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**Charging structures
for Personal Accounts**

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Introduction	1
Summary of conclusions	3
1. What are the possible charging structures?	7
2. An Annual Management Charge	15
3. A joining charge plus an AMC	17
4. An annual flat fee	19
5. A contribution charge	21
6. A contribution charge plus an AMC	23
7. Evaluation against the Government's criteria	25
Appendix	31
Acknowledgements and contact details	35
References	36

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Introduction

The Government set out its intention to introduce major reforms to the UK pension system in a White Paper in May 2006. These include substantial reforms to both state and private pensions.

The Pensions Bill that is currently being scrutinised in Parliament will, if enacted, implement the Government's proposed reforms to the state pension system. It will also establish a Delivery Authority that will advise on the implementation of a new national pension savings scheme called Personal Accounts.

The Government published a second White Paper in December 2006 setting out more details of how it proposes to implement the new Personal Accounts. It is currently consulting on a number of issues before introducing a second Bill, expected Autumn 2007.

The Government is seeking views on the appropriate charging structure for Personal Accounts. To date, this issue has not been extensively debated, though there are important issues for future Personal Accounts holders and the industry providers who will be involved in operating aspects of Personal Accounts.

The charging structure in Personal Accounts could take a number of forms. Options include an Annual Management Charge (AMC), a joining fee, an annual flat fee, a contribution charge, and combinations of these alternatives.

This paper investigates the impact of five alternative charging structures for Personal Accounts on:

- Different types of individuals, with different work patterns, earnings and contributions to Personal Accounts.
- The financing of Personal Accounts, such as when income from charges becomes equal to the cost of running the system.

A final chapter evaluates the advantages and disadvantages of each charging structure against five criteria suggested by the Government.

The PPI is holding a series of seminars, supported by new research papers, to discuss some of the remaining policy issues for Personal Accounts. This paper will provide the basis for discussion at the first seminar. A second seminar will focus on the role and objectives of the Personal Accounts Delivery Authority and the Personal Accounts Board.

This paper has been co-sponsored by the Department for Work and Pensions (DWP), AEGON and Standard Life. The PPI is grateful for their support.

Summary of conclusions

The Government has proposed a new national pension savings scheme, called Personal Accounts. The Government aims for Personal Accounts to operate at low cost.

All other things being equal, a low charge would lead to higher pension incomes for those who save than a high charge. However, other factors affecting pension incomes may be more significant, including investment returns, employer contributions and the tax and benefit systems.

This paper does not explore the implications of different levels of charges but the implications of different structures for how the charges are levied.

A variety of charging structures are possible for Personal Accounts:

- **An Annual Management Charge (AMC):** This is a charge made annually as a proportion of an individual's funds under management.
- **A joining charge and an AMC:** A joining charge is a one-off payment made by a member on his or her initial entry to the scheme. Since it is unlikely to raise sufficient revenue by itself to finance Personal Accounts, it could be combined with an AMC.
- **An annual flat fee:** A flat amount that is the same for all individuals, made annually for as long as the individual is a member of the scheme.
- **A contribution charge:** A proportion of each contribution made, from the individual, the employer and the state.
- **A contribution charge and an AMC:** This is an example of a possible hybrid structure and combines a contribution charge with an AMC.

The Government has suggested five criteria for the evaluation of charging structures. This paper uses these criteria to evaluate the five alternative charging structures.

Fair to all members, taking into account an individual's ability to pay

One definition of 'fairness' is that everybody pays the cost of running their fund, with no cross-subsidy between members. None of the charging structures analysed fully meets this test, due to the differences in how providers charge for different services. Of those analysed, the annual flat fee may be the closest to satisfying this definition of 'fairness'.

However, an annual flat fee could have a severe impact on people with low earnings who contribute for a short period of time. If no additional protection were introduced alongside a flat fee, this could mean that some people lose the whole of their saving to charges.

Another definition of 'fairness' is that everybody loses the same proportion of their fund value to charges, so that the amount paid is lower for lower earners and for people with short saving histories. Only a pure contribution charge would meet this test.

An AMC would mean that high and low earners pay the same proportion of the fund value to charges, providing that they have the same saving histories. However, an AMC could affect people differently depending on when in life they save. People who start saving early in life but then stop saving, for example because they change job and are auto-enrolled into an occupational pension scheme, could pay proportionately more under an AMC than people who begin to save late in life.

Provides significant revenue in the early years of operation, reducing the amount and length of operating losses, and reducing financing costs
A pure AMC would raise very little revenue in the short term, until the size of funds under management has built up. This could mean that the organisations financing Personal Accounts may have to borrow between £1.7 and £4.5 billion in order to finance the costs of setting up and administering Personal Accounts. In the central scenario used in this paper, the total amount of interest paid on this debt could amount to £3 billion, which may ultimately be passed on to members.

The most effective way to reduce borrowing requirements could be to introduce a joining charge, so that members pay an upfront fee for taking out a Personal Account. However, a contribution charge and an annual flat fee could also eliminate the need for borrowing after 2015.

Simple and easy to understand

Further research is needed to determine how well individuals understand charging structures and how charging structures may influence their behaviour. An AMC would be readily comparable to the existing Stakeholder Pensions. However, it may be difficult for individuals to understand the impact of AMCs on final pension funds.

A contribution charge has the most consistent impact on the proportion of fund value lost to charges, while an annual flat fee may be the easiest to understand in terms of how much is being paid each year.

Incentivises members to help keep costs down

None of the charging structures seems to directly incentivise an individual member to reduce costs that providers incur on their behalf.

Higher participation may mean that the fixed costs of Personal Accounts are shared between more individuals, reducing the average cost per member. Some of the charging structures may encourage participation in Personal Accounts more than others. For example, an up-front joining charge may discourage participation.

Incentivises the scheme operator to maximise the fund value

An AMC explicitly relates revenue to fund value and so may provide the greatest incentive to maximise fund value. However, a hybrid charging structure with an AMC element could also achieve the same objective.

Overall, no single charging structure, or combination of charging structures, has all of the desirable attributes. Each charge structure has advantages and disadvantages and there are trade-offs that have to be made.

Depending on what the main priority is, different charging structures might be chosen (see the following table):

- If fairness was the main priority, then the choice of charging structure would depend on the definition of 'fairness' being used. For example:
 - If it meant that everybody should pay the cost of running their fund, then this might suggest an annual flat fee is the best structure.
 - If it meant that everybody should lose the same proportion of their fund value to charges, then a contribution charge may be appropriate.
- If reducing financing costs was the main priority, then this may lead to a hybrid between a joining charge and an AMC.
- If being simple and easy to understand was the main priority, then there may be different views on which structure is the most appropriate:
 - An AMC may be the easiest to compare to existing Stakeholder Pensions.
 - A contribution charge has the most consistent impact on the proportion of final pension funds lost to charges.
 - An annual flat fee may be the easiest to understand in terms of how much is being paid each year.
- None of the charging structures seem to directly incentivise members to help keep costs down, although some of the charging structures may encourage participation in Personal Accounts more than others.
- If incentivising the scheme operator to maximise the fund value was the main priority, then a charging structure with a substantial AMC component may be appropriate.

	Fairness		Reducing financing costs	Simple and easy to understand	Incentivises members to help keep costs down	Incentivises the scheme operator to maximise the fund value
	Same proportion of fund size lost to charges	Same absolute amount lost to charges				
Annual Management Charge (AMC)	<ul style="list-style-type: none"> Members who start saving early in life but then stop contributing pay the highest proportion of their fund value 	<ul style="list-style-type: none"> High earners pay more in absolute terms than low earners People with full saving histories pay more in absolute terms than people with broken histories 	<ul style="list-style-type: none"> £1.7-£4.5bn borrowing 15-28 year payback £900-£11,800m cost of debt 	<ul style="list-style-type: none"> Most comparable to existing Stakeholder Pensions 	<ul style="list-style-type: none"> Does not seem to directly encourage members to make fewer queries and therefore, to help keep costs down 	<ul style="list-style-type: none"> Yes, because charging revenue is directly related to fund value
Joining charge plus AMC	<ul style="list-style-type: none"> Compared to a pure AMC, outcomes are worse for people with very short saving histories and slightly better for those with full saving histories 	<ul style="list-style-type: none"> As with the pure AMC, high earners and people with full saving histories pay more in absolute terms 	<ul style="list-style-type: none"> No borrowing required after 2012 	<ul style="list-style-type: none"> Two components may seem less easy to understand 	<ul style="list-style-type: none"> May discourage people from joining Personal Accounts. By decreasing participation, fixed costs per head could be higher as they are shared between fewer members 	<ul style="list-style-type: none"> Yes, because most of the charging revenue is related to the fund value after the first year
Annual flat fee	<ul style="list-style-type: none"> Low earners pay a higher proportion of their fund value than high earners 	<ul style="list-style-type: none"> Everybody pays the same absolute amount each year 	<ul style="list-style-type: none"> £700-£800m borrowing 2-3 year payback £100 to £200m cost of debt 	<ul style="list-style-type: none"> Could be easiest to understand the amount lost in charges each year 	<ul style="list-style-type: none"> Same as AMC 	<ul style="list-style-type: none"> Charging revenue is not directly related to fund value
Contribution charge	<ul style="list-style-type: none"> Everybody pays the same proportion of their fund value 	<ul style="list-style-type: none"> High earners pay more in absolute terms than low earners 	<ul style="list-style-type: none"> £600m borrowing 2 year payback £0 to £100m cost of debt 	<ul style="list-style-type: none"> Could be easiest to understand the impact of charges on the final fund value 	<ul style="list-style-type: none"> Same as AMC 	<ul style="list-style-type: none"> Charging revenue is not directly related to fund value
Contribution charge plus AMC	<ul style="list-style-type: none"> Members who start saving early in life but then stop contributing pay the highest proportion of their fund value (but not as much as under a pure AMC) 	<ul style="list-style-type: none"> High earners pay more in absolute terms than low earners 	<ul style="list-style-type: none"> £900m-£1bn borrowing 5-6 year payback £100 to £500m cost of debt 	<ul style="list-style-type: none"> Two components may seem less easy to understand 	<ul style="list-style-type: none"> Same as AMC 	<ul style="list-style-type: none"> Partially as some of the charging revenue is related to the fund value in the long term

Chapter 1: What are the possible charging structures?

This chapter describes the Government's proposal to introduce a new system of low-cost Personal Accounts and explores different options for how the charges could be levied.

The proposed Personal Accounts are a national low-cost savings scheme. Although many details are yet to be finalised, the basic framework would be:

- Auto-enrolment for all employees aged over 22 and earning more than £5,035 a year into a Personal Account (or an equivalent), with the opportunity to opt out, from 2012.
- A minimum contribution of 4% from the individual on band earnings between £5,035 and £33,540 a year. This would be matched by a minimum¹ 1% contribution of band earnings from the Government and a compulsory² 3% contribution of band earnings from the individual's employer.

The impact of low charges

A lower charge would, all other things being equal, mean that the value of saving is higher. Even apparently small reductions in charges can have a large impact on final pension funds. However, many other factors affect pension incomes, including investment returns, employer contributions and the tax and benefit systems. While a low charge is important, these other factors can be more significant³.

The current low-cost personal pension product is the Stakeholder Pension. Providers incur costs in selling Stakeholder Pensions, in providing regulated advice to consumers and from administering them. Providers need to recoup these costs from the charges that they levy. The maximum amount that providers can charge for a Stakeholder Pension is an Annual Management Charge (AMC) of 1.5% of assets under management for the first ten years, reducing to 1.0% for subsequent years. This maximum charge is set by the Government.

As an illustration of the possible impact of charges, a median-earning man with a full saving history could see his final pension fund reduced by 21% as a result of charges, if the full rate was applied.

Not all providers levy the maximum possible charge. Providers may set different charges for pensions sold to a group of individuals (for example, working for the same employer) than for single individuals, and charges can be significantly affected by how pensions are sold and by the extent of the advice being offered.

¹ As this is provided through the current system of pension tax relief, the Government contribution would be higher for individuals who pay higher rate tax

² For employees who do not opt out of Personal Accounts. Employer contributions may be phased in.

³ See PPI Briefing Note 33

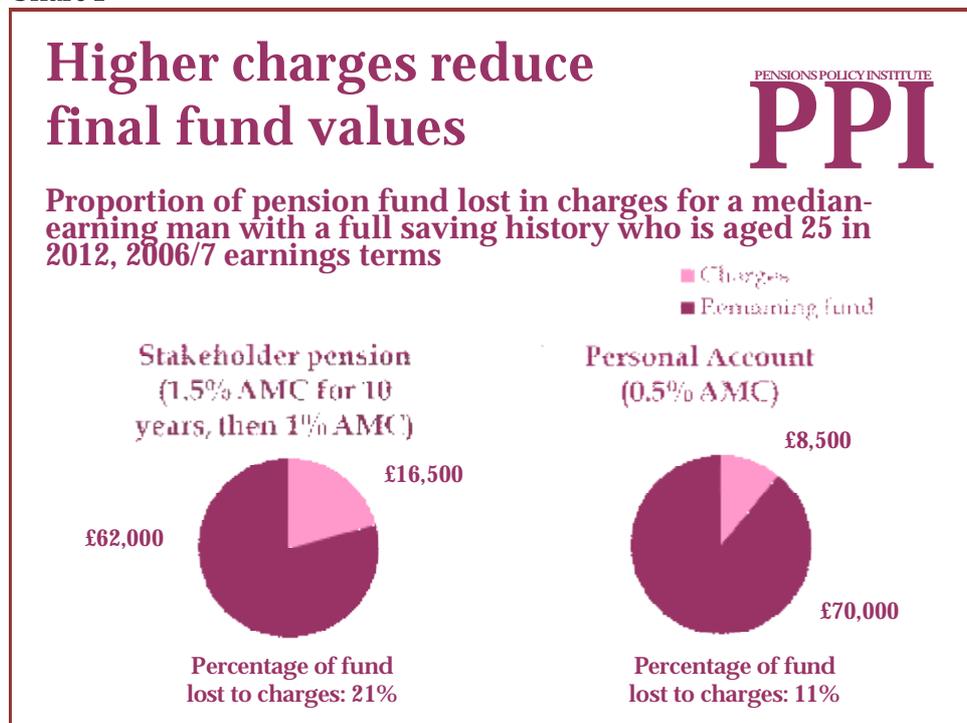
Personal Accounts will differ from Stakeholder Pensions in a number of important ways:

- Auto-enrolment means that Personal Accounts will not need to be sold in the same way that Stakeholder Pensions are currently.
- It is not intended that individuals will need regulated advice to buy a Personal Account in the way that they generally do when buying a Stakeholder Pension.
- Employers will be compelled to contribute 3% of band earnings if an individual does not opt out of Personal Accounts. There is no equivalent requirement for employers to contribute to Stakeholder Pensions.

Therefore, Personal Accounts may be able to operate at a lower cost and so make a lower charge than is possible for Stakeholder Pensions.

Despite significant uncertainties, the Government believes that Personal Accounts could deliver an AMC as low as 0.5% in the short term and below 0.3% in the long term⁴. If Personal Accounts delivered an AMC of 0.5%, then a median-earning man with a full saving history could see his final pension fund reduced by 11% as a result of charges (Chart 1).

Chart 1⁵



⁴ DWP (2006 PA) paragraph 4.7

⁵ PPI analysis using the Individual Model

However, many other factors affect pension incomes. Besides charges, the following factors can be important:

- Investment returns.
- Employer contributions.
- Government contributions.
- Income tax paid on pension income in retirement.
- The impact of means-tested benefits in retirement, such as Pension Credit, Council Tax Benefit and Housing Benefit. For some people, saving in a pension can mean lower entitlements to means-tested benefits in retirement, which can reduce the value of saving.

The reforms to the state pension system that are currently being scrutinised in Parliament could increase returns from saving in a pension, as could the requirement for an employer contribution in Personal Accounts.

For example, a hypothetical median-earning man with a full saving history could receive an 'internal rate of return'⁶ of 2.6% if he saved the equivalent of the Personal Account minimum into a Stakeholder Pension. This assumes that he is saving from age 25 under the current state pension system, without any reform, that his employer did not make a pension contribution and that his provider charges the maximum possible amount for a Stakeholder Pension (an AMC of 1.5% for the first ten years and 1.0% thereafter).

Under the proposed Personal Accounts, his internal rate of return could be higher because of the state pension reforms, the employer contribution, as well as because of the lower charges (Chart 2):

- The state pension reforms currently being scrutinised in parliament could increase his rate of return by 1.3%. This is because the reforms will reduce the extent of Pension Credit, so that he loses less in means-tested benefits as a result of his saving⁷.
- The employer contribution in Personal Accounts could increase his rate of return by a further 1.6%.
- The low charges in Personal Accounts could increase his rate of return by a further 0.4%.

So his overall rate of return could be 5.9% under Personal Accounts, compared to 2.6% in a Stakeholder Pension.

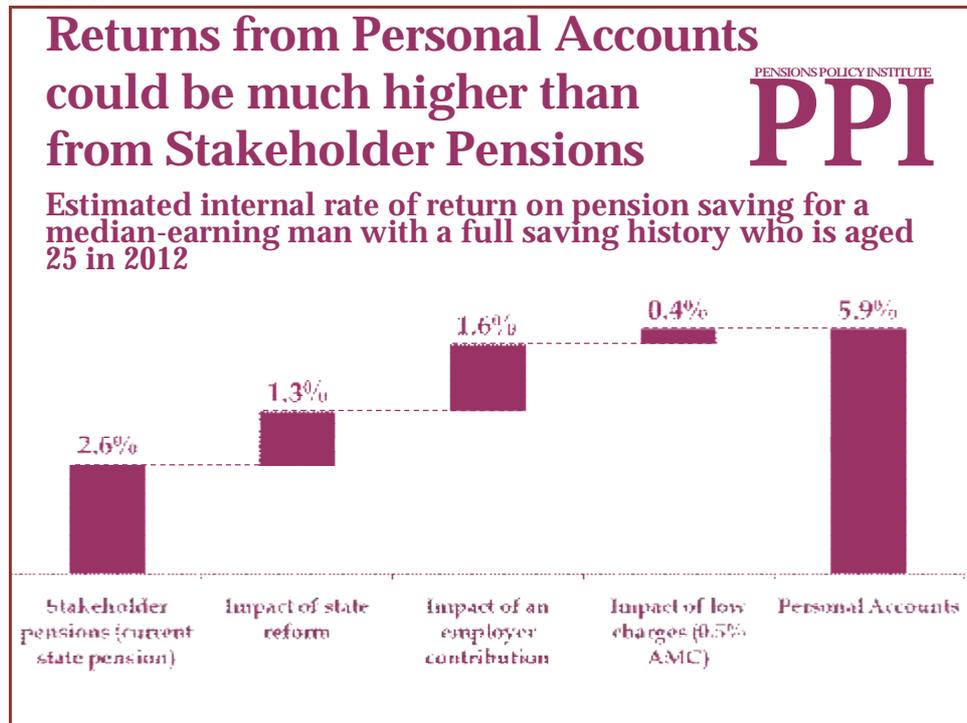
The proposed state pension reforms and the employer contribution can therefore have a larger impact on the return from Personal Accounts than the low charge⁸.

⁶ PPI analysis using the Individual Model. The 'internal rate of return' is the nominal interest rate that the individual receives on his or her individual contributions to Personal Accounts, after allowing for the effects of tax relief, employer contributions, investment returns, charges, income tax and means-tested benefits. It should not be compared with investment returns on other forms of saving.

⁷ See PPI (2007)

⁸ See Steventon (2006), published by PPI, for further information on what affects returns from saving in a Personal Account

Chart 2



Charging structures

To date, much of the discussion around Personal Accounts has assumed they will operate with an Annual Management Charge (AMC). However, a variety of charging structures exists and the Government is *interested in views on the appropriate method of charging members for Personal Accounts*.

This paper explores the different structures suggested by the Government:

- A. An Annual Management Charge (AMC): This is a charge made annually as a proportion of an individual's funds under management.
- B. A joining charge: A one-off payment made by a member on entry to the scheme. A joining charge is likely to be insufficient by itself to finance Personal Accounts, so in this paper it is combined with a lower AMC.
- C. An annual flat fee: An amount charged on a regular basis for as long as the individual is a member of the scheme. It is not based on the size of the member's contributions.
- D. A contribution charge: A proportion of each contribution made. In this paper, this is taken to include contributions made by the individual, the employer and by the state through tax relief.

⁹ DWP (2006 PA) page 98

Several organisations have pointed out that while an AMC may provide a stream of revenue that is similar to the costs of managing Personal Account funds, an AMC alone is unlikely to cover the costs of setting up Personal Accounts in the short term¹⁰. Some of these organisations have suggested the possibility of combining a contribution charge and an AMC, which is considered in this paper, although other combination charge structures are also possible.

The following chapters explore the implications of each of these options in turn on individuals and the financing of Personal Accounts. A concluding chapter draws together findings and evaluates the options.

Individual analysis

Different charging structures could have very different effects on different individuals. Depending on the charge structure, charges could have different impacts on high and low earners, on young and old people, and on people with different saving histories.

The PPI's Individual Model has been used to analyse the impact of different charging structures on individuals, in terms of the proportion of their final pension fund value lost to charges (as in Chart 1). Some of the hypothetical individuals are men and some women. The charging structures will not affect an individual man differently to an individual woman, provided they are the same age, earn the same amount and have the same saving history. However, the charging structures may typically have different impacts on men and women, because women are more likely than men to have lower earnings and are currently less likely to save in a private pension¹¹.

Individuals with different saving histories are illustrated, ranging from people with a full 43 years of saving to only 4 years. Full details of the hypothetical individuals who are aged 25 in 2012 are set out in Box 1. Older individuals with the same working and saving histories but who are aged 40 and 55 in 2012 have also been modelled. In addition, individuals with different levels of earnings are modelled.

¹⁰ For example, Standard Life (2006), and Deloitte (2003), which considered a three-year contribution charge

¹¹ Office for National Statistics Annual Survey of Hours and Earnings, Family Resources Survey 2004/5 Table 7.12

Box 1: Hypothetical individuals

- A) Full saving history (Saves for a total of 43 years)**
A man who is in full-time work from leaving education until retiring at state pension age. He contributes to a Personal Account continuously from 2012 until reaching state pension age.
- B) Caring breaks (Saves for a total of 26 years)**
A woman with two short career breaks for caring. She saves in a Personal Account for four years in her mid-twenties before taking time out of work for six years to care for her child. After the 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. After these five years of caring, she returns to work full-time until she retires at state pension age. She saves in a Personal Account while she is working full-time but not when she is caring or working part-time.
- C) Switches to employer scheme at 45 (Saves for a total of 20 years)**
A man who saves continuously into a Personal Account until his mid-forties when he joins a new employer who operates an alternative scheme. He then saves in this alternative scheme until state pension age.
- D) Starts saving at 45 (Saves for a total of 23 years)**
A woman who opts-out of Personal Accounts until her mid-forties, first to pay-off debts in her twenties and then to service mortgage repayments. She starts saving in a Personal Account in her mid-forties when her higher salary makes it more affordable.
- E) Short period of saving at 25 (Saves for a total of 4 years)**
The same as individual B, except that she stays working part-time after her first career break. She decides she cannot afford to save in a Personal Account while working part-time. This means that she only saves in a Personal Account for 4 years in her late twenties when she worked full-time.
- F) Short period of saving at 50 (Saves for a total of 4 years)**
A man who only starts saving in a Personal Account when he is fifty. After saving for 4 years he becomes unwell with an incapacitating condition that leaves him unable to work for 6 years. He resumes part-time work in his early sixties but decides he cannot afford to save in a Personal Account.

Financing analysis

The choice of charging structures could also have a large impact on how Personal Accounts are financed. The costs of setting up and administering Personal Accounts are likely to be higher at the outset, due to the need to create new infrastructure to set up new policies. Some charging structures may raise more revenue in the short term, thereby reducing the amount of capital that has to be raised to cover any shortfall between costs and revenue.

The amount of revenue raised from charges is projected and compared to estimates of the costs of setting up and administering Personal Accounts. Any shortfall of revenue over costs is assumed to be met by borrowing, which is gradually repaid after Personal Accounts move into surplus. A key output is the 'payback period', which is the duration until the debt is fully repaid.

The payback period will be very sensitive to the interest rate payable on the debt (the 'cost of capital'). This is uncertain as it will depend on prevailing market conditions and on investors' views of the risks involved with investing in the delivery of Personal Accounts. A range of assumptions is used for the analysis in this paper:

- For illustration purposes, the central scenario assumes a nominal cost of capital of 10% a year. This is similar to the typical rate of return required by companies on their capital, assuming a payback period of ten years¹².
- A lower scenario of 5% a year, which is closer to gilt yields.
- A higher scenario of 15% a year. This could be at the higher end of rates required by companies, and could result if the payback period of investing in Personal Accounts was substantially longer than ten years.

The costs of setting up and administering Personal Accounts will not be known with certainty until closer to the implementation date of Personal Accounts. This paper uses the Pensions Commission's estimates, which were based on their discussions with industry experts¹³:

- An initial cost of £500 million to set up the infrastructure of Personal Accounts.
- An additional start-up cost of £90 per individual. This cost is assumed to increase with prices.
- On-going costs of £25 a year for each in-force policy and £20 a year for each paid-up policy. These costs are assumed to increase with prices.
- Fund management costs of 0.08% of assets under management.

¹² Deloitte (2003) paragraph 7.3.13. Interviews in May 2003 concluded that companies use a typical hurdle rate of 11%

¹³ Pensions Commission (2006) Appendix F pages 238 and 239. Alternative estimates exist, for example, ABI (2006) chapter 5

The precise level of costs in Personal Accounts cannot be estimated with certainty in advance of their introduction in 2012. Factors that are uncertain include¹⁴:

- The financing of up-front costs and early operating losses
- The participation and contribution levels of individuals
- Administration and fund management costs

Costs may be incurred before 2012, due to the procurement of services, marketing and the running of the Personal Accounts Delivery Authority. Some amount of borrowing may therefore be required under any charging structure, before charging revenue is raised from 2012. The analysis in this paper is for the amount of borrowing that is still needed after 2012, because this is the key areas of difference between the charging structures. For presentational purposes, therefore, it is assumed that all of the costs of setting up Personal Accounts are incurred in 2012.

This paper does not explore the implications of different levels of charges but the implications of different structures for how the charges are levied. However, when comparing the impact of different charging structures, it is important that the level of charge in each option is broadly similar. Otherwise, for example, one structure could appear to be the most beneficial for all individuals simply because the models assume that charges for that structure are set artificially lower than the others. The levels of the charges in the different structures have therefore been calibrated to be broadly similar, in terms of the overall amount of revenue that they would generate (see the Appendix for further details).

The modelling in Chapters 2 to 6 of this paper is therefore based on the following calibrated charging structures:

- A. An AMC of 0.5% of funds under management
- B. A one-off joining charge paid by a member on the first entry to the scheme, equal to 3 months worth of contributions, plus an AMC of 0.45%
- C. An annual flat fee of £70 a year for all members, increasing from year to year in line with the growth in average earnings
- D. A charge of 10% of the value of contributions
- E. A charge of 5% of the value of contributions, plus an AMC of 0.25%

¹⁴ DWP (2006 PA) paragraph 4.8

Chapter 2: An Annual Management Charge

An Annual Management Charge (AMC) could:

- Affect people differently, depending on their age and saving history.
- Raise very little revenue in early years. Borrowing of between £1.7 and £4.5 billion may be needed in order to finance the setting-up and administration of Personal Accounts. It may take 15 to 28 years to fully repay this borrowing.

An AMC is a charge paid annually as a proportion of an individual's funds under management. It is paid in every year until retirement, including years when no contributions are made. In this chapter, an AMC of 0.5% is assumed.

Impact on individuals

An AMC could affect people differently depending on their age and saving history (Table 1):

- People who start saving early in life but then stop saving could lose the greatest proportion of their fund value to charges, because the AMC is still levied during years when no contributions are made.
- Today's older people could be affected the least by an AMC, since the AMC would be applied for fewer years. For example, a man aged 55 in 2012 with a full saving history could lose 3% of his fund value to charges.
- The percentage of an individual's fund value lost to charges does not vary significantly by their income. For example, a man aged 25 in 2012 with a full saving history could lose around 11% of his fund value to charges, regardless of his income.

Table 1¹⁵: Estimated percentage of fund value lost to charges under the Annual Management Charge for hypothetical individuals

	Number of years saving	Position in the earnings distribution				
		1st	3rd	Median	7th	9th
Aged 25 in 2012						
Man with full saving history	43	11%	11%	11%	11%	11%
Woman with caring breaks	26	10%	10%	10%	10%	10%
Man who switches to e'er scheme at 45	20	15%	15%	15%	15%	15%
Woman who starts saving at 45	23	6%	6%	6%	6%	6%
Woman with short saving period at 25	4	19%	19%	19%	19%	19%
Man with short saving period at 50	4	7%	7%	7%	7%	7%
Aged 40 in 2012						
Man with full saving history	27	7%	7%	7%	7%	7%
Woman with caring breaks	22	7%	7%	7%	7%	7%
Aged 55 in 2012						
Man with full saving history	10	3%	3%	3%	3%	3%
Woman with caring breaks	5	1%	1%	1%	1%	1%

¹⁵ See Box 1 for details of the individuals used

Financing of Personal Accounts

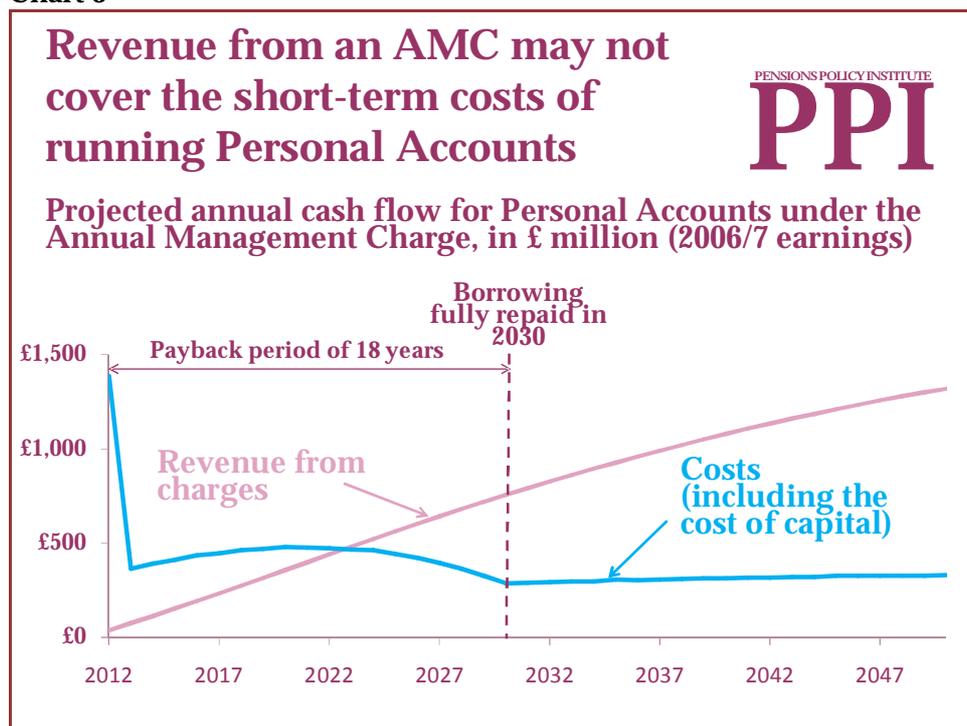
The amount of revenue raised under an AMC will be relatively small in the short term, until the amount of funds under management has built up. In the central scenario:

- It may be necessary to borrow around £1.3 billion in 2012, to cover the set-up costs of Personal Accounts, in 2006/7 earnings terms (Chart 3).
- Even after Personal Accounts are set up in 2012, revenue from an AMC is unlikely to be sufficient to cover administration costs in the immediately following years. This means that more borrowing could be required, peaking at around £2.4 billion in 2020. At this point, annual revenue from charges begins to exceed annual costs and the amount of borrowing begins to reduce.
- Borrowing could be paid off in 2030, 18 years after the introduction of Personal Accounts.
- In the long term, after the borrowing has been repaid in 2030, it may be possible to reduce the level of charges, since revenue under a 0.5% AMC would more than cover the ongoing costs of running Personal Accounts.

The payback period and amount of borrowing are both uncertain (see page 13). For example, the cost of capital could differ from the 10% assumed above:

- If the cost of capital was 5%, then the peak amount of borrowing could be £1.7 billion, being fully repaid in 2027.
- If the cost of capital was 15%, then the peak amount of borrowing could be much higher at £4.5 billion, which may not be fully repaid in 2040. More borrowing would be needed in this scenario to pay for the extra interest payments resulting from the higher cost of capital.

Chart 3



Chapter 3: A joining charge plus an AMC

Incorporating a joining charge in the charging structure may not significantly alter the impact of charges on individuals compared to a straightforward AMC. However, it could mean that large amounts of revenue are raised in the first few years that Personal Accounts are in operation, substantially reducing the need for borrowing.

This chapter considers a combination of a slightly lower AMC of 0.45% and a joining charge, where members pay a fee equal to three months' worth of their contributions for their first year of their saving.

Impact on individuals

Under a combination of a joining charge and a lower AMC (Table 2) the impact is similar to that under a pure AMC (Table 1). The addition of the joining charge may worsen outcomes for individuals with very short saving histories. This is because the charge would be a larger proportion of the total amount of contributions made. Overall:

- People who start saving early in life but then stop saving could be affected the most by a joining charge plus AMC. For example, women aged 25 in 2012 with a short saving period in their twenties could lose 22% of their fund value to charges. This is because the AMC would continue to be levied during years in which no contributions are made.
- The percentage of an individual's fund value lost to charges does not vary significantly by their income. For example, a man aged 25 in 2012 with a full saving history could lose around 10% of his fund value to charges, regardless of his income.

Table 2¹⁶: Estimated percentage of fund value lost to charges under the combination of a joining charge plus AMC for hypothetical individuals

	Number of years saving	Position in the earnings distribution				
		1st	3rd	Median	7th	9th
Aged 25 in 2012						
Man with full saving history	43	10%	10%	10%	10%	10%
Woman with caring breaks	26	10%	10%	10%	10%	10%
Man who switches to e'er scheme at 45	20	14%	14%	14%	14%	14%
Woman who starts saving at 45	23	7%	7%	7%	7%	7%
Woman with short saving period at 25	4	22%	22%	22%	22%	22%
Man with short saving period at 50	4	13%	13%	13%	13%	13%
Aged 40 in 2012						
Man with full saving history	27	8%	8%	8%	8%	8%
Woman with caring breaks	22	7%	7%	7%	7%	7%
Aged 55 in 2012						
Man with full saving history	10	5%	5%	5%	5%	5%
Woman with caring breaks	5	6%	6%	6%	6%	6%

¹⁶ See Box 1 for details of the individuals used

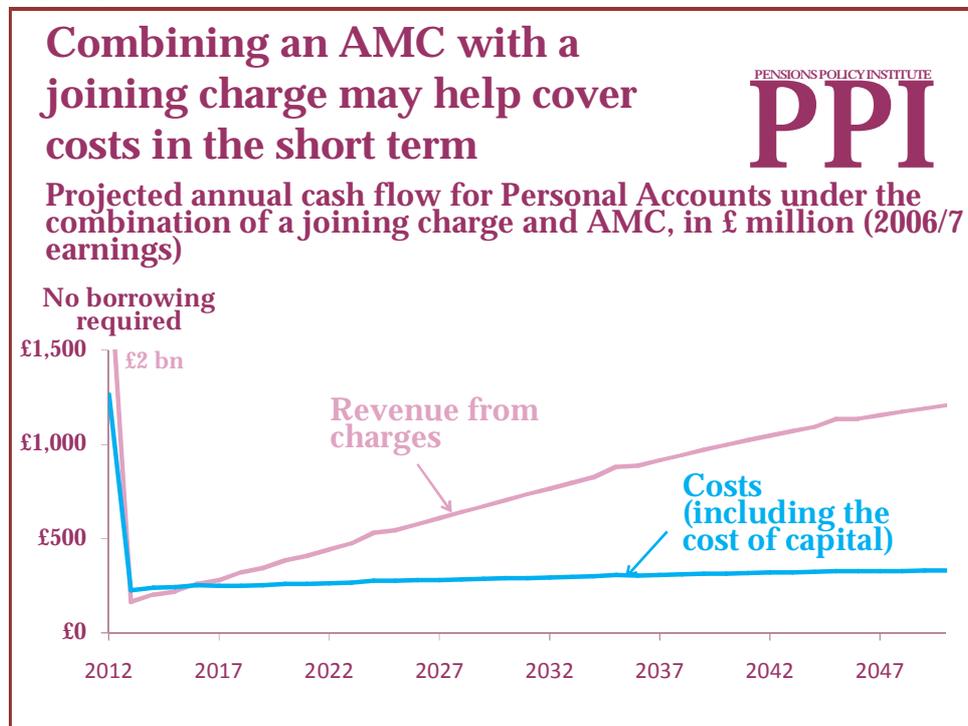
Financing of Personal Accounts

A joining charge could mean that large amounts of revenue are raised in the first few years that Personal Accounts are in operation, substantially reducing the need for borrowing.

In the central scenario:

- If, as assumed above, the joining charge was set equal to 3 months' worth of contributions, then the amount of charging revenue raised in 2012 could more than cover the costs of setting up Personal Accounts. Although borrowing may be needed in the period up to 2012, no borrowing would be required from that point on (Chart 4).
- If the joining charge was set lower, say, at 2 months' worth of contributions, then some borrowing could be required, although still less than under a pure AMC.

Chart 4



Chapter 4: An annual flat fee

An annual flat fee, that is the same for all people, could have a severe impact on individuals with low incomes and short periods of saving. Revenue could cover administration costs but not the costs of setting up Personal Accounts, so borrowing of between £700 and £800 million may be needed in 2012.

An annual flat fee is an amount charged on a regular basis for as long as an individual is a member of the scheme, regardless of whether any contributions are made. It is not based on the size of contributions. This chapter assumes a fee of £70 a year, increasing in line with average earnings.

Impact on individuals

The impact of an annual flat fee can vary significantly depending on an individuals' age, income and saving history (Table 3):

- The percentage of an individual's fund value lost to charges could be greatest for people on lower incomes, because the size of the charge would be greater relative to their contributions. For example, a man with a full saving history aged 25 in 2012 could lose 5% of his fund value to charges if he was a median earner, but 10% if he earned at the first decile.
- Today's younger people who save for a short period in their twenties and then stop contributing could also forgo a significant proportion of their fund. For example, a low-earning woman aged 25 in 2012 with a short period of saving in her twenties could forgo all of her fund to a flat fee.
- Today's younger people with low earnings and who save for a short period in their fifties could also be affected by an annual flat fee. This is because the size of the funds would be small relative to the size of the flat fee

Table 3¹⁷: Estimated percentage of fund value lost to charges under the annual flat fee for hypothetical individuals

	Number of years saving	Position in the earnings distribution				
		1st	3rd	Median	7th	9th
Aged 25 in 2012						
Man with full saving history	43	10%	6%	5%	4%	3%
Woman with caring breaks	26	28%	16%	12%	9%	6%
Man who switches to e'er scheme at 45	20	20%	12%	9%	7%	6%
Woman who starts saving at 45	23	17%	10%	7%	5%	3%
Woman with short saving period at 25	4	100%	80%	60%	46%	33%
Man with short saving period at 50	4	36%	23%	18%	13%	13%
Aged 40 in 2012						
Man with full saving history	27	10%	6%	5%	3%	3%
Woman with caring breaks	22	21%	12%	9%	6%	4%
Aged 55 in 2012						
Man with full saving history	10	11%	7%	5%	4%	3%
Woman with caring breaks	5	18%	11%	8%	6%	3%

¹⁷ See Box 1 for details of the individuals used

Impact on financing

In the short term, revenue could cover administration costs but not the costs of setting up Personal Accounts, so borrowing of between £700 and £800 million may be needed in 2012.

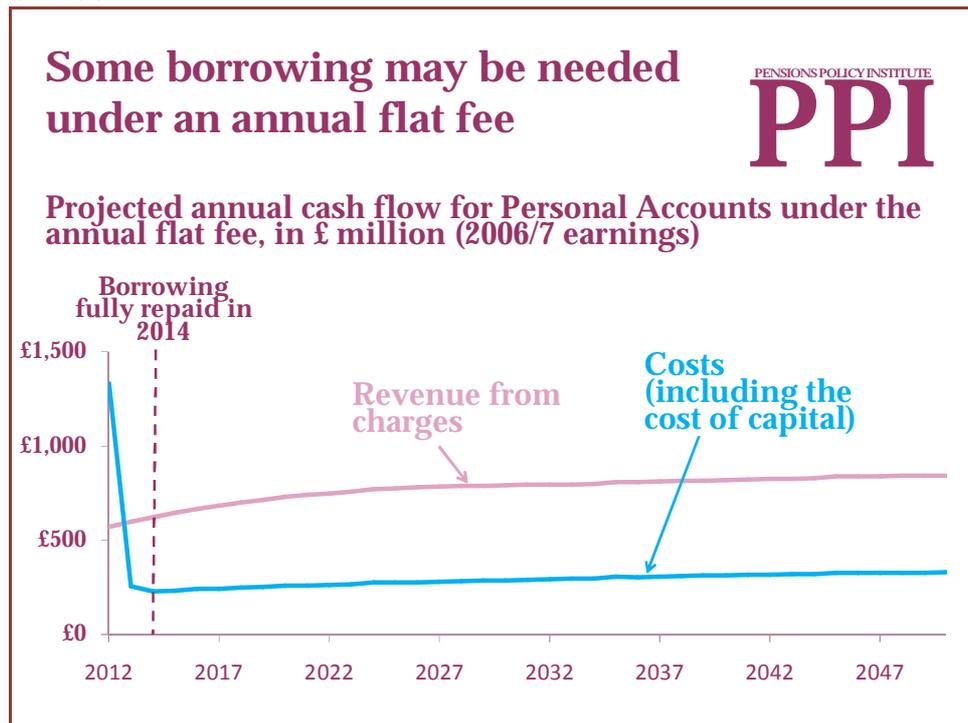
In the central scenario:

- It may be necessary to borrow around £800 million in 2012, to cover the set-up costs of Personal Accounts, in 2006/7 earnings terms (Chart 5).
- The amount raised in charges would be enough to cover administration costs in every year from 2012. No new borrowing would be needed after 2012 and the initial borrowing could be paid in 2014, 2 years after the introduction of Personal Accounts.
- Revenue could increase steadily in the years following 2012 until the number of Personal Account funds reaches an equilibrium level.

The payback period and amount of borrowing are both uncertain, although much less so than for the Annual Management Charge since borrowing is needed over a much shorter period of time. For example:

- If the cost of capital was 5%, rather than the 10% assumed above, then the peak amount of borrowing could be slightly lower at around £700 million and could be fully repaid in 2014.
- If the cost of capital was 15%, then the peak amount of borrowing could still be around £800 million and could be fully repaid in 2015.

Chart 5



Chapter 5: A contribution charge

An annual charge, equal to a certain proportion of each contribution made, could reduce fund values by the same proportion, irrespective of an individual's age, earnings or saving history. Borrowing of around £600 million may be needed after 2012 to cover the set-up costs of Personal Accounts.

A contribution charge is a proportion of each Personal Account contribution made, including the employer and employee contributions plus the Government's tax relief. Unlike other charges, a contribution charge is not levied when contributions are not being made. In this chapter, a 10% contribution charge is assumed.

Impact on individuals

A contribution charge of 10% would reduce the value of contributions by 10%, regardless of how large the contributions are or when they are made. The contribution charge would therefore reduce final fund sizes by 10%, for all of the hypothetical individuals (Table 4).

However, although all individuals would see the same proportional reduction, it is important to note that the absolute value of the reduction would be greatest for those with the largest pension funds. For example, a man with a full saving history aged 25 in 2012 would see a reduction due to charges of:

- £7,500 if he earned at median earnings (in 2006/7 earnings terms).
- £3,500 if instead, he earned at the 1st decile of male earnings.

Table 4¹⁸: Estimated percentage of fund value lost to charges under the contribution charge for hypothetical individuals

	Number of years saving	Position in the earnings distribution				
		1st	3rd	Median	7th	9th
Aged 25 in 2012						
Man with full saving history	43	10%	10%	10%	10%	10%
Woman with caring breaks	26	10%	10%	10%	10%	10%
Man who switches to e'er scheme at 45	20	10%	10%	10%	10%	10%
Woman who starts saving at 45	23	10%	10%	10%	10%	10%
Woman with short saving period at 25	4	10%	10%	10%	10%	10%
Man with short saving period at 50	4	10%	10%	10%	10%	10%
Aged 40 in 2012						
Man with full saving history	27	10%	10%	10%	10%	10%
Woman with caring breaks	22	10%	10%	10%	10%	10%
Aged 55 in 2012						
Man with full saving history	10	10%	10%	10%	10%	10%
Woman with caring breaks	5	10%	10%	10%	10%	10%

¹⁸ See Box 1 for details of the individuals used

Impact on financing

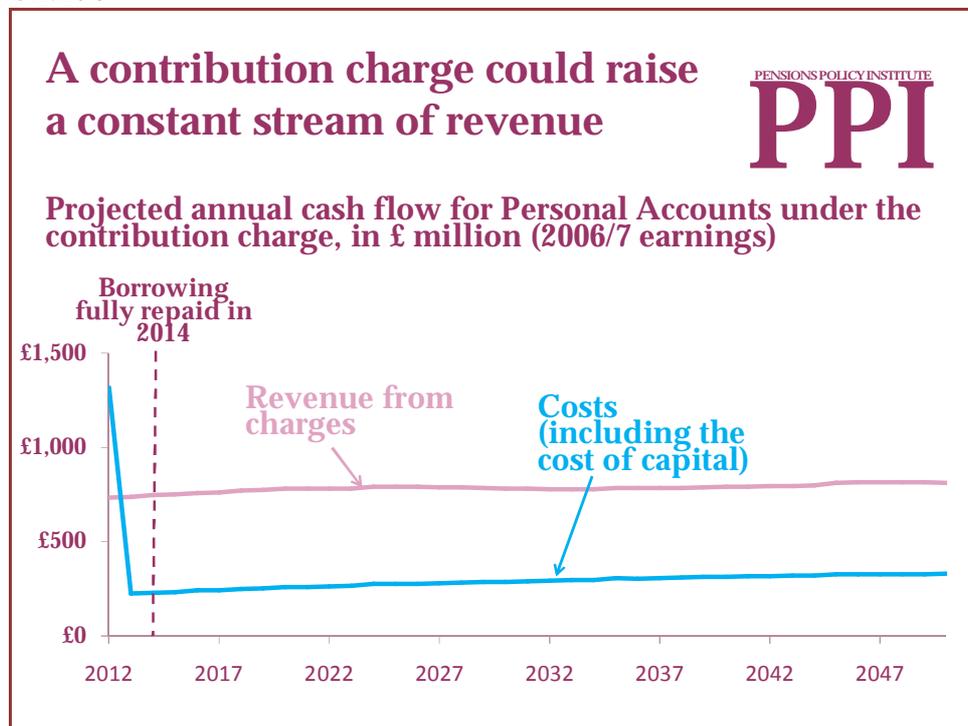
Under a contribution charge, a short term loan of around £600 million may be needed to cover the set-up costs of Personal Accounts.

In the central scenario:

- It may be necessary to borrow around £600 million in 2012, to cover the set-up costs of Personal Accounts, in 2006/7 earnings terms (Chart 6).
- The amount raised in charges would be enough to cover administration costs in every year from 2012. No new borrowing would be needed after 2012 and the initial borrowing could be paid in 2014, 2 years after the introduction of Personal Accounts.
- Revenue could remain stable over time, if contributions to Personal Accounts remain stable over time.

An annual cost of capital that is 5% higher or lower than assumed in the central scenario is unlikely to mean a significantly different amount of borrowing is required or significantly alter the payback period.

Chart 6



Chapter 6: A contribution charge plus an AMC

Some organisations have discussed combining different charging structures together, for example, a combination of a contribution charge and an AMC. Compared to a straightforward AMC, this would reduce the variation in outcomes between individuals and reduce the amount of borrowing needed.

This chapter considers a combination of a lower AMC of 0.25% and a lower contribution charge of 5% of total contributions (i.e. employer and employee contributions plus Government tax relief). The contribution charge is assumed to stop when contributions stop but the AMC is paid until retirement.

Impact on individuals

Under a combination of a contribution charge and AMC (Table 5):

- Variations between individuals would be reduced compared to a straightforward AMC. For example, the most the hypothetical individuals would forgo under this combination charge is 14%, compared to 19% under a straightforward AMC (Table 1).
- People who start saving early in life but then stop saving could be affected the most. This is because the AMC will continue to be charged after contributions stop.
- The proportional losses do not vary significantly by income. For example, a woman with caring breaks aged 25 in 2012 could lose 10% of her fund value to charges, regardless of her income.

Table 5¹⁹: Estimated percentage of fund value lost to charges under the combination of a contribution charge and lower AMC for hypothetical individuals

	Number of years saving	Position in the earnings distribution				
		1st	3rd	Median	7th	9th
Aged 25 in 2012						
Man with full saving history	43	11%	11%	11%	11%	11%
Woman with caring breaks	26	10%	10%	10%	10%	10%
Man who switches to e'er scheme at 45	20	13%	13%	13%	13%	13%
Woman who starts saving at 45	23	8%	8%	8%	8%	8%
Woman with short saving period at 25	4	14%	14%	14%	14%	14%
Man with short saving period at 50	4	9%	9%	9%	9%	9%
Aged 40 in 2012						
Man with full saving history	27	8%	8%	8%	8%	8%
Woman with caring breaks	22	9%	9%	9%	9%	9%
Aged 55 in 2012						
Man with full saving history	10	6%	6%	6%	6%	6%
Woman with caring breaks	5	6%	6%	6%	6%	6%

¹⁹ See Box 1 for details of the individuals used

Impact on financing

Compared to a straightforward AMC, this hybrid could reduce the amount of borrowing needed.

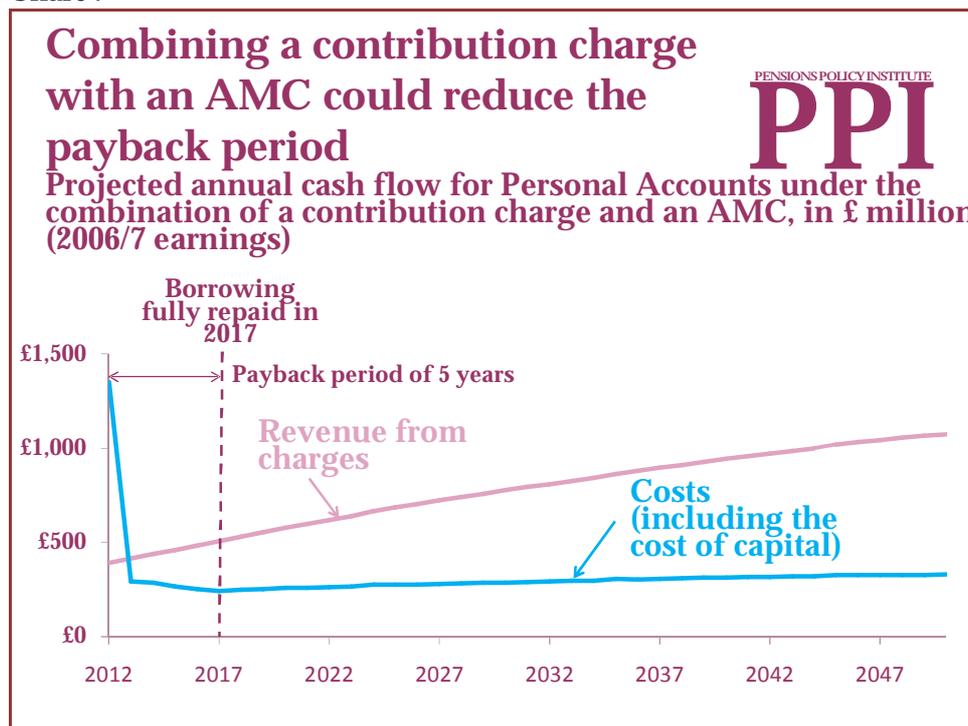
In the central scenario:

- It may be necessary to borrow around £1 billion in 2012, to cover the set-up costs of Personal Accounts, in 2006/7 earnings terms (Chart 7).
- Unlike with a pure AMC, charging revenue would cover administration costs in the immediately following years. This means no more borrowing is needed after 2012. The existing amount of borrowing could be paid off in 2017.

The payback period and amount of borrowing are both uncertain, although less so than for the Annual Management Charge since borrowing is needed over a much shorter period of time. For example:

- If the cost of capital was 5%, rather than the 10% assumed above, then the peak amount of borrowing could be slightly lower at around £900 million and could be fully repaid in 2017.
- If the cost of capital was 15%, then the peak amount of borrowing could be slightly higher at around £1 billion and may be fully repaid slightly later in 2018.

Chart 7



Chapter 7: Evaluation against the Government's criteria

The previous five chapters have shown that the choice of charging structure can have significant implications for individuals and the financing of Personal Accounts.

This chapter evaluates each of the charging structures against the five criteria that the Government has suggested²⁰:

1. Fair to all members, taking into account an individual's ability to pay
2. Provides significant revenue in the early years of operation, thus reducing the amount and length of operating losses, and reducing financing costs
3. Simple and easy to understand
4. Incentivises members to help keep costs down
5. Incentivises the scheme operator to maximise the fund value

Initial analysis by the Department for Work and Pensions (DWP) suggested that no single charge structure, or a combination of charge structures, has all of the desirable attributes²¹. Each charge structure has advantages and disadvantages and there are trade-offs that have to be made.

Fair to all members

The charging structures analysed in the previous chapters will affect different individuals in different ways. Views will differ on exactly what is meant by 'fairness'.

One definition of 'fairness' is that everybody pays the cost of running their fund, with no cross-subsidy between members. None of the charging structures analysed fully meets this test, due to how providers charge for different services. For example²²:

- The cost of setting up an individual Personal Account policy would occur once when a member begins saving
- The administrative costs of running Personal Accounts are likely to be similar for all individuals, regardless of the length of their saving histories or the size of the fund
- The costs of managing Personal Account funds are likely to be proportional to the size of the funds

To satisfy this first definition of fairness, a combination of a joining charge, a flat fee and an AMC would be needed, to cover each of these three types of costs. None of the charging structures analysed in this paper fully meets this definition of fairness, although the annual flat fee may be the closest.

²⁰ DWP (2006 PA) paragraph 4.11

²¹ DWP (2006 PA) paragraph 4.12

²² Pensions Commission (2006) Appendix F

An alternative interpretation of ‘fairness’ is that everybody loses the same proportion of their fund value to charges. This links the amount of charges paid to the size of a member’s fund, which is likely to be lower for lower earners and for people with short saving histories.

Only a pure contribution charge would meet this test. Column D in Table 6 shows that, under a contribution charge, all of the hypothetical individuals could lose 10% of their fund value to charges.

Table 6²³: Estimated percentage of fund value lost to charges for different hypothetical individuals. NOTE: The best charging structures for each individual are shaded in grey.

	A	B	C	D	E
	AMC	Joining charge + AMC	Annual flat fee	Cont. charge	Cont. charge + AMC
1) Median-earning man with full saving history, aged 25 in 2012	11%	10%	5%	10%	11%
2) Low-earning woman with caring breaks, aged 25 in 2012	10%	10%	28%	10%	10%
3) Low-earning woman with short saving period at 25, aged 25 in 2012	19%	22%	100%	10%	14%
4) Low-earning man with short saving period at 50, aged 25 in 2012	7%	13%	36%	10%	9%
5) Median-earning man with full saving history, aged 55 in 2012	3%	5%	5%	10%	6%

A pure AMC would mean that high and low earners lose the same proportion of their fund value to charges, providing that they have the same saving histories. However, an AMC could affect people differently depending on when in life they save (column A in Table 6):

- Of all of the hypothetical individuals modelled, people with short periods of saving early in life could lose the greatest proportion of their fund value to charges under an AMC (see, for example, individual 3 in Table 6). People could have this saving history because they change job and are auto-enrolled into an occupational pension scheme, or because of caring responsibilities, disability, unemployment or any other reason.

²³ See Box 1 for details of the individuals used. For the purposes of this table, ‘low earning’ means ‘earns at the 1st decile for individuals of the same age and sex’ and ‘high earning’ means ‘earns at the 9th decile for individuals of the same age and sex’.

- At the other extreme, people with short periods of saving late in life could be affected proportionally the least by an AMC (see, for example, individual 4 in Table 6).
- People with long saving histories could see a reduction somewhere in the middle of these two extremes (see, for example, individual 1 in Table 6).

Because an AMC has a small proportionate impact on people with short periods of saving late in life, it is likely to have a small proportionate impact on people in their forties or fifties when Personal Accounts are introduced in 2012 (see, for example, individual 5 in Table 6).

A hybrid between a contribution charge and an AMC would mean that there is less variation in the impact of charges between individuals than under a pure AMC (column E in Table 6).

Young people with a relatively full saving history could generally do best under an annual flat fee (column C in Table 6). This is because the impact of a sustained contribution history and investment returns could mean that the size of their saving is relatively large, and so the impact of an annual flat fee is relatively small.

However, an annual flat fee could have a larger impact on individuals with low incomes and shorter periods of saving. In certain extreme cases, of people who save for a few years early in life and then stop contributing, it may mean that the entire value of saving is lost to charges (see, for example, individual 3 in Table 6).

It should be noted that the charging structures could be modified in specific ways, to reduce their impact on particular groups of people. Many modifications are possible, including:

- Charges could be capped. For example, in Australia, superannuation accounts of less than AU \$1,000 (around £400) are protected so that the amount of charges levied in each year cannot exceed the level of investment returns in that year²⁴. Accounts that are 'lost' (for example, where individual members cannot be contacted) are also protected.
- A lower AMC could be applied to large accounts, to reflect the fact that the AMC has a large absolute impact.

²⁴ Superannuation Industry (Supervision) Act

Provides significant revenue in the early years of operation

Some short-term borrowing may be inevitable under any of the charging options. This is because charging revenue would not be raised until Personal Accounts are fully implemented in 2012, but there will be costs involved in the setting-up of Personal Accounts in the run up to this date. However, depending on the charging structure used, long-term borrowing may also be needed.

A pure AMC would raise very little revenue in the short term, until the size of funds under management has built up. This could mean that the organisations financing Personal Accounts may have to borrow between £1.7 and £4.5 billion, depending on the cost of capital. In the central scenario used in this paper, the total amount of interest paid over the course of the borrowing could amount to £3 billion, which may ultimately be passed on to members.

The most effective way to reduce borrowing requirements could be to introduce a joining charge, so that members pay an upfront fee for taking out a Personal Account. This could eliminate the need for borrowing after 2012 (Table 7).

The other charging structures may also require borrowing over a much shorter period than the pure AMC:

- A pure annual flat fee or a pure contribution charge could mean that borrowing could be fully repaid by 2015, three years after the assumed implementation date of Personal Accounts.
- If an AMC element was desirable, then it may be possible to combine an AMC with other types of charge in such a way as to reduce financing costs. For example, a hybrid between an AMC and a joining charge or a contribution charge.

Table 7²⁵: The financing of the different charging structures

	Payback period	Peak amount of borrowing (£m, 2006/7 earnings)	Total cost of capital (£m, 2006/7 earnings)
AMC	15 to 28 years	£1,700 to £4,500	£900 to £11,800
Joining charge + AMC	No borrowing required after 2012		
Annual flat fee	2 to 3 years	£700 to £800	£100 to £200
Contribution charge	2 years	£600	£0 to £100
Contribution charge + AMC	5 to 6 years	£900 to £1,000	£100 to £500

²⁵ Ranges show the impact of a cost of capital of 5% and 15%, the lower and upper assumptions used in this paper. £ million figures are rounded to the nearest £100 million. Figures of less than £50 million are rounded to £0, although this does not mean that there is no cost. No range is shown when both the upper and lower estimates round to the same figure.

Any pure charging structure, rather than a hybrid, could lead to a mismatching between charging revenue and costs. This is because the providers of different services may charge in different ways. For example, providers of administrative services for Personal Accounts may charge on a per member basis, while providers of fund management services might charge on an AMC basis.

Simple and easy to understand

Further research is needed to determine how well individuals understand charging structures and how charging structures may influence their behaviour.

An AMC would be readily comparable to the existing Stakeholder Pensions. However, it may be difficult for individuals to understand the impact of AMCs on final pension funds, since the AMC has a cumulative impact over time. Apparently small changes in the level of an AMC charge have a disproportionate impact on the final fund values, as shown in Chart 1 in Chapter 1.

A contribution charge has the most consistent impact on the proportion of final fund value lost to charges, while an annual flat fee may be the easiest to understand in terms of how much is being paid each year.

An annual flat fee may be very visible to members and make Personal Accounts appear more expensive than Stakeholder Pensions, even if they are not. An annual flat fee may therefore put Personal Accounts at a disadvantage relative to existing types of pension provision.

Incentivising members to help keep costs down

None of the charging structures seems to directly incentivise an individual member to reduce costs that providers incur on their behalf, for example, by making fewer queries.

One way of altering the charging structure to incentivise members to keep costs down could be to charge for specific activities, for example, a charge based on the number of telephone calls made by the member each year. However, charging for specific activities may add complexity and may discourage members from doing what is in their best interest.

Some of the charges may encourage participation in Personal Accounts more than others. This higher participation may mean that the fixed costs of Personal Accounts are shared between more individuals, reducing the average cost per member.

The impact of charges on individual behaviour is not known and further research is needed. One plausible set of reactions is:

- A joining fee could act as a psychological deterrent to people, so that people are more likely to opt out of Personal Accounts when they are first enrolled. However, once the joining fee has been made, it may encourage people to continue to save in Personal Accounts. Individuals may feel that they need to continue to use the product they have bought in order to get good value out of the amount they have already paid.
- A flat fee may be very visible to members. Although it is simple and transparent, it may discourage individuals to save.

Although greater participation would share the fixed costs, more policies would need to be set up and so variable costs could be higher. In some of the charging structures, higher participation would mean more charging revenue which could meet the higher variable costs. However, under a pure AMC, the higher variable costs from higher participation could mean that more borrowing is needed.

Incentivise scheme operators to maximise fund value

An AMC explicitly relates revenue to fund value and so may provide the greatest incentive to maximise fund value. However, a hybrid charging structure with an AMC element could also achieve the same objective.

Some of the charging structures may incentivise scheme operators to act in different ways. For example, a flat fee may provide an incentive for scheme operators to encourage higher participation, since revenue under a flat fee depends on how many people have a Personal Account. Similarly, a contribution charge could provide an incentive for scheme operators to encourage people to contribute more than the minimum into a Personal Account, if charges were also levied on additional voluntary contributions.

Overall, no single charging structure, or combination of charging structures, has all of the desirable attributes. Each charge structure has advantages and disadvantages and there are trade-offs that have to be made.

Appendix: Modelling details

This appendix:

- Gives more information on how the charging structures have been calibrated
- Describes the main assumptions used in this paper
- Describes the likely impact of assuming different assumptions to those used in this paper

Calibration

The charging structures modelled in this paper have been calibrated so that, in the long term, they raise the same amount of revenue as an Annual Management Charge (AMC) of 0.5%. This is consistent with the latest Government estimate that *personal accounts could deliver an AMC of possibly as low as 0.5 per cent in the short term and below 0.3 per cent in the long term*²⁶.

For the purposes of the calibration, any long-term surplus of charging revenue over costs is assumed to be invested in gilts. The accumulated amount of revenue in 2050 is then calculated based on a set of assumptions, and the levels of the charges are set so that the accumulated amount in revenue in 2050 is comparable between the charging structures.

Note that, although all of the charging structures have been calibrated to raise the same level of revenue, they do have different borrowing requirements. This means that the cost of servicing borrowing differs between the charging structures.

An alternative calibration would be based on the amount of revenue raised, after the costs of setting up Personal Accounts, administration and servicing borrowing have been deducted. Since the pure AMC requires more borrowing than the other charging structures, this alternative approach would mean that the levels of charges in the other structures would be calibrated to be at a lower level than is used in this paper.

Any calibration is to some extent arbitrary. In particular, there are choices for what timeframe is used: whether the calibration is based on the position in 2050 or in some earlier or later year. The objective is to set the level of charge in each charging structure to be broadly similar, to enable fair comparisons to be made.

For simplicity, this paper assumes a charging structure that does not change over time, although there is some international evidence to suggest that reductions over time are possible²⁷.

²⁶ DWP (2006 PA) paragraph 4.7

²⁷ DWP (2006 PA) Box 4b

Financing assumptions

The PPI's Aggregate Model is used to project the amount of revenue raised from charges, which is compared to estimates of the costs of setting up and administering Personal Accounts. Any shortfall of revenue over costs is assumed to be met by borrowing, which is gradually repaid after Personal Accounts move into surplus.

The following assumptions are used in the modelling:

- The central scenario assumes that around 8 million people participate in Personal Accounts in 2012²⁸. The number of participants is uncertain and alternative scenarios consider 6 and 10 million participants²⁹.
- The central scenario assumes an annual investment return of 3% in excess of prices, consistent with an investment of 60% in equities and 40% in bonds³⁰. Alternative scenarios are considered with annual investment returns of 2.5% and 3.5%.
- Future annual price inflation of 2.5%.
- Future annual earnings growth of 2.0% in excess of prices.
- A range of assumptions are used for the cost of capital. See page 13 for more details.

Projecting the costs of setting up and running Personal Accounts

The exact future cost of setting up Personal Accounts is uncertain. In this paper, the assumed costs of running Personal Accounts are based on Pensions Commission estimates³¹:

- An initial cost of £500 million to set up the infrastructure of Personal Accounts.
- An additional start-up cost of £90 per individual. This cost is assumed to increase with prices.
- On-going costs of £25 a year for each in-force policy and £20 a year for each paid-up policy. These costs are assumed to increase with prices.
- Fund management costs of 0.08% of assets under management.

The PPI's Aggregate Model is used to project the number of people saving in Personal Accounts (i.e. the number of in-force policies). The Pensions Commission costs estimates are then applied to these projections. The modelling in the main part of this paper assumes the Government's central scenario for membership.

²⁸ DWP (2006 PA RIA) Box 1

²⁹ DWP (2006 PA RIA) paragraph 1.8

³⁰ Curry (2003) page 25, published by PPI. This assumes equity returns of 7% a year and bond returns of 4%.

³¹ Pensions Commission (2006) Appendix F

To project the number of paid-up policies, an assumption is made regarding non-persistence (whereby in-force policies become paid-up) and re-joining (whereby people with paid-up policies resume their contributions again and so their policies become in-force):

- Consistent with the Pensions Commission's costs, non-persistence of saving in Personal Accounts is assumed to be 25% of current levels³²
- Each year, 10% of working age people who already have a Personal Account but who are not currently contributing are assumed to resume their contributions
- For simplicity, there is assumed to be no transfers into or out of Personal Accounts

Projecting revenue from charges

The Aggregate Model also projects the annual contributions into Personal Accounts and the total size of Personal Account funds. The total revenue from each of the different charging structures is estimated based on these projections.

The projection uses the following assumptions:

- Employees in Personal Accounts contribute the minimum amount, without making any additional voluntary contributions.
- A central assumption of an annual investment return of 3% in excess of prices, consistent with an investment of 60% in equities and 40% in bonds³³.

Key areas of sensitivity

All of the assumptions made in this paper are uncertain, as discussed on page 13. This section briefly describes the main findings from the sensitivity analysis that has been carried out on the main assumptions³⁴.

The projected time it takes for Personal Accounts under each charging structure to repay borrowing (the 'payback period') is very sensitive to the cost of capital assumed, particularly with a pure AMC. A cost of capital of 15%, rather than the 10% assumed for the central scenario, could extend the payback period of a pure AMC by 10 years and could increase the peak amount of borrowing required by £2.1 billion. A lower cost of capital of 5% on the other hand, could reduce the payback period by 3 years and could decrease the peak amount of borrowing required by £700,000.

³² As estimated in the FSA persistency survey for Stakeholder Pensions, FSA (2006)

³³ Curry (2003) page 25, published by PPI. This assumes equity returns of 7% a year and bond returns of 4%.

³⁴ Details available on request

Membership that is 2 million people higher or lower than assumed would alter the projected payback period by 1 year or less. However, under a pure AMC, membership that is 2 million people higher can increase the peak amount of borrowing required by £400,000. This is because of the extra cost of setting up the new policies. Conversely, membership that is 2 million people lower could reduce the peak amount of borrowing required by £400,000.

Annual investment returns that are 0.5% higher or lower would alter the projected payback periods by less than 1 year, and would not substantially change the amount of borrowing needed. This is because the impact of changes to the investment return is most significant over the long term, after borrowing has been paid off.

For hypothetical individuals, the results are not very sensitive to different assumptions on investment returns. In general, a higher investment return would both increase the final pension fund before charges and the final pension fund after charges, leaving the proportionate reduction largely unchanged.

The only charging structure that is affected noticeably by different investment return assumptions is the flat fee. This is because unlike an AMC, which takes the same proportion of a fund regardless of its absolute size, the size of a flat fee relative to the size of the fund can change when using different assumptions for investment returns.

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The authors take responsibility for remaining errors.

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