



National Audit Office

Cabinet Office

Managing early departures in central government

Financial modelling technical annex

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Introduction

1 This document accompanies *Managing early departures in central government*, a report published by the Comptroller and Auditor General on 15 March 2012.

2 The 2010 Spending Review required government departments to make significant administrative cost savings as part of reducing the deficit. Staff costs typically make up around half of administration budgets and almost all departments are planning staff cost reductions, largely through reducing the number of employees.

3 We define 'early departures' to include Voluntary Early Exit (including with early access to pension), Voluntary Redundancy and Compulsory Redundancy. This study examines the potential for government departments, and the taxpayer as a whole, to achieve savings from early departures over the period of the spending review.

4 This report is concerned with early departures, from central government departments and other bodies, of staff who are members of the Principal Civil Service Pension Scheme (the Scheme). It does not cover devolved administrations. It also does not examine the large programmes of early departures which are under way in other public sector bodies, including local authorities, the NHS, police and armed forces. The data we have used also exclude a number of other small public sector pension schemes, including those for the Security Service and Secret Intelligence Service.

5 The study examines the potential for government departments to achieve savings from early departures over the period of the spending review and to sustain value for money savings over the longer term. To do this we aimed to:

- set out the available information on the scale and impact of the planned departures on the civil service;
- model the cashflows from departures completed under the revised Scheme in the year beginning 22 December 2010; and
- consider how well placed departments are to make informed decisions, and manage risks to value for money.

6 As part of the second of these aims, we sought to create some metrics for the value for money of the early departures in terms of the payback period, and the net present value, both for departments and for the taxpayer as a whole. We also aimed to compare the value for money of early departures under the revised and the previous Scheme terms. This information was not available either across government or within individual departments. Moreover, the presentation of costs and savings from early departures in departmental Resource Accounts was not sufficiently detailed or consistent to support analysis of value for money.

7 We therefore created a financial model of the costs and savings associated with the early departures completed during the first year of the revised Civil Service Compensation Scheme, which came into effect on 22 December 2010. This was based on an analysis of the cashflows between different actors in the process, including departments, the Principal Civil Service Pension Scheme and HM Revenue & Customs, and data obtained from the Principal Civil Service Pension Scheme.

8 The model was not intended to identify the value for money of individual early departures, and we have taken appropriate steps to avoid extracting or using personal data. Rather, it is intended to provide suitable measures at a cross-government level to form part, but not the whole, of an assessment of value for money. This technical annex sets out our approach to the modelling work, and full details of our findings.

9 The model makes a number of assumptions, and has been subjected to sensitivity analysis, although we recognise that there is scope for further analysis to be undertaken. In developing and testing the assumptions, we have drawn on external data sources, including the Office for National Statistics, the Department for Work and Pensions and the Labour Force Survey. We are indebted for actuarial and additional modelling expertise to consultants from PricewaterhouseCoopers LLP. We are also grateful for the collaboration of economic and statistical experts from the Cabinet Office.

10 The model we have created has potential to be developed further, as a tool for government departments or other bodies, or across government, to support decision-making around early departures. It also has the capacity to accommodate further complexity in economic and actuarial assumptions, to decrease levels of uncertainty around the results, as the availability of suitable data improves.

Construction of the model

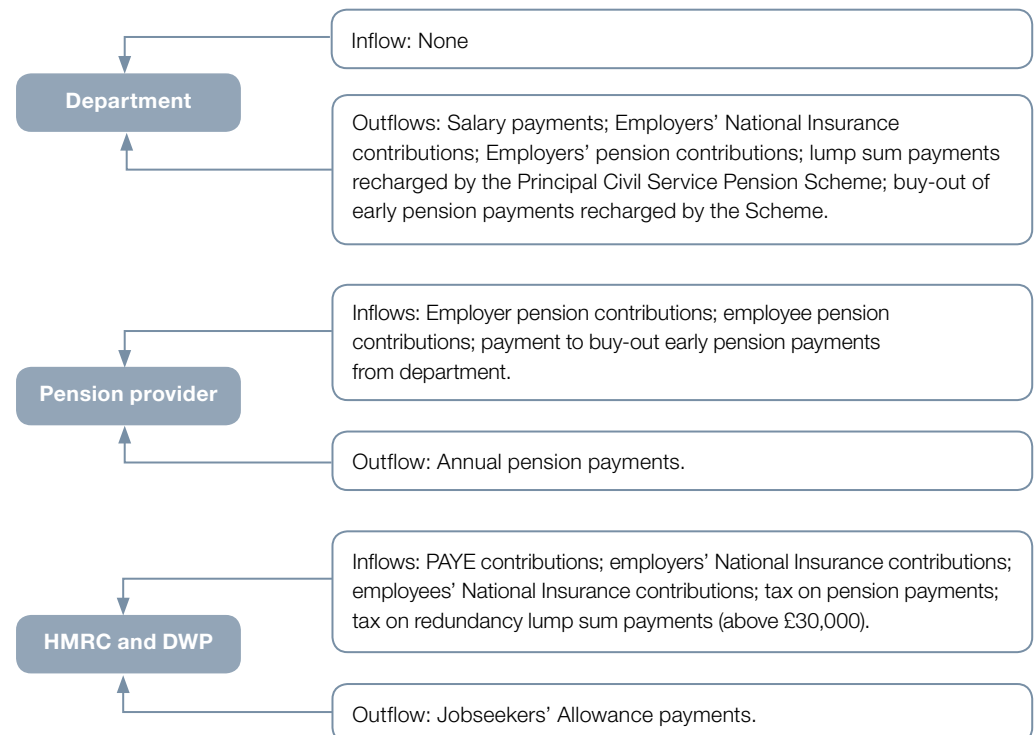
1 The model has been constructed in Microsoft Excel, and is formed of three parts. These represent the three areas within Government that are affected financially by each early departure:

- the department/agency/non-departmental public body that the individual is leaving (the Department);
- the Principal Civil Service Pension Scheme (the Scheme); and
- HM Revenue & Customs and the Department for Work and Pensions (HMRC and DWP).

2 The model is designed to show the flows of cash between these three actors, summarised in **Figure 1**.

Figure 1

Cashflows associated with early exits



Source: National Audit Office and PricewaterhouseCoopers

3 For each section, the model calculates the cashflows resulting from two scenarios:

- Scenario One – the actual scenario when the individual took early departure.
- Scenario Two – a second “counterfactual” scenario where the individual remained in employment.

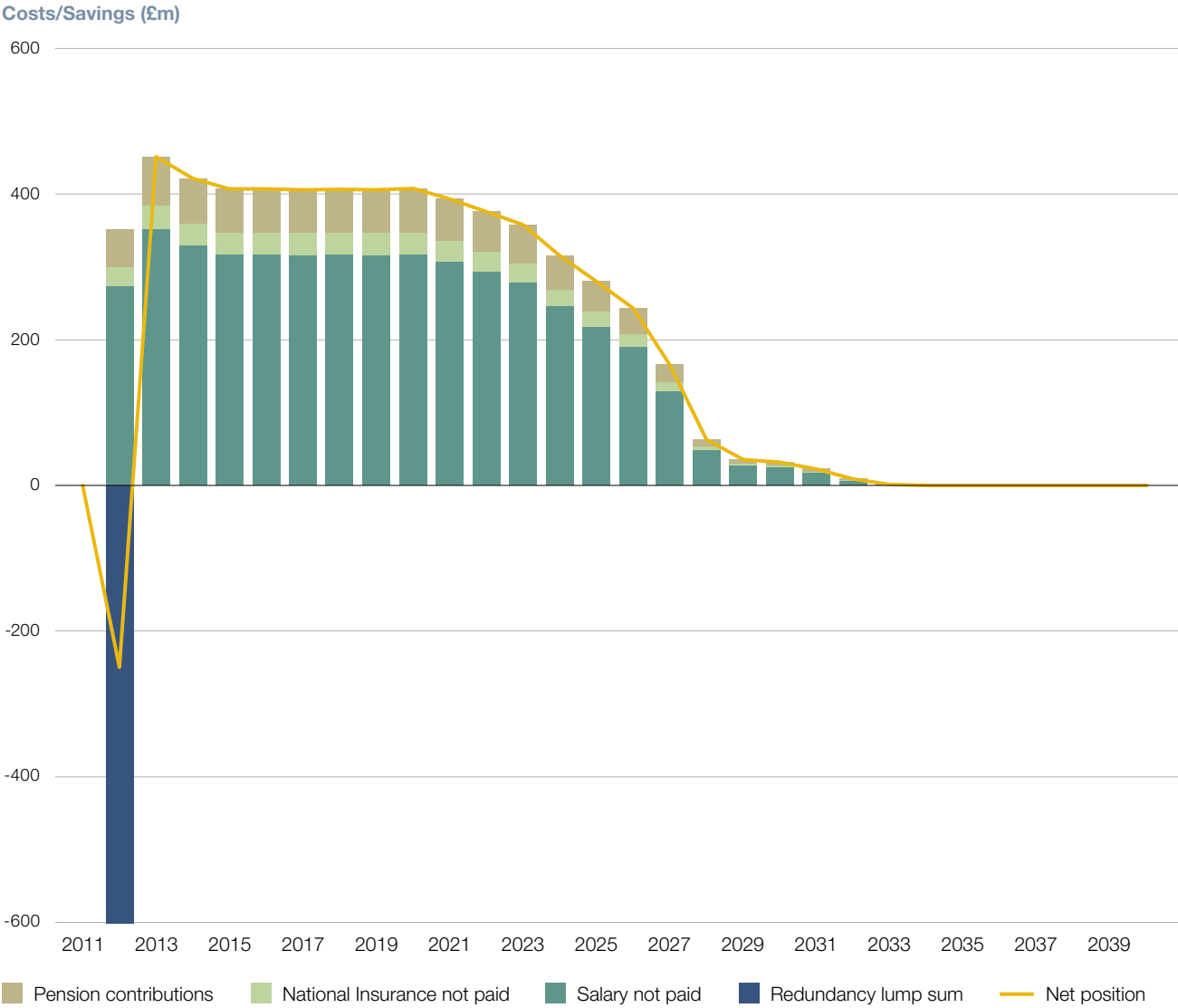
4 The model calculates the net effect of the individual taking an early departure by deducting the cashflows of Scenario One from the cashflows of Scenario Two. With this set of net cashflows it is possible to calculate:

- the **payback period** for a departure (the time taken for savings associated with not employing someone to outweigh the initial costs of an early departure); and
- the **net present value** of the resultant cashflows (the total cost minus the total savings over a given period. In our report, we consider the lifetime net present value, and also that for the spending review period).

5 In each case, these can be given either for the Department or, by combining the three parts of the model, the taxpayer as a whole. **Figure 2** shows the cashflows for departments. Here we see an immediate spike in costs, which represents the initial lump sums to staff leaving, plus a smaller sum to buy out early pension payments. Above the line, savings accumulate in the form of salary, National Insurance and pension contributions that would have been paid had staff remained. All cashflows included within the model are calculated on an annual basis. Therefore, any tax effects caused by the timing of payments during the year have not been taken into account; for example, whether payments fall before or after changes to tax rates during the year.

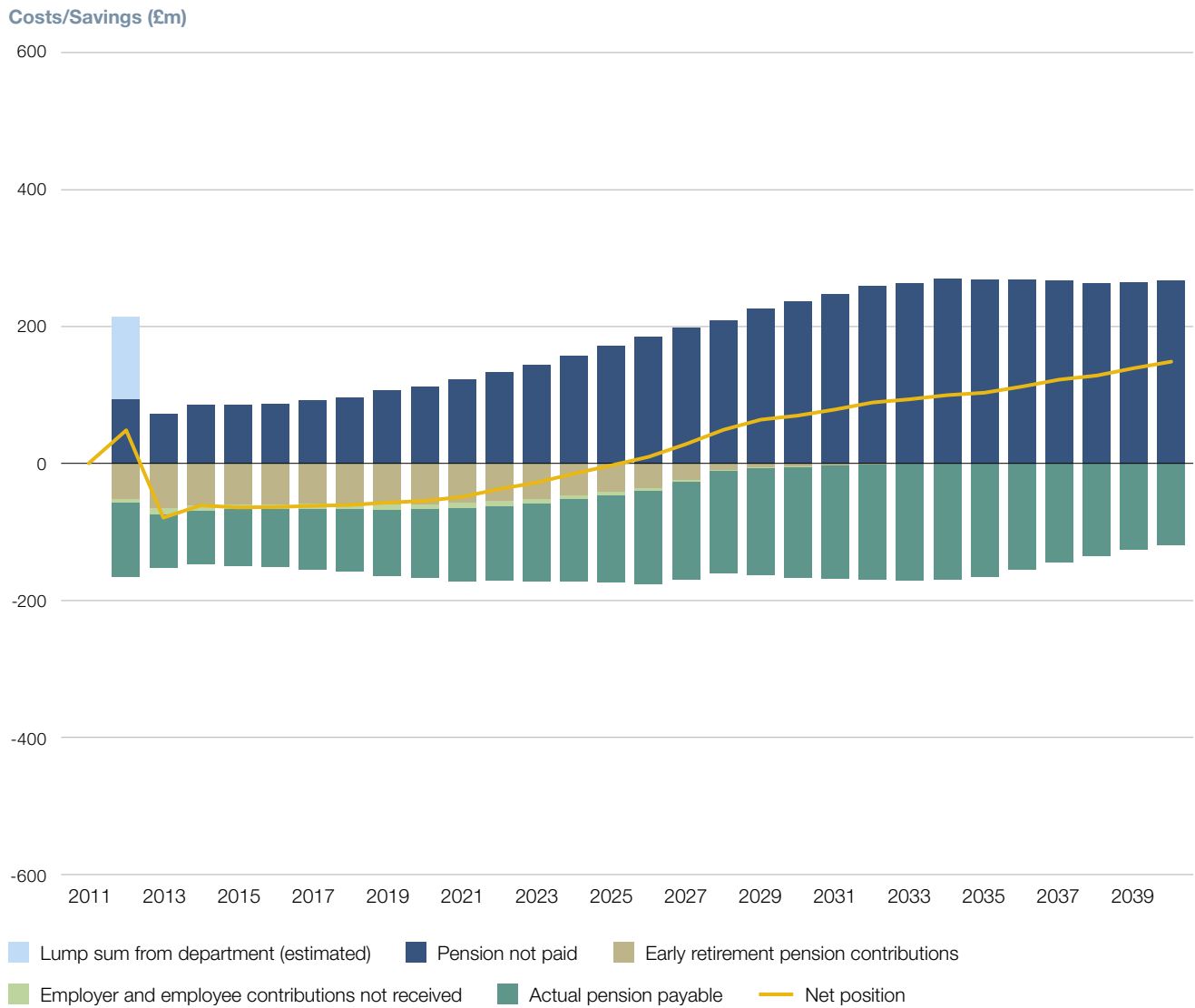
6 Other costs to government cover a longer timeframe. For the Scheme, people leaving early and taking pensions create a delayed peak in costs. Payback is achieved over a much longer period, as the overall pension payable is reduced because of the shorter length of service (**Figure 3** on page 8).

Figure 2
Cashflows for departments



Source: National Audit Office/PricewaterhouseCoopers analysis of Principal Civil Service Pension Scheme data

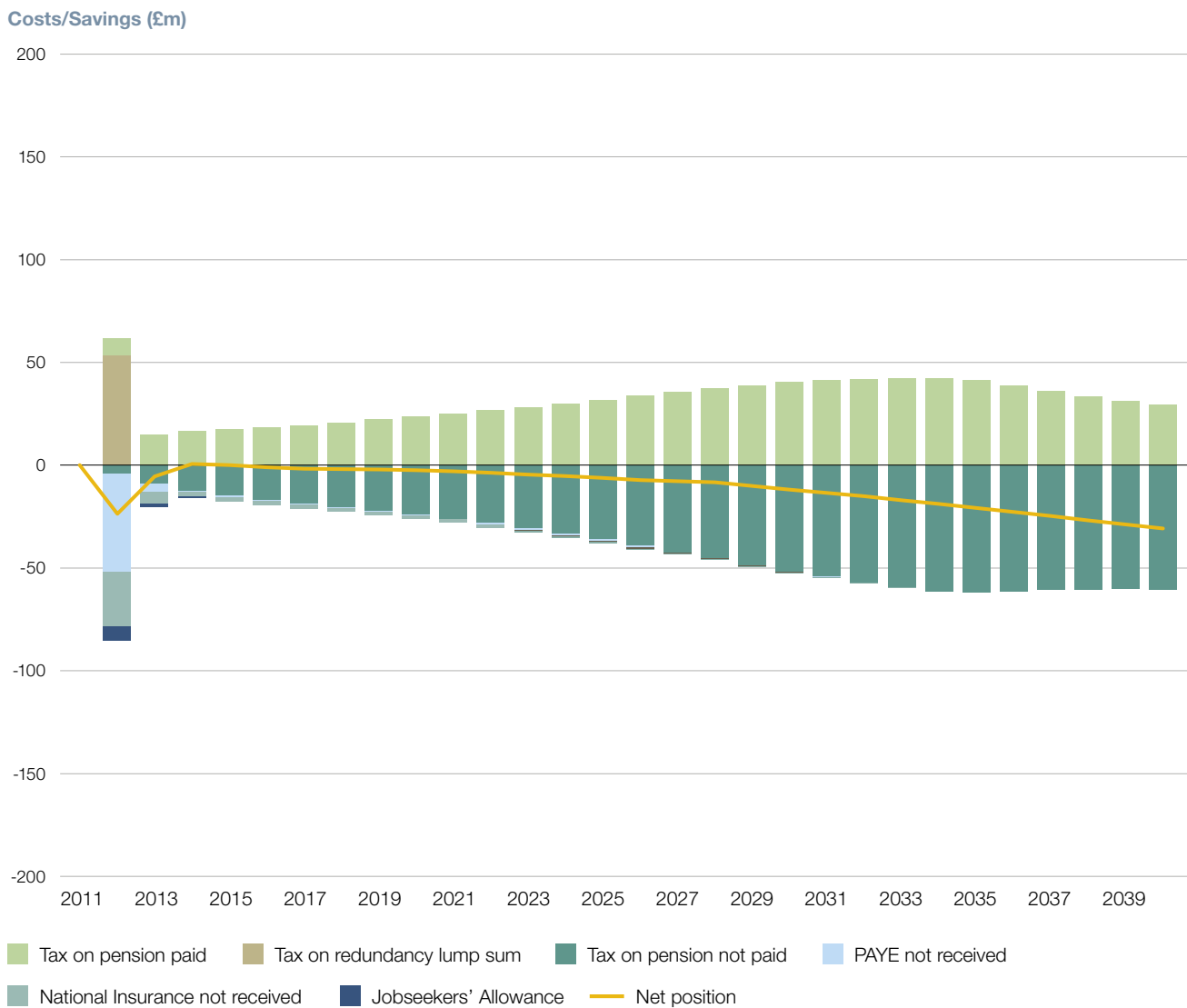
Figure 3
Cashflows for the pension scheme



Source: National Audit Office/PricewaterhouseCoopers analysis of Principal Civil Service Pension Scheme data

7 For the tax and benefits system, there is an initial windfall in tax on lump sums, but a loss in tax revenue from salary. This chart also shows costs to the Department for Work and Pensions where some leavers claim Jobseeker’s Allowance (Figure 4).

Figure 4
Cashflows for HM Revenue & Customs and Department for Work and Pensions



Source: National Audit Office analysis/PricewaterhouseCoopers analysis of Principal Civil Service Pension Scheme data

8 Figure 5 combines the three previous charts, showing the combined cashflows.

Figure 5
Overall cashflows



Source: National Audit Office/PricewaterhouseCoopers analysis of Principal Civil Service Pension Scheme data

Data considerations

Data source

1 To populate the model, we obtained data from Capita Hartshead, who provide data services to the Principal Civil Service Pension Scheme administrators, MyCSP. The data was extracted from the Penserver database via Capita's own systems. We obtained a data extract to include data lines for all members of the scheme who had left before Normal Pension Age, initially over the last five years. We requested only those data fields needed to populate our model, including:

- salary;
- date of birth;
- gender;
- date of leaving;
- department;
- lump sum paid;
- type of award (e.g. with or without early access to pension);
- date that the award was made;
- pension payments made;
- reckonable service accrued; and
- postcode information.

Data security

2 Personal data items such as name and National Insurance number were not extracted. As a unique identifier, we used the anonymous system-generated code attached by Capita's system to each scheme member's record, so that we could trace back to the original record if it became necessary for data cleansing purposes. We used the postcode data to generate a regional code for each data line and then removed postcodes from our dataset to ensure it remained anonymised. We followed the National Audit Office's Information Security Policy¹ at all times to safeguard the data, and required our consultants to do the same.

¹ http://www.nao.org.uk/publications/0708/statement_personal_data.aspx

Data quality

3 In January 2012, the Comptroller and Auditor General issued a qualified opinion on the Cabinet Office: Civil Superannuation accounts for 2010-11.² This was, in part, due to the Cabinet Office not providing sufficient records to provide assurance over the regularity of benefit payments. We are therefore aware of possible limitations over the quality of the data used in the model. However, we consider that the data cleansing approach employed (see below) has minimised the effect of missing or duplicate data.

4 Analysis has been limited where we could not be confident in the quality of the data, even after cleansing. In particular we did not have confidence in the employer codes attached to each leaver in the dataset. We have therefore not sought to break down the analysis of payback period by department, though the model could do so. To establish the overall number of early leavers for each department only, we cross-checked with departments own records, and relied on those records where there was disagreement with the employer coding within the dataset.

Data cleansing

5 Prior to receiving the data download, we requested Capita to carry out data cleansing to remove invalid records (known as “stop” records). These are outdated records that have been superseded when the Scheme receives updated information on a member, and would therefore create duplication. The following further data cleansing was carried out by PricewaterhouseCoopers:

- Records with a last day of service, or award date, prior to 22 December 2010 (when the revised Scheme was implemented) were filtered out.
- Records relating to departments or bodies that are outside the scope of our study (such as the devolved administrations) were excluded. We agreed the final inclusion listing with the Cabinet Office.
- Our data quality review identified 2000 ‘duplicate’ records, covering 979 individuals. In these instances, the same individual had multiple records, either classified as ‘new’ records, or ‘revisions’. In order to prevent double counting of the payments made to these individuals, the ‘duplicate’ records have been excluded. As these relate to genuine leavers, who satisfy all our other inclusion criteria, the final results produced by the model have been scaled up to take into account the effect of excluding these genuine leavers.
- Any records that had missing salary information, or a ‘nil’ figure for both lump sum payable and pension payable, were excluded. Again, the final results produced by the model were scaled up to take into account the effect of excluding these genuine leavers.

² Report of the Comptroller and Auditor General on the Civil Superannuation accounts 2010-11, 31 January 2012.

- Where people taking an early departure elected to take their pension early, the department paid a portion of the lump sum back into the Scheme to buy out the pension payments. The data from the Scheme was not sufficiently detailed to split out the portion of lump sum paid directly to the leaver and the portion paid back into the Scheme. We therefore made a set of reasonable assumptions about the portion of lump sum paid back into the Scheme. We know that the portion required to buy out the pension depends on the age of the leaver and the time left before Normal Pension Age (NPA). Based on our actuarial advice, we used the following table of rates to apportion the lump sums. (**Figure 6**).

Figure 6

Assumed proportion of lump sum payments repaid to the Scheme

Years to Normal Pension Age	Percentage of lump sum paid back into Scheme (%)
Over Normal Pension Age	0
0	0
1	20
2	40
3	60
4	80
5 or more	100

Source: National Audit Office

Data handling

6 To allow our Excel model to process the dataset efficiently, we used Microsoft Access to group the data into batches of a workable size. This process used four criteria to generate the groups:

- Gender.
- Year of birth.
- Early payment (Yes or No).
- Type of pension (Classic, Nuvos, Classic Plus, Premium, “Other”).

7 Each group is then represented by a weighted average, which is processed by the model and the results scaled back up to the full dataset.

Assumptions and sensitivity analysis

1 There are a number of assumptions built into the model. These have been developed with actuarial advice from PricewaterhouseCoopers, with additional data and advice from the Cabinet Office, HM Treasury and the Department for Work and Pensions, and use of information from published sources.

Staff on-costs saved

2 As our central assumption, we did not include an allowance for departments to save other headcount-related costs over and above salary, National Insurance contributions and pension contributions from releasing staff early. This is, in any case, in line with the approach used by some departments to support their decision-making. However, given that there is significant potential for 'on-cost' savings, we have carried out sensitivity analysis around the scope for further savings from IT and property-related costs.

3 Cabinet Office data suggest that in addition to salary, the on-costs of employing an individual are around 80-100 per cent of that salary, of which 25 per cent for National Insurance and pension contributions is already included in our model. There is, however, significant uncertainty over how much of the remaining 55–75 per cent on-costs can be saved by departments and how quickly they can achieve this following release of staff. IT cost savings, which the Cabinet Office estimates at around £2,000 per head or £35 million may be quickly achieved, depending on the terms of IT contracts. But our recent work shows that fixed or semi-variable property-related costs will be much slower to eliminate.³

4 To demonstrate the potential range of results, depending on how far departments can release on-cost savings, the remainder of the results set out below include both:

- **direct savings**, comprising paybill (salary, National Insurance and pension contributions) savings only; and
- **direct plus wider savings**, including paybill as above, plus a conservative 55 per cent (80 per cent less 25 per cent) for other on-costs.

³ Comptroller and Auditor General, *Improving the efficiency of central government office property*, Session 2010-12, HC 1826.

Effect of re-employment

5 Built into Scenario One (where the individual takes an early departure) is an assumption regarding re-employment. There are three component parameters to our assumption:

- How soon the individual will be re-employed.
- The amount of Jobseeker's Allowance (JSA) claimed during the period before re-employment.
- The level of salary upon re-employment, in comparison to their pre-departure salary.

6 For the first two parameters, we used data from the Labour Force Survey to understand typical re-employment rates following redundancy, and the percentage of individuals who are likely to claim contributions-based Jobseeker's Allowance following their departure (we assumed they would not be eligible for income-based Jobseeker's Allowance). We coupled this with data from the Office for National Statistics' *Nomis* database on one-off flows of the claimant count, which was used as a proxy to estimate flows back into work.⁴ We then used averages to determine the overall re-employment likelihood and JSA claim amounts for each of the age cohorts. Steady state is assumed to be reached from year three onwards.

7 The third parameter incorporates a number of factors. Recent evidence from the Institute of Fiscal Studies⁵ indicates that there is an 8.3 per cent premium when comparing public sector to private sector pay. However, the civil service constitutes only around 10 per cent of the whole public sector. Cabinet Office evidence suggests that civil service pay is typically lower than that for the public sector as a whole, by approximately 10 per cent for those in Executive Officer grades and above. Therefore, on balance we consider it appropriate to assume that those leaving via early departure will experience neither a reduction nor an increase in salary on re-employment. Hence the third parameter of re-employment assumes 100 per cent salary recovery when re-entering the workplace. In the event of further information becoming available, the model retains the ability to adjust this percentage.

8 We conducted sensitivity analysis around this assumption, which considers the combined effect of a slower return to work and/or a lower salary than previously, and the converse. The assumptions used in each scenario, relative to the central assumptions described above, are set out in **Figure 7** overleaf.

⁴ <http://www.nomisweb.co.uk/>

⁵ <http://www.ifs.org.uk/budgets/gb2012/12chap5.pdf>

Figure 7
Sensitivity analysis

Re-employment scenario	Re-employment rate	Allowance for Jobseekers payments
“50 per cent lower”	50 per cent of central rates	150 per cent of central allowance
“20 per cent lower”	80 per cent of central rates	120 per cent of central allowance
“20 per cent higher”	120 per cent of central rates, capped at 100 per cent ¹	80 per cent of central allowance
“50 per cent higher”	150 per cent of central rates, capped at 100 per cent ¹	50 per cent of central allowance

NOTE

¹ Re-employment rate is capped so that the likelihood of re-employment does not exceed 100 per cent.

Source: National Audit Office/PricewaterhouseCoopers

9 Combining the second and third parameters at paragraph 5 above into a percentage ‘re-employment rate’ enables the model to take into account the payment of tax and National Insurance on future earnings from new employment. The point at which the future salary payments occur is determined by the first parameter. The salary level used (and hence the PAYE and National Insurance Contributions paid to HM Revenue and Customs) is reduced by the re-employment rate percentage which changes over time to reflect the likelihood of the individual being re-employed, and the proportion of their former salary that they obtain (which in this case we set to 100 per cent). Appendix One to this technical annex shows the table of the re-employment rates used, incorporating the time to entering a new job, and the salary received, into one percentage figure.

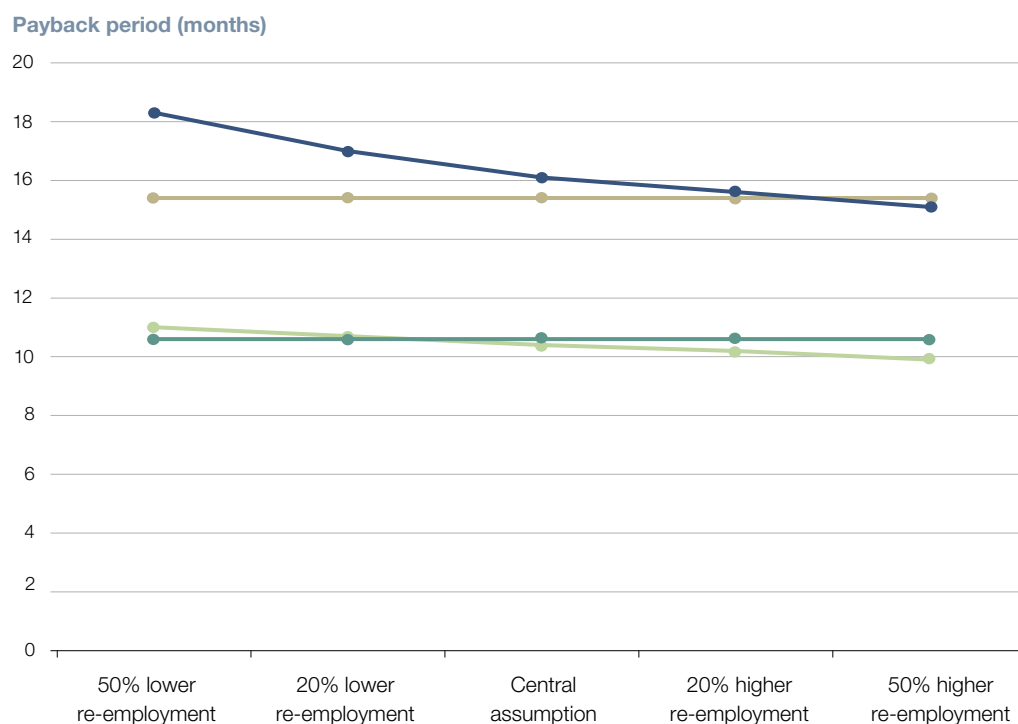
10 The following charts set out the sensitivity to these variations in re-employment rate, and to the inclusion of wider cost savings, of payback period (**Figure 8**), net present value over the spending review period (**Figure 9** on page 18) and lifetime net present value (**Figure 10** on page 19).

11 Figure 8 shows that the payback period under the central re-employment assumption ranges from 10.6 to 15.4 months for departments, and from 10.4 to 16.1 months for the taxpayer, depending on the inclusion of wider cost savings. That is to say that, when excluding on-costs, the payback period for the taxpayer is shorter than that for departments, contrary to what we may expect. The reason for this is that cash actually flows *from* the department *into* the Scheme in year one. The analysis for the taxpayer takes this inflow into account, thus making the payback period shorter, whilst the department-only scenario does not.

12 We have assumed that, if the individual gains re-employment within the civil service, this is a new role and not the same position or a direct replacement of another early departee. Therefore, in our model, re-employment of the individual has no financial effect on the department or the Scheme.

Figure 8

Effect of better or worse re-employment rates and the inclusion of wider cost savings on payback period



● Full costs/savings to taxpayer (direct only)

18.3

17.0

16.1

15.6

15.1

● Department costs/savings (direct only)

15.4

15.4

15.4

15.4

15.4

● Full costs/savings to taxpayer (including wider cost savings)

11.0

10.7

10.4

10.2

9.9

● Department costs/savings (including wider cost savings)

10.6

10.6

10.6

10.6

10.6

NOTES

1 The results for departments alone are not affected by the re-employment rate, and are included for comparison purposes only.

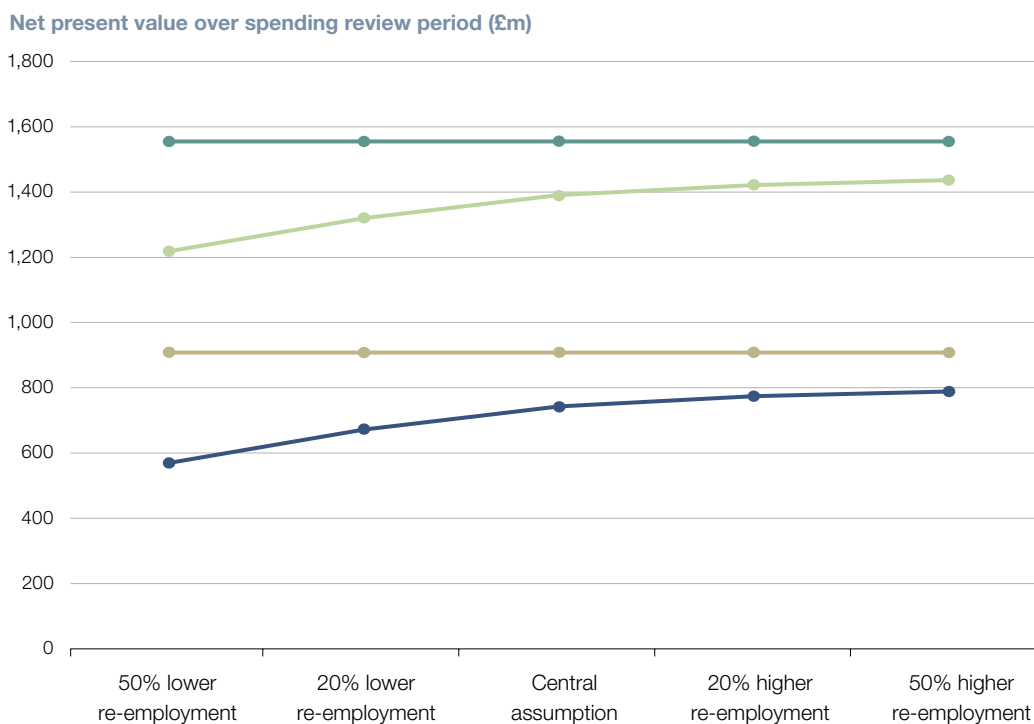
2 Both lines for the taxpayer tend to a maximum, at which point all leavers have found re-employment.

3 Figures are rounded in the main report.

Source: National Audit Office analysis of Principal Civil Service Pension Scheme data

Figure 9

Effect of better or worse re-employment rates on net present values over the spending review period



Category	50% lower re-employment	20% lower re-employment	Central assumption	20% higher re-employment	50% higher re-employment
● Department costs/savings (including wider cost savings)	1,555	1,555	1,555	1,555	1,555
● Full costs/savings to taxpayer (including wider cost savings)	1,218	1,320	1,391	1,421	1,436
● Department costs/savings (direct only)	908	908	908	908	908
● Full costs/savings to taxpayer (direct only)	570	672	743	774	789

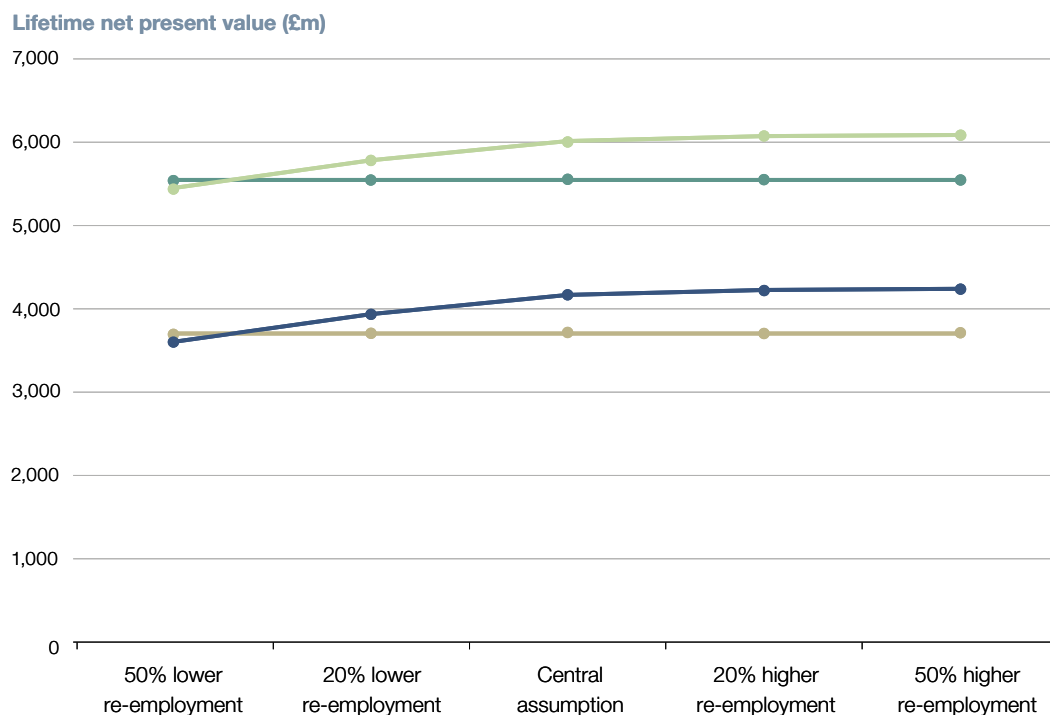
NOTES

- 1 The results for departments alone are not affected by the re-employment rate, and are included for comparison purposes only.
- 2 Both lines for the taxpayer tend to a maximum, at which point all leavers have found re-employment.
- 3 Figures are rounded in the main report.

Source: National Audit Office analysis of Principal Civil Service Pension Scheme data

Figure 10

Effect of better or worse re-employment rates on lifetime net present values



	50% lower re-employment	20% lower re-employment	Central assumption	20% higher re-employment	50% higher re-employment
● Department costs/savings (including wider cost savings)	5,550	5,550	5,550	5,550	5,550
● Full costs/savings to taxpayer (including wider cost savings)	5,455	5,787	6,015	6,073	6,088
● Department costs/savings (direct only)	3,703	3,703	3,703	3,703	3,703
● Full costs/savings to taxpayer (direct only)	3,607	3,939	4,168	4,226	4,241

NOTES

- 1 The results for departments alone are not affected by the re-employment rate, and are included for comparison purposes only.
- 2 Both lines for the taxpayer tend to a maximum, at which point all leavers have found re-employment.
- 3 Figures are rounded in the main report.

Source: National Audit Office analysis of Principal Civil Service Pension Scheme data

Assumed turnover if early departures had not taken place

13 A key assumption built into the model is the natural wastage that would typically occur within an organisation. It would be unrealistic to assume that, had individuals not opted to take early departure, they would all have remained in their present role until their Normal Pension Age (NPA). As a result, we have included within the counterfactual Scenario Two (where the individual did not take early departure) an ‘assumed leaving date’, when the employee in question would have left the civil service.

14 Drawing on the advice of our in-house economists and our actuarial advisers from PricewaterhouseCoopers, and data from the Cabinet Office, we generated a counterfactual assumption by placing individuals in three categories. The categories reflect behavioural issues associated with choosing to take early departure: we recognise that individuals will have chosen to depart for a range of reasons, but overall, we consider it likely that the actual leavers would on average have left the civil service somewhat earlier than people of the same age who did not in practice choose to take voluntary early departure:

- Members below the Minimum Pension Age (MPA, either 50 or 55) who thus did not have the option of taking an early pension: The assumed leaving age is based on average turnover over the last four years for civil servants at different ages, taken from analysis of the Annual Civil Service Employment Surveys (Office of National Statistics), up to a maximum of Normal Pension Age (NPA). This can be seen at Appendix Two to this technical annex.
- Members above the MPA who took early pension: The model assumes that these members would have left service two years before their NPA, (either 60 or 65), or if they have attained that age, immediately.
- Members above the MPA who took a compensation lump sum and no pension: The model assumes that these members would have left the civil service at their NPA, (either 60 or 65), or if they have already attained NPA, immediately.

15 In the (actual) early departure scenario, most individuals are projected to take other employment. In the counterfactual Scenario Two, these individuals continue working in the civil service until the ages indicated above. For consistency, Scenario One only counts future cash flows from employment for as long as the counterfactual Scenario Two would have anticipated continued civil service employment. Any subsequent employment is taken as equivalent in the two scenarios and not included in the model.

Assumed pension age if early departures had not taken place

16 For completeness, although the headline results are not significantly sensitive to the counterfactual age of drawing pension, we made a further counterfactual assumption regarding pension age, had an individual not opted to take early departure (Scenario Two). We have assumed that members would have taken pension at their NPA, either 60 or 65.

Pay changes

17 The model assumes that pay increases at an annual rate of 2.0 per cent in 2010-11, 1.0 per cent from 2011-12 – 2013-14, 2.0 per cent for 2014-15 and then 4.25 per cent from 2015-16 onwards. These figures are based on advice from our actuarial consultants and discussions with the Cabinet Office.

Pension changes

18 The model assumes that pension payments would increase at an annual rate equivalent to the Consumer Price Index (CPI). CPI has been set at 3.1 per cent in 2010-11, 5.2 per cent in 2011-12, 2.5 per cent in 2012-13, 2.10 per cent in 2013-14, and 2.0 per cent from 2014-15 onwards. For simplicity, the model also assumes that there are no future changes to pension scheme benefit structures, accrual rates, contribution rates and Normal Pension Ages.

Tax on lump sum redundancy payments

19 This is estimated in the model at a flat rate of 30 per cent on lump sum payments over £30,000. This is an average of the 20 per cent and 40 per cent tax rates, based on advice from our actuarial consultants and agreed with the Cabinet Office.

Tax on pension payments

20 The model applies a flat 25 per cent tax rate on pension payments. Although some early departees will be paying tax on pension payments at 40 or 50 per cent, we consider it reasonable to assume that the majority are paying at the lower rate and to use 25 per cent as a best estimate.

Discount rate

21 The model applies a discount rate of 3.0 per cent + CPI to future cash flows. This is consistent with the discount rate required to be used in the valuation of unfunded public sector pension schemes for the purpose of calculating scheme contribution rates, which was agreed in March 2011 following a consultation process by HM Treasury. CPI has been set at 3.1 per cent in 2010-11, 5.2 per cent in 2011-12, 2.5 per cent in 2012-13, 2.10 per cent in 2013-14, and 2.0 per cent from 2014-15 onwards.⁶ Although not all cashflows considered in the model relate to pensions, it is the pension payments which stretch furthest into the future where discounting has the most effect.

PAYE/National Insurance

22 The model assumes that Income Tax and National Insurance rates and bandings will not change. The 2011-12 bands are used as the most recent set available.

Life expectancy

23 Based on the latest data from the Office of National Statistics, the model assumes that male members have a life expectancy of 83, with females 86.⁷ This should not be read as an alternative to more considered treatments of life expectancy in other studies.

⁷ <http://www.ons.gov.uk/ons/rel/lifetables/interim-life-tables/2008-2010/sum-ilt-2008-10.html>

Appendix One

Annualised 'Re-employment' rate assumptions

Re-employment rates (annual)	Years after early departure					
	0 (%)	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Age at departure						
18	58	98	99	99	99	99
19	58	98	99	99	99	99
20	58	98	99	99	99	99
21	58	98	99	99	99	99
22	58	98	99	99	99	99
23	58	98	99	99	99	99
24	58	98	99	99	99	99
25	51	91	97	97	97	97
26	51	91	97	97	97	97
27	51	91	97	97	97	97
28	51	91	97	97	97	97
29	51	91	97	97	97	97
30	51	91	97	97	97	97
31	51	91	97	97	97	97
32	51	91	97	97	97	97
33	51	91	97	97	97	97
34	51	91	97	97	97	97
35	51	91	97	97	97	97
36	51	91	97	97	97	97
37	51	91	97	97	97	97

Age at departure	Re-employment rates (annual)					
	Years after early departure					
	0 (%)	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
38	51	91	97	97	97	97
39	51	91	97	97	97	97
40	51	91	97	97	97	97
41	51	91	97	97	97	97
42	51	91	97	97	97	97
43	51	91	97	97	97	97
44	51	91	97	97	97	97
45	51	91	97	97	97	97
46	51	91	97	97	97	97
47	51	91	97	97	97	97
48	51	91	97	97	97	97
49	51	91	97	97	97	97
50	50	88	91	91	91	91
51	50	88	91	91	91	91
52	50	88	91	91	91	91
53	50	88	91	91	91	91
54	50	88	91	91	91	91
55	50	88	91	91	91	91
56	50	88	91	91	91	91
57	50	88	91	91	91	91

Re-employment rates (annual)	Years after early departure					
	0 (%)	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Age at departure						
58	50	88	91	91	91	91
59	50	88	91	91	91	91
60	50	88	91	91	91	91
61	50	88	91	91	91	91
62	50	88	91	91	91	91
63	50	88	91	91	91	91
64	50	88	91	91	91	91
65	50	88	91	91	91	91

Appendix Two

Assumed counterfactual turnover

Normal Pension Age	60 e.g. Classic, Classic Plus and Premium members	65 e.g. Nuvos members
Age now	Counterfactual age at leaving the civil service	Counterfactual age at leaving the civil service
18	n/a ¹	26
19	n/a ¹	28
20	n/a ¹	30
21	n/a ¹	34
22	n/a ¹	37
23	n/a ¹	39
24	38	41
25	40	43
26	42	45
27	43	47
28	45	48
29	46	50
30	47	51
31	48	52
32	49	53
33	50	54
34	51	55
35	52	56
36	52	57

Normal Pension Age	60 e.g. Classic, Classic Plus and Premium members	65 e.g. Nuvo members
Age now	Counterfactual age at leaving the civil service	Counterfactual age at leaving the civil service
37	53	57
38	54	58
39	54	59
40	55	60
41	56	60
42	56	61
43	57	61
44	57	62
45	58	62
46	58	63
47	59	63
48	59	64
49	59	64
50	60 ²	65
51	60 ²	65
52	60 ²	65
53	60 ²	65
54	60 ²	65

NOTES

- 1 The data contains no individuals under the age of 24 who are members of Classic, Classic Plus or Premium, which were all closed to new members by 2007.
- 2 The counterfactual applies this table only to members below their Minimum Pension Age (MPA). This is generally 55 for Nuvo members and members who joined other sections of the Pension Scheme after 6 April 2006. For other members the MPA is generally 50.