |
| BSP<br>S2P  | £76<br>-                             | £76                                   | £76                                   | £92<br>-                       |
| Personal<br>Account   | £30                                  | £15                                   | £59                                   | £43                            |
| Pension Credit<br>Total <sup>22</sup>   | £10<br>£106 to £116                  | £22<br>£92 to £114<br>(-13% to -2%)   | -<br>£136<br>(28% to 17%)             | -<br>£136                      |

Table 4<sup>20</sup>: Projected pension income, on the basis that his business does not generate income or assets in retirement, in f. per week, 2006/7 earnings term

 <sup>20</sup> PPI analysis using the Individual Model. Rows may not add due to rounding.
<sup>21</sup> Range shows with and without claiming Pension Credit. Percentage change figures are calculated by comparing incomes on the basis that Pension Credit is not claimed and separately on the basis that Pension Credit is claimed. Percentage change figures are not shown for Variant C because figures for Variant C and the main example relate to different ages.

<sup>22</sup> See footnote 22

## **Appendix**

This Appendix sets out the common assumptions used in the case studies and some sensitivity analysis.

Proposals in the White Paper are assumed to be introduced in full. The start date of the BSP being indexed in line with average earnings is assumed to be 2012. Personal Accounts are introduced in 2012.

The existing link between the Lower Earnings Limit and the BSP is retained, so that the Lower Earnings Limit increases in line with average earnings from 2012.

Price inflation is assumed to be 2.5% each year and average earnings are assumed to grow by 2.0% each year in excess of prices.

Annual pre-retirement investment returns in Personal Accounts are assumed to be 3% in excess of prices, corresponding to a mixed equity/bond fund. Results are sensitive to this assumption. For example, the main example of the median-earning man illustrated in Example 1 of this paper (Table 5):

- Could receive £74 a week from his Personal Account at state pension age (68) if investment returns were 3% in excess of prices.
- If investment returns were higher, at 4% in excess of prices, then he could receive £92 from his Personal Account at state pension age.
- If investment returns were lower, at 2% in excess of prices (corresponding to earnings growth), then he could receive £60 from his Personal Account at state pension age.

Table 5<sup>23</sup>: Projected income from Personal Accounts for the median earning man, for different assumptions on pre-retirement investment returns, in £ per week, 2006/7 earnings terms

|                        | At age 68 | At age 78 |
|------------------------|-----------|-----------|
| Central assumption:    |           |           |
| 3% in excess of prices | £74       | £48       |
| 4% in excess of prices | £92       | £59       |
| 2% in excess of prices | £60       | £39       |

Annual management charges in Personal Accounts are assumed throughout the case studies to be 0.3% of assets under management. All other things being equal, higher charges could lead to lower incomes from Personal Accounts than shown<sup>24</sup>.

<sup>24</sup> See PPI Briefing Note 33 for a discussion of the impact of Personal Account charges

<sup>&</sup>lt;sup>23</sup> PPI analysis using the Individual Model

All of the individuals modelled are assumed to use their Personal Account fund to buy a single-life, level annuity fixed in cash terms at retirement. This means that their income would decline quickly during their retirement, especially when considered relative to average earnings. For simplicity, they are assumed not to take a lump sum option.

Assumptions are made regarding future annuity rates. The assumptions used are:

- Mortality follows the PMA92/PFA92 mortality tables, adjusted for future mortality improvements using the "medium cohort" projection in CMIB (2002).
- Post-retirement investment returns are 1% in excess of prices.
- Calculated mortality rates are multiplied by a factor of 1.04 to allow for expense charges.

These assumptions are broadly similar to those required for the calculation of annuity rates for the purpose of Statutory Money Purchase Illustrations (SMPIs)<sup>25</sup>. As noted above, a level annuity is assumed to be bought for the purpose of the case studies rather than an RPI annuity as required for SMPIs.

As an illustration, on the assumptions used in the case studies, the rate for a single-life, level annuity is 6.5% for men at age 65 in 2006. Equivalent available market rates are currently between 6.3% and 7.4%<sup>26</sup>.

<sup>25</sup> Actuarial Profession (2006) TM1 Version 1.2, coming into effect 1 November 2006. Note that TM1 requires annuities to be calculated using a market interest rate. This varies over time, and would be 1.2% real for illustrations dated between 6 April 2005 and 5 April 2006, and 0.8% real for illustrations dated between 6 April 2007. The case studies use an assumption of 1.0% real.

 <sup>&</sup>lt;sup>26</sup> For a non-smoker with a pension fund of £75,000. Annuity rate information is taken from the FSA's Comparative Tables (www.fsa.gov.uk/tables) as at 17 October 2006, for rates with unrestricted availability.
<sup>©</sup> The Financial Services Authority.

### **Acknowledgements and Contact Details**

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Contact: Niki Cleal, Director Telephone: 020 7848 3751 Email: niki@pensionspolicyinstitute.org.uk

Pensions Policy Institute King's College Waterloo Bridge Wing, Franklin-Wilkins Building Waterloo Road London SE1 9NN

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