



Association of British Insurers

**Oxera**

**ABI RESEARCH PAPER 1**

# **HOW TO EVALUATE ALTERNATIVE PROPOSALS FOR PERSONAL ACCOUNT PENSIONS**

An economic framework to compare the  
NPSS and Industry models

**Report by Oxera**

October 2006

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**Aims and scope:** The Association of British Insurers (ABI) is the trade body representing the UK's insurance industry. The ABI Research Paper Series is used to publish the research that the ABI carries out on behalf of its members. The series, launched in October 2006, builds on the success of previous ABI research, in order to help inform the insurance industry and contribute to public policy debate.

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**ISBN 1-903193-30-3**  
**978-1-903193-30-3**

## FOREWORD

This report represents an important contribution to the debate on how to assess the alternative models for delivering Personal Accounts – competition for contracts or competition through branded providers.

The Pensions Commission's report on a new pensions settlement for the twenty-first century set out influential recommendations for a new policy direction on the UK pension system and helped to create the basis for a consensus on pensions policy. The Government responded with detailed proposals to: reform the state pension system; support extended working lives; streamline regulation; and introduce new Personal Accounts, intended to provide a simple and straightforward way for people to take personal responsibility for the income they want in retirement.

One key decision the Government put out for consultation is exactly how Personal Accounts should be administered – by creating a single new organisation, as suggested by the Pensions Commission, or by building on existing pension provision from a number of providers.

To put it another way, should competition be about the proposed Delivery Authority deciding who should win the contracts to deliver the Personal Accounts system or about individuals choosing, if they wish to do so, which company should administer their Personal Account and invest their contributions?

This research by Oxera uses economic criteria and competition analysis to help inform the debate by identifying the minimum conditions under which the two models may result in desired market outcomes. It poses questions that the Government will need to consider in making the final decision.

A handwritten signature in black ink that reads "Stephen Haddrill". The signature is written in a cursive style.

Stephen Haddrill  
Director General  
Association of British Insurers

## SUMMARY OF OXERA'S RESEARCH FINDINGS

Oxera has examined whether the costs of a centralised National Pensions Saving Scheme would be lower than those of an alternative industry-led model, because of economies of scale in administration and/or fund management, and the absence of brand marketing costs. Oxera has found that:

- economies of scale in pension administration are limited, at least beyond a certain point (eg, 500,000 accounts), and thus the number of participants is unlikely to cause significant differences in administration costs between the two models;
- economies of scale in fund management are significant up to a fund size of £500m. Beyond that level they become less significant, in particular after a fund size of £1 billion. The average industry default fund would rapidly achieve this sort of scale, and non-default funds would also be large enough for there to be no significant differences in fund management costs between the two models;
- current estimates of marketing expenditure (2% of revenues) for the Personal Accounts market are not high compared with marketing expenditure in established industries (on average, around 3% of revenues);
- the centralised NPSS model does not eliminate marketing costs altogether, but focuses firms' marketing efforts on a single consumer, the new public procurement agency. Experience of this kind of large contract shows that bidding and other transition costs are considerable (bidding costs for successful bidders average around 2.9% of contract value). They should therefore be taken into account when comparing the two models.

Oxera's research also identifies the conditions for effective competition in the new market, whichever model is chosen. As Personal Accounts do not yet exist, much remains uncertain. But the following points are clear:

- some level of switching between providers is desirable, because it produces competitive pressure on providers to reduce costs and improve service. In the absence of financial intermediaries, the cost of such switching would be small and would have only a minor impact on costs for consumers (up to 5 basis points). Active switching would also assist firms entering the Personal Accounts market.
- while some consumers may find it difficult to make comparisons over asset allocation choices, they will face the same simplified asset allocation choice in either model for Personal Accounts. The more straightforward choice between branded providers in the Industry-led model is a familiar choice for consumers in other retail financial services products, and does not necessarily require financial sophistication among consumers.
- experience of contracts for large public administration systems demonstrates a number of risks to the centralised NPSS model. For example, it may be difficult for the government to specify levels of customer service in the contract and to monitor these over time, yet good customer service is important to maintaining participation rates in Personal Accounts.
- industry experience shows that, depending on payment structures, contracts for the centralised model would have to last for up to 20 years, in order to allow bidders a reasonable return on their investment. The winner(s) of the first contract would therefore gain a considerable incumbency advantage, making it less attractive for new entrants to bid when the contract is renewed. The pensions administrator could therefore eventually become stuck with an incumbent, who – in the absence of effective competitive pressure – would have no incentive to improve service beyond that built into the contract.

## EXECUTIVE SUMMARY

### Objectives and remit of this report

Oxera has been commissioned by the Association of British Insurers (ABI) to conduct independent research in relation to the Department of Work and Pensions White Paper, 'Security in retirement: towards a new pensions system' (DWP 2006). Oxera's report focuses on two of the proposed models for Personal Account pensions: the National Pension Savings Scheme (NPSS) model (proposed in the White Paper) and the Industry model (based on the Partnership Pensions model originally proposed by the ABI and amended by the DWP).

The objective of this report is to facilitate the debate by identifying a number of minimum conditions under which the NPSS and the Industry models may deliver desired market outcomes. The report provides an independent framework of reference for assessing the relative merits of these models for pension reform, and sets out economic criteria to evaluate them. A number of aspects not analysed in detail in the White Paper or Pensions Commission reports are assessed, including:

- the relevance of economies of scale in fund management and pension administration to the comparison of the two models; and
- a number of conditions under which there could be effective competition in each model.

Even if a model is viable from a commercial perspective, market failures or poor design may still prevent it from delivering the desired outcomes. The contribution of the analysis in this report is an assessment of the viability of the models from a market design point of view.

The objective of the report is not therefore to assess which model is the most appropriate. A full assessment would require a broader set of criteria than those applied in this report. Furthermore, the analysis should be distinguished from two other research workstreams being undertaken elsewhere by the government, trade associations and market participants looking into the practical implementation of the models and their commercial viability.

### Methodology and information sources

Desired market outcomes can only be achieved if certain minimum conditions are met. To identify these conditions, the analysis applies economic criteria to the value chain for the provision of a new pension product. Economic criteria include the degree to which cost efficiencies can be obtained (in particular, economies of scale), the level and sustainability of competition, and the types of risk in each model.

To support the analysis, Oxera has gathered evidence and undertaken empirical analysis on several specific areas, including the extent of economies of scale in fund management and pension administration, and the size of an average fund and number of accounts per provider in the NPSS and the Industry model.

Many information sources have been used for the analysis, including an extensive survey of the literature on pension economics and competition. Interviews were held with ABI staff and ABI member firms to obtain a better understanding of some of the features of the Industry model. For the empirical analysis, data was obtained primarily from public domain sources. For the assessment of economies of scale, an international comparison of pension systems was undertaken, while the assessment of conditions for effective competition draws on both economic literature and public domain data sources.

### Summary of findings

The analysis focuses on the two main components in the value chain for the provision of Personal Accounts: administration services and fund management. In addition, it examines the economic aspects of marketing (and bidding and transition) costs.

It has been suggested that costs in a centralised system such as the NPSS model may be lower as a result of economies of scale in administration services and/or fund management and because of the absence of brand marketing costs.<sup>1</sup> Sections 4 and 5 of this report analyse the available evidence on the extent of economies of scale in these activities and whether they may cause differences in costs between the NPSS and Industry models. Section 8 assesses the level of marketing costs in the Industry model and compares this with bidding (and other transition) costs in the NPSS model.

Whether and to what extent low costs are passed on to consumers in the form of low prices depends on the degree of competition. Sections 6 and 7 identify conditions under which there could be effective competition enabling consumers to benefit from low prices (reflecting costs—ie, allocative efficiency) and innovation (dynamic efficiency) in the NPSS and Industry models.

### Economies of scale in pension administration (section 4)

The provision of pension administration services involves up-front investments in IT systems and associated applications. These costs would be expected to be fixed for a

<sup>1</sup> The White Paper claims that 'a model in which individuals have a choice of provider is likely to be more expensive to administer' (p. 52, para 1.69). The IMA has suggested that 'an absence of brand marketing costs means that this structure [a centralised administration] is likely to result in lower costs than the alternatives (IMA 2006a, p. 3). The National Association of Pension Funds (NAPF) assumes (in its response to the Pensions Commission reports) that there are some economies of scale in account administration services (NAPF 2005). The IMA has suggested that the existence of economies of scale in passive fund management is one of the reasons why costs are likely to be lower in the NPSS (IMA 2006a, p. 13).

certain amount of capacity (ie, number of accounts), resulting in lower average costs per account when the number of accounts increases. The evidence on economies of scale in pension administration can be summarised as follows.

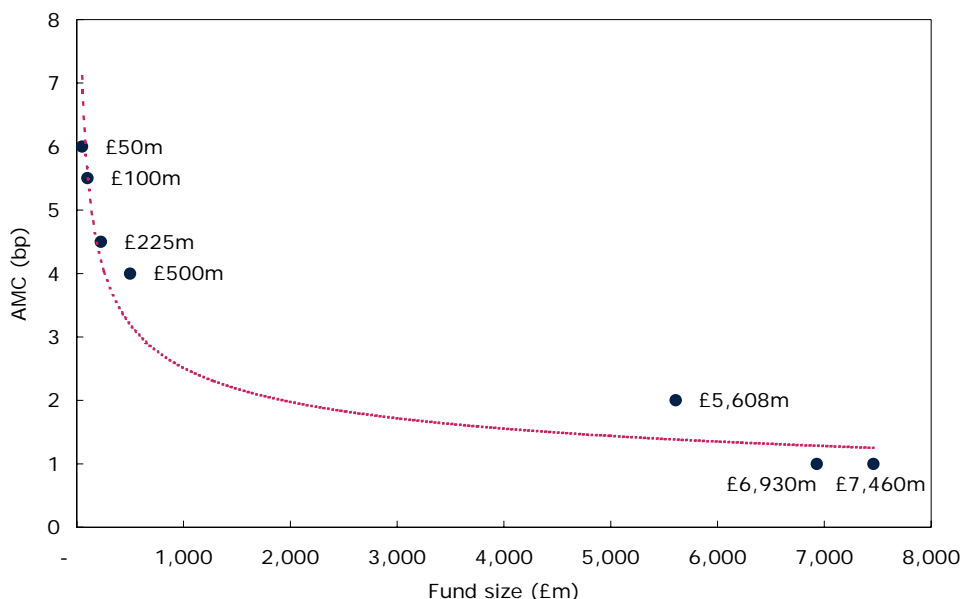
- Analysis of the data on the costs incurred by pension providers in the UK indicates that there are indeed some economies of scale in administration, but they are limited.
- The existence of limited economies of scale is also confirmed by studies in the economic literature.
- The information available to analyse large pension systems in other countries does not provide evidence to support the existence of economies of scale beyond a certain point (eg, 500,000 accounts). The variation in costs between pension systems in different countries may relate to other factors, such as differences in the scope of the activities undertaken by the administration services provider and those undertaken by the employer.

There are more accounts per provider in the NPSS model than the average number of accounts per provider in the Industry model. However, given that economies of scale are limited, Oxera's modelling analysis shows that the differences in the number of accounts are unlikely to cause significant differences in administration costs between the two models.

### Economies of scale in fund management (section 5)

A similar assessment of possible differences in the costs of fund management between the NPSS and Industry models shows that there are economies of scale in fund management (see Figure 1). This is also confirmed by the economic literature. While there are significant economies of scale up to a fund size of £500m, these become less significant beyond £500m and in particular once funds under management reach around £1 billion.

**Figure 1 Relationship between fund size and fund management fee**



**Note:** See Figure 5.1 in section 5.

**Source:** Oxera (2003) and Thrift Savings Plan (2004).

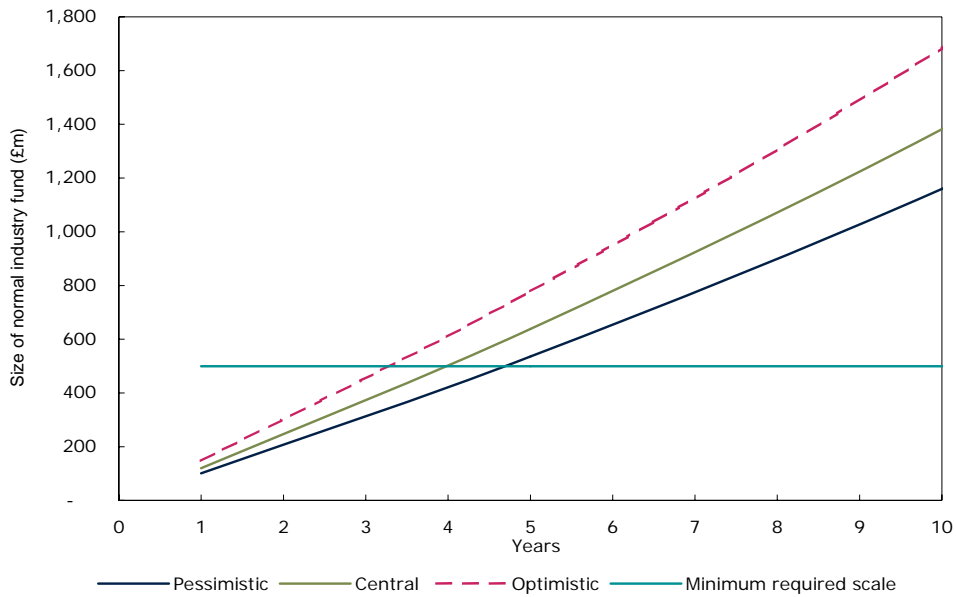
Whether these economies of scale could cause significant differences in fund management costs between the NPSS and Industry models will depend on the average size of the default and non-default funds in both models.

Based on assumptions in line with those of the Pensions Commission and White Paper, Oxera's modelling shows that the average fund in the NPSS model will be larger than that in the Industry model. This is to be expected since there will be fewer funds in the NPSS model than in the Industry model (in which there are more providers, each of which will offer its own funds). However, the analysis indicates that the average fund in the Industry models is still large enough not to cause significant differences in fund management costs between the two models. Furthermore, providers may offer some of their existing funds (provided in the market for stakeholder or personal pensions), which are already large.

In a scenario with six providers in the Industry model, the average default fund reaches a size of around £1.1 billion in the first year. In the scenario of 12 providers, an average default fund reaches a size of £540m in the first year and £1.1 billion in the second year. This means that the difference in management costs between an average default fund in the NPSS model and in the Industry model is unlikely to be significant in terms of costs to consumers; and, again, providers may offer existing funds rather than creating new ones.



**Figure 2** Expected fund size for non-default fund (£m) in a scheme of six providers



Source: Oxera.

An average non-default fund in the Industry model may not reach a size of £500m until after four or seven years (in scenarios of six and 12 providers respectively). This implies that, in the early years, the management costs for the non-default funds in the Industry model are likely to be greater than the costs for the equivalent fund in the NPSS model. However, the analysis in section 5 indicates that the differences in management costs are unlikely to be significant in terms of impact on consumers. For example, the costs of managing a non-default fund in the Industry model may be around 0.5bp larger than the costs of managing a non-default fund in the NPSS model. One influence on how quickly non-default funds reach £500m are the assumptions on opt-out rates. Figure 2 illustrates this by showing three different scenarios for opt-out rates in the scenario with six providers in the Industry model.

**Conditions for effective competition in the NPSS and Industry models (sections 6 and 7)**

The conditions for effective competition in the NPSS and Industry models are identified in sections 6 and 7. Summarised below are the findings on two pertinent issues: the possibilities for switching in the NPSS and Industry models, and the costs of marketing (in the Industry model) and bidding (and other transition costs) in the NPSS model.

**Switching**

*The Industry model (section 6.3)*

In the context of stakeholder and personal pensions, switching provider has at times been viewed in a negative light because it involves costs (eg, setting up a new account

and transferring data), making pension provision more expensive. It is argued that switching is driven by commission-led interventions rather than by consumer preference or need. However, from a competition perspective, some level of switching is desirable. In principle, the ability to switch, even if exercised by only a small number of consumers, creates conditions for competitive pressure on pension providers to reduce costs and improve their customer service and product offerings. The analysis presents several scenarios in which consumers have genuine incentives to switch provider.

The analysis shows that the overall costs of switching in Personal Accounts may be small. For the purposes of this analysis, it has been assumed that switching will be free to consumers and therefore that the costs will be incurred by providers and passed on to all consumers in the form of a higher annual management charge (AMC). In the scenario of a cost of £107 per switch and a 5% switching rate, the uplift in AMC would amount to 5bp and, in the scenario of a cost of £5 per switch, to less than 0.5bp. The actual switching cost will depend on when consumers switch. If they switch at a point in time when the provider has not yet been able to recover its set-up costs, switching costs are likely to be closer to £107—the set-up costs for Personal Accounts per customer in the Industry model were estimated at £107.<sup>2</sup> If they switch when the provider has already recovered its set-up costs, the switching costs are likely to be closer to £5. The actual overall switching costs may therefore lie somewhere between 0.2bp and 5bp.

#### *The NPSS model (section 7.4)*

To maintain effective competition in the NPSS model, it is important that the NPSS Board has the opportunity to switch to new suppliers when contracts come up for renewal.

In many respects, the market for fund management in the NPSS model would work in the same way as the institutional investment management market. Fund managers would compete for mandates, which run for a fixed term, after which they would have to bid again for a new contract. The firms that would bid for contracts in the NPSS are likely to be existing fund management firms—ie, those already offering fund management services to pension fund trustees. Given the high number of institutional fund managers, a sufficient number of fund managers are likely to be available to bid for the mandate in the NPSS model.

The analysis also indicates that in the market for institutional fund management, pension fund trustees do not find it difficult to switch fund managers. Although switching can be time-consuming, transferring the assets from one fund manager to another seems to be relatively straightforward—although some cost is involved, it tends to be fairly low (Oxera, 2003).

<sup>2</sup> Source: Deloitte (2006), p. 32.

In contrast, switching administration service provider may be difficult due to a combination of factors. The provision of pension administration services at the scale required in the NPSS model requires specific investments by the providers, for which the payback period may be long. Industry sources have indicated that the contract would have to be for a period of up to 20 years, depending on the structure of payments to the pension administrator, in order to allow the bidders to earn a reasonable return on their investment. This means that the incumbent(s) (ie, the winner(s) of the first contract) are likely to gain an advantage over new entrants, making it more difficult and less attractive for new entrants to bid for a contract to run the administration upon contract renewal. Thus, there is a significant risk that the NPSS Board becomes locked into one or more providers. Without effective competitive pressure, an incumbent supplier has no incentive to perform over and above the incentives created by a payment for performance contract. Regulatory pressure, which can to some extent act as a proxy for competition, brings its own costs for suppliers and taxpayers, which have to be recovered.

In this study, the performance of a number of contracts for large public administration systems is examined. The analysis indicates that, quite apart from operational risk in the implementation process, in each case study there is evidence of limits to competition that risked the public sector department becoming locked in. Such constraints included high fixed costs, high operational risk involved in the transition from one supplier to the next, and informational asymmetries. The NPSS model may therefore not deliver effective competition.

### Marketing costs and bidding (and other transition costs) (section 8)

The Pensions Commission has indicated that there would be a risk that competition to influence employer (or individual) choice would take the form of high expenditure on brand advertising. The analysis in the report provides the following observations.

- Marketing is an important tool for firms to increase their customer base. There are two target customer groups: those currently absorbed by a rival firm's market share, and those not yet reached by the market. A marketing strategy to reach the second group is not unique to the Industry model. In principle, therefore, the introduction of a new pension system would require a minimum level of marketing expenditure in either the NPSS or the Industry model to encourage consumer take-up.
- Marketing expenditure can help to convey information about product quality to consumers, strengthen competition, and may contribute to a higher take-up of Personal Accounts. The analysis suggests that the current estimate of the level of marketing expenditure in Personal Accounts (at 2% of revenues) is not high compared with marketing expenditure in established industries, nor, in cases when it is linked to overall brand awareness, would it necessarily all be recovered from Personal Account customers. The advertising to sales ratio lies

below the UK mean (3.3%) and median (2.1%) levels for 23 industries examined by Oxera.

- The bidding (and other transition) costs incurred prior to choosing the national pension provider in the NPSS model may be considered to have some equivalence with the ongoing marketing costs in the Industry model. The NPSS model does not eliminate marketing costs (broadly defined) altogether, but transfers the focus of firms' marketing efforts to a single consumer—ie, the public procurement agency. The analysis of large contracts in this report shows that bidding and other transition costs are prevalent and should therefore be taken into account when comparing the two models.

### Potential implications for market outcomes and policy formulation

As noted above, the objective of this study is not to assess which model is the most appropriate. The analysis identifies minimum conditions under which the two models may result in desired market outcomes. Since the empirical analysis undertaken for this report is for a product and market (Personal Accounts) that do not (yet) exist, there is inherent uncertainty about whether some of these conditions will hold in practice. Furthermore, a full assessment would require a broader set of criteria than the (economic) criteria applied here.

However, it is possible to make a number of preliminary observations about the potential implications of the findings for some of the market outcomes.

#### Level of prices of Personal Accounts in the NPSS and Industry models

The analysis shows that economies of scale in administration and fund management are limited beyond a certain fund size and number of accounts, and are unlikely to cause significant differences in costs between the two models.

Furthermore, although providers in the Industry model will incur some additional marketing costs, both the NPSS Board and providers are likely to incur bidding and other transition costs in the NPSS model. These costs, although their potential extent is uncertain, should be taken into account when comparing the two models.

The opportunities for switching provider determine the extent to which the market may be competitive. The analysis shows that in the Industry model there are, in principle, economically effective incentives for consumers to switch and that the overall switching costs may be limited.

The analysis indicates that there are a number of risks associated with the implementation of the NPSS model. For example, it may be difficult to specify levels of customer service in the contract and to monitor this aspect over time. It may be undesirable to do so if this restricts innovation. Furthermore, there is a risk of reduced competition when contracts come up for renewal due to high switching costs and

incumbents' advantage over new entrants. This means that even if the costs of fund management and administration were lower in the NPSS model, this might not necessarily translate into low prices to consumers and this risk increases over time.

### Quality and innovation

In the Industry model, competition could put pressure on providers to innovate and introduce new product features and improve their customer service. The service providers can decide which type of funds to offer, provided that these funds are within the parameters set by the regulator.

In the NPSS model, the minimum length of a contract for the management of a fund may be around five years. This means that there will be regular tenders giving fund managers the opportunity to propose new funds and/or apply new techniques to manage the funds. New types of fund will require NPSS Board approval.

Since the administration is outsourced, service standards will have to be specified in the contract in advance and improvements may normally only be introduced when the contract comes up for renewal (unless contracts are renegotiated)—industry sources have indicated that the length of the contract may be up to 20 years. The NPSS contracts will require close monitoring and performance assessment to ensure that service standards are in line with the specification in the contract and meet customers' needs. This is an area that deserves further assessment.

The relatively long duration of contracts means that there may be less scope for innovation and improvement of customer service and administration in the NPSS model than in the Industry model.

### Consumer choice

In the Industry model, consumers make a twofold choice: first of pension provider and then of asset allocation. The first type of choice—between branded providers—is unique to the Industry model, while the second type of choice—asset allocation—is similar in the NPSS and the Industry models.

The choice of asset allocation will require a degree of financial sophistication among consumers since choosing equities over bonds, or international equities over UK equities can involve complex risk–reward trade-offs. This element of choice is common to the NPSS and Industry models, and will be simplified in both models by restricting asset allocation choices and providing default options, as well as by taking action to build financial capability. In this regard, the economic literature suggests that,

although too much fund choice can be detrimental, some limited choice can raise contribution and participation rates.<sup>3</sup>

Oxera's research focuses on the choice of provider, since this is the element of choice unique to the Industry model. In particular, the research has examined incentives to switch provider, the role of brand marketing, and the effect of the carousel mechanism on competition. The main advantage of having choice of provider is that it introduces direct product market competition in the market for Personal Accounts. The exercise of choice of provider does not necessarily require financial sophistication among consumers (given a simple fee structure). Consumers may be familiar with choosing between branded providers from other markets in retail financial services, and are likely to make choices on familiar aspects of price, service quality and brand.

### Participation in Personal Accounts

This report does not analyse in detail the impact of the design of the NPSS and Industry models on the participation in Personal Accounts. However, two aspects of the Industry model may indirectly have a positive impact on participation:

- providers have an incentive to market Personal Accounts to potential customers;
- good and reliable customer service may lead to higher participation rates. In the Industry model, good customer service is driven by competition.

By contrast, in the NPSS model, the standards for customer service will have to be pre-specified in a contract and may therefore be difficult to change over time in response to consumers' needs. Furthermore, it may be difficult both to monitor output and measure customer experience and take corrective action, even if failure is detected.

<sup>3</sup> See, for example, Iyengar, Jiang and Huberman (2004), and Papke (2004).

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## 1.0 INTRODUCTION

### 1.1 Objectives and remit of this report

Oxera has been commissioned by the Association of British Insurers (ABI) to conduct independent research in relation to the Department of Work and Pensions White Paper, 'Security in retirement: towards a new pensions system' (DWP 2006a).

In the White Paper, the DWP proposes to introduce 'Personal Accounts', a new low-cost pension product to give those without access to occupational pension schemes the opportunity to save. Employees would be automatically enrolled into either their employer's scheme or a new Personal Account, with the freedom to opt out. Employers would make minimum matching contributions.<sup>4</sup>

The White Paper proposals are based on three reports produced by the Pensions Commission (2004, 2005, 2006). The Pensions Commission has suggested that all Personal Accounts should be provided by a single organisation. The day-to-day running of the scheme would be outsourced to one or a number of pension administrators and several fund managers. This model is referred to as the **National Pension Savings Scheme (NPSS)**. An alternative approach presented in the White Paper builds on existing pension provision. (This alternative is based on the Partnership Pensions model originally proposed by the ABI and amended by the DWP.) Rather than using a single organisation, a number of pension providers would offer Personal Accounts. This approach is referred to as the **Industry model**.

As explained in the White Paper, cost minimisation and the promotion of effective competition are among the key objectives in the system employed to deliver Personal Account pensions:

We wish to consult further on the administration of personal accounts. In assessing approaches, our key objectives will be minimising the cost to members of the scheme and maximising effective competition between firms involved in the provision of the scheme (p. 56, para. 1.71)

To assess the options, the White Paper outlines a range of criteria, such as the appropriate type of choice, implementation timetable, level of overall risk, administrative burden on employers, and level of charges, in both the short and long term.<sup>5</sup> This means that the objective is to minimise total costs, including those imposed on employers, in the short and long term, taking into account the risks associated with the different models.

<sup>4</sup> In addition, the White Paper proposes measures to improve the foundation for all pensioners and to continue to tackle pensioner poverty. These measures are not addressed in this report.

<sup>5</sup> Other criteria listed in the White Paper are: value for money for the taxpayer, simplicity for employers and individuals, the promotion of personal responsibility, the governance of the scheme, consumer protection, and maximising effective competition between firms (p. 56, para. 1.71).

The goal of this report is to facilitate the debate by identifying a number of minimum conditions under which the NPSS and the Industry models may deliver desired market outcomes.<sup>6</sup> The report provides an independent framework of reference for assessing the relative merits of these models for pension reform and sets out economic criteria to evaluate them. It focuses on the two main components in the value chain for the provision of Personal Accounts: pension administration and fund management. A number of aspects not analysed in detail in the White Paper or Pensions Commission reports are assessed, including:

- the relevance of economies of scale in fund management and pension administration to the comparison of the two models; and
- the conditions under which there could be effective competition in each model.

The objective of the report is not to assess which model is the most appropriate. A full assessment would require a broader set of criteria than the (economic) criteria applied in this report. Furthermore, the analysis should be distinguished from the following two other research workstreams being undertaken elsewhere by the government, trade associations and market participants:

- *practical implementation of the models*—the White Paper provides a high-level description of the models, and further research is being conducted to determine how they would operate in practice;
- *commercial viability of the models*—the level of cost that administration service providers would incur in delivering Personal Accounts and the commercial viability of the models are likely to depend on some of the specific features of the models which may need to be further specified. For example, further guidance would be required on the distinction between the activities undertaken by the clearing house and the administration service providers. An analysis of the commercial viability of the models is crucial to the overall assessment, but beyond the scope of this report.

Even if a model is viable from a commercial perspective, market failures or poor design may still prevent it from delivering the desired outcomes. The contribution of the analysis in this report is an assessment of the viability of the models from a market design point of view.

## 1.2 Methodology and information sources

Desired market outcomes can only be achieved if certain minimum conditions are met. To identify these conditions, the analysis applies economic criteria to the value chain for the provision of a new pension product. The economic criteria are described in section 2, which sets out in more detail the methodology applied in this report.

<sup>6</sup> This report focuses on the NPSS and the Industry models. Analysis of other models, such as the ‘Super Trust’ model proposed by the National Association of Pension Funds (NAPF), is beyond the scope of this report.

The economic criteria distinguish between structural market features, such as the degree of competition, and market outcomes, such as the extent to which Personal Accounts would be offered at low cost, and the degree of participation.

To support the analysis, Oxera has gathered evidence and undertaken empirical analysis on several specific areas, such as the size of an average fund in the NPSS and the Industry models; the importance of switching to deliver more effective competition; and marketing costs in the Industry model and bidding costs (and other transition costs) in the NPSS model.

Oxera used many information sources, including an extensive survey of the literature on pension economics and competition. Interviews were held with ABI staff and ABI member firms to obtain a better understanding of some of the features of the Industry model. For the empirical analysis, data was obtained primarily from public domain sources. For the assessment of economies of scale, an international comparison of pension systems was undertaken, while the assessment of conditions for effective competition draws on both the economic literature and public domain data sources.

### 1.3 Structure of the report

The report is structured as follows:

- section 2 explains the economic framework for comparing the NPSS and Industry models;
- section 3 provides an overview of the potential economies of scale in the NPSS and Industry models;
- sections 4 and 5 assess the relevance of economies of scale in the administration of pensions and fund management respectively;
- sections 6 and 7 identify conditions for competition in the Industry and NPSS models, respectively;
- section 8 analyses the level of marketing costs in the Industry model and compares this with the level of bidding (and other transition) costs in the NPSS model;
- section 9 summaries the main findings of the economic analysis and identifies implications for market outcomes.

More detailed analysis and background information is provided in the appendices:

- appendix 1 presents a summary of the research findings on large public administration systems run by the private sector for the purposes of informing this study;
- appendix 2 explains the model assumptions used in the study on weighted average earnings of the target population;
- appendix 3 summarises analysis of the length of contracts in the NPSS model.

## 2.0 CONCEPTUAL FRAMEWORK

This section sets out the framework of analysis of the research on several aspects of the NPSS and Industry models. It starts by identifying a set of economic criteria and market outcomes, and then applies these to the main elements in the value chain of the provision for Personal Accounts. A number of criteria are assessed in more detail in the remaining sections of the report.

### 2.1 Framework for analysis

In the presence of market failures, the NPSS and Industry models may not result in the desired market outcomes. Market failure is a situation in which markets do not efficiently organise production or allocate goods and services to consumers. In financial services, market failures are inextricably linked to risks such as operational risks and financial (or default) risks, and to the incentives of participants in the financial services industry.<sup>7</sup> If there were little risk and/or the incentives between provider and consumers were exactly aligned, the possibility of detriment arising from market failures would tend to be low.

Examples of market failures include *market power or lack of competition*, which may result in excessive prices and/or low quality of products, and *asymmetric* information, which can arise in relation to product offerings—eg, consumers cannot evaluate the characteristics of a financial product; and in relation to providers—eg, consumers are imperfectly informed about the quality of a financial services provider. The severity of market failures is linked to risks—for example, lack of information about a firm’s financial position would not be associated with consumer detriment if there were no risk that the consumer could lose funds or otherwise be adversely affected in the event of firm default.

The severity of market failures is also linked to the incentives of participants in the financial services industry. For example, even if a consumer were not able to observe or monitor fully the activities of a financial intermediary, there would be no detrimental impact and indeed no market failure if it were possible to align the intermediary’s incentives with those of the consumer (eg, by means of a completely specified and cost-effectively enforceable contract). It is the problem of incentive misalignment that gives rise to, or exacerbates the negative impact of, a market failure.

The degree of competition in a market can be assessed by using a number of specific and standard indicators, such as the degree of concentration, the presence of high entry barriers, economies of scale, and switching costs. High entry barriers are likely to indicate markets where competition concerns may arise (for example, relating to market power or lack of effective competition). Likewise, the presence of strong economies of scale may give rise to a sub-optimal market structure in the short term (eg, an inefficient cost base as a result of having too many players in the market) and to naturally concentrated

<sup>7</sup> For a description of market failures, risks, and incentive misalignment problems, see Oxera (2006).

markets in the long term (eg, smaller-scale players are likely to exit the market, increasing concentration).

To assess the performance and functioning of markets, it is standard practice among regulators, competition authorities and government bodies to conduct a market review comprising a market failure and competition analysis. In the past few years, there have been a number of reviews of markets in the financial services sector.<sup>8</sup>

This report takes a similar approach, with the aim of identifying the conditions under which a number of specific features of markets in the NPSS and Industry models may or may not work effectively. One main difference in approach is that the aforementioned reviews examined existing markets, while the analysis in this report is undertaken for a product and market which do not (yet) exist (Personal Accounts). The empirical analysis therefore draws on experiences in markets with products with similar characteristics, such as fund management services provided to pension fund trustees, personal and stakeholder pensions, and pension systems with Personal Accounts in a number of other countries which are relevant for comparison.

## 2.2 Economic criteria and market outcomes

A number of economic criteria have been used in this report: productive efficiency, competition, risks, incentive misalignment and asymmetric information. The approach in this report is to assess the strength of the evidence on how the NPSS and Industry models perform against such broad criteria. By doing so, the analysis addresses several aspects of the criteria outlined in the White Paper, such as the level of charges, the level of overall risk, and the need to maximise competition between firms. Other criteria, such as the promotion of personal responsibility, the administrative burden on employers and the governance of the scheme, are not explicitly addressed, and are considered beyond the scope of the report.

The economic criteria are described below and applied to the pension administration services and fund management.

### 2.2.1 Productive efficiency

As explained in the White Paper, cost minimisation is the first key objective in the system employed to deliver Personal Account pensions:

In assessing approaches, our key objectives will be **minimising the cost to members of the scheme** and maximising effective competition

<sup>8</sup> Examples include the Morris review of the actuarial profession, which involves a detailed assessment of the degree of choice and competition in the market for actuarial services (HM Treasury 2005); a Competition Commission inquiry into home credit (Competition Commission 2006a), and a study for the Office of Fair Trading on the competition impact of the Financial Services and Markets Act, which contains a high-level assessment of market failures in the financial services sector (OFT 2004b).

between firms involved in the provision of the scheme (p. 56, para. 1.71) [emphasis added].

This is called productive efficiency, which can be defined as using the least amount of resources to produce a given good, service or output at the lowest possible unit cost.

### 2.2.2 Administration

It has been suggested that the costs of the provision of Personal Accounts in the NPSS may be lower than in the Industry model. The White Paper argues that 'a model in which individuals have a choice of provider is likely to be more expensive to administer' (p. 52, para. 1.69). The Investment Management Association (IMA) also suggests that 'an absence of brand marketing costs means that this structure [a centralised administration] is likely to result in lower costs than the alternatives (IMA 2006a, p. 3). Furthermore, the National Association of Pension Funds (NAPF) assumes (in its response to the Pensions Commission reports) that there are some economies of scale in account administration services (NAPF 2005).

Section 4 examines whether there is empirical evidence of economies of scale in pension administration services, and identifies the conditions under which scale economies could result in lower costs in the NPSS model than in the Industry model. Whether economies of scale would result in lower costs in the NPSS model depends not only on the extent of economies of scale, but also on the difference between the NPSS and Industry models in terms of the number of Personal Accounts managed by each provider.

Section 8 assesses the level of marketing costs in the Industry model and compares this to the bidding (and other transition) costs in the NPSS model.

### 2.2.3 Fund management

It has been suggested that the existence of economics of scale in passive fund management is one of the reasons why costs are likely to be lower in the NPSS (IMA 2006a, p. 13). Section 5 examines whether there is empirical evidence of economies of scale in fund management, and identifies the conditions under which scale economies could result in lower costs in the NPSS than in the Industry model. Whether costs would be significantly lower in the NPSS depends not only on the degree of economies of scale, but also on the difference between the NPSS and Industry model in terms of the size of the funds managed by each provider. Both dimensions are examined in section 5.

### 2.2.4 Competition

Even if costs in the NPSS model were lower than in the Industry model, this does not necessarily mean that consumers would indeed be able to benefit from lower prices in the NPSS model. Whether differences in costs between the NPSS and Industry models will result in different prices to consumers depends on the degree of competition in the two models. The strength of competition determines the extent to which allocative efficiency



can be achieved. Under this market condition, resources are allocated in a way that maximises the net benefit attained through their use, generally at the point at which prices reflect marginal costs. In addition, competition may result in dynamic efficiency, which refers to the extent to which firms introduce new products or processes (as a result of innovation).

The 2006 Pensions Commission report states that:

‘in a market where the power of choice exercised by individuals or small employers to drive competitive cost reduction may be limited, a model in which an economy of scale agent (the central system) chooses between alternative providers is likely to be more efficient’ (p. 32).

The strength of competition in the two models will depend on their specific design. The conditions for effective competition in the Industry and NPSS models are assessed in sections 6 and 7 respectively.

#### 2.2.5 Risks

The provision of Personal Accounts may involve certain types of risks, such as operational, financial and default risk. Financial and default risks are inherent in any product that holds volatile underlying assets. The question is how these risks are addressed in the NPSS and Industry models.

#### 2.2.6 Administration

The provision of administration services for Personal Accounts involves operational risks related to transaction processing and record-keeping. If these risks are considered significant, a regulatory and supervisory regime could be introduced and enforced by, for example, the Financial Services Authority (FSA) and/or the Pensions Regulator. In the NPSS model, the regulatory and supervisory regime could, in principle, also be enforced by the NPSS Board. There may be some differences between the regulatory and supervisory regimes in the NPSS and Industry models,<sup>9</sup> and therefore in the (direct and indirect) costs of regulation. A quantification of these costs is beyond the scope of this report.

#### 2.2.7 Fund management

Operational and financial/default risks are significant in the absence of regulation, but these are likely to be the same in the NPSS and the Industry models (see also OFT 2004b, p.67). Furthermore, fund management firms are already subject to FSA

<sup>9</sup> For example, in the NPSS model, the impact of operational risks may be more severe than in the Industry model. In particular if the administration system is outsourced to a limited number of providers, the impact of an operational failure in one of the systems will affect more people than in the Industry model—since there will be more providers in the Industry model, each provider will have fewer accounts. The NPSS model may therefore require additional measures to prevent operational failures.

regulation, which implies that additional regulation may not be necessary for the management of Personal Account pension funds. The risks associated with fund management are therefore not assessed in this report.

#### 2.2.8 Asymmetric information

As explained above, asymmetric information refers to situations where consumers cannot evaluate the characteristics of a financial product or are imperfectly informed about the quality of a financial services provider.

The problem of asymmetric information may affect the effectiveness of competition. For example, if consumers are imperfectly informed about the quality of a financial services provider, this may reduce the competitive pressures on providers. The extent to which asymmetric information may affect competition is assessed in the sections on competition (sections 6 and 7).

#### 2.2.9 Incentive misalignment

Incentive misalignment refers to situations where the incentives of the providers, or, more commonly, intermediaries, are not aligned with those of consumers.

In a market where consumers purchase products directly from providers (ie, not through intermediaries), competition can be expected to align providers' and consumers' incentives. This could be the case in the Industry model relative to the NPSS, where the incentives of the NPSS Board cannot be assumed to be aligned with those of the consumers unless this is specifically set out in the legislation and the governance structure provided for the Board. Moreover, although, at the point of tendering, competition would align the incentives of the providers with those of the NPSS Board, after signing the contract, the incentives may no longer be aligned. For example, the NPSS Board may have to monitor the quality of the service providers throughout the duration of the contract. This aspect is addressed in section 7.

#### 2.2.10 Market outcomes

The economic criteria outlined above provide a framework for establishing the conditions under which each model is expected to deliver desired market outcomes. In this report, the assessment focuses on the following market outcomes.

The level of *prices* of Personal Accounts may differ in the NPSS and Industry models as a result of differences in both costs (productive efficiency) and the degree of competition (ie, allocative efficiency, the extent to which prices reflect costs). The assessment of costs takes into account the degree of economies of scale, differences in marketing costs and possible differences in risks associated with the implementation of each model—risks that may result in higher prices to consumers.

Differences in the nature and degree of competition may also affect the extent to which consumers will be able to benefit from *innovation*; for example, the extent to which administration services are improved over time through the use of new technologies and the extent to which the choices of funds reflect the development of new products ('dynamic efficiency').

Differences in innovation and in the way products are offered may result in variation in the level of *choice* offered in the NPSS and Industry models. The extent to which each model offers choice will be assessed as a separate market outcome.

Finally, prices, marketing, the level of choice and the way Personal Accounts are offered and distributed may affect the degree of *participation*.

The implications of the findings of the economic analysis for market outcomes are assessed in section 9.

## 2.3 Other issues

There are a number of issues that are beyond the scope of this report either because they are likely to affect the NPSS and the Industry models in a similar way, and may therefore have no significant impact on the comparison between the two models, and/or because they are related to possible features of the models that have not yet been specified in the White Paper or Pensions Commission reports. These issues are briefly described in this section.

### 2.3.1 Clearing house

In both the NPSS and the Industry models, the White Paper (pp. 50–53) proposes to introduce a centralised function to collect and reconcile contributions, allocate default providers and collate information—this can be referred to as a clearing house.

The specific features of the clearing house, such as the ownership and governance structure, have not yet been specified. Furthermore, the division of the activities between the clearing house and administration service provider may require further clarification, and is likely to have an impact on the levels of cost that each would incur in providing Personal Account pensions.

It is worth noting that the activities undertaken by the clearing house may be characterised by 'network effects'. This means that an individual's demand depends not only on their own preferences, as in normal markets, but also on the demand of other individuals. Products with network externalities may therefore result in a market with one provider. Having more than one network is possible but would require interoperability so that users of different networks can still communicate.

Examples of products with network effects include telecommunications, where a network is worth more to a user, the greater the number of other users connected to that

network, and payment systems; for example, in the case of a credit card system, the benefit to a retailer of accepting a credit card increases with the number of consumers holding the card, and the benefit of holding the card increases with the number of retailers accepting it.

A clearing house for Personal Accounts is worth more to a consumer, employer and provider, the greater the number of other users connected to that clearing house. This means that it may be more efficient that the clearing and settlement activities are undertaken by a clearing house than by the individual Personal Account providers.

In the analysis in this report, in line with the proposals in the White Paper, it is assumed that there would be a clearing house in both models, and no further analysis of this aspect is undertaken.

### 2.3.2 Charging structure

The DWP and Pensions Commission present the results of their modelling work of the costs of the provision of Personal Account pensions in terms of an ad valorem fee—ie, a percentage of the assets under management, expressed as an annual management charge (AMC). Alternative charging structures would be fees per account or a fee/AMC hybrid.

A fee per account may be more cost-reflective (for administration services) and may therefore result in a shorter pay-back period than would be the case with an ad valorem fee. Due to the relatively low value of assets in the early years of a Personal Account pension, the revenues on the basis of an ad valorem fee are likely to be smaller than those resulting from a fee per account.

In this report, no further assessment of the appropriate charging structure is provided. Where the analysis requires a fee, an ad valorem fee is used.

### 2.3.3 Transfers in and out

The Pensions Commission (2005, p. 264) has suggested that transfers between NPSS and other pension schemes should be allowed but perhaps subject to a maximum transfer allowed into the NPSS. The White Paper does not explicitly address the issue of transfers.

Both the NPSS and the Industry models will have to address this issue in the details of market design. If transfers in are allowed, the providers in the NPSS model or the Industry model would have an incentive to spend their resources on attracting switchers, rather than customers new to pensions. However, transfers in would improve the economics of the provision of Personal Accounts by bringing in high-value customers at an early stage (but at the same time may negatively affect the viability of existing pension products). If transfers out are allowed, Personal Account providers may lose customers to other pension schemes once individuals' pension assets have built up to substantial amounts, which would damage the economics of Personal Account providers. Prohibiting

transfers out would, however, limit consumer choice to move to a more sophisticated product once a customer has substantial assets and greater financial sophistication.

The rules on transfers in and out are likely to affect the NPSS and the Industry models in a similar way. For the purposes of the analysis in this report, it was therefore considered unnecessary to model the impact of different assumptions on transfers in and out. The modelling work assumes that there would be no transfers in, and that transfers out would be introduced after the system has been operational for some time, and would therefore be unlikely to affect the economics of Personal Accounts during the initial period.

#### 2.3.4 Use of intermediaries and provision of advice

In both the NPSS and the Industry models, Personal Accounts would be provided directly by the providers to the consumers—ie, not through intermediaries. This is one of the differences between Personal Accounts and personal and stakeholder pensions.

Personal accounts will be a basic pension product with simple and standardised features. This may mean that consumers do not need specific advice, but if they do, they can consult a financial adviser and pay them a fee for the advice.

The provision of financial services products not through intermediaries is not uncommon—examples include general insurance, savings accounts and ISA products in the UK and personal pensions in Spain. The proposal is that the Personal Account would be a savings account for retirement and therefore not difficult to use.

In the analysis in this report, these features of Personal Accounts are taken as given, and not analysed further.

#### 2.3.5 Persistency

Persistency can be defined as a situation where someone continues to make contributions to a pension scheme. In the market for stakeholder and personal pensions, lack of persistency has resulted in additional costs.<sup>10</sup>

As explained by the Pensions Commission, one of the drivers of this cost is that if people move to a new employer who makes employer contributions, individuals can typically only receive those contributions if they join the employer's own specific scheme, rather than receiving contributions into an scheme of which they are already a member.<sup>11</sup>

In principle, the issue of persistency affects both the NPSS and Industry models in similar ways. In both models, persistency is to some extent addressed by the introduction of a clearing house which may make it easier for consumers to continue to make contributions to the same pension scheme, for example after changing jobs. A detailed analysis of the issue of persistency is therefore beyond the scope of this report. However, this report

<sup>10</sup> See Pension Commissions (2004), p. 256.

<sup>11</sup> See Pension Commissions (2004), p. 256.

does analyse the effect of switching providers. It assesses the relationship between switching and competition and the impact of switching on the costs of the provision of Personal Accounts in the Industry model. This is discussed in section 6.

#### 2.3.6 Market distortion

The introduction of Personal Accounts may have an impact on existing pension products, such as occupational, personal and stakeholder pensions. A detailed assessment of the potential impact is beyond the scope of this report, although two comments can be made.

- From a strict economics point of view, a reduction in the demand for other types of pension products as a result of the introduction of Personal Accounts may not be desirable if, for example, the creation of Personal Accounts involves government funding (ie, subsidies). State funding would then distort competition between Personal Accounts and other pension products.
- If the government decides to (partly) fund the creation of Personal Accounts, there must be a clear economic justification (eg, failure of the market to serve a certain part of the population). Furthermore, resources should be focused on a system designed to minimise the impact on areas where the market is already working.

### 3.0 OVERVIEW OF ECONOMIES OF SCALE IN PENSION PROVISION

This section provides an overview of economies of scale within pension provision. Sections 4 and 5 then assess the evidence of economies of scale in pension administration and fund management and the extent to which these are likely to arise in the NPSS and Industry models.

This section is structured as follows:

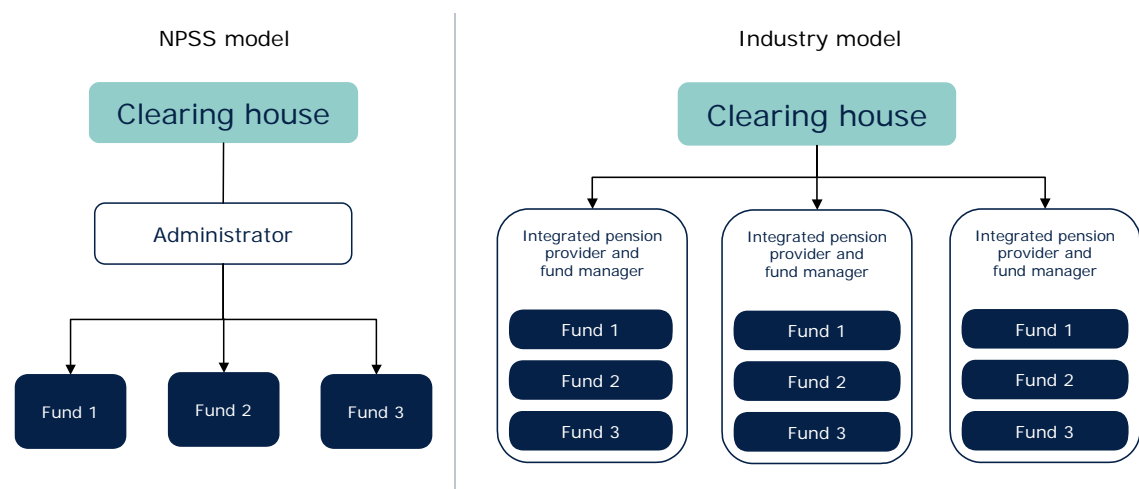
- section 3.1 describes the basic structure of the NPSS and Industry models and sets out the possibility of economies of scale in both administration and fund management in the two models;
- section 3.2 explains the economics of economies of scale

#### 3.1 Economies of scale in the two models

According to a high-level description, in the NPSS there will be one, or a few, account administration service providers and a limited number of funds, while in the Industry model there will be a larger number of providers, each possibly offering several different funds.

The implication is that there will be more providers and funds in the Industry model than in the NPSS model (see Figure 3.1). Assuming that the total number of customers in both models is the same, an average individual service provider in the Industry model would manage fewer accounts than the service provider(s) in the NPSS. Similarly, an average fund in the Industry model will be smaller than its equivalent in the NPSS unless providers choose to offer pre-existing funds to Personal Account customers.

**Figure 3.1 Simplified representation of NPSS and Industry models**



Source: Oxera.

If economies of scale in account administration and/or fund management are significant, the costs in the NPSS model could, in theory, be lower than in the Industry model. In the analysis undertaken in the context of the Pensions Commission reports and the White Paper, several references have been made to the relevance of economies of scale.

- *Economies of scale in administration*—the NAPF analysis, presented in its response to the Pensions Commission reports, assumes that there are some economies of scale in account administration services (NAPF 2005). For example, the costs of administration in the scenario of one super trust amount to 14 basis points (bp) and in the scenario of 10 super trusts to 15.4bp.<sup>12</sup> The NAPF response does not provide significant empirical evidence to support its assumptions on economies of scale.
- *Economies of scale in fund management*—the IMA response to the Pension Commission report and White Paper mentions the existence of economies of scale in passive fund management<sup>13</sup> as one of the reasons why costs are likely to be lower in the NPSS:
 

‘Beta’ investing involves delivering as close a match as possible to market return, at minimum cost. Economies of scale can be achieved here that would allow the kind of bulk ‘purchasing’ described in the Pensions Commission’s Second Report to push down the asset management charge (IMA 2006a, p. 10, para. 39).

As the IMA response does not provide substantial empirical evidence quantifying economies of scale, it is not possible to comment on the findings. Furthermore, the IMA states that there would not necessarily be substantial economies of scale for actively managed equity and bond funds (p. 10).

### 3.2 The economics of economies of scale

Economies of scale refer to a long-run reduction in average (or unit) costs that occurs as the scale of a firm’s output increases. Scale economies can be due to a variety of factors, including:

- superior techniques or organisation of production—as scale is increased, automatic machinery may be used instead of manual operation;
- managerial economies—as a result of using specialist management techniques;
- economies of specialisation—with more output, there is greater scope for using specialist labour.

Often economies of scale are due to large fixed start-up costs, such as the cost of investing in new machines, computer systems and applications. These are incurred before

<sup>12</sup> The NAPF proposes a model of ‘Super Trusts’. Super Trusts would be responsible for the administration of the pension and the fund management (NAPF 2005)

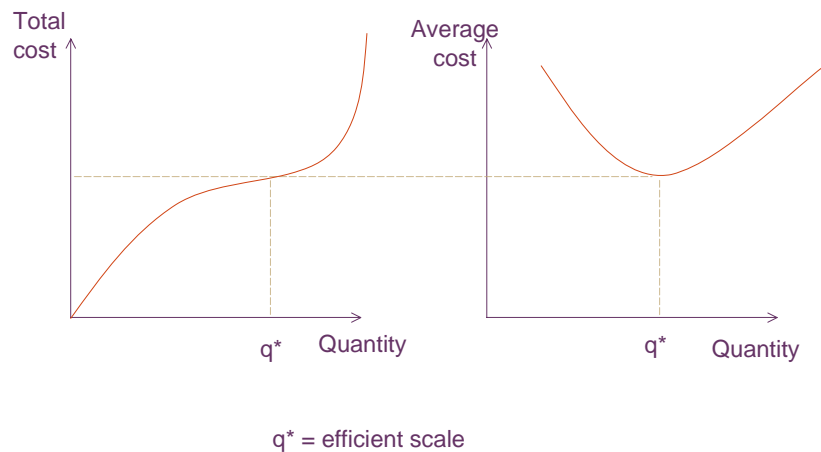
<sup>13</sup> A passive fund is a fund that does not try to beat the index, but simply aims to track it by investing in companies precisely in accordance with the constituents of an index. Active funds aim to outperform the market average by seeking out stocks that will provide a better total return.



production takes place; therefore, as the output level grows, the average costs decrease because the fixed costs are averaged across a larger number of output units.

In many industries, there are economies of scale above a certain output level. The presence of economies of scale does not necessarily mean that having only one firm in the market is most efficient. Figure 3.2 illustrates this with an example of an industry where average costs decrease for a given output range, and then increase (as a result of diseconomies of scale—described below).

**Figure 3.2 Economies of scale**

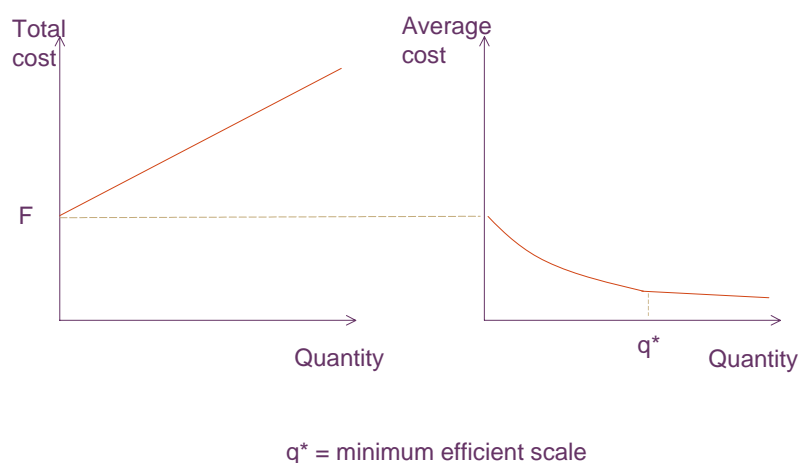


**Source:** Oxera.

This industry therefore has an *efficient scale*, at quantity  $q^*$ . This is the minimum point on the average cost curve. In this industry, it would be efficient if all firms produced a quantity  $q^*$ . The number of firms present would then depend on the overall level of demand in the industry.

Figure 3.3 represents an industry with some initial start-up costs,  $F$ , and thereafter only variable (per-unit) costs. In this industry, average costs decrease until they become almost constant at the per-unit (marginal) cost. Such an industry is said to have a *minimum efficient scale*—ie, the point at which average costs level off. (In the figure, this is the point at the end of the line in the chart on the right-hand side, where the costs per unit become nearly constant.)

Figure 3.3 Minimum efficient scale



Source: Oxera.

In such an industry, there is no 'optimal' number of firms in the market. Any firm that is producing at or above the minimum efficient scale is efficient—hence, there is scope in the market for firms of different size. There are many examples where firms of varying sizes are present in the market—eg, banks, gas and electricity providers, and many companies in the manufacturing sector.

There are also products where economies of scale are so significant that costs are only minimised when the entire output of an industry is supplied by a single producer. In other words, supply costs would be lower under monopoly than in a market with several providers. This is referred to as a 'natural monopoly'. Distribution networks for gas and local water supply are two such examples.

There may be a trade-off between having one firm—thus taking advantage of economies of scale—and allowing competition. Although the competition model may not result in the same economies of scale, it may lead to lower prices and more innovation over time as a result of competitive pressure on firms. This means that even if economies of scale are very significant, if innovation is important, having a market with more than one provider may still be beneficial from an economic welfare point of view. An example is mobile telephony where, despite the significant economies of scale, different players are active in the market—competition between them will drive innovation.

Figure 3.2 illustrated a firm whose average costs increase beyond a given level of output. Such a firm or industry is characterised by *diseconomies* of scale—like economies of scale, these are likely to apply only to a particular output range. Diseconomies of scale are difficult to justify in theory. In the long run, a firm that is seeking, say, to double its output can always achieve at most the same level of average costs by building an identical production facility and operating as two firms. However, in some industries there is some evidence of diseconomies of scale.<sup>14</sup> It is possible that, as firms grow, they become more difficult to manage because of increasing complexity and therefore suffer from inefficiencies.

<sup>14</sup> An example is car manufacturing. See Katz and Rosen (1998), p. 254.

## 4.0 ECONOMIES OF SCALE IN ADMINISTRATION

This section assesses the extent of economies of scale in pension administration, and identifies the conditions under which such economies would affect the comparison of the NPSS and Industry models. The extent of economies of scale in fund management is assessed separately in section 5.

This section is structured as follows:

- section 4.1 analyses the extent of economies of scale in administration on the basis of UK and international evidence;
- section 4.2 looks for evidence on economies of scale in the economic literature;
- section 4.3 assesses the average number of Personal Accounts per provider in both models, on the basis of a number of scenarios;
- section 4.4 concludes.

### 4.1 Is there empirical evidence of economies of scale in the administration of pensions?

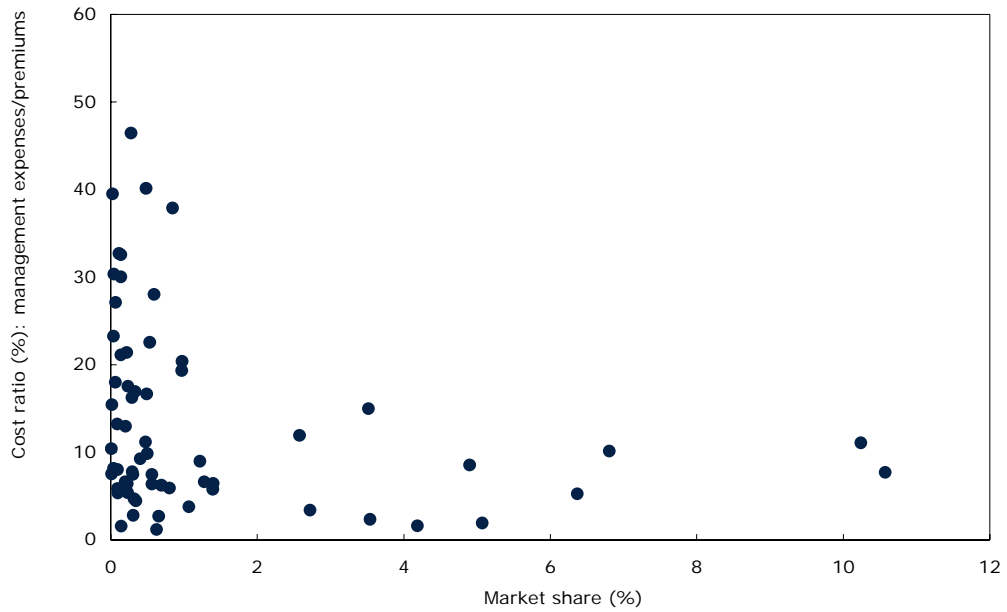
#### 4.1.1 Analysis of data on costs of administration services for pensions in the UK

Figure 4.1 shows the cost ratio (management expenses divided by net written premiums) for insurance companies in the UK (related to their life insurance and pension business) relative to their share in the life insurance and pension market. This data was provided by the ABI.

Management expenses include the costs of both the administration and fund management, but not commissions paid to non-staff members (ie, mainly independent financial advisers). The costs of fund management are small compared with those of administration,<sup>15</sup> which means that the management expenses presented in Figure 4.1 may be taken as a proxy for administration costs. The market share here is taken as a proxy for the size of the company and for the number of customers it serves.

<sup>15</sup> For example, in stakeholder pensions, the fund management costs form less than 8% of total costs. See: Pensions Commission (2005), appendix F, p. 229.

**Figure 4.1 Cost ratio versus market share (2004 total management expenses as a % of 2004 premiums, data on 64 pension providers)**



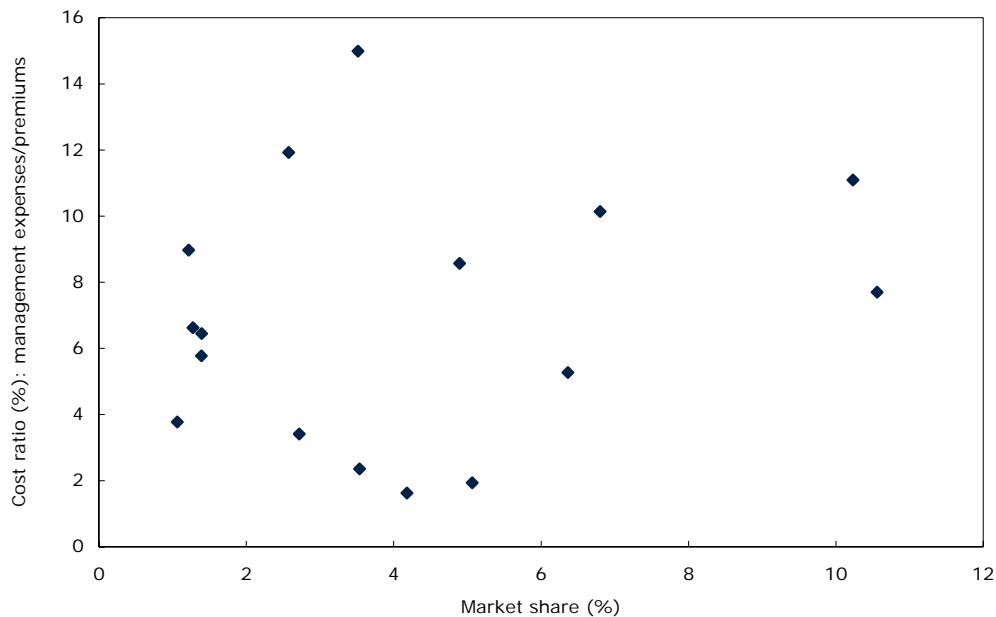
**Note:** A few firms with negative premiums for some lines of business were removed from the sample.

**Source:** ABI.

Figure 4.1 shows that most larger insurance companies have a lower cost ratio than many of the smaller players. The underlying data indicates that the weighted average cost ratio for companies with a market share below 1% is around 15.2%, while that for the 16 companies with a market share of 1% or more is around 7.3%. This suggests that there is some evidence of economies of scale.

Figure 4.2 presents the management expenses for the 16 insurance companies with a market share of 1% or more. The cost ratio ranges between 1.6% and 15%, while the market shares of these 16 companies lies between 1% and 11%.

**Figure 4.2 Cost ratio versus market share (2004 total management expenses as a % of 2004 premiums, data on largest 16 providers)**



Source: ABI.

Figure 4.2 does not provide prima facie evidence of economies of scale. This may mean that scale economies are relatively limited and are not significant for companies with a market share of more than 1%. Data from the ABI indicates that a 1% market share in the individual pensions market corresponds to fewer than 500,000 accounts.<sup>16</sup>

#### 4.1.2 Analysis of data on costs of administration services for pensions in other countries

This section assesses the existence and extent of economies of scale in pension administration on the basis of cost data of pension systems for a sample of five countries. Only countries with pension systems with Personal Accounts and with sufficient data on the costs of administration services in the public domain were selected.<sup>17</sup> The five systems are:

- Australian Superannuation Guarantee scheme (both industry and retail);
- Danish Arbejdsmarkedets Tillægspension (ATP);
- Polish Open Pension Funds (OPF);
- Swedish Premium Pension System;
- US Thrift Savings Plan (TSP).

<sup>16</sup> This calculation is based on regular premium individual pension accounts for a sample of 46 firms.

<sup>17</sup> Other countries with personal account pension systems include Hungary, and some Latin American countries, such as Mexico, Argentina, Chile and Bolivia. These were excluded from the sample due to lack of data on administration costs. Furthermore, a large number of countries do not have personal account pension systems of substantial size to be included in the comparison. In Germany and the Netherlands, for example, occupational rather than personal account pension systems are more common.

The US TSP and the Danish ATP, introduced in 1986 and 1962 respectively, are mature schemes, where the role of private firms is limited to asset management mandates. The US TSP only covers federal government employees and is not mandatory. The Danish ATP scheme is mandatory, but scheme members do not have any choice regarding the investment strategy, which is centrally determined by the ATP Board.

In Australia, the Superannuation Guarantee scheme, introduced in 1992, mandates employers to make contributions on behalf of their employees to superannuation (pension) funds of their employees' choice. The system is highly decentralised, with minimal central government involvement. Different types of fund are offered, usually organised by sector, and of these, the industry and retail funds are included in the comparison since these are most similar to Personal Accounts.

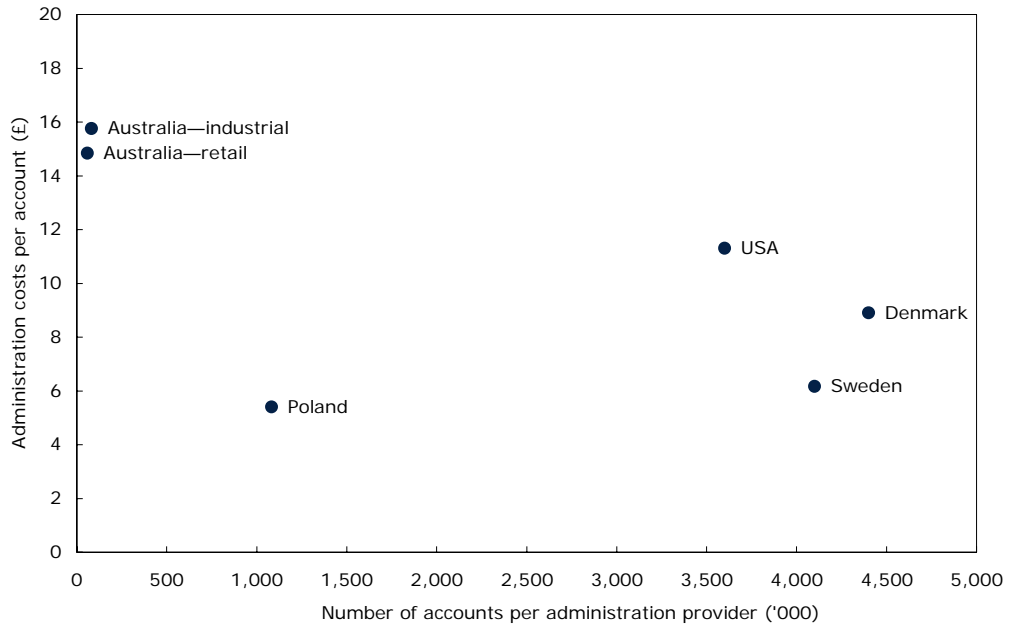
Poland's mandatory private pension scheme, introduced in 1999, is designed to provide supplementary publicly funded, but privately managed and owned, pensions. For employees born after 1969, participation in the scheme is mandatory. In 2005, there were 15 pension management companies, each offering one fund. Management companies carry out the administrative and fund management functions, and contributions are collected by the Polish Social Insurance Institution.

Participation in the Swedish Premium Pension System, introduced in 1998, is mandatory for all individuals covered by the public pension system. Members can choose among 697 funds, managed by 84 private asset managers (as at the end of 2004). Members failing to make an active choice are enrolled in the default fund. The system is supervised by the premium pension authority (PPM), which is also in charge of the administration of the individual accounts.

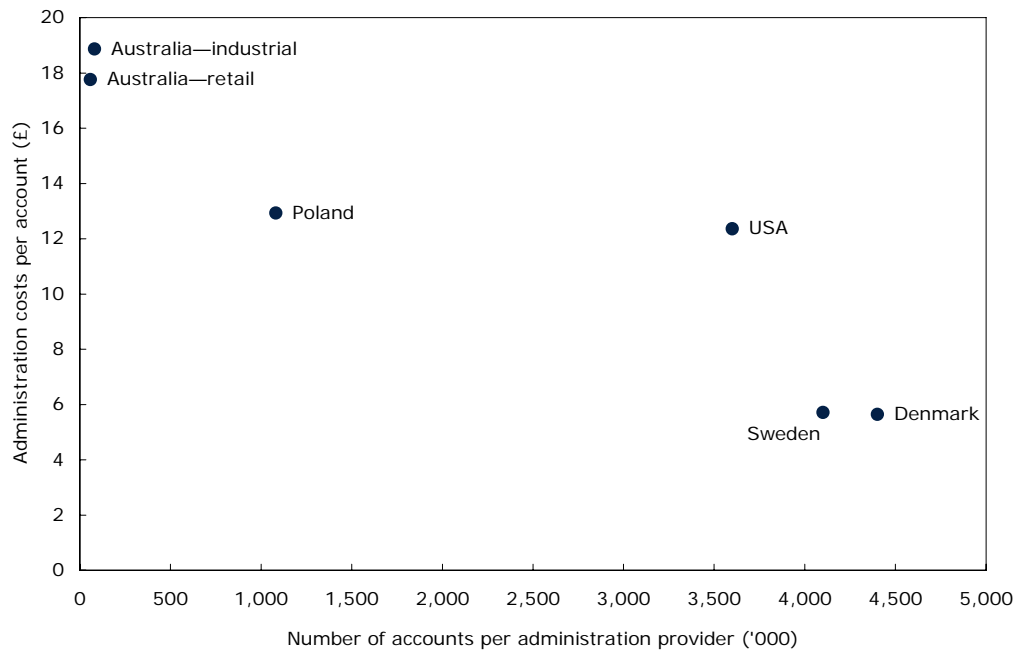
When analysing administration costs, the relevant unit is the costs per account (rather than the costs as a percentage of the asset under management) since the volume of administration activities is primarily related to the number of accounts rather than the size of the fund. Figures 4.3 and 4.4 compare the average administration cost per account<sup>18</sup> and the number of accounts per provider. While Figure 4.3 presents costs data in nominal terms, Figure 4.4 presents data points using an adjustment based on purchasing power parity (PPP), thereby taking into account the impact on cost of the difference in the standard of living across countries.

<sup>18</sup> This refers to the pure administration costs and does not include fund management costs and marketing costs.

**Figure 4.3 Administration costs per account versus number of accounts per provider—PPP unadjusted**



**Figure 4.4 Administration costs per account versus number of accounts per provider—PPP adjusted**



**Source:** PPM (2004), Thrift Savings Plan (2004), Insurance and Pension Funds Supervisory Commission (2004), Clare (2001), Coleman, Esho, and Wong (2003), ATP (2005), and Oxera calculations.

If economies of scale were to exist, a downward-sloping relationship would be expected as the number of accounts per provider increases. The evidence is inconclusive. Although the two systems with the highest number of accounts (Sweden and Denmark) have the lowest costs, the US TSP has a similar number of accounts but higher costs (almost twice

as high as the Swedish pension system, for example). Furthermore, its costs are higher than (or, if PPP-adjusted, roughly the same as) in Poland, even though Poland has many fewer accounts per provider.

There may be factors other than economies of scale that explain the cost difference between the systems, or that may have led to cost under- or overestimation, thereby complicating the international comparison.<sup>19</sup> For example, the costs per account of the TSP system may have been underestimated since some of the administration activities are not undertaken by the TSP administrator but by the employers. This means that the actual costs per account in the USA are higher than indicated in Figures 4.3 and 4.4. Moreover, the TSP represents a homogeneous group of employers (US federal government agencies), thereby facilitating the standardisation of processes and in turn limiting costs. The Danish ATP does not allow any choice in terms of investment strategy, possibly making the administration system less complicated.

In summary, although this international comparison is limited in scope, it includes a number of countries with large personal account pension systems. The analysis does not show conclusive evidence of significant economies of scale beyond a certain point (for example 500,000 accounts).<sup>20</sup> It is likely that there are some economies of scale in pension administration (as the analysis in section 4.1.2 suggests), but they may not be so significant as to cause substantial differences in costs in large schemes.

## 4.2 Economies of scale in pension administration in the economic literature

A limited number of studies analyse economies of scale in pension administration. Some of these analyse the relationship between costs and number of accounts, while others focus on the costs and size of assets under management.

A study undertaken for the World Bank found no significant relationship between charges and the size of funds in Latin America and the UK (Whitehouse 2000, p. 57). This implies that even if there was an inverse relationship between costs and the size of funds, it was not passed on to the consumer in the form of lower charges.

Turner and Beller (1989) analysed the relationship between administration costs and the assets under management in the USA, and concluded that economies of scale existed until the fund reached \$75m in assets; thereafter, the administration costs as a proportion of assets remain constant. In their analysis of the French mutual fund market, James et al. (2000) found evidence of a minimum efficient size of \$500m. The Australian Prudential Regulatory Authority (1998) showed that there was a minimum efficient scale in terms of the number of accounts per provider—the costs of administration services

<sup>19</sup> The maturity of the system may also affect the level of costs. Newer systems, such as those in Australia and Sweden, may have higher levels of cost due to high up-front costs not yet recovered. However, even if this were the case, the charts would still not provide evidence of economies of scale.

<sup>20</sup> The IMA (2005, p. 7) reaches a similar conclusion: 'At a general level, substantial economies of scale in unit terms are achievable, although the threshold for such economies of scale may well be low enough to see similar effects in large, collective schemes.'



declined as the number of members in the fund increased. However, the study undertook the analysis for a relatively small number of accounts—only up to 10,000 accounts, after which no data on fees and fund size was given.

The evidence from the literature, although limited, seems to be consistent with the hypothesis that economies of scale in administration are limited. The literature concludes that variation in administration costs between systems/countries is more likely to be due to differences in system design, such as differences in the scope of the activities undertaken by the administration services provider and those undertaken by the employer, than to particularly significant scale effects.

### **4.3 Analysis of average number of accounts per provider in the NPSS and Industry models**

The NPSS and Industry systems are modelled below to illustrate the number of accounts that each provider could have after a number of years, according to pessimistic, central and optimistic scenarios. This allows for an assessment of the relevance of economies of scale to the comparison of the two models.

Table 4.1 shows the assumptions used in the model, which are in line with those in the Pensions Commission modelling. The same model is also used to estimate the size of an average fund in both the NPSS and the Industry models. This analysis and assumptions are described in detail in section 5.

**Table 4.1 Assumptions to estimate number of accounts per provider**

	Assumption	Source
Population growth rate	0.4%	DWP (2006a), Box 1b, p. 45
Number of employees eligible for automatic enrolment.	10.8m	DWP (2006a), p. 75
Opt-out rate (of those in normal employment who are automatically enrolled)	Pessimistic scenario: 46% Central scenario: 35% Optimistic scenario: 20%	Pensions Commission (2005), Appendix F, pp. 242 and 252
Opt-in numbers (unemployed and self-employed workers opting into the scheme)	375,000	1,400,000 eligible from the self-employed, 25% participation rate Pensions Commission (2005), pp. 254–5
Number of providers in Industry model	One scenario with six providers and one scenario with 12 providers	Oxera assumption based on industry and ABI sources
Number of providers in NPSS model	One scenario with one provider and one scenario with three providers	The Pensions Commission assumes one provider, and indicates that there would be a possibility of hiring more than one provider (2006, p. 32 and footnote 7). The White Paper assumes more than one provider (DWP, 2006, p. 50)

The results of the model are sensitive to the opt-out rate (the proportion of eligible individuals who choose not to participate in the scheme), for which there are three scenarios:<sup>21</sup> a pessimistic rate of 46%, a central scenario rate of 35%, and an optimistic rate of 20%.

As the model is also sensitive to the number of providers, it was run on the basis of six and 12 providers in the Industry model and one and three provider(s) in the NPSS model.<sup>22</sup>

The model shows that in the scenario of 12 providers in the Industry model and an opt-out rate of 46%, each provider in the Industry model will have around 520,000 accounts in the first year, slowly growing towards 560,000 accounts in 20 years. In the central scenario, the number of accounts amount to more than 610,000 in the first year and in the optimistic scenario to 750,000. The central scenario is shown in Table 4.2 for different numbers of providers in the NPSS and the Industry models.

<sup>21</sup> These scenarios are based on assumptions in Pensions Commission (2005), Appendix F, pp. 242 and 252.

<sup>22</sup> The six and 12 providers can be considered the lower and upper limit of the total number of providers in the market. Section 6 indicates that a market with six providers would not cause concerns over single-provider dominance or excess concentration. Market participants and the ABI have indicated not to expect more than 12 firms to offer Personal Accounts.

The number of accounts managed by the one provider in the NPSS model would amount to more than 7m in the first year, growing to close to 8m within 20 years.

The fact that the number of accounts per provider in the Industry model is over 500,000 indicates that economies of scale are unlikely to cause significant differences in costs between the NPSS and the Industry models.

As is to be expected, there is less difference in the number of accounts per provider in the scenario of three providers in the NPSS model and six providers in the Industry model. Each provider in the NPSS would then have around 2.6m accounts, while each provider in the Industry model would have 1.3m accounts (after 20 years under the central scenario). In other words, the more administration service providers in the NPSS model, the more similar the NPSS and Industry models become in terms of number of accounts per provider.

**Table 4.2 Number of accounts per provider in the NPSS and Industry models (central scenario of opt-out rate)**

Years	NPSS (one provider)	NPSS (three providers)	Industry (six providers)	Industry (12 providers)
1	7,395,000	2,465,000	1,232,500	616,250
2	7,424,580	2,474,860	1,237,430	618,715
5	7,514,032	2,504,677	1,252,339	626,169
10	7,665,520	2,555,173	1,277,587	638,793
20	7,977,719	2,659,240	1,329,620	664,810

**Source:** Oxera calculations based on Pensions Commission assumptions.

#### 4.4 Economies of scale in administration: summary

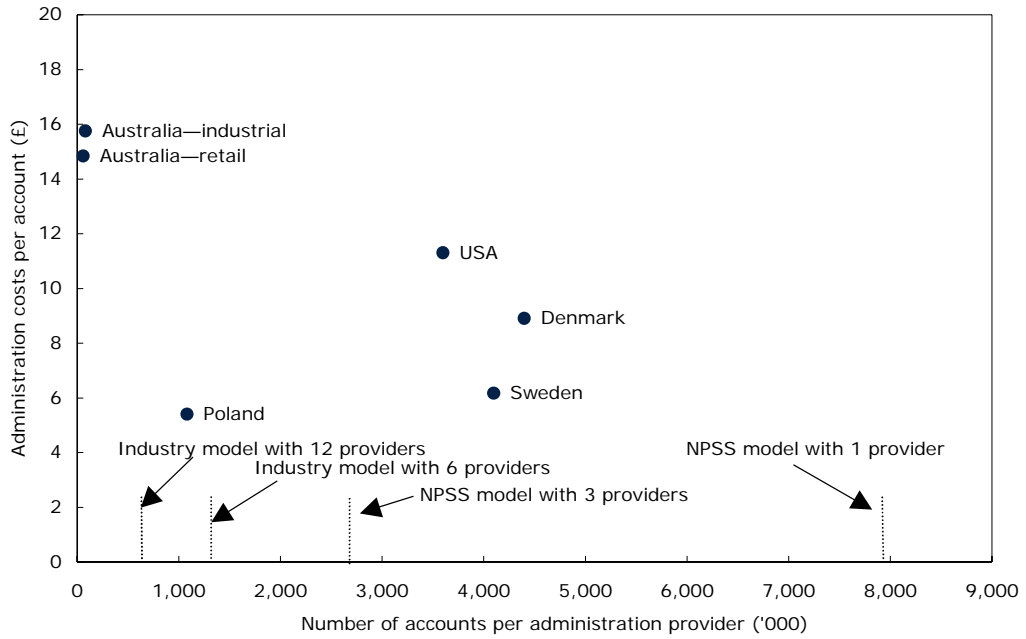
The provision of pension administration services involves up-front investments in IT systems and associated applications. These costs would be expected to be fixed for a certain amount of capacity (ie, number of accounts), resulting in lower average costs per account when the number of accounts increases.

Analysis of the data on the costs incurred by pension providers in the UK indicates that there are some economies of scale in administration, but they are limited. This is also confirmed by studies in the economic literature.

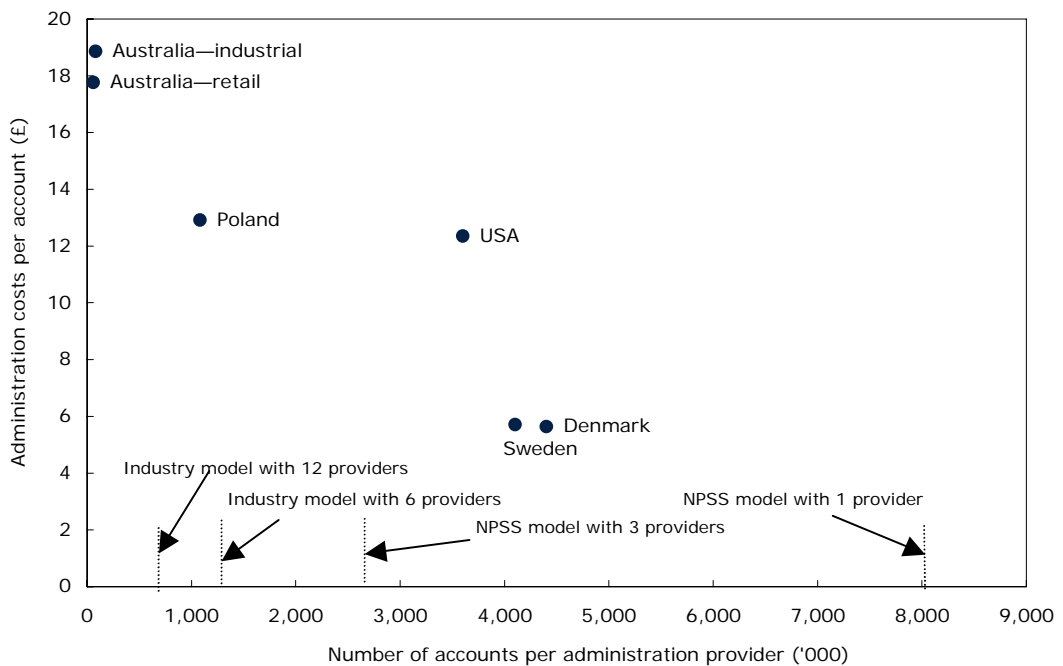
The information available to analyse large pension systems in other countries also does not provide evidence to support the existence of economies of scale beyond, for example, 500,000 accounts (see Figure 4.5 and 4.6). The variation in costs between pension systems in different countries may relate to other factors, such as differences in the scope of the activities undertaken by the administration services provider and those undertaken by the employer.

The number of accounts per provider in the NPSS model is larger than the average number of accounts per provider in the Industry model. (Figures 4.5 and 4.6 show the average number of accounts per provider in the NPSS and Industry models and, for illustrative purposes, compare these to the number of accounts per provider in other countries.) However, Oxera’s modelling analysis shows that, given that economies of scale are limited, the differences in the number of accounts are unlikely to cause significant differences in administration costs between the two models.

**Figure 4.5 Comparison of size of provider—PPP unadjusted**



**Figure 4.6 Comparison of size of provider—PPP adjusted**



Source: Oxera.

## 5.0 ECONOMIES OF SCALE IN FUND MANAGEMENT

This section assesses the conditions under which economies of scale in fund management may affect the fund management costs in the NPSS and Industry models. The focus here is on passive fund management—economies of scale in passive fund management are likely to be more significant than those in active fund management since passive fund management may allow for a greater degree of automation and active fund management may require more manual input from fund managers.<sup>23</sup>

The section is structured as follows:

- section 5.1 assesses evidence on economies of scale in fund management;
- section 5.2 analyses the size of an average fund in the NPSS model and Industry model using several scenarios. This allows an assessment of whether fund management costs would be significantly different under the NPSS model and Industry model;
- section 5.3 concludes.

### 5.1 Is there empirical evidence of economies of scale in fund management?

#### 5.1.1 Analysis of fund management fees

Figure 5.1 shows passive fund management fees relative to the size of fund under management.<sup>24</sup> The management fees are based on data provided by a representative sample of UK fund management firms, and reflect typical management fees charged to UK pension funds averaged across the sample of fund management firms. The figure includes the management fees for the US TSP pension funds.<sup>25</sup>

The management fees are exclusive of trade commission costs. These costs may result in an uplift of the management fee of around 3bp.<sup>26</sup>

The figure indicates that there are significant economies of scale up to a fund size of £500m. However, economies of scale become less significant in the range £500m to £1 billion and in particular once funds under management reach around £1 billion. The data indicates that the management fee for a fund of £500m is around 4bp and for a fund of £1 billion around 2–3bp.

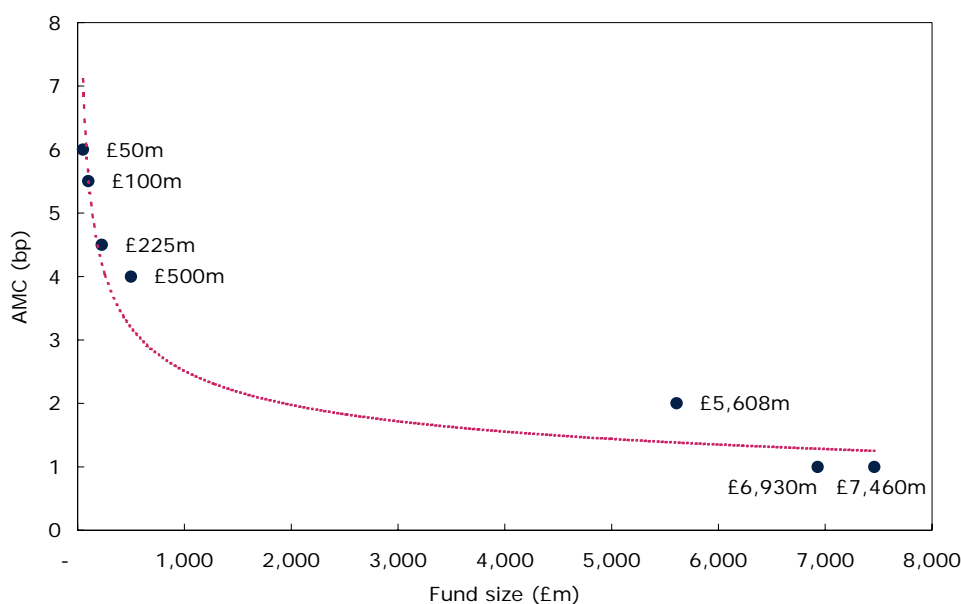
<sup>23</sup> See also IMA (2006a), February, p. 10.

<sup>24</sup> Here, the fund management fees are taken as a proxy for fund management costs. Since the market for institutional fund management can be considered competitive (see also Oxera 2003), it is reasonable to assume that fees will closely reflect costs.

<sup>25</sup> The three funds included have assets of £5,608m, £7,460m and £6,930m, with management costs of 2bp, 1bp and 1bp respectively. Thrift Savings Plan (2004).

<sup>26</sup> This is a rough estimate of trade execution costs for a passively managed fund, assuming a turnover of around 30% and an average commission rate of around 10bp.

Figure 5.1 Relationship between fund size and fund management fee



**Note:** The data on fund management fees in the Oxera study for the FSA was collected through a survey of a representative sample of UK fund management firms. The fees refer to typical fees charged by UK fund management firms to UK pension funds, and are weighted averages across all fund management firms in the sample (weighted by the size of the funds under management). Data is from 2001 but adjusted downwards on the basis of Oxera's understanding of market developments to reflect the fall in management fees during the period 2001–06. Industry data indicates that management fees for a fund of £1 or £2 billion amount to around 2bp–3bp.

**Source:** Oxera (2003) and Thrift Savings Plan (2004). The three TSP funds included have assets of £5,608m, £7,460m and £6,930m, with management costs of 2bp, 1bp and 1bp respectively.

### 5.1.2 Economies of scale in fund management in economic literature

There are various studies on the existence of economies of scale in fund management. The following three studies provide indications about the size of fund for which economies of scale are significant.

- From its analysis of mutual funds, the US Securities Exchange Commission found that the operating expense ratio of a mutual fund with assets of \$10m (£5.30m) was 22bp lower than a fund of \$1m (£0.53m), while a fund of \$1 billion (£530m) had an operating expense ratio 66bp lower than a fund of \$1m (£5.30m) (SEC 2000).<sup>27</sup> Funds over \$1 billion formed the highest category in the study—no evidence of economies of scale beyond a fund size of \$1 billion was provided.
- Latzko (1999) analysed the US mutual fund market and discovered that economies of scale are exhausted by about £1.84 billion in fund assets.
- Dermine and Roller (1992) analysed mutual funds in France and found economies of scale to exist for small firms, but diseconomies for large institutions. An efficient fund size was found to be £298m.<sup>28</sup>

<sup>27</sup> An exchange rate of £0.53:€1 was used.

<sup>28</sup> An exchange rate of £0.103:FRF1 was used

These three studies appear to confirm that economies of scale start to become less significant beyond a certain point (eg, £500m), and may become exhausted between £1 and £2 billion.

## 5.2 Analysis of the average size of fund in the NPSS and Industry models

### 5.2.1 Model assumptions

The model described in section 4 is used to ascertain an expected average size of average default and non-default funds. Table 5.1 describes the assumptions used in the model, which are in line with those made in the Pensions Commission modelling. Additional assumptions are made where necessary for the modelling.

- The output is real—ie, the fund size is in present value.
- The population growth rate (people who become part of the band of eligible contributors) is assumed to be 0.4% per year.
- 2.5% of customers are assumed to stop contributions each year (NAPF 2005, p. 46). These customers' accounts still exist but no more contributions are paid into them. Thus, although this assumption does not affect the number of accounts, it does affect the total amount of new contributions each year and therefore the size of the funds.
- The contribution rate includes an employee and employer contribution, as well as a tax savings contribution. The Pensions Commission assumes that 8% is the minimum, and that some people may make additional voluntary contributions. In line with the Pension Commission's own assumptions, the model assumes that contributions are only made on the portion above £5,000 of an individual's earnings.<sup>29</sup>

The model is sensitive to the opt-out rate (the proportion of eligible individuals that choose not to participate in the scheme) of which there are three scenarios:<sup>30</sup>

- pessimistic: 46%;
- central: 35%;
- optimistic: 20%.

The model is also sensitive to the number of providers in the Industry model and the number of funds in the NPSS and Industry models. In this case there are two scenarios: six and 12 providers in the Industry model, each of which offers one default fund and

<sup>29</sup> Therefore, the contributions of a median earner in 2006 would be: 8% of £18,094 – £5,000 = £1,048. In 2010, with real earnings growth at 2%, the contribution of a median earner would be 8% of £14,173 = £1,134, assuming that the threshold for contributions is uprated with real earnings growth, such that it stands at £5,412 in 2010.

<sup>30</sup> Based on assumptions in Pensions Commission (2005), Appendix F, pp. 242 and 252.

three other non-default funds. Thus, there will be four funds in the NPSS model<sup>31</sup> and between 24 and 48 funds in the Industry model.<sup>32</sup>

**Table 5.1 Assumptions to estimate number of accounts per provider**

	Assumption	Source
Earning growth rate (real)	2%	Oxera
Population growth rate	0.4%	DWP (2006a), Box 1b, p. 45
Fund growth rate (real)	3.5%	Pensions Commission (2005), Appendix F, pp. 225 and 259
Number of employees eligible for automatic enrolment	10.8m	DWP (2006a), p. 75
AMC	0.3%	Pensions Commission (2005), Appendix F, p. 23 0.3% is an estimated cost under a nationally administered system
Opt-out rate (of those in normal employment who are automatically enrolled)	Pessimistic scenario: 46% Central scenario: 35% Optimistic scenario: 20%	Pensions Commission (2005), Appendix F, pp. 242 and 252
Opt-in amount (unemployed and self-employed workers opting into the scheme)	375,000	1,400,000 eligible from the self-employed, 25% participation rate Pensions Commission (2005), pp. 254–5
Number of providers and funds in Industry model	One scenario with six providers and one scenario with 12 providers; each provider has four funds	Oxera assumption based on industry and ABI sources
Number of funds in NPSS model	Four funds	The Pensions Commission (2006, p. 29) assumes that there will be several different funds
Contribution rate	8%	Pensions Commission (2005), Appendix F, p. 255, 8% minimum
Weighted average earnings of the target population	£18,094	DWP (2006a); this is explained in Appendix A2
Default rate (% of accounts opened as default)	75%	ABI

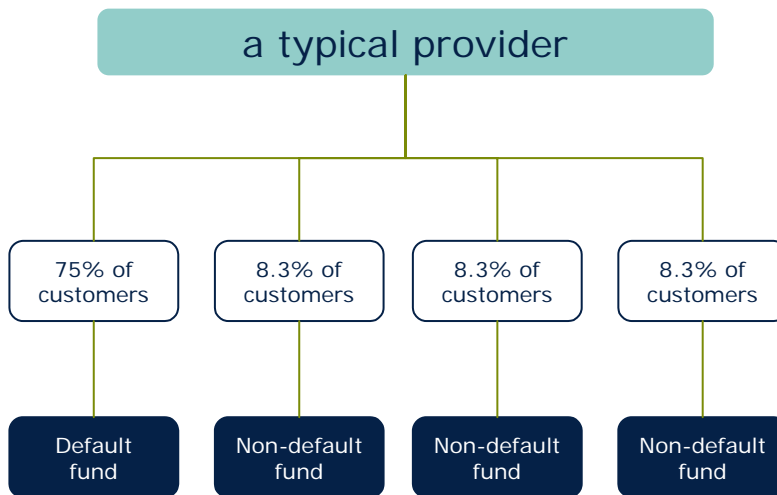
<sup>31</sup> In practice the management of a fund may be split into different mandates. Assuming that there will be four funds in the NPSS model is therefore conservative for the purposes of this analysis.

<sup>32</sup> In principle, in the Industry model, service providers may decide to outsource their fund management activities. Therefore the size of the funds in the Industry model may be larger than assumed in the Oxera's modelling.



The total number of customers for each provider has been shared out between the default fund and the non-default funds according to the 'default rate' shown in Table 5.1. The amount not apportioned to the default fund is then shared out evenly between these three non-default funds, as illustrated in Figure 5.2 below.

**Figure 5.2 Structure of provider**



Source: Oxera.

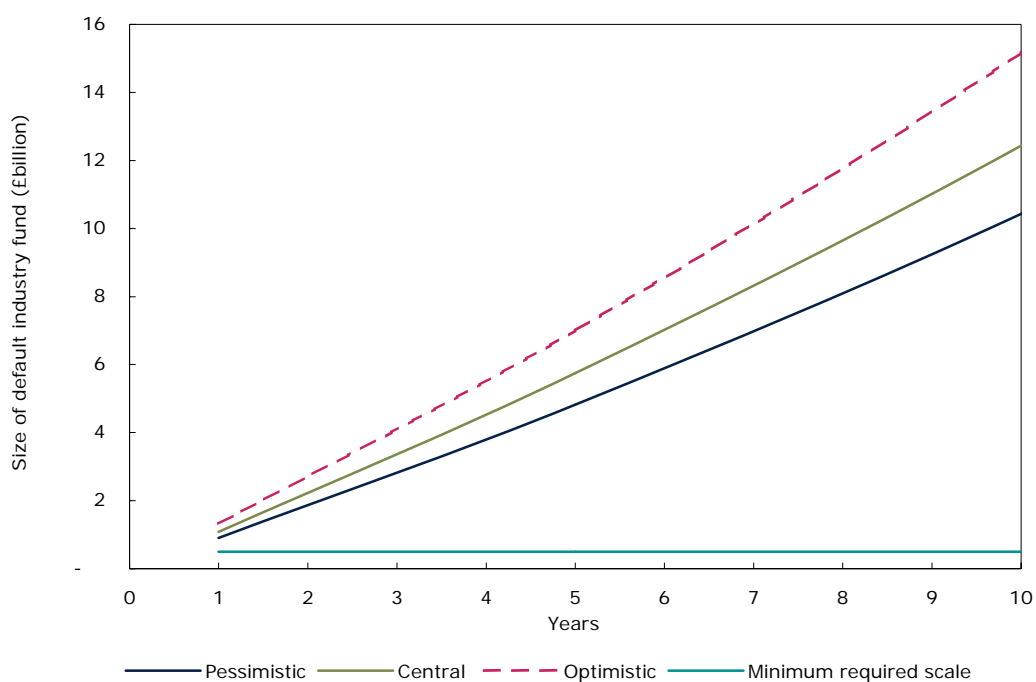
### 5.2.2 Model results

Figure 5.3 shows the increase in the size of an average default fund in the Industry model (assuming six providers) under the three opt-out scenarios.<sup>33</sup> The average default fund already reaches around £1.1 billion in the first year in the central scenario. In the scenario of 12 providers (not shown in the chart), an average default fund reaches a size of £540m in the first year and £1.1 billion in the second year.

As was to be expected, the size of funds in the NPSS model is larger than those in the Industry model. The default fund in the NPSS reaches around £6.5 billion in the first year. However, the differences in size are unlikely to cause significant differences in the costs of fund management between the two models. As explained above, economies of scale start to become less significant at a fund size of £500m. The blue horizontal line indicates a fund size of £500m.

<sup>33</sup> As a cross-check, the increase in size of total assets under management (ie, the total of all funds, which is the same in the NPSS and Industry models) was compared against those estimated from the Pensions Commission's macro model (2005, p. 257). Over the first ten years (the period of relevance for the analysis of economies of scale in fund management), the results from the two models are similar. The results for the second ten years are slightly different: Oxera's estimates of the assets under management are higher than the Pensions Commission's model. This divergence may be explained by the inclusion of outflows, in the form of annuities, from the pension system in the Pensions Commission model. This difference does not affect the conclusions from this report, as the period under analysis is the first ten years of the scheme.

**Figure 5.3** Expected fund size for default fund (£ billion) in a scheme of six providers



Source: Oxera.

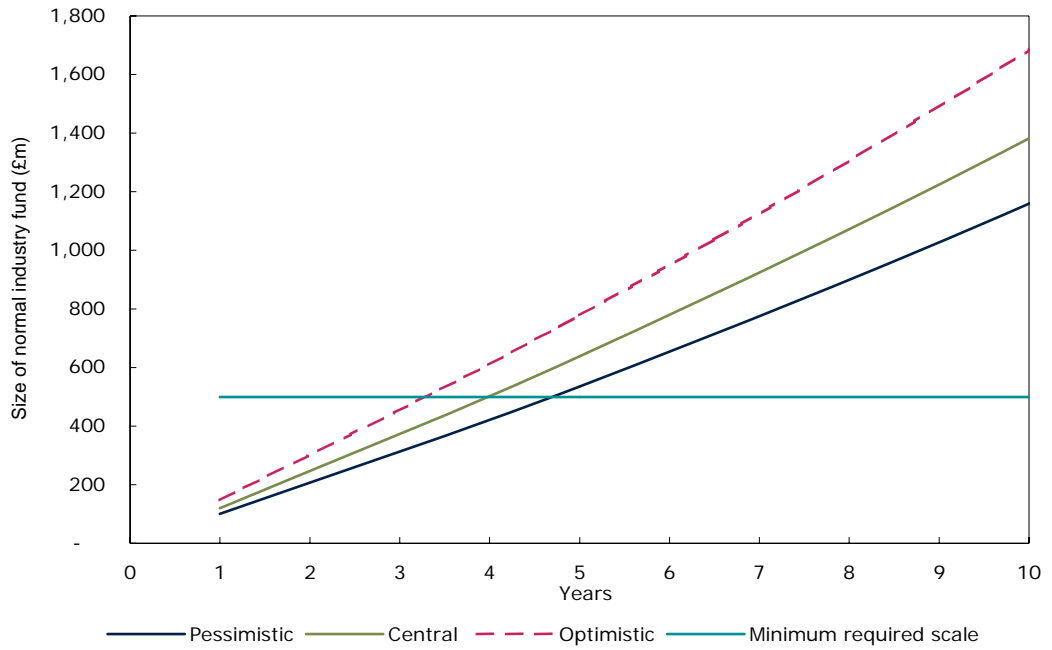
Figures 5.4 and 5.5 plot the size of a non-default fund under the three opt-out rate scenarios (assuming six providers in Figure 5.4 and 12 in Figure 5.5).

When considering a market with six providers under the central scenario, an average non-default fund will reach a size of £500m in about four years. Changing the opt-out assumption shifts this point to within a year either way of the central scenario.

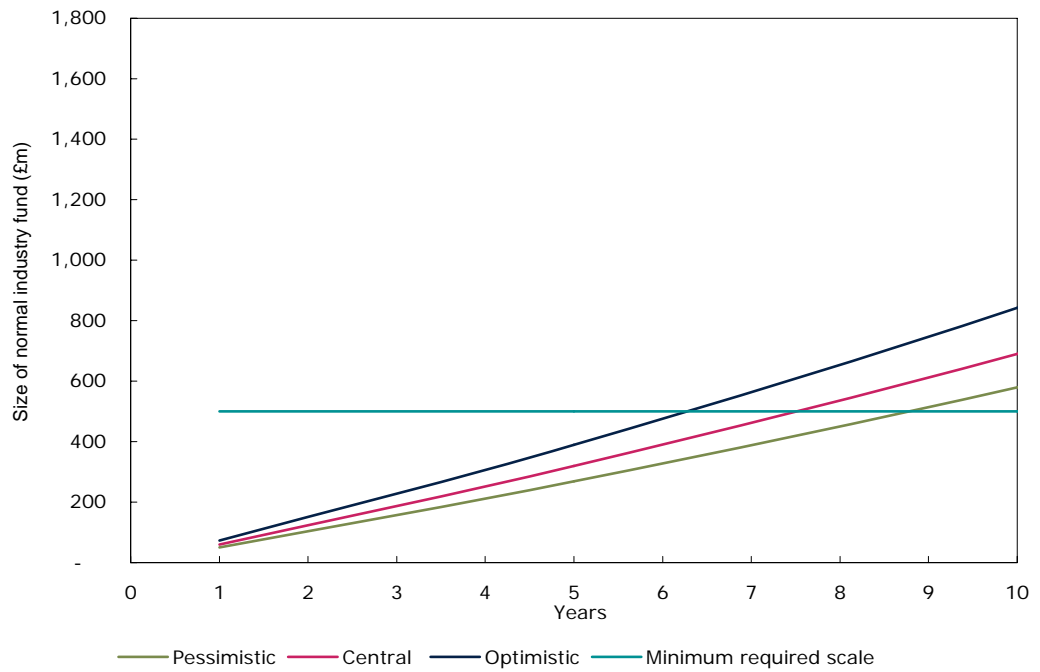
Under the central scenario with 12 providers in the Industry model, an average non-default fund will reach a size of £500m in around seven years. Changing the opt-out rate shifts this point to around six years for the optimistic scenario and about eight years for the pessimistic scenario.<sup>34</sup>

<sup>34</sup> As would be expected, the results of the model are sensitive to the assumptions on median earnings, persistency, and the 'default rate'. For example, the non-default fund would reach a size of £500m in eight years of operation, rather than seven years if the median earning amounted to £13,094, the persistency were 4.2% or the 'default rate' were 77%.

**Figure 5.4** Expected fund size for non-default fund (£m) in a scheme of six providers



**Figure 5.5** Expected fund size for non-default fund (£m) in a scheme of 12 providers



Source: Oxera.

### 5.3 Economies of scale in fund management: conclusions and implications for management fees and charge ratio

The analysis of fund management fees shows that there are economies of scale in fund management. However, economies of scale start to become less significant in the range £500m to £1 billion and in particular once funds under management reach around £1 billion. This is confirmed by the economic literature.

Oxera's modelling shows that in the Industry model with six providers the average default fund already reaches a size of around £1.1 billion in the first year. In the scenario of 12 providers, an average default fund reaches a size of £540m in the first year and £1.1 billion in the second year. This means that the difference in management fee between an average default fund in the NPSS model and the Industry model is unlikely to be significant in terms of costs to consumers.

This can be illustrated by estimating the charge ratio—ie, the percentage of an average person's account after 40 years that is taken up by charges. For example, assuming that in the NPSS model, the total AMC (including the costs of fund management and administration) amounts to 0.3%, the charge ratio would be 6.46% (over a period of 40 years).<sup>35</sup> If the fund management costs were 1bp higher in the Industry model (resulting in an AMC of 0.31%), the charge ratio would amount to 6.67%.

An average non-default fund in the Industry model may not reach a size of £500m until after four or seven years.<sup>36</sup> This implies that, in the early years, the management fee for the non-default funds in the Industry model may be higher than the equivalent fund in the NPSS model, as costs may be slightly higher. Such a difference in management fees will result in a difference in charge ratios. Using the management costs in Figure 5.1 and size of fund as shown in Figure 5.4, this can be illustrated with the following pattern of management charges:

- a weighted average AMC of around 4.3bp per year for the first seven years;
- a weighted average AMC of around 2.8bp per year for the five years during which the fund size is between £500m and £1 billion;
- a weighted average AMC of around 2.2bp per year for the 20 years after the fund reaches over £1 billion.

This would result in a weighted average AMC of around 2.5bp over a 20-year period and slightly below 2.5bp over a 40-year period. This can be translated into an increase in the charge ratio. For example, assuming that in the NPSS model the total AMC (including the costs of fund management and administration) amounts to 0.3%, the charge ratio would be 6.46% (over a period of 40 years). If the management fee were 2bp higher, the charge ratio would amount to 6.88%.

This shows that the difference in the cost of managing assets in the NPSS and the Industry models (as a result of economies of scale) is unlikely to be very significant.

<sup>35</sup> The assumptions for this calculation are shown in Table 5.1.

<sup>36</sup> Depending on whether the number of providers is six or 12.

## 6.0 CONDITIONS FOR COMPETITION IN THE INDUSTRY MODEL

As explained in the White Paper, effective competition is the second key objective in the system employed to deliver Personal Account pensions:

In assessing approaches, our key objectives will be minimising the cost to members of the scheme and **maximising effective competition between firms involved in the provision of the scheme** (p. 56, para. 1.71) [emphasis added].

The nature of competition in the NPSS and Industry models is significantly different, necessitating a separate assessment for each. The conditions for competition in the NPSS model are examined in section 7.

This section looks at how competition may operate in the Industry model, and is structured as follows:

- section 6.1 explains the dimensions of choice that can be exercised by individuals;
- section 6.2 uses standard economic theory to establish criteria to evaluate the degree of competition;
- section 6.3 analyses switching rates and costs, explaining why competition requires some degree of switching, and looking at how consumers can be expected to make decisions to switch;
- section 6.4 analyses the effect on competition of the carousel mechanism;
- section 6.5 draws together this analysis to identify the minimum conditions for competition in the Industry model, employing standard competition policy tools to assess the key characteristics this market would need in order to deliver effective competition.

### 6.1 Choice in the Industry model

#### 6.1.1 Competition on several fronts

Competition in the Industry model takes the form of direct competition between providers (for those who choose a provider themselves) with the remaining accounts allocated through a carousel mechanism. In principle, choice exercised by consumers will take account of several factors, including price, service quality and a provider's reputation.

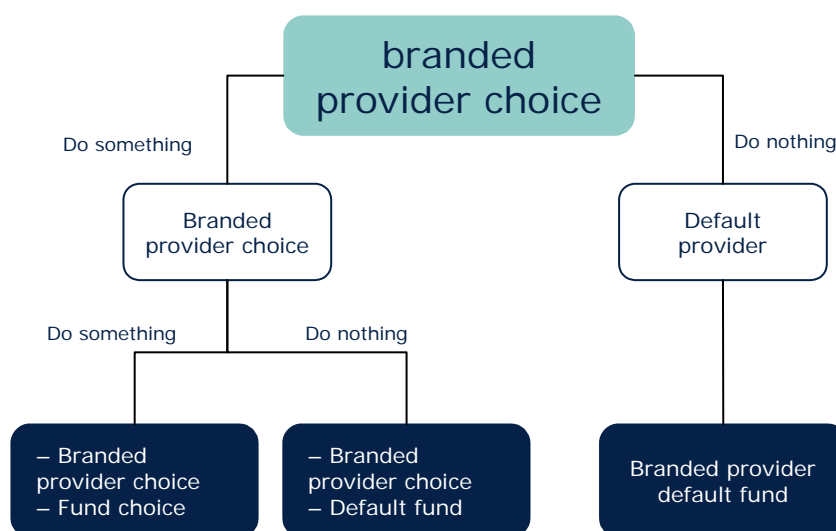
It is likely that a market along the lines of the Industry model will feature competition on several fronts—eg, on the basis of service after enrolment, on price, and on reputation. For effective competition, the actual or potential exercise of choice in response to price or quality changes needs to be high enough to constrain the exercise of market power by individual providers. As explained in the Pension Commission's Final Report, the exercise of choice is a vital component of a cost-efficient system:

motivation for cost reduction would have to derive either from the pressure of choice and competition ... or from regulatory pressure (2006, p. 32)

### 6.1.2 Second layer of choice in the Industry model

In the Industry model, consumers make a twofold choice: first of pension provider and then of asset allocation, as illustrated in Figure 6.1. The choice of asset allocation will be the same as in the NPSS model—a simplified menu of funds offering as few as three or four asset allocation options. Consumers who do not make an active choice of provider will be allocated to a default provider and a default fund (through a carousel mechanism, as explained in section 6.4).

**Figure 6.1** Dimensions of consumer choice in the Industry model



**Source:** Reproduced from DWP (2006a), p. 55.

In the White Paper, the DWP supports the idea of a single provider, claiming that ‘having a choice of providers would add a layer of complexity and would not generally be welcomed by people’ (p. 56). However, it is worth emphasising that the exercise of choice between branded providers does not necessarily require financial sophistication among consumers (given a simple fee structure). Consumers may be familiar with choosing between branded providers from other markets in retail financial services, and are likely to make choices on familiar aspects of price, service quality and brand. A regulatory and supervisory regime may further facilitate this since it sets minimum conditions with which providers will have to comply.

A survey undertaken by the ABI suggests that consumers prefer to have choice of provider. 80% of the respondents said that they want some ‘choice over who administers my Personal Account, including the ability to transfer my account to a different company if I am unhappy with the service’ (ABI, 2006a).

The choice of asset allocation *will* require a degree of financial sophistication among consumers, since the risk–reward trade-offs involved in choosing equities over bonds, or

international equities over UK equities, can be complex. This element of choice is common to the NPSS and Industry models, and will be simplified in both models by restricting asset allocation choices. In this regard, the economic literature suggests that too much fund choice can be detrimental, although some limited choice can raise contribution and participation rates.

Iyengar, Jiang and Huberman (2004) report that an addition of ten funds to the existing range of choices in a USA 401k pension plan decreases participation by 2% and portfolio share of equities by 8%, while increasing the share of 'safe' investments by 5.4%. Benartzi and Thaler (2002) find that, in the context of pension investment, the increase in participants' utility, from being able to choose their own portfolio, is small. However, Papke (2004) finds that a participant in a defined-contribution (DC) scheme who has choice over their investment contributes over 8.5% more into the scheme than a comparable participant without choice. This is an economically large effect, since the unconditional mean of contributions is around 5% of salary. 83% of participants in all 401k plans (30.93m out of 37m in total) are said to have some control over their investments. Simple tabulation also indicates that people are more likely to participate when they have investment choice: 50% of those without choice participate, while for those with choice the percentage is 87%.<sup>37</sup>

Thus, the extent of fund choice is a sensitive aspect of the design of Personal Accounts, and greater choice of fund may add to the complexity of the choice that consumers face in a market structured along the lines of either the NPSS or the Industry model. However, having some limited fund choice may increase both contributions and participation. Determining the appropriate degree of fund choice is outside the scope of this research, but, for useful evidence, see further details in Iyengar, Jiang and Huberman (2004) and Papke (2004).

Oxera's research has focused on the choice of provider, since this is the element of choice unique to the Industry model. In particular, the research has examined incentives to switch provider, the role of brand marketing, and the effect of the carousel mechanism on competition. The evidence on these topics is presented in sections 6.2 to 6.4 below.

Although the choice of asset allocation in the NPSS and the Industry model is the same, the market structures (and therefore the nature of competition) are different. Whether the structures of the NPSS and Industry models will affect prices is addressed in section 7.

Before choosing a provider and fund, the consumer will have to decide whether to contribute to a Personal Account pension, and, if so, how much. The dimensions of choice are summarised and evaluated in Table 6.1.

<sup>37</sup> Papke also notes that participants usually direct not only their own contributions, but also those of their employers. The paper draws evidence from the 1992 Health and Retirement Study from the USA; respondents were aged 51–61. The choice variable relates to individuals answering 'yes' to the question: 'Were you able to choose how the money in your account is invested?'

**Table 6.1** Dimensions of consumer choice

Dimension of choice	In which models?	Complexity of choice for consumers
Choice of whether to contribute to a Personal Account pension	NPSS and Industry	Medium/high In both models consumers will have to decide whether to contribute, and, if so, at what level. Depending on an individual's financial arrangements, it is possible that (regulated) advice will be required If transfers in and out of Personal Account pensions are permitted, the choice of whether to contribute to a Personal Account becomes more complex, as it does for individuals who must decide between an employer scheme and a Personal Account pension
Choice of fund	NPSS and Industry	Medium/high Consumers are not well placed to make informed judgements on the relative likely future performance of different fund managers and investment styles
Choice of provider by individuals	Industry only	Low/medium With a simple pricing structure, consumers face a choice based on AMC, customer service and provider reputation. This is not necessarily more complex than other choices consumers make when selecting retail financial services products, without the need for advice
Choice of provider by central system (with long-term contracts)	NPSS only	Low/medium A single central scheme will have the resources and skills to select suitable administration providers. Monitoring the performance of the provider(s) and selecting between entrants and incumbents in subsequent tenders may be more complex than the initial choice, due to the information asymmetry that may arise between the incumbent provider(s) and the central system

Source: Oxera.

## 6.2 Conditions for effective competition in the Industry model

According to standard economic theory on the conditions for perfect competition, in ideal terms, a competitive market meets the following conditions:

- firms produce similar goods;
- the market features a large number of firms, and a large number of consumers;
- firms have similar cost structures;
- firms can enter and exit without significant cost;
- consumers can switch between providers without cost;
- consumers are well informed about the characteristics of different products, and can therefore make a rational choice between providers.



In such an environment, choice, rivalry and innovation protect consumers' interests and deliver the right incentives for firms.

In reality, few markets perfectly meet all these conditions, and so identifying the minimum criteria for effective competition requires an integrated analysis of which of these conditions may be relaxed without significant harm to competition.

Table 6.2 interprets this list of competitive conditions in the context of the Industry model.

**Table 6.2 Competitive conditions in the context of the Industry model**

Criteria	Interpretation for Industry model
Firms produce similar goods	<p>Products that are perfect substitutes yield higher firm-specific price elasticities of demand than products that are differentiated. With similar goods, price is likely to be the main strategic variable on which firms compete</p> <p>Personal Account pensions are intended to be simple products with standardised product features and a limited choice of funds. Hence the scope for product differentiation is limited. Relative to other markets in financial services, Personal Account pensions may feature a low degree of product differentiation</p>
The market has many firms, and many consumers	<p>Research in the economic literature finds a positive relationship between market concentration and price–cost margins, which implies that competition is less intense in markets with few firms (Weiss 1974 and Salinger 1990).</p> <p>Competition authorities usually interpret the threshold for market dominance as a single-firm market share of 40–50%,<sup>1</sup> and consider a market concentrated if it reaches a Herfindahl–Hirschman Index (HHI, combined market share index) in excess of 1,800<sup>2</sup></p> <p>With six providers of equal market share, each provider will have a 17% market share, and the HHI will be 1,666. On this basis, there would be no concerns over single-provider dominance or excess concentration, although the market would be close to the threshold of being considered highly concentrated</p> <p>The Personal Account pensions market will feature a large number of consumers</p>
Firms have similar cost structures	<p>A market in which one firm has a large absolute cost advantage over rivals will tend to monopoly. A market with firms that have similar cost structures is therefore more compatible with effective competition. Assuming that providers achieve similar economies of scale in administration (analysed in section 4 above), and given the lack of product differentiation, firms may have similar cost structures</p>

Criteria	Interpretation for Industry model
Firms can enter and exit without significant cost	If there is free entry and exit, it will be difficult for existing firms in the industry to maintain prices above costs. Any profits associated with non-competitive pricing would invite entry until all excess profits were competed away. While new entry to the pensions market is restricted by high minimum efficient scale, in 2004 there were 57 providers of regular premium individual pensions in the UK. <sup>3</sup> Some of these are likely to have the potential to enter the market for Personal Account pensions by scaling up existing operations (supply-side substitution rather than new entry). Other new entrants may include insurance companies from overseas and other retail financial institutions in the UK, such as banks and building societies. Nonetheless, entry may require significant investment (depending on the way in which Personal Accounts are set up), and so barriers to entry and exit will be substantial
Consumers can switch between providers without cost	Effective competition requires the exercise of choice in response to price or quality changes (ie, switching). Costly switching reduces the propensity of consumers to change provider in the event of price increases or service quality deterioration. Depending on the regulation of Personal Account pensions, switching may be free to consumers (see section 6.3 for a full analysis). Other costs associated with switching (the need to acquire information about new providers; learning required to become familiar with the new provider) may be minimised by the simplicity of Personal Account pensions, and the role of the clearing house
Consumers are well informed about the characteristics of different products, and can therefore make a rational choice between providers	For consumers to make effective choices based on information on price and quality, the availability of such information and consumers' ability to interpret it are crucial. As explained in section 6.1 on choice, asset allocation choices may be complex. However, the choice between pension providers (excluding asset allocation choice, which is common to both the NPSS and the Industry models) is similar to the choices made by consumers in other retail financial services markets. Depending on the degree to which the Personal Account pensions product will be simplified, consumers may be able to compare providers on the familiar criteria of price (% AMC), service quality and brand. Further detail on brand marketing is provided in section 6.3

**Note:** <sup>1</sup> See OFT (1999) Section 2. <sup>2</sup> The HHI is the sum of the squares of each firm's market share. For example, in a market with five firms that each have a share of 20%, the HHI would be  $400 + 400 + 400 + 400 + 400 = 2,000$ . The HHI ranges between 0 (a very large number of very small firms) and 10,000 (one firm with 100% market share). The US Horizontal Merger Guidelines denote, respectively, highly concentrated markets (>1,800), moderate concentrated markets (between 1,000 and 1,800) and unconcentrated markets (<1,000). See US Department of Justice and Federal Trade Commission (1992). <sup>3</sup> ABI 2004 figures taken from the ABI website.

**Source:** Oxera.

Table 6.2 shows that the market for Personal Accounts in the Industry model, like many other markets, does not perfectly meet all the criteria associated with perfect competition. This does not mean that competition will not be effective.<sup>38</sup> Further analysis is presented below on the key issues for competition in the Industry model: switching,

<sup>38</sup> A textbook example of a market that does not perfectly meet all conditions but where competition can still be effective is an oligopoly market. In such a market, where goods are homogeneous and firms set prices rather than desired output levels, Bertrand competition can still be effective.

brand marketing, and the carousel (which must be analysed separately, as consumers within the carousel do not exercise a choice).

### 6.3 Analysis of switching in the Industry model

In the context of stakeholder and personal pensions, switching (provider) has at times been viewed in a negative light because it involves costs, making pension provision more expensive. It is argued that switching is driven by commission-led interventions rather than by consumer preference or need. However, from a competition perspective, some level of switching is desirable—it puts competitive pressure on pension providers to reduce costs and improve their product offerings. Low levels of switching are therefore often associated with a lack of competition. For example, in its analysis of the potential gains from switching pension provider, the FSA stated: ‘a low level of switching might enable firms to increase charges over time, or to set excessively high charges for personal pensions, or both’ (FSA 2002).

Box 6.1, presented at the end of this section, illustrates the relationship between switching and competition with evidence on the mutual fund market in the USA.

The incentives for consumers to switch Personal Account pensions are considered below, together with an assessment of the impact of switching costs and an examination of the evidence of switching in other sectors.

#### 6.3.1 Evidence on switching in pensions and other sectors

Table 6.3 presents annual switching rates for various sectors in the economy. The switching rate varies by sector from around 10% (annual) switching in the market for pay TV to around 1.5% in the market for current accounts.<sup>39</sup> Switching rates may also vary over time. Figure 5.2 illustrates the development of switching rates (surrenders) in pensions.

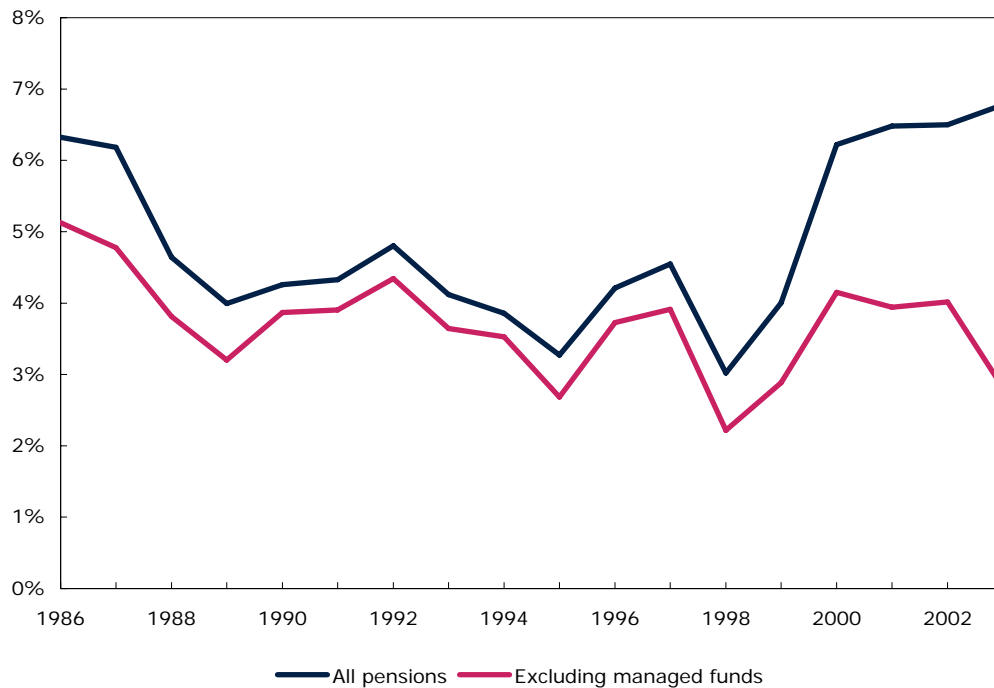
<sup>39</sup> The switching rate is calculated as the number of consumers who switched in a year divided by the total number of consumers in the market in question in that particular year.

**Table 6.3 Annual switching rates in different sectors**

Market	Switching/ churn rate (%)	Year ending	Source and notes
Electricity	21	2001–03	Ofgem (2004), p. 75
Gas	13	2001–03	Ofgem (2004), p. 70
Pay-TV	10.3	2005	BSkyB (2005), p. 10
Car insurance	9.6	2005	The FSA (2006) finds that 52% of people with car insurance had not changed their policy in the previous five years
Mobile telephony	9	2002	Oftel Survey 2002 in Competition Commission (2003), p. 125
Mortgages	6	2005	Estimated annual figure from a five-year total between 2000 and 2005: National Consumer Council (2005), p. 3
Home insurance	6	2005	Estimated annual figure from a five-year total between 2000 and 2005: National Consumer Council (2005), p. 3
Irish personal banking	5	2005	Irish Bankers Federation (2006)
Fixed telephony	4	2005	Estimated annual figure from a five-year total between 2000 and 2005: National Consumer Council (2005), p. 3
Personal pensions	3.7	1986–2003	ABI, based on surrenders as a percentage of fund value (all pensions provided by ABI members). This does not include managed fund business
Northern Ireland personal banking	2.3	2004–05	OFT (2005), p. 16, para. 64
Stakeholder pensions	2.1	2004	ABI.
Savings accounts	1.4	2005	Estimated annual figure from a five-year total between 2000 and 2005: National Consumer Council (2005), p. 3
Current accounts	1.4	2005	Estimated annual figure from a five-year total between 2000 and 2005: National Consumer Council (2005), p. 3
Great Britain personal banking	1.4	2003	Competition Commission (2006b), p. 14, para. 38. This figure is based on a NOP survey quoted by one of the clearing banks

**Source:** Compiled by Oxera from various sources.

**Figure 6.2 Surrenders as a % of fund value (all pensions provided by ABI members)**



**Note:** The surrender figures include a certain amount of insurers' managed fund business, which is the investment of pension fund money, but is not insurance business. Thus, it may be more accurate to exclude managed fund business from the surrender figures.

**Source:** ABI data.

Switching rates should be interpreted with care—they are influenced by a range of factors, such as the percentage of household income spent on the good or service. A low switching rate is therefore not necessarily an indication of weak competitive pressures. For example, when a firm lowers prices or improves quality, its competitors may be quick to react so that there is no need for switching to take place for a consumer to gain from the benefits of competition. This indicates that the *threat* of switching is credible and imposes competitive pressure on firms. Furthermore, in growing markets, the competition for new business may be sufficient to keep prices down despite low switching rates.

Similarly, a high switching rate is not necessarily an indication of intense competition. For example, an observed high switching rate may be simply a response of a relatively inelastic consumer demand to large variations in price, rather than a truly elastic competitive market.

This means that the minimum switching rate that makes a market competitive will vary across sectors. The following comments can be made about the evidence on switching rates presented in Table 6.3.

- The switching rate in the market for stakeholder pensions is lower than in a number of other sectors, such as telephony, gas, electricity and mortgages, and lower than in the market for personal pensions. However, when analysing the observed

switching rate in the stakeholder pension market, it should be borne in mind that the stakeholder pension scheme was introduced in 2001, only three years before the survey. Because of the limited amount of money saved, people are less likely to consider the benefits of switching. This effect is compounded by the possibility that policy charges within stakeholder pensions have not altered significantly over this short time span.

- Ofcom recently decided to remove BT's price controls (Ofcom 2006, pp. 11–14). In this decision, switching rates and BT's behaviour were taken into account. As indicated in the table, the annual switching rate in fixed-line telephony was 4% in the past five years.
- In some of the markets examined in Table 6.3, switching has been made easier. For instance, mobile phone users take their telephone number with them to their new provider without incurring charges; and current account holders can move direct debits and standing orders automatically when switching banks (without having to cancel and set them up again).

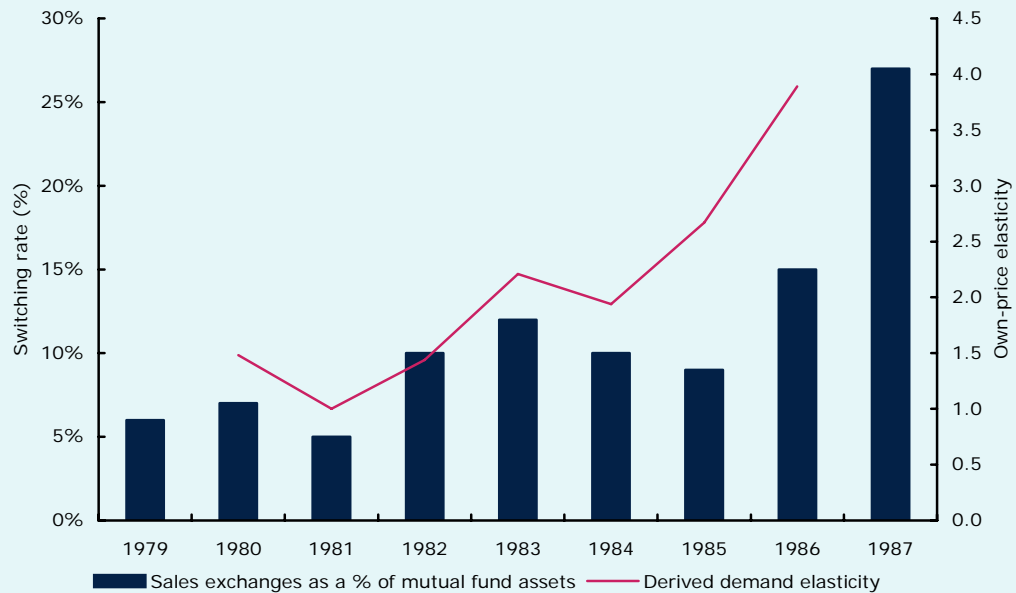
The lesson for Personal Accounts (pensions) is that if competition between pension providers is to be encouraged, switching should be made easy for consumers. For example, making switching free for consumers may be considered as an option. This means that rather than recovering the costs of switching from those customers who switch, they would be borne by pension providers and recovered from all customers through a slightly higher average fee. Providing consumers with accessible information on the switching process and lowering the administrative requirements are also likely to facilitate competition.

The incentives to switch and the costs of switching are considered Box 6.1.

**Box 6.1 Relationship between switching and competition**

The relationship between switching and competition is illustrated in Baumol et al. (1990), who examined the rise in switching rates within the mutual fund market between 1979 and 1987. This was a consequence of lower dealing charges (which reduced the transaction costs of switching), and a continuation of the increased liquidity of investment portfolios. The proportion of investment funds in closed-end funds fell from 57.5% in 1940 to 2.6% in 1987 (closed-end funds were not redeemable on demand, and so greatly inhibited investor mobility). Furthermore, the general growth of the investment market during the period increased the liquidity of the underlying fund assets, enabling many funds to offer automatic withdrawal features. Several other mechanisms that promote fund liquidity were developed during this period, including the ability to wire-transfer investors' funds instantaneously to their bank account when redeeming shares. The relationship found by Baumol et al. between switching rates and demand elasticity in the mutual fund market is illustrated below. The demand elasticity presented—the elasticity faced by individual providers—shows that higher switching rates were correlated with high elasticities. A high elasticity indicates that consumers are responsive to relative prices and therefore put competitive pressure on providers to keep prices low.

**Switching rates and demand elasticity**



**Source:** Baumol et al. (1990), *The Economics of Mutual Fund Markets: Competition Versus Regulation*, Kluwer, pp. 129, 162.

### 6.3.2 Switching in response to differences in policy charges

The analysis below of the potential gains from switching pension provider adopts an approach similar to the FSA (2002) study, which assumes that the financial incentives that encourage consumers to switch depend on the availability of lower policy charges (or differences in the quality of service), rather than higher fund returns. Its rationale is that, as returns are not guaranteed in defined-contribution pension schemes, comparison of charges is most appropriate.

Different AMCs may reflect differences in efficiencies and differences in service levels between providers. For example, a provider with an AMC of 0.4% may offer a streamlined web-based service compared with other providers charging 0.6% AMC, which may offer greater levels of customer service (eg, a free-phone call centre).

Oxera has analysed the point at which a switch in pension provider to one offering a lower AMC in the presence of varying fixed transfer costs becomes profitable from a consumer perspective. The methodology is based on the assumption that the fund growth rate is generic to all providers at a nominal rate of 5.5% per annum. This assumption is in line with the FSA reasoning that, since DC pension scheme returns are not guaranteed, they should not create the basis for comparing providers. It also implies that a lower AMC is not financed by providers simply cutting into the return on the pension assets, which would reduce the effective return on the fund to the consumer.<sup>40</sup>

The maturity value of the fund in each case was estimated on the basis of the assumption for the central scenario in the Pensions Commission reports. The assumptions are summarised in Table 6.4.

**Table 6.4 Assumptions used in the model to assess the impact of switching costs**

Median earnings, per annum	£18,094
Real earning growth rate, per annum	2.0%
Real fund growth rate, per annum	3.5%
Inflation, per annum	2.0%
Contribution rate, per annum	8.0%
Primary earnings threshold (deducted from earnings before contributions are taken)	£5,000

**Source:** For sources, see Table 5.1.

<sup>40</sup> The assumption of a generic fund growth rate does not necessarily imply that the realised growth rate for each fund type differs between pension providers randomly, or that their skill level is generic, just that consumers do not base their choice between providers on the advertised fund growth rates. While this has implications for the role of marketing within the Industry model, it can be seen as realistic since higher advertised growth rates do not in themselves look particularly attractive, especially if they co-exist with more precarious balance sheets. This assumption is also important in isolating the effects of switching between providers offering various AMCs.



The effects of switching were modelled incorporating two transfer fee assumptions: a conservative one at £107 and a more competitive estimate at £5. These estimates are explained in Box 6.2.

### Box 6.2 Switching costs

Switching provider results in costs. However, given the design of the Industry model, administrative costs associated with account transfers may be limited. Accounts will be designed to be portable between employers and between pension providers, with a consistent ‘front-end’ provided by the clearing house. If account transfers are handled on line, the associated administrative costs may be limited and fund transfer costs may also be expected to be small.<sup>41</sup> Estimates for the administrative cost of switching run from £0.50 to £5, depending on the extent to which switching can be handled on line.<sup>42</sup> Oxera’s modelling uses the estimate of £5, which assumes that some paper-based or call-centre contact is required.

Nonetheless, switching may generate additional marketing expenditure, both brand marketing and direct marketing to individual consumers. As an upper-end estimate of the total costs associated with switching, Oxera’s modelling takes the cost of switching as identical to the initial set-up cost for Personal Accounts per customer in the Industry model, as shown in the table below. This cost incorporates all the marketing and literature associated with signing customers up for Personal Accounts, plus an allowance for the fixed set-up costs of Personal Accounts. These were estimated in Deloitte (2006).<sup>43</sup>

#### High-end estimate of switching cost, including initial marketing and set-up costs

Up-front cost	£ per customer
Marketing and literature	40
Policy set-up	20
Compliance	7
Overheads	40
<b>Total</b>	<b>107</b>

Source: Deloitte (2006), p. 32.

<sup>41</sup> Trade execution costs may be limited as a result of netting. When a customer switches from one pension provider to another, a unit of one fund is sold to buy a unit of a different fund. Netting means that each provider can net off purchases and sales within their fund, such that their net trading requirement is minimised.

<sup>42</sup> Estimates compiled from industry sources.

<sup>43</sup> These switching costs are simply used here as assumptions. Oxera has not conducted an assessment of the level of switching costs itself.

Table 6.5 shows for illustrative purposes the results for several switching scenarios with a transfer fee of £107. The first row shows the number of switches and specifies the number of years the fund is held at a particular AMC:

- Scenario with one switch: a switch after 15 years from a provider with an AMC of 0.6% to a provider with an AMC of 0.55% would become profitable after seven years;
- Scenario with two switches: a switch after 15 years from a provider with an AMC of 0.6% to a provider with an AMC of 0.55%, and then after five years a switch to a provider with an AMC of 0.50%, would become profitable after five years.

In the other switching scenarios (with three, four, and five switches) the last switch would become profitable sooner after four or three years.

**Table 6.5 Switching incurring a transfer fee of £107**

	Number of switches					
	0	1	2	3	4	5
AMC (%)	0.6 (40)	0.6 (15)	0.6 (15)	0.6 (15)	0.6 (15)	0.6 (15)
(number of years fund is held at AMC)		0.55 (25)	0.55 (5)	0.55 (5)	0.55 (5)	0.55 (5)
			0.50 (20)	0.50 (5)	0.50 (5)	0.50 (5)
				0.45 (15)	0.45 (5)	0.45 (5)
					0.40 (10)	0.40 (5)
						0.35 (5)
Real maturity value of fund (£)	135,546	136,615	137,555	138,318	138,856	139,125
The number of years it takes for the last switch to become profitable		7	5	4	3	3
Real net gain in maturity value from switching (£)		1,069	2,010	2,772	3,310	3,579

**Source:** Oxera.

Table 6.6 shows the results for a number of scenarios with a transfer fee of £5. In all scenarios, the switch(es) would become immediately profitable. This confirms that, by minimising the transfer cost, switching becomes more attractive to consumers, which will help to preserve effective competition within the pension market.

**Table 6.6 Switching incurring a transfer fee of £5**

	Number of switches					
	0	1	2	3	4	5
AMC (%)	0.6 (40)	0.6 (15)	0.6 (15)	0.6 (15)	0.6 (15)	0.6 (15)
(number of years fund is held at AMC)		0.55 (25)	0.55 (5)	0.55 (5)	0.55 (5)	0.55 (5)
			0.50 (20)	0.50 (5)	0.50 (5)	0.50 (5)
				0.45 (15)	0.45 (5)	0.45 (5)
					0.40 (10)	0.40 (5)
						0.35 (5)
Real maturity value of fund (£)	135,546	136,828	137,957	138,885	139,568	139,962
The number of years it takes for the last switch to become profitable		0	0	0	0	0
Real net gain in maturity value from switching (£)		1,282	2,411	3,340	4,022	4,416

**Source:** Oxera.

### 6.3.3 Would switching increase the costs in the Industry model?

The switching scenarios described in the section above assume that switching costs would be incurred by the individual customers who switch. However, to make switching as easy as possible, it might be worth considering making switching free to consumers. The costs of switching would then not be incurred by customers who switch, but by the providers. These providers would in turn pass on the costs to all customers in the form of a higher AMC.

The impact of switching costs on AMCs can be illustrated using switching costs of £107 and £5 and a switching rate of 5% and 2%. Assuming an annual switching rate of 5% and a switching cost of £107, the increase in the AMC would amount to around 5 bp—ie, an AMC of 0.5% in the scenario of no free switching would increase to 0.55% in the scenario of free switching. For the scenario of a 2% switching rate, the increase in AMC would be less than 2bp.

For the scenario of a £5 switching cost (and 5% or 2% switching rate), the increase in AMC would be less than 0.2bp.

The uplift in AMC as a result of switching costs can be translated into an increase in the charge ratio (ie, the percentage of an average person's account after 40 years that is taken up by charges). For example, assuming that, in the NPSS model, the total AMC (including the costs of fund management and administration) amounts to 0.3%, the charge ratio would be 6.46% (over a period of 40 years). If the management fee were 2bp higher, the charge ratio would amount to 6.88%.

This shows that increased switching drives up the costs of the system, but the impact is small, and may be offset by the benefits of competition (for which switching in response to price or quality changes is essential). These benefits would accrue both to consumers and to the more efficient providers who, through switching, were able to capture more market share. It is unlikely that the costs of switching on the probable scale envisaged would be so great as to force a 'losing' player out of the market. However, even if this did occur, it would still be consistent with a competitive market outcome: consumers would receive a better deal from the remaining providers, and the ability to switch would mean that new entry would still be possible, provided this did not lead to excessive concentration.

#### 6.4 What is the impact of the carousel on competition?

In either model, people who do not make an active choice will be allocated to a default option. In the case of the NPSS, this will be the default fund; in the case of the Industry model, this will be a default fund at a default provider. The mechanism that allocates default providers is referred to as the carousel.<sup>44</sup>

The mechanism to allocate individuals to a default provider will affect the nature of competition in the Industry model, as will the proportion of individuals who do not make an active choice. In the extreme, if very few individuals made an active choice, competition in the Industry model could not be expected to be effective, since effective competition requires consumers who are willing to switch to another provider when faced with price or quality differences.

Introducing a rule not allowing providers to price-discriminate between carousel customers and non-carousel customers would mean that carousel customers would still be able to benefit from competition: it would allow them to benefit from the competitive pressure put on providers by the non-carousel customers.

The number of people who would use the carousel will depend on several factors, including, for example, the way the choices are presented to employees.<sup>45</sup> The repercussions for competition of the extent of active choice, and the nature of the allocation mechanism for those who do not choose, are explored below.

Four options for the allocation mechanism are considered in Table 6.7 below.

<sup>44</sup> See ABI (2006b).

<sup>45</sup> Estimating the extent of active choice is beyond the scope of this report.

**Table 6.7 Options for the Industry model carousel**

Mechanism	Advantages	Disadvantages
Random allocation or rotation to a list of all providers	<p>Risk of pension provider failing is dispersed among widest population</p> <p>Arrangement does not favour one pension provider over another</p>	<p>Lack of competition within carousel</p> <p>Colleagues within the same firm may face different annual charges and net returns. (Requiring each provider to offer a default fund of a standardised design would minimise these variations)</p> <p>If a provider fails, the government may face liability for having allocated pension holders to that provider</p> <p>Smaller providers may lack requisite capacity</p>
Allocation among a list of approved providers based on measure of 'capability'	<p>Criteria may be set for approved providers (eg, maximum price, capital adequacy thresholds), reducing risk of failure</p>	<p>Lack of competition within carousel</p> <p>Colleagues within the same firm may face different annual charges and net returns</p> <p>Effectiveness depends on criteria set for approved providers. Exclusion from the list may prompt complaints under competition law</p> <p>If a provider fails, the government may face liability for having allocated pension holders to that provider</p>
Allocation among a list of providers based on market shares (measured by success in the active choice part of the market)	<p>Intensifies competition between providers (every time they win one customer outside the carousel, they gain several within it)</p> <p>Discipline of competition is extended to affect carousel providers</p> <p>Reduced role for regulation (eg, may not require price cap)</p>	<p>Cannot function until ex-carousel market shares are established</p> <p>Colleagues within the same firm may face different annual charges and net returns</p>
Full allocation to lowest-cost provider(s)	<p>Customers within carousel benefit from lowest possible charges</p> <p>Carousel providers can benefit from greatest possible economies of scale</p> <p>Intense competition between providers on AMC</p>	<p>Low AMC may be achieved at the cost of quality (eg, poor customer service, reduced yield)</p> <p>Lowest-cost provider may not have sufficient capacity</p> <p>Lowest-cost provider now may not be so in the future—it would be highly impractical to switch all customers within the carousel every time a new provider undercuts the incumbent</p>

Source: Oxera.

As noted in the table, each possible allocation mechanism has advantages and disadvantages. A full assessment of these mechanisms would require economic modelling, which is beyond the scope of this report.

In summary, it is in the nature of the carousel that effective competition is hard to achieve, no matter which mechanism is employed. Where consumers do not make a choice, the discipline of competition cannot operate properly, and some regulation may be required. It is therefore preferable that as many people as are able and confident to do so make their own choice, rather than using the carousel. This may require a reasonable level of financial literacy and appropriate marketing. As providers compete for customers, the marketing activity that takes place may tend to increase the level of financial literacy, and as pension savings build up to significant amounts, individuals may take more interest in their options. For these reasons, the number of people who make their own choice may increase over time, and the role of the carousel may be reduced. In competition terms, this would be a desirable outcome.

## **6.5 Brief summary of conditions for competition in the Industry model**

Table 6.8 assesses the Industry model in light of the conditions for effective competition identified in section 6.2. Effective competition does not require fulfilment of all these criteria; they serve as a benchmark for perfect competition, against which the degree of competition in a market can be assessed.

**Table 6.8 Minimum conditions for effective competition: Industry model**

Assessment of Industry model	
Firms produce similar goods	Personal accounts will be a simplified pension product, and therefore products will be similar. Providers are likely to compete on the basis of price and service, within a tightly defined mandate
The market features many firms, and many consumers	With six providers of equal market share, each will have a 17% market share, and the HHI will be 1,666. On this basis, there would be no concerns over single-provider dominance or excess concentration, although the market would be close to the threshold of being considered highly concentrated
Firms have similar cost structures	Subject to the regulation of Personal Accounts, providers may have to meet minimum capacity requirements or face a price cap. This may lead to all providers meeting minimum efficient scale, and therefore having similar cost structures
Firms can enter and exit without significant cost	Barriers to entry and exit may be substantial, since participation in the scheme requires significant (sunk) investment
Consumers can switch between providers without cost	Subject to regulation, switching providers may be free to consumers. Switching rates in response to price changes need to be high enough to constrain the exercise of market power
Consumers are well informed about the characteristics of different products, and can therefore make a rational choice between providers	This requires either a high degree of financial literacy or a very simple pension product. The standardisation of the Personal Accounts product, and the marketing undertaken by providers, will determine whether the model can meet this criterion

**Source:** Oxera.

In summary, the degree of effective competition depends to an extent on the simplification of the pensions product, since consumers need to be able to make an informed choice of provider for effective competition. While the choice of investment option requires a degree of financial sophistication, consumers are likely to face the same investment choices in the Industry model as in the NPSS, such that the Industry model will in principle place no extra burden on consumers with respect to fund choice. The Industry model adds, however, a layer of choice of branded provider. In this regard, for there to be effective competition, consumers should be able to make an informed choice of provider on the basis of administration charges, customer service and reputation. This is in nature a similar choice to that made for other financial products.

Assuming a sufficient degree of informed choice, it is worth emphasising that switching is healthy for competition. A reasonable number of switching consumers constrains the ability of individual providers to raise prices or lower service standards, promoting rivalry and innovation between suppliers. This competition helps achieve allocative efficiency (cost-reflective prices) and dynamic efficiency (cost-saving innovations are researched and implemented by competing suppliers).

Finally, marketing activity is helpful to competition in so far as it informs consumers about differences between the products of rival suppliers (for example, by highlighting good customer service), thereby enabling consumers to make an informed decision to switch. The analysis in section 8 considers in detail the role of marketing in the Industry and NPSS models.



## 7.0 CONDITIONS FOR COMPETITION IN THE NPSS MODEL

This section examines how competition may operate in the NPSS model. The objective is to identify conditions under which there may be effective competition in the NPSS model.

As explained in the introduction to section 6, the nature of competition in the NPSS model is different to that in the Industry model—competition is *for* the market, not *in* the market, since the national scheme would choose between providers of operational services, which would bid for the contract(s) to run the Personal Accounts system. Assessing the conditions for competition in the NPSS model therefore requires a different set of criteria from that used to assess competition in the Industry model.<sup>46</sup>

The section is structured as follows:

- section 7.1 explains how choice will be exercised by consumers and by the non-departmental public body that will appoint administrators and fund managers to run the NPSS;
- section 7.2 uses economic theory on bidding markets to establish criteria to evaluate the degree of competition in the NPSS model;
- sections 7.3 and 7.4 apply these criteria in the context of NPSS fund management and pension administration respectively;
- section 7.5 examines other large public administration systems that have been tendered to private sector contractors;
- section 7.6 uses economic theory and case studies from other sectors to examine optimal contract length for the NPSS, and the effect of long contracts on competition;
- section 7.7 draws together this analysis to identify the minimum conditions for competition in the NPSS, using criteria on bidding markets to assess the expected degree of competition, given the market design.

### 7.1 Choice in NPSS

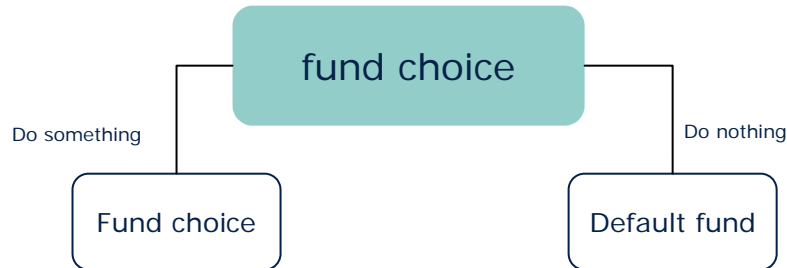
There is no role for consumer choice as a driver of competition in the NPSS. As examined in the White Paper, ‘everyone would deal with the NPSS and would receive consistent service standards and outcomes’ (2006, p. 50, para. 1.67). These service standards and outcomes would be determined by contractual agreements between the non-departmental public body overseeing the NPSS and a number of pension administrators.

The analysis of choice is therefore focused on competition for contracts in pension administration. A second level of competition in the NPSS relates to fund management, which will also operate as competition for contracts.

<sup>46</sup> See Klemperer (2005).

While consumers have a choice in the NPSS, as illustrated in Figure 7.1 below, this choice is limited to asset allocation options.

**Figure 7.1** Dimensions of consumer choice in the NPSS model



**Source:** DWP (2006a), p. 55.

## 7.2 Economic theory on bidding markets

Competition between firms in the NPSS is expected to take the form of a tender process for a large long-term contract (or possibly more than one contract) to run the administration system—the competition is *for* the market rather than *in* the market. Once a firm has won an auction for that large contract, it is likely to become a near-monopolist for the duration of that contract. Nonetheless, if there are other firms who can credibly bid for, and win, the contract at the end of the incumbent’s term, competition may still operate effectively.

This type of competition over long-term contracts where the firm that wins has a temporary near-monopoly position, yet faces effective competitive constraints, is often characterised as a ‘bidding market’.

Depending on the characteristics of the market, this type of competition may be considered effective or ineffective. A paper by Klemperer for the UK Competition Commission suggests four criteria for judging whether a market characterised by very large market shares may still be competitive:

- (1) competition is winner-takes-all—the bidder wins all or none of the contract;
- (2) competition is lumpy—each contract is large relative to a bidder’s total sales;
- (3) competition begins afresh for each auction—there is no ‘lock-in’ such that the incumbent supplier is advantaged;
- (4) entry is easy.

(Klemperer 2005, p. 6)

An additional relevant criterion is whether the contract can be specified simply and completely. These criteria are applied to identify the conditions for competition in fund management (section 7.3) and in administration (section 7.4).

### 7.3 Conditions for competition in fund management

In many respects, the bidding market for fund management in the NPSS model would work in the same way as the institutional investment management market. Fund managers would compete for mandates, which run for a fixed term, after which they would have to bid again for a new contract. The IMA (2006a, para. 34) has suggested a minimum term of five years.

Table 7.1 shows the conditions under which there would be competition in the bidding market for fund management in the NPSS model, some of which are discussed in more detail below.

**Table 7.1 Minimum conditions for effective competition in fund management: NPSS model**

	Assessment of NPSS
Contract is awarded to a single successful bidder, so competition to be the winner is fierce	Each supplier must win all or none of the mandate such that no bidder can improve its terms of trade by reducing the quantity offered. In the NPSS model, there will be more than one fund, and the management of each fund may be split up into different mandates. This means that there will be multiple winners resulting in less fierce competition than in the case of one contract with one winner
Contracts are large, such that bidders that lose will have minimal market share	Each contract must be sufficiently large so that there is an element of ‘bet your company’ in the tender. Although this will be the case for smaller and medium-sized firms, it may not be for very large multinational fund management firms
Competition begins afresh for each auction, with no incumbency advantages	Although incumbents may have some advantages, existing evidence indicates that, in the institutional fund management market, switching is relatively straightforward and frequent
Entry is easy	Although there may be barriers to enter the market for fund management of Personal Account pensions, there is already a large number of players in the market for institutional fund management, which may be able to increase their capacity—the market is not concentrated. This means that there is likely to be a sufficient number of players for each tender
The contract can be specified simply and completely	The type of contract would be similar to those used in the institutional fund management market. The experience in this market does not indicate any significant problems

**Source:** Oxera.

In the NPSS model, there will be more than one fund and the management of each fund may be split up into different mandates. This means that there will be a number of fund managers bidding for a number of different contracts—ie, there would be multiple

winners. Competition in a scenario of multiple contracts is likely to be less fierce than in a scenario of one contract.

However, the nature of competition is likely to be similar to that in the market for institutional fund management. This market was examined in a study prepared for the FSA, which concluded that fund managers operated in reasonably competitive markets (Oxera 2003).

Some evidence on entry barriers in the market for fund management can be found in the aforementioned study for the FSA on the market for institutional fund management (Oxera 2003). With regard to regulatory entry barriers, the study concludes that:

Although regulatory requirements may have an effect on the ease and speed with which companies can obtain authorisation, on the whole it appears that these regulatory requirements do not constitute a significant barrier to entry. This is borne out by the high number of companies that have been granted regulatory approval to operate as fund managers.

A survey of pension fund trustees (included in the same study for the FSA) indicates that fund managers need to have expertise in specific areas and a sound investment style and philosophy. Past performance and reputation are also important factors. In practice, these factors could form an entry barrier for new companies seeking to offer fund management services.

The firms that would bid for contracts in the NPSS model are likely to be existing fund management firms—ie, firms already offering fund management services to pension fund trustees. Given the high number of institutional fund managers, there is likely to be a sufficient number of fund managers available to bid for the mandate in the NPSS model. A crucial issue is the ease with which the NPSS Board would be able to switch fund managers. Some evidence on this can be found in Oxera (2003). Analysing the results of a survey of pension fund trustees and fund management firms, the study concludes that there are no specific barriers that make switching particularly difficult. Switching is relatively straightforward and frequent. The survey showed that:

in general, pension fund trustees do not find it difficult to switch fund managers. Of seven respondents, only two cited difficulties. These related to the effort required of trustees to select new fund managers and the risk of attrition in value during the switching process. Indeed, despite the fact that most pension funds find switching easy, it should be noted that switching fund manager is usually a time-consuming process, which mainly consists of selecting a new fund manager. Pension fund trustees who were interviewed indicated that the whole switching process usually takes at least six months. On the other hand, transferring the assets from one fund manager to another seems to be relatively straightforward—it often involves some cost, but in general this is relatively low (Oxera 2003, p. 39).

The survey indicates an annual switching ratio of 5%. Another survey (Myners 2001) shows a higher degree of switching. One-third of pension fund trustees had changed at least one of their investment managers in the previous 12 months. This suggests that the average length of a contract is between three and 20 years.<sup>47</sup> The survey also indicated that larger pension funds switch fund managers more frequently than smaller pension funds.

From a competition perspective, the main difference between the bidding market for fund management in the NPSS model and the existing institutional fund management market is likely to be the size of the average fund. As shown in section 5, the default fund, in particular, is likely to be much larger than companies' pension funds currently managed by UK fund managers.<sup>48</sup> It is not clear whether the larger size of the fund would make it more difficult to switch fund manager, for example—it may be more difficult to find enough fund management firms with sufficient capacity or which are able to expand capacity quickly enough to manage a very large fund. However, even if that were the case, the NPSS Board would have the option of splitting up the default fund into several separate mandates—for example, different mandates for different classes of asset.

Indeed, splitting up a pension fund into separate mandates is standard practice among pension fund trustees, and is also proposed by the IMA. The IMA recommends a spread of both investment risk within individual NPSS funds and of fund manager risk:

The components of a default fund could be managed with a diverse range of assets and investment styles, and by a number of different managers (effectively, a multi-manager fund). The default fund effectively offers individual retirement accounts from the point of view of the scheme member, but the scheme assets are managed collectively in a multi-manager fund. (2006a, para. 33)

#### 7.4 Conditions for competition in NPSS administration

The Competition Commission has recognised the Klemperer analysis in a recent merger case as providing criteria that 'reflect structural features of the market that we considered to be relevant to the assessment of pre-merger competition' (2006c, p. 39, para. 5.27). These criteria are relevant to the NPSS model since they specifically highlight benchmarks for effective competition in a market where companies bid at intervals for large contracts. This section therefore applies the Klemperer criteria to pension administration in the NPSS model.

<sup>47</sup> The average length of the contract can be calculated as 100 divided by the switching ratio.

<sup>48</sup> With regard to the default fund, of the top ten largest UK fund managers by assets under management, a five-year old default fund in the NPSS model of around £41 billion represents, on average, 34% of a fund manager's total assets under management. Only one present fund manager has more assets under management than a 20 year-old NPSS default fund. Source: IMA (2006b), Chart 4 and Table 1, p. 7.

It could be argued that under a scenario of one administration provider the proposals for pension administration under the NPSS fulfil the first two Klemperer criteria: competition is both winner-takes-all and lumpy.

However, it is more difficult to see that incumbency effects will not exist in the NPSS model. With positive costs of bidding, once a firm gains a clear advantage in a market, other firms may stop trying to bid against it, as the probability of winning falls (Klemperer 2005, p. 15). Indeed, Klemperer notes that:

a contract to supply information technology to a large public health authority such as the UK National Health Service, or competition for a rail or bus franchise, or to run the UK National Lottery, might satisfy (1) [competition is winner-takes-all] and (2) [competition is lumpy], but not (3) [competition begins afresh for each auction], because whichever company wins the current contract will have a significant advantage in winning a subsequent competition when the current technology needs updating or the current franchise expires (2005, p. 8).

Incumbency advantages and lock-in therefore represent a significant issue to address in considering the minimum conditions for competition in NPSS administration to operate effectively. As Klemperer emphasises:

after being the winner among eight bidders of the contest for the seven-year monopoly franchise to run the UK national lottery ... Camelot had developed substantial learning-by-doing and reputation advantages by the time of the subsequent contest in 2000. Not surprisingly there was far less competition (just two bids) in the second contest (2005, p. 11).

Similar concerns apply to the subsequent contracts for NPSS administration, when there may be far fewer credible bidders than in the initial tender process. Beyond the Klemperer criteria, in an analysis of the GE/Honeywell merger, Patterson and Shapiro (2001) present a list of questions to evaluate competition in bidding markets.

1. Do multiple suppliers typically enter the bidding competition?
2. Do customers consider these suppliers capable of offering good alternatives?
3. Have suppliers historically preserved their strengths and capabilities despite setbacks?
4. Is bidding vigorous? Are there multiple rounds of bidding in which the bids move significantly? Do suppliers offer major concessions to win the bidding?
5. Have multiple suppliers shown the ability actually to win bids with regularity?
6. Are multiple suppliers positioned technically to remain capable and attractive for upcoming bidding events? (p. 20)

Answering these questions in the context of the NPSS is not possible since the system does not exist yet. However, the questions relate principally to the availability of *multiple credible and active bidders* each time a contract comes up for tender. This is a significant issue for the NPSS, given previous examples of large public administration contracts.

Oxera's study of these contracts (see Appendix A1) indicates that, in each case study, there was evidence of limits to competition that risked the public sector department becoming locked into one supplier. Such restraints included:

- high up-front fixed costs;
- high risk involved in the transition from one supplier to the next; and
- informational asymmetries.

These meant that the incumbents were often in an advantageous position with respect to their competitors. The analysis found that there were attempts to compensate competitors so that they were no longer at such a disadvantage compared with the incumbent—for example, by paying for some of the fixed costs.<sup>49</sup>

The risk of getting locked into one provider may be reduced (but not eliminated) by splitting the NPSS contract into multiple lots, as suggested by the Pensions Commission (2006), since there will be at least two or three credible alternatives when contracts are renewed:

It would indeed be possible in the NPSS model not only to have competitive bidding between alternative providers of account administration services, but to divide the contract between different providers (rather than awarding on a winner takes all basis) thus allowing comparison of cost and service quality over time. (p. 32, footnote 7)

Similarly, the DWP White Paper on regulatory impact assessments indicates that a number of companies are expected to be involved in running the NPSS:

... personal accounts would be provided by a single organisation with the day-to-day running of the scheme outsourced to a number of pension administrators. (2006b, p. 44, para. 2.35)

However, the state of competition with three or four administrators is still not ideal, since:

- if the central system removes one or more of the suppliers because of poor performance, this will make the market more concentrated (assuming that entry barriers discourage other potential replacements), eliminating some of the advantages of having multiple suppliers;
- the market is still highly concentrated (more so than an Industry model with six providers) and entry barriers remain a significant issue because the three or four

<sup>49</sup> See the assessment of a contract for IT services to HMRC in section A1.3.

incumbents will develop substantial learning-by-doing advantages by the time of the subsequent contests, which may disadvantage potential entrants;

- coordinated effects may be a problem, as highlighted in Klemperer 2005 (p. 11), since the auction mechanism can create the price transparency and frequent firm interactions which can help facilitate coordination.

#### 7.4.1 Incentives of the incumbent supplier

Furthermore, over the duration of the NPSS contract, it is important that the incumbent firm faces the correct incentives. In theory, these incentives may be written into the contract, rewarding innovation and cost efficiencies; in practice, however, it is difficult to write complete contracts. Williamson (1976) notes that, to work well, franchising models require:

- that the franchising contract can be specified simply and completely;
- that there is effective competition for the franchise not only when it is auctioned for the first time but on each occasion that it comes up for renewal; and
- that if an incumbent franchisee is displaced by a rival, it receives proper compensation for transferable investments that it has made.

Armstrong, Cowan and Vickers (1994) emphasise the difficulties in maintaining the right incentives for the incumbent over a long-term contract:

Consider a hypothetical auction of a monopoly franchise to supply telecommunications services throughout Britain for the next twenty-five years. A complete contract would need to specify pricing structures, quality levels, and so on, for every conceivable contingency. Unless it was crudely and inefficiently insensitive to future developments, for example, the evolution of costs, such a contract would be immensely complex and extremely difficult to write, monitor, and enforce (p. 126).

Similar considerations apply to the contracts for the NPSS. Under the NPSS, the government is expected to outsource administration to a provider (or a small number of providers), each of which will face significant uncertainties. For example, a specific problem relates to unknown persistency (ie, drop-out) rates. The administrator has to hold accounts for years after members have opted out, with associated costs. A contract will have to specify how the administrative service providers will be paid for active and inactive accounts, which depends on the unknown and difficult-to-predict variable of persistency rates. Should the government or the contractor bear this risk?

Another uncertainty relates to demand for customer service. While the White Paper has specified that all customers should receive 'consistent service standards and outcomes' (2006, para. 1.67), providers of Personal Account pensions will be catering for a market of customers—and often their employers—who are new to pensions. The number and complexity of customer enquiries, the appropriate channel for customer service (call



centre, website) and the desired level of customer service will need to be specified in the NPSS contracts. This may require complex monitoring and enforcement.

To let the contract for administration services, the government will have to set a contract term. Industry sources have indicated to Oxera that this contract would have to be for a long period of time, up to 20 years, depending on the structure of payments to the pension administrator, in order to allow the bidders to earn a reasonable return on their investment. This is based on the experience of stakeholder pensions, which have payback periods of around 20 years. The issue of contract duration is explored further in section 7.6.

Given the uncertainties, for example in persistency and the volume of customer enquiries, it is unclear how risk will be distributed in the NPSS contracts. Will market participants be expected to take all the risk, or will government take part of it? There is therefore a trade-off when setting policy. If contracts are designed to transfer all risk to providers, the required rates of return will be higher than if the government bears some risk. This cost will be passed on to consumers. However, if the government underwrites the NPSS contracts in any form, this would be a cost to taxpayers.

Armstrong, Cowan and Vickers (1994) go on to argue that:

It would make much more sense to renegotiate some of the contract terms from time to time. Thus price controls could be reviewed every four or five years. Indeed it would be very hard for the government to commit not to vary some contract terms as events unfold. Much more likely, then, is some kind of incomplete contract that leaves a number of aspects to be resolved, perhaps according to agreed procedures, as time goes by. But this is effectively just what regulation involves—a continuing task of contract monitoring, enforcement, and renegotiation. Thus in circumstances of any complexity, franchising does not do away with the need for regulation (p.126).

Similarly, NPSS contracts will require close monitoring and performance assessment. Given that the main variable of success is good customer service (the ‘consistent service standards and outcomes’ specified in the White Paper, 2006, para. 1.67), leading to high participation rates, it may be difficult to monitor output. Familiar problems of using quantitative indicators (eg, waiting times for enquiries to be answered) to measure qualitative output (ie, the customer experience) may create incentive mismatch.

## 7.5 Experiences with large public administration systems

Oxera’s analysis of large public administration systems indicates that significant problems can arise whereby suppliers do not deliver on time, or the systems built were not of appropriate quality (see Appendix A1). In some cases, suppliers were paid for meeting performance targets that shifted risk away from the public department somewhat, as it would only have to pay the supplier when it met these targets. Overall, the costs involved in monitoring performance may be high in the NPSS system, although dividing the

contract between multiple suppliers could facilitate a form of yardstick competition (see Shleifer 1985), improving the ability of the supervising body to evaluate costs and service levels over time.

Three systems are examined in Appendix A1, on the basis of evaluations conducted by the National Audit Office (NAO):

- the National Lottery contract won for a second time by Camelot;
- the National Savings contract won by Siemens Business Services (SBS); and
- the HM Revenue & Customs (HMRC) ASPIRE contract won by the Cap Gemini and Fujitsu consortium.

The appendix also presents the results of a brief study on the Swedish Premium Pension system, the pension authority (PPM), and its former supplier, CSC Sverige (CSC).

This section summarises the findings of Appendix A1. The cases have been selected because of the similarities with the NPSS proposal and because they highlight a number of common features and problems encountered in the provision of a public sector administration system by a private contractor, from which useful lessons can be drawn. An additional criterion for the choice of these case studies is the availability of third-party references and value-for-money assessments of such systems, which supported this analysis. The National Lottery case highlights the risks associated with large contracts, such as the lack of competition in the bidding process and difficulties with switching suppliers when a contract comes up for renewal. The National Savings contract with SBS is, in terms of functionalities, similar to the NPSS, and shows the extent to which supplier switching can cause problems. The ASPIRE contract is analysed as it attempts to deal with some of the issues found in the previous examples. The Swedish case highlights some of the problems experienced with pension system administration.

The problem areas identified in these four cases point to the risks that NPSS might encounter, although there may also be ways to overcome these. The instruments to mitigate some of the risks would normally result in some costs, which should be taken into account in the overall assessment of the potential effectiveness of the NPSS model.

### 7.5.1 Performance

The evaluations conducted by the NAO indicate that the suppliers studied did not necessarily perform very well: CSC, in particular, and SBS did not deliver on time. However, in the case of the SBS and Cap Gemini consortium (HMRC), contract provision was made for this. SBS was monitored and paid when it reached its performance targets. The Cap Gemini consortium was also paid on performance rather than the costs it incurred. Compensation was also paid by SBS, Cap Gemini and CSC for failures in performance. This ensured that there were no budget overruns for the government department, which only paid for what was delivered.

### 7.5.2 Restraints to competition

Without effective competitive pressure, an incumbent supplier has no incentive to perform over and above the incentives created by a payment for performance contract. Competitive pressure can be weak and a government department may become locked into one supplier with no potential competitors. There is some evidence of being locked into a particular supplier in relation to EDS, the National Savings licensee, and Camelot, the National Lottery licensee. In the case of Camelot, in particular, the National Lottery Commission feared that there would be only one credible bidder for the third licence. The evaluations showed a number of reasons for a lack of competitive pressure, in line with theoretical predictions.

- The set-up of large administration systems requires a large fixed capital investment. The incumbent has already sunk capital into the system, which puts it at an advantage over competitors, which will need to factor these costs into their price offers.<sup>50</sup>
- The incumbent often enjoys a superior knowledge of the market. In the case of the National Lottery, Camelot had information on the Lottery retail network and was not obliged to release this information to its competitors.
- The risks inherent in a transition of operators work against the likely success of a new entrant. Potential suppliers have to submit a bid that compensates for this, while the incumbent does not.
- The relatively large costs involved in making bids deterred potential competition, especially in the National Lottery example.

### 7.5.3 Contract design

Some of the contracts sought to mitigate the lack of competitive pressure, for instance by paying for bidding costs and sunk costs. The ASPIRE contract did this, which resulted in a change of supplier, even when the incumbent was seen as particularly strong. However, there is concern that the parties involved were overcompensated. In other words, these results suggest that it may be difficult to stimulate competition without overcompensation.<sup>51</sup>

To smooth the transition stage from one supplier to the next, the studies suggest that the contract should require all parties involved to cooperate. The initial National Lottery contract lacked such provisions, while they were included in the second contract and the ASPIRE contract.

<sup>50</sup> However, the competitor, by having to build a whole new system, can offer a radical overhaul of the administration system, which may be relatively more costly for the incumbent to offer.

<sup>51</sup> See NAO (2006a), para 8.

## 7.6 Contract duration and competition in the NPSS

This section explores some of the vast economic literature on optimal contract length, drawing on theory and case studies to analyse the implications of contract design in the NPSS for effective competition. For further details, see Appendix A3.

Literature on contract theory suggests multiple factors that affect optimal contract length. In their study of franchising contracts, Brickley, Misra and Van Horn (2003) perceive optimum contract length as a blend of protection against franchisor opportunism (ie, the franchisee gains an incentive to invest due to stability, which requires longer contracts), and the flexibility of franchisor choice (ie, the freedom to choose between competing offers, which requires short-term contracts). The literature lists three main determinants of the optimum contract length:

- degree of relationship-specific investment;
- investment incentives; and
- uncertainty.

Yvrande-Billon (2004) notes that, in the case of the privatisation of the British railways, the contract duration imposed by the reformers did not match the degree of specificity of the rolling-stock assets. The asset specificity relies on the design of trains for special tracks, regional differences in the power supply system and signalling mechanisms, and variable fleet composition, all of which reduce the redeployability of a given fleet. Yvrande-Billon concludes that the new organisational structure of British railways relied on contractual arrangements that did not minimise transaction costs and were therefore not efficient.

The implication of short-term contracts with frequent revision processes is that the incumbent will be reluctant to invest. It is not clear whether the incumbent could use the strategy of investing shortly before the revision periods, which would raise entry costs for other potential bidders. Theory would therefore suggest longer-term contracts that would induce the incumbent firms to adopt a long-run smoothed investment strategy.

As highlighted in section 7.4.1, one type of uncertainty relevant for the suggested reforms is the company's uncertainty of future income flows (due to uncertain persistency rates), which may result in sub-optimal investments. Thus, the uncertainty approach would suggest using contracts of long duration.

It is often argued that long-term contracts can provide strategic advantages to companies and even deter entry of potential competitors (see Aghion and Bolton 1987). This provides a rationale for anti-competitive concerns. An incumbent may lock a buyer into a long-term relationship in order to preclude potential entrants from 'stealing' the buyer from the incumbent. As a result, the size of the potential entrant's market would be reduced, as would the probability of entry. In this situation, buyers would impose a negative externality on other buyers when they sign long-term contracts, since the probability of entry falls as buyers accept the incumbent's contract terms. The effect

would be exacerbated if the buyers were large customers. Long-term contracts may therefore create inefficiencies since buyers may end up paying a higher price than they otherwise would have.

However, if a buyer (ie, a final consumer) has the option to renegotiate the contract or breach the contract and pay damages (eg, penalty payment), it will do so if a new entrant offers a price that is low enough to compensate for the extra costs that the buyer has to incur. Since the entrant can now sell to this buyer, exclusive contracts may not deter it from entering, since it will anticipate that other buyers will also reach the agreement so that it can breach a minimum efficient scale (see Simpson and Wickelgren 2004). Therefore, the issue would not be so much the long duration of contracts but whether the penalties for terminating the contract generate strong barriers to switching.

The postal, rail and waste management sectors may be characterised by high asset specificity. The rail industry solution involves longer-term contracts with several revision stages, while the postal industry solution calls for either shorter contracts (as in the waste management sector) or long contracts with short-notice cancellations.

While typically providing enhancement to investment incentives, long-term contracts can be detrimental to effective competition. For example, in 2001, the European Commission investigated the agreements between the Duales System Deutschland AG (DSD) and the waste collectors relating to its system of selective collection and recovery of household packaging waste in Germany (DSD decision) (European Commission, 2001a and b).<sup>52</sup> DSD was the only company with a country-wide waste management system, and had signed exclusive agreements with the collection/recovery companies of up to 15 years. Although the Commission recognised that a certain duration of the agreement was necessary to enable collectors to achieve an economically satisfactory return on their investments, DSD was required to significantly shorten the length of the contract in order to encourage entry from other collectors into the downstream market.<sup>53</sup> As a result of the Commission's decision, the tender for the new service agreements started four years earlier than initially foreseen by DSD (in 2003 instead of 2007). In addition, the Commission considered that agreements exceeding three years were not indispensable to recover the investments in waste collection infrastructure. A similar conclusion was reached in the ARA decision (European Commission 2003), where the Commission accepted a contract duration of three years—after these three years, ARA is free to terminate the contracts or renew them for a further two years.

The implications of this analysis for contract design in the NPSS are significant. In particular, there are two generic trade-offs that make the future design of the NPSS difficult.

<sup>52</sup> DSD itself did not collect the waste but used local collecting companies with which it had 'service agreements'.

<sup>53</sup> In addition to a certain duration of the agreement, the Commission recognised that exclusivity is also necessary to allow collectors to achieve a certain degree of efficiency.

- If contracts are too short in duration or split between too many providers, investment incentives will suffer.
- If contracts are too long in duration or involve heavy relationship-specific investment, competition in future bidding rounds will suffer.

Additional complications in contract design relate to the ability to write complete contracts. For example, pension administrators will be required to provide a certain level of customer service (eg, answering phone queries in a prompt and efficient manner). Given the uncertainty regarding the level of customer enquiries, particularly in the early years of the NPSS, it is expected that a contract stipulating levels of customer service will be difficult to specify completely. The government will need to make a choice about where the risk lies: should customers incur a loss of service if there are more enquiries than forecast, or should they incur a loss of profits; or should the contract specify compensation payable to the contractor if there are more enquiries than forecast, but require service quality to be maintained? As explained above, greater uncertainty for the contractor is likely to lead to lower investment, or equivalently a higher required rate of return. Longer contracts can smooth these risks, but lead to a greater risk of becoming locked into one provider.

## **7.7 Brief summary of conditions for competition in the NPSS model**

The nature of competition in the NPSS is different to that in the Industry model, and therefore a different approach is appropriate. Using Klemperer's conditions for an ideal bidding market allows the effectiveness of competition in the proposed NPSS system to be benchmarked. Table 7.2 summarises the degree of competition in NPSS pension administration. The conditions for competition in fund management in the NPSS model were summarised in Table 7.1.

**Table 7.2 Conditions for effective competition in pension administration: NPSS model**

Assessment of NPSS	
Competition is winner-takes-all	Each supplier must win all or none of the order such that no bidder can improve their terms of trade by reducing the quantity offered. In the NPSS model, there may be more than one provider. This means that there will be multiple winners resulting in less fierce competition than in the case of one contract with one winner
Competition is lumpy	Each contract must be sufficiently large that there is an element of 'bet your company' in the tender. The NPSS contract, if not split into many units, should fulfil this criterion
Competition begins afresh for each auction	Oxera's study of similar contracts indicates that, in each case, the government risked being locked into one supplier. Given the long-term nature of pension provision, this is a significant risk to competition in the NPSS, which is potentially mitigated by having multiple providers
Entry is easy	The tender process should allow competitors to showcase their alternatives on an equal footing. However, the large (sunk) fixed investments in IT create entry barriers unless assets can be efficiently transferred from the incumbent to an entrant
The contract can be specified simply and completely	A complete contract would need to specify pricing structures, quality levels, etc, for every conceivable contingency. More likely is an incomplete contract with high monitoring/enforcement cost. The incumbent may therefore face the wrong incentives, insofar as the contract cannot be completely specified

**Source:** Oxera.

## 8.0 MARKETING AND BIDDING COST IN THE INDUSTRY AND NPSS MODELS

This section addresses the issue of marketing cost, identified by the Pensions Commission as a risk to cost levels in the Industry model:

there would be a danger that competition to influence employer (or individual) choice would take the form of high expenditure on brand advertising ... In a market where the power of choice exercised by individuals or small employers to drive competitive cost reduction may be limited, a model in which an economy of scale agent (the central system) chooses between alternative providers is likely to be more efficient (2006, p. 32).

To analyse the role of marketing in the Industry and NPSS models it may be helpful to start with a generic economic framework for the function of marketing, before considering how this applies to pensions.

Marketing typically has two roles in a market: to *inform* consumers about the characteristics of different products, and to *persuade* consumers to buy a product. These roles tend to overlap, because all advertising contains at least some information on product characteristics.

In principle, since advertising raises costs (holding output constant and comparing with a situation where no marketing takes place) then it might be presumed to raise prices. However, advertising also has a role in reducing consumers' search costs, *informing* them about products and prices, and helping them to choose between brands. Furthermore, it may facilitate the entry and expansion of new firms, which can use advertising to expand their market, exploiting economies of scale and capturing the demand of established firms (see Church and Ware 2000, p. 570). Therefore marketing activity may in principle increase the intensity of competition in a market, helping to keep costs low over time.

High expenditure on brand advertising can be a concern for efficiency. This is because, to the extent that brand advertising does not inform consumers about real differences between products, it may increase rather than reduce consumers' search costs by creating product differentiation that is perceived rather than real. This can reduce the intensity of effective competition, such that firm's efforts to improve their market shares are channelled into marketing expenditure (which may increase perceived product differentiation) rather than low prices.

This section therefore analyses brand marketing cost in the Industry model to see whether the forecast levels of expenditure for Personal Account pensions could be considered excessive, and examines firms' incentives to escalate brand marketing expenditure beyond forecast levels.



The counterpart to marketing cost in the Industry model is the cost associated with bidding and provider selection (termed transition or bidding costs) in the NPSS model. This is the cost incurred by both the government as consumer and the potential pension administrators as bidders, which arises because the bidding process encourages potential administrators to invest time and money to *inform* and *persuade* the procurer about the merits of their proposal. As stated in the OFT's 2004 discussion paper on public procurement:

Bidding for a public contract can be very costly, and bidders will ultimately have to recover these costs (e.g. through a mark-up on the contract price). More bidders may therefore imply higher prices as total participation costs (measured across all bidders) increase.<sup>54</sup>

The role of bidding costs in the NPSS model can therefore be analysed alongside the role of marketing cost in the Industry model.<sup>55</sup> Section 8.2.1 examines a public sector procurement case study, and calculates bidding costs as a proportion of contract value for a number of industries.

## 8.1 Analysis of marketing within the Industry model

This section sets out:

- the role of marketing in the Industry model;
- the role of marketing in promoting take-up; and
- a cross-industry review to assess whether the extent of pensions marketing activity might be considered 'excessive'.

### 8.1.1 The role of marketing

Marketing is an important tool for firms to increase their customer base. There are two target groups for potential consumers:

- 1) those currently absorbed by a rival firm's market share; and
- 2) those not yet reached by the market.

<sup>54</sup> The paper also notes that 'in a perfectly competitive market where bidders will, on average, need to recover the costs of bidding, any increase in participation costs will have to be borne by the public sector. If the cost of preparing a bid is  $x$ , and the probability of winning a tender is  $p$ , a bidder will need to include a mark-up for the recovery of bidding costs of  $x \cdot 1/p$  in its bid. A lower mark-up will result in an expected loss, and a higher mark-up would result in an expected profit that is not sustainable as it has been assumed that there is perfect competition among bidders. Thus, if competition amongst bidders is effective, a buyer will always pay the full cost of bidders regardless of whether there are 10, 100 or 1,000 bidders. This conclusion does not hold if bidders have some market power, and where participation costs may partly be funded from profits' OFT (2004a), p. 74.

<sup>55</sup> However, a proportion of costs associated with bidding may be replicated in the Industry model, since they may include the costs of business planning required for entry into any new market.

The first possible role for marketing in signalling to consumers high-quality providers may be an important element in the context of asymmetric information. Greco (2006) sees marketing as vital for the existence of high-skilled fund managers in ‘a market of competitive pension funds’:

If good managers cannot signal their capacity to the market, a stark version of the traditional lemon-market argument applies: only bad managers stay on the market in equilibrium, given that good fund managers are unable to cover fixed costs of investment in skill. If good managers are able to signal their skill through some costly promotional activity (as we observe in real-world markets of pension funds), then the efficiency of market equilibrium improves, though first-best cannot be reached because of deadweight losses determined by promotion costs on the net rate of return that is warranted to pensioners.

The second marketing strategy aimed at promoting the general pension product is not unique to the Industry model and is also required in the NPSS model. The introduction of a new pension system will require a minimum level of marketing expenditure by either system to encourage consumer take-up. Given the government’s policy objective of increasing retirement savings and the experience of the 2001 introduction of the UK stakeholder pensions, where much of the target market of middle-income, low savers was missed, the role of marketing deserves careful consideration.

In 2003 the Department for Work and Pensions provided little evidence of take-up or interest in Stakeholder pensions among middle earners who did not have an existing private pension. Although the number of holders of Stakeholder pensions exceeded 1 million by late-2002, many of these new pension arrangements seem to have arisen from individuals switching from other schemes (notably personal pensions) and from existing Group Personal Pensions being reconstituted as Stakeholder pensions. Since 2002, the number of new contracts has declined year on year. Independent research suggests that private pension coverage has fallen among the target group of middle earners. There has been some increase in use by low or non-earners, but this is probably an attempt to utilise the tax benefits by the spouses of high earners. Analysis by the Pensions Commission suggests that ‘at income levels below £20,000 it is difficult profitably to sell pensions at the present charge cap’ (House of Commons, Treasury Committee, 2004).

Since the initial market promotion is not unique to the Industry model, unlike the ongoing marketing costs as firms compete for a share of the fixed market, it should be discounted in a cost comparison between the NPSS and Industry models. While sizing up the magnitude of ongoing marketing costs in the Industry model, the NPSS model equivalent—bidding expenditure—is the relevant benchmark.

In its 2003 report—which resulted in an increase in the regulatory price cap on new stakeholder pensions from a fixed 1% to allow a higher charge of 1.5% for the first 10 years—Deloitte states:

On Stakeholder Pensions the general reaction has been that the levels of business have been such that expected returns have not been made.

According to the Deloitte study, two main causes for the lower-than-anticipated growth found are the aggressive pricing strategies adopted by close-product substitutes in order to protect their market share; and the lack of government promotion of the product:

finally, many institutions have been disappointed with the level of Government advertising or other projects to increase the general awareness of the products—especially since the initiative was meant to be a significant component in achieving the Government’s policy objectives. With the low level of charges it was felt that individual companies could not afford to spend significant funds on such exercises, and so a significant role for Government was foreseen (Deloitte 2003).

Furthermore, in support of excluding initial marketing costs is Paymaster, which specifically states in its proposal to run the NPSS administration system that:

There would be significant sums of money involved in advertising the Scheme in order to promote take-up. These costs are unlikely to be considered when assessing the achievement of 0.3% AMC (Paymaster 2006).

Since the marketing strategy aimed at promoting the general pension product is relevant to both the NPSS and the Industry model and therefore does not affect the comparison of these models, it is not analysed in any further detail in this report.

### 8.1.2 Cross-industry review of advertising sales ratios

Marketing expenditure can help to convey information on product quality to consumers and to strengthen competition. The question is whether beyond a certain point marketing spend can be considered excessive

To determine a potential range for ‘ongoing’ marketing costs within the Industry model, a cross-industry review of costs within established industries with similar market structures can be useful. Since the degree of asymmetric information varies between industries, the marketing will also vary. The cross-industry review also helps place the current level of marketing in the pension industry into perspective.

Analysis has been restricted to industries with concentration ratios similar to those that could be expected in the Industry model. This is appropriate since, as the Competition Commission (2003) explains, marketing expenditure is likely to rise with concentration ratios—in very concentrated markets, marketing expenditure may be high:

If a market is highly concentrated then, as we have noted, there may be quite strong incentives for companies to avoid significant price competition. This is because a price reduction which fails to obtain a significant market share increase will reduce profits; but one which gains significant market share must reduce the market shares of the other main players significantly, inviting price cuts of their own which would leave all players worse off. Such considerations may channel competition, perhaps excessively, into marketing and other forms of non-price competition, ie forms which, if successful, cannot so easily, if at all, be replicated (Chapter Two, p. 74, para. 2.297).

Table 8.1 provides a summary of the level of marketing spend as a proportion of revenue across a number of sectors, with more detail presented in Table 8.2. It shows that the current estimate for the level of marketing in the Personal Accounts pensions market is low compared with marketing expenditure in established industries.<sup>56</sup>

**Table 8.1** Summary table based on marketing expenditure data in Table 8.2 below

	UK	Average of marketing expenditure in UK, USA, France, and Germany <sup>1</sup>
Mean	3.29	3.14
Median	2.10	2.25
1st quartile	1.00	1.00
3rd quartile	4.50	4.20
Pension	1.92	n/a

**Note:** <sup>1</sup> For the 14 industries where common data (equal weighting) is available.

**Source:** See Table 8.2.

As the Industry model is expected to share several characteristics with the retail banking industry, it is noteworthy that the current estimate for the advertising sales ratio in the Personal Account pensions market is below some definitions of the level of marketing observed within the banking SME industry. The Competition Commission (2002, Chapter Two, p. 75, para. 2.298) did not consider such marketing levels to be excessive.

Table 8.2 presents the full results of the cross-industry comparison.

<sup>56</sup> Some of the brand marketing costs could be general company-wide brand marketing costs. In the case of multi-product providers, these costs may be shared with other products thereby reducing the brand marketing costs related to Personal Accounts.

**Table 8.2 Marketing spend as a proportion of revenue**

Product	Advertising/ retail sales (%)				Source
	UK	US	France	Germany	
Cereals	12.90	10.80	(x)	(x)	Sutton, 1991
Margarine	10.20	2.30	n/a	2.60	Sutton, 1991
Mobile telephony <sup>1</sup>	6.919	(x)	(x)	(x)	Competition Commission 2003
Instant coffee	6.40	2.20	11.10	3.50	Sutton, 1991
Soup	6.00	3.30	5.70	5.60	Sutton, 1991
Banks—SME activity	4.0 to 5.0**				Competition Commission 2002
Pet food	4.30	4.00	4.20	8.40	Sutton, 1991
Chocolate confectionery	3.50	3 to 4	2.90	5.90	Sutton, 1991
Mineral water	2.70	(x)	5.00	1.50	Sutton, 1991
Frozen food	2.60	2.00	n/a	1.20	Sutton, 1991
Baby food	2.20	0.90	1.30	1.20	Sutton, 1991
Banks—SME activity	0.2 to 2.2*				Competition Commission 2002
Sugar confectionery	2.10	2 to 3	~1.4	4.20	Sutton, 1991
Personal Account pensions (estimate)	1.92	n/a	n/a	n/a	Industry sources, based on total marketing spend over project lifetime (20–25 years). Note that marketing spend will be front-loaded around the launch of Personal Account pensions
Coffee	1.90	~1	14.00	2.90	Sutton, 1991
Biscuits	1.90	2.50	2.90	5.10	Sutton, 1991
Soft drinks	1.20	3.20	2.20	3.80	Sutton, 1991
Beer	1.00	3.60	~5	1.00	Sutton, 1991
Flour	0.96	0.17	0.55	n/a	Sutton, 1991
Canned vegetables	0.58	0.29	0.55	(x)	Sutton, 1991
Salt	0.45	1.30	–	–	Sutton, 1991
Bread	0.29	0.42	0.12	0.40	Sutton, 1991
Sugar	0.06	0.24	–	–	Sutton, 1991
Processed meat	(x)	0.54	0.70	0.30	Sutton, 1991
<b>Sample average</b>	<b>3.3</b>	<b>2.4</b>	<b>3.8</b>	<b>3.2</b>	

**KEY:** (x) Market omitted from study; \* Current level; \*\* potential future level; (–) value very low and omitted from published statistics; n/a, not available.

**Notes:** <sup>1</sup> In the case of mobile telephony and pensions, this is marketing spend as a proportion of total costs. It excludes handset subsidies and sales discounts.

**Source:** Oxera.

## 8.2 Analysis of bidding costs in the NPSS model

The bidding costs (and other transition costs) incurred prior to choosing the national pension provider in the NPSS model may be considered to have some equivalence with ongoing marketing costs in the Industry model. Some rough indications of the order of magnitude of bidding costs based on evidence in several sectors are presented below—specifically:

- the results of an analysis of bidding costs for the HMRC IT services contract;
- analysis of bidding costs as a proportion of contract value in several markets, to provide figures on bidding expenditure comparable to the figures on marketing cost as a proportion of sales presented in the previous section.

### 8.2.1 Bidding and transition costs in large public administration systems

The tendering of the HMRC IT services contract has been used to provide a rough indication of the possible order of magnitude of the bidding costs for the NPSS model, and illuminates potential problems with maintaining competition for contracts where the bidding costs are so significant and cannot be reclaimed. These estimates are presented for illustrative purposes only—the bidding costs in the NPSS may be higher or lower than in the HMRC IT services contract.

#### *The tendering of HMRC IT services*

When HMRC entered into a contract with the Cap Gemini and Fujitsu consortium to supply IT services, it replaced a contract previously held with EDS for ten years and another held by Accenture operating the National Insurance Recording System (NAO 2006a, para. 1.11).

To ensure a level playing field, HMRC paid for the unique transition costs (UTCs)<sup>57</sup> that a new supplier would have to pay. Without such payments, HMRC regarded the costs of transition for a new entrant as too high to launch an effective bid, as the bidders would have to deliver a strategy that was less risky than the incumbent's in order to counter the increased costs associated with transition (the incumbent's sunk costs) (NAO 2006a, para. 1.7). The NAO regarded this as an essential step in encouraging competition (para. 8). Moreover, by not paying these costs, HMRC would have sent a signal to the market that it was effectively 'locked into' its existing supplier, as transition costs would place new bidders at a severe disadvantage (NAO 2006a, para. 7).

#### *Bidding costs were reimbursed*

HMRC paid £8.6m towards the bidding costs in order to stimulate a sufficient level of competition during the bidding process (NAO 2006a, para. 6). In a separate contract, the

<sup>57</sup> The costs incurred in changing from one provider to another, minus the extra costs that would have been incurred had the incumbent won the new contract.

government also contributed towards the bidding costs in the public–private partnership (PPP) deal for the London Underground (NAO 2004, para. 6).

### Transition costs

To stimulate competition, HMRC paid £37.6 m to the entrant for the transition costs it incurred (see Table 8.3).

**Table 8.3 Transition costs**

Category	£m
UTCs to Cap Gemini/Fujitsu	37.6
Transition support costs to EDS/Accenture	5.3
Departmental staff and running costs	1.3
Consultancy advice and support	2.4
DWP, and IT support costs for National Insurance Recording System 2 transition	0.5
Retained staff costs for EDS	0.4
Total costs of transition	47.5

**Source:** NAO (2006a), Table 11, p. 27.

EDS considered that, if it had won the contract, the transition costs to the larger contract would have been £4.4m. By choosing Cap Gemini, a further £37.6m was needed (referred to as UTCs), while £5.3m was given to the incumbents to compensate for transition support costs. These UTCs were identified by the new entrant as the costs that would not have arisen had the incumbent carried on its operation. The Public Accounts Committee mentions that this practice of paying such costs may be more efficient than leaving the private companies to pay their own costs, as these could be included in their prices plus a mark-up (NAO 2006a, paras 2.5 and 2.6).

The costs of projects that lasted across the transition were paid according to the terms of the former contract with EDS so that bidders would not be deterred (para. 3.8). However, these UTCs had to be agreed with HMRC. This task was not complete by the time the transition had actually started (para. 2.7). The NAO considers that the compensation paid to Cap Gemini may have been excessive (NAO 2006b).

## 8.2.2 Comparison of bidding costs as a proportion of contract value

Table 8.4 illustrates the magnitude of the costs involved for a range of public infrastructure projects that have been auctioned out to the private sector. Table 8.4 shows the costs as a percentage of each project’s contract value, providing useful information for the purposes of drawing comparisons with annual marketing spend from the Industry model.

The total transitional cost for each project summarises the costs incurred by all parties involved, including the cost of transferring information and infrastructure to new providers following the re-tendering of a contract.

Total transitional costs as a proportion of contract value range from 0.5% to 8.0%. Note that the estimates of 0.5% and 0.6% for the sale of the three rolling-stock leases are particularly conservative as they do not incorporate the costs incurred by each bidder, only the costs to British Rail, the incumbent, and the Department of Transport, the procurer. The 0.5% estimate for the National Savings projects is more accurate but subject to underestimation due to the lack of data concerning the transitional costs incurred by the Inland Revenue, the incumbent, and the costs to the procurer.

The key findings are that average transition costs are 4.2% of contract value, and average bidding costs are 3.1% of contract value. These are similar to the calculations for marketing costs in Table 8.2, indicating that a bidding market may not eliminate costs associated with informational asymmetries, compared with a market composed of branded providers.

However, this finding needs careful interpretation. Bidding costs may cover many of the costs associated with market entry, whereas the comparison of marketing costs in Table 8.2 principally relates to marketing in a mature industry, after the initial market entry and expansion phase are over.



**Table 8.4 Illustrative comparison of bidding costs as a percent of contract value**

	Contract value (£m)	Winner's bidding costs (£m)	Total bidding costs (£m)	Total transitional costs (£m)	Winner's bidding costs as % of contract value	Bidding cost as % of contract value	Total cost as % of contract value
National Lottery <sup>1</sup>	184	3.5	8.0	13.0	1.9	4.3	7.1
National Savings <sup>2</sup>	635	1.7	3.0	3.0*	0.3	–	0.5
HMRC IT services <sup>3</sup>	2,830	8.6	n/a	82.3	0.3	–	2.9
London Underground <sup>4</sup>	15,700	n/a	275.0	455.0	–	1.8	2.9
M1-A1 <sup>5</sup>	232	4.0	6.1	8.2	1.7	2.6	3.5
A1(M) <sup>5</sup>	154	3.0	7.1	9.2	1.9	4.6	6.0
A419/A417 <sup>5</sup>	112	3.0	5.2	7.3	2.7	4.6	6.5
A69 <sup>5</sup>	62	1.0	2.2	4.3	1.6	3.5	6.9
Angel rolling-stock lease <sup>6</sup>	696	n/a	n/a	3.3	–	–	0.5
Eversholt rolling-stock lease <sup>6</sup>	518	n/a	n/a	3.3	–	–	0.6
Porterbrook rolling-stock lease <sup>6</sup>	528	n/a	n/a	3.3	–	–	0.6
Average PFI in schools <sup>5 7</sup>	39	3.1	n/a	3.1	8.0	–	8.0
Average PFI in hospitals <sup>5 7</sup>	96	7.7	n/a	7.7	8.0	–	8.0
Sample average					<b>2.9</b>	<b>3.1</b>	<b>4.2</b>

**Notes:** <sup>1</sup> Total bidding costs for the National Lottery have been calculated on the basis of the two submitted bids from Camelot and the People's Lottery incurring costs estimated at £3m to £4m and interest shown from five other potential bidders. The contract value is the National Lottery Commission's estimate for retained profit for the duration of the licence. Since the incumbent won, there were no transitional costs. <sup>2</sup> No data is available on procurement or incumbent transition costs. <sup>3</sup> The procurer reimbursed the entrant £8.6m for bidding costs and £37.2m for UTCs; the incumbent £5.7m for their transition costs and incurred additional unspecified costs of £27.5m. This breakdown is useful in clarifying the specific cost of choosing a new entrant over the incumbent provider. Transition costs are 1.8% of contract value (exempting the unspecified procurement costs). The contract value is subject to demand and may rise to £6 billion. <sup>4</sup> Total bidding costs is the total amount the procurer reimbursed to all bidders. The cap on reimbursement to failed bids was 90%, so this is a conservative estimate. <sup>5</sup> There is no incumbent to incur transitional costs due to the nature of these projects. <sup>6</sup> No data is available on the costs the bidders incurred, so the total cost includes the cost to the procurer only. <sup>7</sup> There is no information regarding the procurement costs.

**Sources:** NAO (1998a and b, 2000, 2002, 2003, 2004, 2006a). Major Contractors Group website, www.mcg.org.uk.

### 8.3 Conclusion on marketing costs

These findings indicate that the NPSS does not eliminate marketing costs (broadly defined) altogether, but transfers the focus of firms' marketing efforts to a single consumer, ie, the public procurement agency. While these costs may or may not be of the same magnitude as marketing costs in the Industry model, they nonetheless are a relevant factor in comparing the two models for Personal Account pensions.

It could also be argued that part of the marketing effort in the Industry model will drive take-up of Personal Account pensions. This marketing effort—to inform and encourage potential pension holders at the launch of the new product and subsequently—will need to take place to some extent in both the NPSS and Industry models.

On this basis, it would be difficult to argue that the NPSS would eliminate marketing costs altogether (on a broad definition of marketing costs), given that significant bidding and procurement costs and informative advertising will be required on Personal Accounts to drive take-up.

## 9.0 CONCLUSIONS

To identify conditions under which the NPSS and Industry models may result in desired market outcomes, the analysis in this report has focused on the two main components in the value chain for the provision of Personal Accounts: administration services and fund management. In addition, it has examined the economic aspects of marketing (and bidding and transition) costs.

It has been suggested that costs in a centralised system such as the NPSS model may be lower as a result of economies of scale in administration services and/or fund management and because of the absence of brand marketing costs. The available evidence on the extent of economies of scale in these activities has been analysed to determine whether they may cause differences in costs between the NPSS and Industry models. Section 8 compared the level of marketing costs in the Industry model with bidding (and other transition) costs in the NPSS model.

Whether and to what extent low costs are passed on to consumers in the form of low prices depends on the degree of competition. Conditions under which there could be effective competition enabling consumers to benefit from low prices (reflecting costs—ie, allocative efficiency) and innovation (dynamic efficiency) in the NPSS and Industry models were identified in sections 6 and 7.

### Economies of scale in pension administration

The provision of pension administration services involves up-front investments in IT systems and associated applications. These costs would be expected to be fixed for a certain amount of capacity (ie, number of accounts), resulting in lower average costs per account when the number of accounts increases. The evidence on economies of scale in pension administration can be summarised as follows.

- Analysis of the data on the costs incurred by pension providers in the UK indicates that there are indeed some economies of scale in administration, but they are limited.
- The existence of limited economies of scale is also confirmed by studies in the economic literature.
- The information available to analyse large pension systems in other countries does not provide evidence to support the existence of economies of scale beyond a certain point (eg, 500,000 accounts). The variation in costs between pension systems in different countries may relate to other factors, such as differences in the scope of the activities undertaken by the administration services provider and those undertaken by the employer.

Oxera's modelling analysis has shown that, as expected, there are more accounts per provider in the NPSS model than the average number of accounts per provider in the Industry model. However, given that economies of scale are limited, the differences in the

number of accounts are unlikely to cause significant differences in administration costs between the two models.

### **Economies of scale in fund management**

A similar assessment of possible differences in the costs of fund management between the NPSS and Industry models has shown that there are economies of scale in fund management. This is also confirmed by the economic literature. While there are significant economies of scale up to a fund size of £500m, these become less significant beyond £500m and in particular once funds under management reach around £1 billion.

Whether these economies of scale could cause significant differences in fund management costs between the NPSS and Industry models will depend on the average size of the default and non-default funds in both models.

Based on assumptions in line with those of the Pensions Commission and White Paper, Oxera's modelling has shown that the average fund in the NPSS model will be larger than that in the Industry model. This is to be expected since there will be fewer funds in the NPSS model than in the Industry model (in which there are more providers, each of which will offer its own funds). However, the analysis indicates that the average fund in the Industry models is still large enough not to cause significant differences in fund management costs between the two models. Furthermore, providers may offer some of their existing funds (provided in the market for stakeholder or personal pensions), which are already large.

In the Industry model with a scenario of six providers, the average default fund reaches a size of around £1.1 billion in the first year. In the scenario of 12 providers, an average default fund reaches a size of £540m in the first year and £1.1 billion in the second year. This means that the difference in management costs between an average default fund in the NPSS model and in the Industry model is unlikely to be significant in terms of costs to consumers; and, again, providers may offer existing funds rather than creating new ones.

An average non-default fund in the Industry model may not reach a size of £500m until after four or seven years (in scenarios of six and 12 providers respectively). This implies that, in the early years, the management costs for the non-default funds in the Industry model are likely to be greater than the costs for the equivalent fund in the NPSS model. However, the analysis in section 5 indicated that the differences in management costs are unlikely to be significant in terms of impact on consumers. For example, the costs of managing a non-default fund in the Industry model may be around 0.5bp higher than the costs of managing a non-default fund in the NPSS model.

### **Conditions for effective competition in the NPSS and Industry models**

Table 9.1 summarises the conditions for effective competition in the NPSS and Industry models on the basis of standard criteria for perfect competition. Although section 7 of this

report used specific criteria to evaluate competition in the NPSS model, in particular once some of the criteria do not hold, it is also possible to compare the models side by side.

Two conditions for effective competition in the NPSS and Industry models were found to be particularly pertinent: switching in the NPSS and Industry models, and the costs of marketing (in the Industry model) and bidding (and other transition costs) in the NPSS model.

## Switching

### *The Industry model*

In the context of stakeholder and personal pensions, switching provider has at times been viewed in a negative light because the costs involved make pension provision more expensive. However, from a competition perspective, some level of switching is desirable because it creates conditions for competitive pressure on pension providers to reduce costs and improve their service and product offerings. The analysis has shown that the overall costs of switching in Personal Accounts may lie somewhere between 0.2bp and 5bp.

### *The NPSS model*

To maintain effective competition in the NPSS model, it is important that the NPSS Board has the opportunity to switch to new suppliers when contracts come up for renewal.

In many respects, the market for fund management in the NPSS model would work in the same way as the institutional investment management market, with fund managers competing for a fixed-term mandate and having to rebid when this comes up for renewal. The firms that would bid for contracts in the NPSS are likely to be existing fund management firms. Given the high number of institutional fund managers, there are likely to be enough fund managers available to bid for the mandate in the NPSS model.

In the market for institutional fund management, it has been shown that pension fund trustees do not find it difficult to switch fund managers. In contrast, switching administration service provider may be difficult for several reasons. The provision of pension administration services at the scale required in the NPSS model requires specific investments by the providers, for which the payback period may be long. Industry sources have indicated that the contract would have to be for a period of up to 20 years, depending on the structure of payments to the pension administrator, in order to allow the bidders to earn a reasonable return on their investment. This means that the incumbent(s) (ie, the winner(s) of the first contract) are likely to gain an advantage over new entrants, making it more difficult and less attractive for new entrants to bid for a contract to run the administration upon contract renewal. Thus, there is a significant risk that the NPSS Board becomes locked into one or more providers. Without effective competitive pressure, an incumbent supplier has no incentive to perform over and above the incentives created by a payment for performance contract. Regulatory pressure,

which can to some extent act as a proxy for competition, brings its own costs for suppliers and taxpayers, which have to be recovered.

Examination in this study of the performance of a number of contracts for large public administration systems indicates that, quite apart from operational risk in the implementation process, in each case study there is evidence of limits to competition that risked the public sector department becoming locked in. Such constraints included high fixed costs, high operational risk involved in the transition from one supplier to the next, and informational asymmetries. The NPSS model may therefore not deliver effective competition.

### Marketing costs and bidding (and other transition costs)

The Pensions Commission has indicated that there would be a risk that competition to influence employer (or individual) choice would take the form of high expenditure on brand advertising. The analysis in the report has observed the following.

- Marketing is an important tool for firms to increase their customer base. There are two target customer groups: those currently absorbed by a rival firm's market share, and those not yet reached by the market. A marketing strategy to reach the second group is not unique to the Industry model. In principle, therefore, the introduction of a new pension system would require a minimum level of marketing expenditure in either the NPSS or the Industry model to encourage consumer take-up.
- Marketing expenditure can help to convey information about product quality to consumers, strengthen competition, and may contribute to a higher take-up of Personal Accounts. The analysis has suggested that the current estimate of the level of marketing expenditure in Personal Accounts (at 2% of revenues) is not high compared with marketing expenditure in established industries. The advertising to sales ratio lies below the UK mean (3.3%) and median (2.1%) levels for 23 industries examined by Oxera.
- The bidding (and other transition) costs incurred prior to choosing the national pension provider in the NPSS model may be considered to have some equivalence with the ongoing marketing costs in the Industry model. The NPSS model does not eliminate marketing costs (broadly defined) altogether, but transfers the focus of firms' marketing efforts to a single consumer—ie, the public procurement agency. The analysis of large contracts in this report has shown that bidding and other transition costs are prevalent and should therefore be taken into account when comparing the two models.

### Potential implications for market outcomes and policy formulation

As noted above, the objective of this study has not been to assess which model is the most appropriate. The analysis has identified minimum conditions under which the two models may result in desired market outcomes. Since the empirical analysis undertaken

for this report is for a product and market (Personal Accounts) that do not (yet) exist, there is inherent uncertainty about whether some of these conditions will hold in practice. Furthermore, a full assessment would require a broader set of criteria than the (economic) criteria applied here.

However, it is possible to make a number of preliminary observations about the potential implications of the findings for some of the market outcomes.

### Level of prices of Personal Accounts in the NPSS and Industry models

The analysis has shown that economies of scale in administration and fund management are limited beyond a certain fund size and number of accounts, and are unlikely to cause significant differences in costs between the two models.

Furthermore, although providers in the Industry model will incur some additional marketing costs, both the NPSS Board and providers are likely to incur bidding and other transition costs in the NPSS model. These costs, although their potential extent is uncertain, should be taken into account when comparing the two models.

The opportunities for switching provider determine the extent to which the market may be competitive. The analysis has shown that in the Industry model there are, in principle, economically effective incentives for consumers to switch and that the overall switching costs may be limited.

The analysis has indicated that there are a number of risks associated with the implementation of the NPSS model. For example, it may be difficult to specify levels of customer service in the contract and to monitor this aspect over time. It may be undesirable to do so if this restricts innovation. Furthermore, there is a risk of reduced competition when contracts come up for renewal due to high switching costs and incumbents' advantage over new entrants. This means that even if the costs of fund management and administration were lower in the NPSS model, this might not necessarily translate into long-term low prices to consumers.

### Quality and innovation

In the Industry model, competition could put pressure on providers to innovate and introduce new product features and improve their customer service. The service providers can decide which type of funds to offer, provided that these funds are within the parameters set by the regulator.

In the NPSS model, the minimum length of a contract for the management of a fund may be around five years. This means that there will be regular tenders, giving fund managers the opportunity to propose new funds and/or apply new techniques to manage the funds. New types of fund will require NPSS Board approval.

Since the administration is outsourced, service standards will have to be specified in the contract in advance and improvements may normally only be introduced when the

contract comes up for renewal (unless contracts are renegotiated)—industry sources have indicated that the length of the contract may be up to 20 years. The NPSS contracts will require close monitoring and performance assessment to ensure that service standards are in line with the specification in the contract and meet customers' needs. This is an area that deserves further assessment.

The relatively long duration of contracts means that there may be less scope for innovation and improvement of customer service and administration in the NPSS model than in the Industry model.

### Consumer choice

In the Industry model, consumers make a twofold choice: first of pension provider and then of asset allocation. The first type of choice—between branded providers—is unique to the Industry model, while the second type of choice—asset allocation—is similar in the NPSS and the Industry models.

The choice of asset allocation will require a degree of financial sophistication among consumers since choosing equities over bonds, or international equities over UK equities can involve complex risk–reward trade-offs. This element of choice is common to the NPSS and Industry models, and will be simplified in both models by restricting asset allocation choices and providing default options, as well as by taking action to build financial capability. In this regard, the economic literature suggests that, although too much fund choice can be detrimental, some limited choice can raise contribution and participation rates.

Oxera's research has focused on the choice of provider, since this is the element of choice unique to the Industry model. In particular, the research has examined incentives to switch provider, the role of brand marketing, and the effect of the carousel mechanism on competition. The main advantage of having choice of provider is that it introduces direct product market competition in the market for Personal Accounts. The exercise of choice of provider does not necessarily require financial sophistication among consumers (given a simple fee structure). Consumers may be familiar with choosing between branded providers from other markets in retail financial services, and are likely to make choices on familiar aspects of price, service quality and brand.

### Participation in Personal Accounts

This report has not analysed in detail the impact of the design of the NPSS and Industry models on the participation in Personal Accounts. However, two aspects of the Industry model may indirectly have a positive impact on participation:

- providers have an incentive to market Personal Accounts to potential customers;
- good and reliable customer service may lead to higher participation rates. In the Industry model, good customer service is driven by competition.



By contrast, in the NPSS model, the standards for customer service will have to be pre-specified in a contract and may therefore be difficult to change over time in response to consumers' needs. Furthermore, it may be difficult both to monitor output and measure customer experience and take corrective action, even if failure is detected.

**Table 9.1 Minimum conditions for effective competition in the NPSS and Industry models**

	Assessment of Industry model	Assessment of NPSS model
Firms produce similar goods	Personal Accounts will be a simplified pension product, and therefore products will be similar. Providers are likely to compete on the basis of price and service, within a tightly defined mandate	By its nature, a franchise tender process specifies in detail the contract to be awarded. Therefore each firm bidding has limited opportunities to differentiate its product
The market features many firms, and many consumers	<p>With six providers of equal market share, each will have a 17% market share, and the HHI will be 1,666. On this basis, there would be no concerns over single-provider dominance or excess concentration, although the market would be close to the threshold of being considered highly concentrated</p> <p>The Personal Account pensions market will feature a large number of consumers</p>	<p>The number of firms in the market has two aspects in the NPSS model: the number of incumbents and the number of potential bidders. The first will be determined by the design of the system, but is likely to result in a highly concentrated market. The second is determined by the strength of entry barriers. The firm(s) that wins the initial contract(s) will have a significant advantage when the first franchise expires, due to the sunk costs of entry. This will limit the number of credible bidders in subsequent franchises</p> <p>There will be two types of consumer: the central NPSS system that lets out the administration contract, and the Personal Account holders as end-consumers</p>
Firms have similar cost structures	<p>A market in which one firm has a large absolute cost advantage over rivals will tend to monopoly. A market with firms that have similar cost structures is therefore more compatible with effective competition</p> <p>Assuming that providers achieve similar economies of scale in administration (analysed in section 3), and given the lack of product differentiation, firms may have similar cost structures</p>	The incumbent firms will gain a learning-by-doing advantage, which will result in asymmetric cost structures between the incumbent firms and potential entrants
Firms can enter and exit without significant cost	<p>While new entry to the pensions market is restricted by high minimum efficient scale, there are 57 individual pension providers in the UK. Some are small and others large—16 have more than 1% market share</p> <p>Some of these pension providers are likely to have the potential to enter the market for Personal Account pensions by scaling up existing operations (supply-side substitution rather than new entry). Other new entrants may include insurance companies from overseas and other retail financial institutions in the UK, such as banks and building societies. Nonetheless, entry may require significant investment (depending on the way in which Personal Accounts are set up), and so barriers to entry and exit will be substantial</p>	The incumbent firms will learn valuable information about the costs of running the system. This information, together with the sunk costs of entry, makes potential bidders subject to a form of the winner's curse, which raises the risk of entry
Consumers can switch between providers without cost	Subject to regulation, switching providers may be free to consumers. Switching rates in response to price changes need to be high enough to constrain the exercise of market power	Incumbent companies will have a significant advantage over new companies. This may make it difficult for the NPSS Board to switch. If the NPSS system chooses to subsidise bidding and transition costs to facilitate new entry, the costs of switching providers may be significant
Consumers are well informed about the characteristics of different products, and can therefore make a rational choice between providers	Requires either a high degree of financial literacy or a very simple pension product. The standardisation of the Personal Accounts product, and the marketing undertaken by providers, will determine whether the model can meet this criterion	<p>The NPSS central system will be a well-informed consumer, with opportunities to benchmark providers against one another and against comparable pension systems in other countries</p> <p>The NPSS Board will have to make sure that service and product requirements meet consumers' needs</p>

Source: Oxera.

## A1 LARGE ADMINISTRATION SYSTEMS

This appendix analyses a selection of large public administration systems run by the private sector. The proposed NPSS shares a number of features with these administration systems: they are also large and potentially complex, and were awarded on the basis of a contract for a number of years following a formal tender. It is helpful to look at the problems encountered in the past, and how these may have been dealt with.

Three systems are examined here: the National Lottery contract won for a second time by Camelot; the National Savings contract won by Siemens Business Services (SBS); and the HMRC ASPIRE contract won by the Cap Gemini and Fujitsu consortium (Cap Gemini).

It is not the objective here to provide a comprehensive analysis of a representative sample of large public administration systems. These three have been selected because of the similarities with the NPSS proposal and because they highlight general problems encountered in the provision of a public sector administration system by a private contractor. Thus the analysis enables an assessment of the extent to which certain problems might arise with the contracting out of the NPSS.

The National Lottery case highlights the risks associated with large contracts, such as the lack of a competition in the bidding process and difficulties with switching suppliers when a contract comes up for renewal. The National Savings contract with SBS is, in terms of functionality, similar to the NPSS, and shows the extent to which supplier switching can cause problems. The ASPIRE contract is analysed as it attempts to deal with some of the issues found in the previous examples.

The description of the large public administration systems and identification of problems is mainly based on studies conducted by the National Audit Office (NAO):

- for the **National Lottery** contract, the main study consulted was NAO (2002), 'Awarding the new licence to run the lottery', HC 803 Session 2001–2002;
- for the **National Savings** contract, the main studies consulted were NAO (2000), 'National Savings—Public/Private partnership with Siemens Business Services', and (2003), 'PPP in practice: National Savings and Investments' deal with Siemens Business Services, four years on';
- for the **ASPIRE** contract, the main study consulted was NAO (2006), 'ASPIRE—the re-competition of outsourced IT systems'.

The summary table found at the end of this appendix includes an overview of these findings, as well as presenting the results of a brief study on the Swedish Premium Pension system, the pensions authority, PPM, and its supplier, CSC. Less information was available to undertake a thorough analysis of this system. However, it does highlight some of the problems experienced with pension system administration.

The examples are analysed under three main topics:

- the general performance of the contract;
- the extent to which competition was present at the bidding stage;
- the provision made in the new contracts to allay problems previously found.

At the end of each case study the relevant points for the NPSS pension administration system are highlighted.

## A1.1 The National Lottery

### A1.1.1 Main details

The National Lottery Commission (NLC) is obliged to seek maximum returns for 'good causes', and considered a competitive bidding process as the best way to achieve this. Bidders bid for the chance to run the National Lottery and competed on the amount contributed to good causes as a percentage of income after prizes and lottery duties had been paid out.

#### *Length of contract*

The NLC considered the length of the contract, eventually keeping it at seven years. It noted that a longer contract period might lessen the likelihood of alternative bidders at the next bidding round, as the incumbent would be more firmly entrenched (NAO 2002, para. 2.5).

#### *Length of procurement process*

The process took longer than expected. The new licence was due to begin in October 2001, but finally came into operation in January 2002 (paras 1.11–12).

#### *Extra cost incurred by procurer*

The NLC is a non-department public body that oversees the conduct of the lottery operator. It is also charged with conducting the procurement process. In 2000/01, its costs were £5m (para. 1.5).

### A1.1.2 Performance

#### *How long did it take to set up the system?*

The NLC planned 15 months for the transition (para. 2.19).

#### *The bidding process took longer than expected*

Neither of the two original bids was considered to be satisfactory by the NLC. The bidders were given extra time to revise their bids nearer to the NLC's expectations (NAO 2002, 'Executive Summary', paras 2–8).

### A1.1.3 Contract design

#### *Problems due to lack of legislation in first licence*

The incumbent was not required to cooperate with the entrant or to hand over its existing infrastructure. Some bidders believed this would force a ‘big-bang’ approach to the transition. The NLC considered that a phased implementation would be less risky, but this would entail the incumbent having to bear some of the additional risk, as it would run its system alongside that of the entrant (para. 2.18).

#### *Provisions made in the new (second) licence*

Due to the problems related to the lack of effective provisions written into the first licence, the new licence requires the incumbent to assist and cooperate with the entrant in the two years prior to the transition. The transfer of property rights may also be required (para. 2.20).

Information about the lottery retail network will also be available to the NLC. This will reduce some of the informational asymmetry between incumbent and potential entrant (para. 2.26).

### A1.1.4 Competitive restraints

#### *Number of bidders*

The final number of bidders (two) was considerably lower than the eight bidders for the first licence.<sup>58</sup> Although the number is comparable with a similar tender in South Africa where there were three bidders and in Ireland where there was only one bidder, the NLC feared that there might be only one credible bidder for the third licence (para. 2.8).

#### *Constraints to competition*

There were a number of constraints for bidders, which may have led to the reduced level of competition.

- **The bidding costs**, which amounted to between £3m and £4m. The NLC looked at ways to reduce these costs in the future, including separating the process into stages and/or selecting a small number of bidders and contributing towards their costs (para. 2.11). However, this would require the NLC to be satisfied that the bidders were controlling their costs and that the money was not paid simply to correct deficient bids (DCMS 2003, para. 3.5).
- **Risk faced by a new operator**: the NLC recognised the considerable risk that a new operator would have to take on—for example, the need to replace the existing infrastructure. The first licence had not required Camelot, the successful bidder, to cooperate with a new operator. The NLC would have liked to have had a phased changeover of systems, with the incumbent bearing some of the risk by running two

<sup>58</sup> Although there were only two final bids, there had been some interest before the competition started, but either the expression of interest was not received in time by the other potential bidders, or they did not comply with the necessary procedures (para 2.6).

systems in parallel for a transitional period.<sup>59</sup> The new (second) licence requires the incumbent to assist and cooperate to help establish the new licensee. The Commission will also be able to ask for property and rights to be transferred to the new licensee in order to facilitate the licensee's operation of the lottery during the third licence period.

- **Few relevant suppliers:** there were few suppliers of the necessary technology services. Only two companies were seen to be able to provide these services, and the NLC recognised that each supplier could be 'locked into' a single operator, thereby limiting competition for the supply of the technological services. Once each of these technology suppliers has signed an exclusive contract with one of the potential operators, there can be no more bids (NAO 2002, paras 2.14–16).

The NAO 2002 report concluded that, due to the inherent risk involved in a switchover, a new entrant would have to submit a bid that was either considerably riskier or more generous than the incumbent. Therefore, the incumbent had two main advantages when bidding, which the NLC thought might have deterred competitors (para. 2.21).

- **The incumbent faced less risk due to its established infrastructure.** The incumbent has already sunk the costs of fixed investments that become an entry barrier for the entrants. To lessen the impact, the NLC insisted that the new operator, even if that were Camelot, would have to replace a number of old lottery terminals. By ensuring that both competitors would have to build terminals, the advantage currently enjoyed by Camelot would be reduced (para. 2.22).
- **The incumbent faced less risk due to its knowledge of the market.** Camelot was not obliged to release the information on the location of its National Lottery retail outlets that the other competitors needed in order to make an informed bid. The NLC has written into the new (second) licence a clause requiring the incumbent to release all such information to help future competitors (paras 2.24–26).

#### A1.1.5 Suggested improvements

The 'National Lottery Licensing and Regulation: Decision Document' (DCMS 2003) suggested ways to increase competition for future auctions, and included responses from the public. One suggestion was a National Lottery holding company—a permanent private sector company but with different shareholders and management. There would then be a competition to own and run this holding company. This might help solve the problem of the takeover of the incumbent's system. One respondent also suggested there might be an arrangement whereby the regulator is able to offer the option of acquiring the assets of the incumbent, and using its key contractors in the short term (paras 3.8–3.14).

<sup>59</sup> The NLC thought this might be up to 15 months. NAO (2002), para 2.19.

#### A1.1.6 Lessons for the pensions system

It is important that the potential bidders have sufficient information and that the related costs do not discourage them from bidding.

- The costs associated with submitting a bid should not be so high as to discourage competition. Various methods could be considered, such as multi-stage bidding processes and helping with the costs of the bid.
- Information asymmetries should be addressed so that competitors are able to make better-informed bids.
- Any advantages enjoyed by the incumbent should be addressed to ensure a level playing field and thus encourage competition. Subsidising the entrant's sunk costs is an example.

### A1.2 National Savings partnership with SBS

#### A1.2.1 Main details

National Savings is a department that helps fund government borrowing by offering savings and investment products to the public. In 1997 it invited expressions of interest from the public to run the operational side of the department. This contract was subsequently awarded to SBS. The length of the contract was 15 years (NAO 2000, para. 1).

#### A1.2.2 Performance

##### *Was the project on time?*

SBS encountered significant problems in transforming National Savings' operational processes, and consequently some parts of the system were not delivered on time (NAO 2003, Executive Summary).

At the time of publication of the National Audit Office report, SBS was unlikely, to make its projected return of 8.7%, as it did not manage to deliver the full transformation when it was planned, and it was possible that the supplier would make a loss. Capital expenditure was higher than expected and its efforts to reduce staff numbers and create 'third-party' jobs had not met the planned targets (para. 2.5).

#### A1.2.3 Competitive restraints

##### *Number of bidders*

An advertisement was placed in the *Official Journal of the European Communities* to which 90 firms responded. Of these, 35 were invited to complete a questionnaire enabling National Savings to evaluate their suitability for the project. Six respondents were then interviewed from which four were given more information on the proposal to be able to submit a bid. Lengthy consultations with these four bidders ensued. Two firms, SBS and

Electronic Data Services, were chosen from these to negotiate with National Savings (NAO 2000, para. 3.23).

Pre-determined criteria were used throughout the process to evaluate the bids.<sup>60</sup> Draft contracts were negotiated with the two final applicants before the final decision. National Savings also assessed the bids against a public sector comparator, and used this to evaluate the competitiveness of each bid.

The NAO considered that this process maintained sufficient competitive pressure, while minimising the costs of formulating bids and negotiations.<sup>61</sup>

#### A1.2.4 Contract design

The NAO highlighted two main aspects of the contract (paras 13–15).

- **The contract allocated risk properly:** SBS is responsible for operational errors. If there is an overpayment to a customer, SBS has to reimburse National Savings and recover the overpayment; in cases of underpayment, SBS has to pay compensation to the customer and incur performance deductions if this is a regular occurrence. The contract thus provides SBS with the incentives to limit errors.
- **There is machinery to manage the contract:** National Savings created a team to monitor SBS and its performance in relation to 42 indicators across eight areas of operational services, designed to measure accuracy, timeliness and quality of service to customers.

Although the SBS reward is deducted when it fails to hit performance targets, the negotiation to agree on the extent of these deductions has been problematic and some were not immediately paid by SBS (NAO 2003, paras 2.25–27).

There was a concern that bidders could include in their bid the risk of suffering performance deductions, but the NAO found no evidence of this (2003, para. 3.14).

#### *Joint governance scheme*

National Savings and SBS maintain both a structure that helps to manage the day-to-day running of the contract, and a strategic commitment to the partnership at senior levels (para. 3.14). This addresses two main elements:

- National Savings monitors SBS's performance, ensuring that the performance regime is transparent and provides incentives for SBS to improve its performance. It also ensures that this performance is benchmarked against an equivalent market project so that there is good value for money throughout the life of the contract.<sup>62</sup>

<sup>60</sup> These were service delivery experience, organisational capability and cultural fit, financial and service capability, and commitment to National Savings' objectives for the project.

<sup>61</sup> These costs were from £1.25m to £1.73m for the final bidders. NAO (2000), para 3.24.

<sup>62</sup> Comparison is made with equivalent organisations considered by both SBS and National Savings to be at the 'leading edge of their areas of service provision'. NAO (2000), para 1.7.



- The return that SBS expected to make—8.7% before tax—is significantly below the average return on other PFI deals, of around 10–20% (Public Accounts Committee, PAC, 2000).

#### *Risk allocation*

This was considered to be a high-risk project. The failure of National Savings would be a significant public concern, and SBS had to transform the business processes and the IT infrastructure (NAO 2003, para. 1.24). However, there were factors that mitigated these risks for the National Savings Agency:

- SBS has total responsibility for the new operational processes. It considered that, by having more control over its operations, unlike many other Private Finance Initiative projects, the risk of delays would be reduced (PAC 2000, para. 5). If it is unsuccessful, it will bear the full financial consequences. SBS planned to change the operational process slowly, as there was already a fully working system in place, avoiding a ‘big-bang’ approach to the transformation. Each stage was to be rolled out ahead of contracted dates, with teams checking usability and problems along the way. National Savings was to monitor this transformation process. This was a central element to the management of risk—the ability to introduce change step by step, and to test and prove the system before moving on. It was considered by SBS to be a major advantage over its previous projects, such as with the Passport Agency, which were not so successful (PAC 2000, para. 20).
- It was thought that SBS would be able to succeed due to its ability to invest heavily in new technology for the first few years to raise efficiency without being constrained by an annual budget, as National Savings previously was (PAC 2000, para. 7).

#### A1.2.5 Lessons for the pension system

- This appears to be a good example of a balance between maintaining competitive pressure and reducing costs to both the bidders and the government department.
- The relative success of the project also relied on SBS’s ability to implement changes step by step. It was possible in this instance to have a period of testing before nation-wide implementation.
- Even in this seemingly well-constructed process, SBS appears to have failed to make the proper transformation from the previous national savings system to a new one.
- Although the performance monitoring system may incentivise the supplier, it is resource-intensive, especially when there are negotiations between procurer and supplier.

## A1.3 Cap Gemini and HMRC

### A1.3.1 Main details

HMRC entered into a contract with the Cap Gemini and Fujitsu consortium to supply IT services. This replaced a contract previously held with EDS for ten years, and another held by Accenture operating the National Insurance Recording System (NAO 2006a, para. 1.11).

#### *Details of the contract*

The supplier is paid on output delivered and not on inputs used. There are also incentives for improved efficiency over time (para. 1.16). The contract was for ten years (para. 1), with a value of £2,830m (para. 1.23). However, with higher-than-expected demand for IT services from HMRC, this may rise as high as £6 billion (para. 26).

### A1.3.2 Performance

#### *How long was the procurement process?*

The procurement process was completed on time and took 21 months. This compares favourably with other similar deals, although processes are getting faster (para. 1.23).

#### *Extra cost incurred by procurer*

The extra cost incurred by the procurer amounted to £27m for the procurement process (£9m for advisers), which is less than 1% of the total contract value. This is compared against average procurement costs of past contracts analysed by the NAO of 3% of total contract value, although this success may be due to economies of scale (para. 1.20).

#### *The transition period*

The previous licence had ensured that the incumbent would cooperate with the entrant and continue services until the transition (paras 1.2 and 2.3). The entrant had to be ready to take over, 'learning the business' before the start of the contract. HMRC facilitated the relationship between the outgoing and ingoing suppliers, and provided overall management of the transition (Figure 8, p. 2.4). 96% of EDS's staff and 97% of third-party contracts were transferred over to Cap Gemini (para. 2.4).

### A1.3.3 Competitive restraints

#### *Number of bidders*

Four bidders responded, from which three were shortlisted: RPS Alliance (the incumbent), Cap Gemini with Fujitsu, and Fusion Alliance (BT, Computer Systems Corporation and Scumberger Sema) (para. 1.7).

#### *Is there evidence of being locked into one provider?*

EDS (part of the RPS Alliance) was seen as a strong incumbent. The initial stages of the procurement process attracted little interest from the industry in bidding against the

incumbents. A high-profile campaign was conducted to encourage bidders other than EDS and Accenture (para. 1.2).

#### A1.3.4 Contract design

##### *HMRC sought to encourage competition in the face of a strong incumbent*

To ensure a level playing field, HMRC paid for the UTCs<sup>63</sup> that a new supplier would have to pay. Without such payments, HMRC regarded the costs of transition for a new entrant as too much to launch an effective bid, as the bidders would have to deliver a strategy that was less risky than the incumbent's in order to counter the increased costs associated with transition (the incumbent's sunk costs) (para. 1.7). The NAO regarded this as an essential step in encouraging competition (para. 8).

Furthermore, by not paying these costs, the Department would have sent a signal to the market that it was effectively 'locked into' its existing supplier, as transition costs would put new competitors at a severe disadvantage when bidding (para. 7).

##### *Bidding costs were reimbursed*

HMRC paid £8.6m towards bidding costs in order to stimulate a sufficient level of competition during the bidding process (para. 6). The government also contributed towards bidding costs in the public-private partnership deal for the London Underground (NAO 2004, para. 6).

##### *Transition costs*

To stimulate competition, HMRC paid £37.6 m to the entrant for the transition costs it incurred (see Table A1.1).

**Table A1.1 Transition costs**

Category	£m
UTCs to Cap Gemini/Fujitsu	37.6
Transition support costs to EDS/Accenture	5.3
Departmental staff and running costs	1.3
Consultancy advice and support	2.4
DWP, and IT support costs for National Insurance Recording System 2 transition	0.5
Retained staff costs for EDS	0.4
Total costs of transition	47.5

**Source:** NAO (2006), Table 11, p. 27.

EDS considered that, if it had won the contract, the costs of transition to the larger contract would have been £4.4m. By choosing Cap Gemini a further £37.6m was needed (referred to as UTCs), while £5.3m was awarded to the incumbents to compensate for the

<sup>63</sup> The costs incurred in changing from one provider to another, minus the extra costs that would have been incurred had the incumbent won the new contract.

transition support costs. The new entrant identified these UTCs as the costs that would not have occurred had the incumbent continued its operation. PAC mentions that the practice of paying such costs may be more efficient than leaving the private companies to pay their own costs, as these could be included in their prices plus a mark-up (NAO 2006a, paras 2.5 and 2.6).

The costs of projects that lasted across the transition period were paid according to the terms of the old contract with EDS, so that bidders would not be deterred (para. 3.8).

However, these UTCs had to be agreed with HMRC. This task was not complete by the time the transition actually started (para. 2.7).

The NAO (2006b) considers that the compensation paid to Cap Gemini may have been excessive.

#### A1.3.5 Lessons for the pension system

- The ASPIRE contract sought to correct the deficiencies of previous government contracts with private suppliers. EDS was seen as a strong incumbent, but nevertheless was replaced by a new entrant. The provisions of the authorities sought to diffuse the advantages that an incumbent usually enjoys—for example, by paying for Cap Gemini's UTCs.
- However, some doubt remains about the suitable level of compensation that the authority should have paid the relevant parties in order to stimulate an appropriate degree of competition.

### A1.4 Swedish Premium Pension system run by CSC Sverige

#### A1.4.1 Main details<sup>64</sup>

An account administrative IT system was required to support the PPM. As there was no system, at that time, that met the PPM's needs, it was decided to adapt an existing system rather than design a bespoke package. In 1998 CSC won the contract for the project.

#### A1.4.2 Performance

CSC failed to deliver the system on time, resulting in postponement of the first fund choice scheme by one year. There were two options available to the PPM: draw up another contract with a different supplier, or continue with CSC. PPM considered that the first option would delay delivery even more, until around 2001.

<sup>64</sup> This information on the Swedish Premium Pension system in this sub-section is based on Riksrevisionen (2004).

As a result of the failure to deliver in a timely fashion, the authorities sought ways to limit the demands on the administration system. PPM decided that the number of fund options would be limited for each saver. In 2000 PPM decided that the system it had developed in-house was superior to CSC's efforts. PPM broke the contract with CSC and continued the work on its own in-house system. Consequently, PPM had to pay compensation to CSC of £8.6m. The compensation was paid for by the Swedish Government. This means that the charges for the PPM pensions do not reflect the full cost base.

## A1.5 Summary

The problem areas identified in this appendix, examined below, point to the potential risks that might arise in the NPSS, although there may also be ways to overcome these. The instruments to mitigate some of the risks would normally result in some costs, which should be taken into account in any comparison between the NPSS model and the Industry model.

### A1.5.1 Performance

The suppliers studied did not necessarily perform very well: CSC, in particular, and SBS did not deliver on time. However, in the case of the SBS and Cap Gemini consortium (HMRC), contract provision was made for this. SBS was monitored and paid when it reached its performance targets. The Cap Gemini consortium was also paid on performance rather than the costs it endured. Compensation was also paid by SBS, Cap Gemini and CSC for failures in performance. This ensured that there were no budget overruns for the government department, and it only paid for what was delivered.

### A1.5.2 Restraints to competition

Without effective competitive pressure, an incumbent supplier has no incentive to perform over and above the incentives created by a payment for performance contract. Competitive pressure can be so weak that a government department becomes locked into one supplier with no potential competitors. There is some evidence of being locked into a particular supplier in relation to EDS, the National Savings licensee, and Camelot, the National Lottery licensee. In the case of Camelot, in particular, the NLC feared that there would be only one credible bidder for the third licence. The studies showed a number of reasons for a lack of competitive pressure.

- The set-up of large administration systems requires a substantial fixed capital investment. The incumbent has already sunk capital into the system, which puts it at an advantage over competitors who will need to factor these costs into their price offers.<sup>65</sup>

<sup>65</sup> However, the competitor, by having to build a whole new system, can offer a radical rehaul of the administration system that may be relatively more costly for the incumbent to offer.

- The incumbent often enjoys a superior knowledge of the market. In the case of the National Lottery, Camelot had information on the Lottery retail network and was not obliged to release this information to its competitors.
- The risks inherent involved in a transition of operators work against the likely success of a new entrant. Potential suppliers have to submit a bid that compensates for this, while the incumbent does not.
- The relatively large costs involved in making bids deterred potential competition, especially in the National Lottery example.

### A1.5.3 Contract design

Some of the contracts sought to mitigate the lack of competitive pressure; for instance, by paying for bidding costs and sunk costs. The ASPIRE contract did this, which resulted in a change of supplier, even when the incumbent was seen as particularly strong. However, there is concern that the parties involved were overcompensated. In other words, these results suggest that it may be difficult to stimulate competition without overcompensation.

To smooth transition from one supplier to the next, the studies suggest that the contract should require all parties involved to cooperate. The initial National Lottery contract lacked such provisions, but they were included in the second contract and the ASPIRE contract.

### A1.6 Summary table

Table A1.2 summarises the points made in the three studies, together with those of the Swedish Premium Pension system.

**Table A1.2 Comparison of contracts for large administration systems**

Criteria	National Lottery	National Savings	HMRC	Swedish system
<b>Main details</b>				
Length of contract	7 years	15 years	10 years	–
Length of procurement process	Longer than expected. Due to begin in October 2001, the new licence finally came into operation in January 2002	–	21 months	–

## HOW TO EVALUATE ALTERNATIVE PROPOSALS FOR PERSONAL ACCOUNT PENSIONS

Criteria	National Lottery	National Savings	HMRC	Swedish system
Value of winning bid	–	£635m (expected net present value as at 2000)	£2,830m, but the contract value could rise to £6 billion due to higher-than-expected demand	–
<b>Performance</b>				
Was the project delivered on time?	n/a	No, but the supplier had paid compensation for this	–	CSC failed to deliver the system on time, resulting in postponement of the first fund choice scheme by one year
Was the project on budget?	–	SBS was unlikely to make its expected return of 8.7%, and the NAO considered it likely that a loss would be incurred	Supplier is paid on performance. £593.3m in first year (10% profit margin)	No
How long did it take to set up the system?	The NLC planned 15 months for the transition	98% of performance targets were achieved in the first four years	Transition completed in six months	Seven months to choose IT provider, but due to the unreliability of this system, PPM delivered an in-house system to replace it in four months
Compensation for failure	–	£2.1m has so far been paid by SBS over four years for missing performance targets	£2.67m has been paid by the supplier	The claim for compensation was rejected in the court case
<b>Competitive restraints</b>				
Number of bidders	There were eight for the first licence, and two for the second licence	90 responded to advert, four of which chosen to progress to the next round	Four	–

Criteria	National Lottery	National Savings	HMRC	Swedish system
Costs of making a bid	Between £3m and £4m	£1.25m and £1.73m for the final two bidders	HMRC paid £8.6m towards bidding costs	–
Is there evidence of being locked-into one provider?	Yes, the NLC considers it likely that there will be only one credible bidder for the next licence	–	EDS was seen as a strong incumbent but lost the contract. However, there were special arrangements to facilitate this	Unclear, but PPM chose an in-house solution rather than outsourcing following the delays with CSC
<b>Contract design</b>				
Problems caused by the contract	No requirement for the incumbent to cooperate with competitors; hence, the information needed to make an informed bid was lacking	–	–	–
What provisions were made in the contract?	Camelot must now cooperate with bidders and a potential entrant	SBS is financially responsible for errors and performance loss	Bidding costs and transition costs paid for by HMRC	–
Extra cost incurred by procurer	£5m costs for NLC	–	£38.6m contributed to bidding costs £43.6m for transition costs Other procurement costs £27.5m	–



## A2 ASSUMPTION ON WEIGHTED AVERAGE EARNINGS

Oxera's model to estimate the size of an average default and non-default fund in the Industry model in section 5 assumes that the weighted average earnings of the target population amount to £18,094 for 2006. Furthermore, in line with the Pension Commission's own assumptions (2005, p. 2002), the model assumes that contributions are only made on the portion above £5,000 (the primary earnings threshold) of an individual's earnings.

The sources for these assumptions are explained below.

### A2.1 Contributions start after earnings of £5,000

The White Paper assumption about the threshold of £5,000 is explained as follows.

We have looked closely at the age and income level at which automatic enrolment should begin, from the point of view of both employees and employers. We have concluded that employees should be automatically enrolled when their earnings are above a lower threshold of around £5,000 a year. This is also when contributions would begin to be paid (contribution band levels are explained in paragraph 1.103).

This is a suitable point to automatically enrol employees because we want to bring as many employees into the scheme as possible, at a level of contributions they are likely to be able to afford. **Because contributions will be calculated on a band of earnings starting at around £5,000 a year, costs will be low for people earning just above this level.** Low earners will be brought into pension saving, will get into the savings habit, will see their savings increase as their earnings grow and, of course, they will have the right to opt out (paras 1.86 and 1.87) [emphasis added].

### A2.2 Weighted average earnings of the target population are £18,094

The White Paper assumption about the weighted average earnings is explained as follows.

Figure 1.xiv illustrates the effects of Personal Accounts by firm size. It shows that proportionately more employees will be eligible for automatic enrolment in firms with fewer than 50 employees. The minimum contribution as a percentage of labour costs is also higher for these firms. (para. 1.124)

Figure 1.xiv The effects of personal accounts by firm size				
Firm size (number of employees)	1–4	5–49	50–249	250+
Number of private sector employees (million)	2.2	4.6	2.6	9.1
Number of employees eligible for automatic enrolment (million)	1.4	3.3	1.7	4.4
Personal account participation rates (%)	70	70	65	60
Number of personal account members (million)	0.9	2.2	1.0	2.6
Capped average earnings per participant (£)	15,500	18,300	19,300	18,300
Average cost per employee (£)	140	190	170	110
Costs of minimum employer contribution (£ million)	300	900	400	1,000
Minimum employer contribution as percentage of labour costs (%)	0.9	0.9	0.7	0.5

Source: DWP (2006a) p75

## A3 FRANCHISING CONTRACTS: ACADEMIC LITERATURE

This appendix reviews academic literature on franchising contracts. Section A3.1 outlines the determinants of optimal contract length and section A3.2 examines the role of regulators during the reprourement process.

### A3.1 Determinants of the length of contract

Contract theory suggests multiple factors that affect optimal contract length. For example, on the one hand, contracts may have to be long enough that the franchisee has sufficient incentive to invest. On the other hand, they may have to be short so that the franchisor has the freedom to choose between competing offers (see Brickley, Misra and Van Horn, 2003).

Contract theory literature lists three main determinants of the optimum contract length: degree of relationship-specific investment; investment incentives; and uncertainty.

#### A3.1.1 Asset specificity

Transaction cost economics suggests that the duration of a contract will increase with the value of relationship-specific investments at stake. One of the key dimensions of the contractual design is thus the impact on transaction costs.<sup>66</sup> In order to economise on transaction costs, the length of the contract should be determined according to the characteristics of the transactions to which the agreement pertains. Transaction costs are assumed to be minimised if contract duration is positively correlated with the level of asset specificity (Masten 1986, Joskow 1987, Crocker and Masten 1988).

The rationale for this is that the specialisation of a durable asset to a particular user, or more accurately the high costs of making it available to others, generates a quasi rent<sup>67</sup> which reflects the asset's opportunity cost (Klein et al. 1978). Given that agents are inclined to opportunistic behaviour (Williamson 1975), the distribution of this quasi rent resulting from relationship-specific investments is a source of conflict between the partners: each will attempt to expropriate (redistribute) the rents accruing to specific assets through mechanisms such as hold-up activities<sup>68</sup> or ex post strategic bargaining.<sup>69</sup>

<sup>66</sup> Transaction costs refer to the costs that need to be incurred by an entrant in relationship-specific investment after taking over the business from the incumbent firm—ie, relationship-specific sunk costs.

<sup>67</sup> Quasi rent is a return earned on a sunk cost investment, net of post-investment opportunity costs. In the case of investment in highly company-specific assets, the opportunity cost is effectively very low after the investment has been made.

<sup>68</sup> The 'hold-up' problem may arise when one or both parties have to make investments to support the transaction (Masten and Snyder 1989). These investments relate, for example, to building up trust between the contractor and the company signing the contract, or to building up the infrastructure to serve the new client (eg, in the case of postal services, this could include mail centres, sorting equipment, and transportation network).

<sup>69</sup> The design of post-investment contracts between the parties will be determined by a series of interlinked actions in which both parties would attempt to obtain as large a share of the quasi rent as possible, for instance through profit-sharing agreements.

Hence, relationship-specific investments enhance the value of exchange by creating quasi rents, but simultaneously they may also cause a waste of resources in order to influence the distribution of gains from trade.

Joskow (1987) concludes that when agreement between agents involves substantial investments in relationship-specific capital, a relationship that relies on repeated bargaining is unattractive. In other words, the higher the specificity of investment, the longer the contract ought to be.

Yvrande-Billon (2004) notes, however, that in the case of privatisation of the British railways, the contractual duration imposed by the reformers does not match the degree of specificity of the rolling-stock assets. The asset specificity relies on the design of trains for special tracks, regional differences in the power supply system and signalling mechanisms, and variable fleet composition, all of which reduce the redeployability of a given fleet. Yvrande-Billon concludes that the new organisational structure of British railways relies on contractual arrangements that do not minimise transaction costs and therefore are not efficient.

As far as the pension system is concerned, the required investment should be seen as moderately transferable—the databases, operational systems and even hardware could be seen as redeployable. The relationship-specific investment involves primarily training of staff in use of those systems. It therefore seems, from the point of view of the degree of asset specificity that the pension system contracts may not necessarily have a long duration.

### A3.1.2 Strategic commitment and investment incentives

Short contracts discourage investment because of uncertainty of future income flows and contract incompleteness (Posner 1972). Laffont and Tirole (1993) also note that the prospect for an incumbent of being replaced by an entrant reduces the incumbent's incentive to invest in capital that it would not be able to transfer at a correct price. When the investment is non-contractible, it cannot be fully compensated and the incumbent has too little incentive to invest. The regulator can remedy this situation by allowing for an optimal procurement rule that would favour the incumbent at the renewal stage. Nichols and Welsby (1999) note that in the rail industry, assets are transferable although not perfectly observable. This leads to the observation that underinvestment may occur—given that current contracts lack procurement clauses and rolling stock leasing companies do not provide equivalent guarantees.

The theory also suggests that any investment made in either physical or human capital will strengthen the franchisee's reputation as a committed player and thus will encourage any subsequent contract to be of a longer duration. Hence investment could be perceived as a strategic action that raises barriers to entry and makes it harder to achieve effective competition to in procurement stages. In line with this hypothesis, Brickley, Misra and Van Horn (2003) find that investment has a positive impact on contract duration, implying

that, irrespective of the length of the contract, any investment would strengthen the company's position during the subsequent tendering process.

Affuso and Newbery (2002) indicate that competition and strategic behaviour at the reprocurement stage in the British railway industry can create incentives for delayed investment. Investing just before the end of the franchise improves the incumbent's probability of having the contract re-awarded and provides them with a first-mover advantage, while raising the entry costs for other potential bidders.

From the point of view of strategic commitment and investment incentives, the implication for the pension system is that, in the case of short-term contracts with frequent revision processes, the incumbent will be reluctant to invest. It is not clear whether the incumbent could employ the strategy of investing shortly before the revisionary periods, which would raise entry costs for other potential bidders. Therefore, theory would suggest longer-term contracts that would induce the incumbent firms to adopt a long-run smoothed investment strategy.

### A3.1.3 Uncertainty

Crocker and Masten (1988) find that when the situation in the market is uncertain, the number of contracts and their duration decreases. Their finding is based on the repercussions of the 1973 oil embargo. Longer-term contracts increase dynamic efficiencies by providing a more stable source of revenues and therefore minimising uncertainty about future income streams. In addition, as risk falls, prices charged for the services may be reduced.

Apart from market uncertainty, the other relevant uncertainties are future competition, cost and regulation (Armstrong, Cowan and Vickers 1994). The effect of uncertainty is, as shown by Guiso and Parigi (1999), even stronger for firms that cannot easily dispose of their capital in second-hand markets.

Given the nature of the pension system, the relevant type of uncertainty in the suggested reforms is the company's uncertainty of future income flows, which may in turn result in lower investments. Thus, the uncertainty approach would suggest using contracts of long durations.

## A3.2 Regulatory impacts during the revision process

During the design of agreements, franchisees attempt to take into account all of the factors mentioned in section A3.1 above. Often it becomes necessary to revise the agreements because of subsequent market developments for example. Given that the proposed pension system might require intervention in future re-procurement and revision stages, Oxera has identified selected historical cases of such interventions.

There are numerous instances where the regulatory authorities have intervened during the revision stages of franchising contracts in order to promote greater competition between the incumbent and the competitors in subsequent tendering processes.

### *Postal sector*

There are some examples in the postal sector where incumbent operators have been accused of using the length of contracts strategically to block entry or expansion of existing rivals. For instance, in 2004, the Danish Competition Authority handled a case about potential abuse of its dominant position by Post Danmark (Danish Competition Authority 2004). The complaint included allegations about agreements of unreasonable long duration in addition to price discrimination and loyalty rebates. In relation to the length of agreements, the Competition Authority rejected the allegation about agreements of unreasonable long duration. According to the Authority, long-term contracts are not necessarily problematic if they can be cancelled at short notice and the buyer does not have to pay damages.

### *Railway industry*

The policy designed by the UK Strategic Rail Authority (SRA) to encourage investment in rolling-stock after privatisation consists of three main elements:<sup>70</sup>

- extension of the contract length on new franchise contracts to a minimum duration of 15-20 years, with a review taking place every five/seven years;
- acting as a procurement agent by buying new rolling stock with the intention of transferring the stock to a successful franchisee;
- offering larger franchises at reprocurement.

Such a policy, as Affuso and Newbery (2002) note, is inconsistent with the theory of investment perceived as a strategic pre-commitment preceding a renewal process. Longer contracts may be required for radical changes in strategy, such as the introduction of profound technological advancements (eg, high-speed trains), but not necessarily for 'business as usual' scenarios. Increased interoperability and redeployability suggests a development of an increasingly flexible market suited for short-term contracts, which reinforces the suggestion that long-term contracts are not the correct solution for dealing with under-investment.

Nevertheless, the extension of a contract improves incumbent's certainty about future income flows and therefore encourages more relationship-specific investment. Similarly, the procurement agreement allows for the incumbent to reduce the present discounted value of potential losses of future investment, which further increases the incentives to invest. As such, that investment strengthens the incumbent's position during the next revision process.

<sup>70</sup> February 2000 announcements.

*Waste management*

In 2001, the European Commission investigated the agreements between the Duales System Deutschland AG (DSD) and the waste collectors relating to its system of selective collection and recovery of household packaging waste in Germany (DSD decision).<sup>71</sup> DSD was the only company that runs a countrywide waste management system and had signed exclusive agreements with the collection/recovery companies of up to 15 years. Although the Commission recognised that a certain duration of the agreement is necessary to enable collectors to achieve an economically satisfactory return on their investments, DSD was required to reduce significantly the duration of contracts in order to encourage entry from other collectors into the downstream market.<sup>72</sup> As a result of the Commission's decision, the tender for the new service agreements started four years earlier than initially foreseen by DSD (in 2003 instead of 2007). In addition, the Commission considered that agreements longer than three years were not indispensable to recover the investments in waste collection infrastructure. A similar conclusion was reached in the ARA decision (European Commission 2003), where the Commission accepted a contract duration of three years—after these three years ARA is free to terminate the contracts or renew them for a further two years.

In the UK, OFT has recently investigated the municipal waste industry and reported on improvements that could be achieved through establishment of competitive markets (OFT 2006). The local authorities are currently carrying the burden of signing contracts for municipal waste collection services, the duration for which ranges from on average seven to 26 years. The OFT argues that an improvement in competition can be achieved through contracts long enough to allow recovery of the supplier's sunk costs, which is estimated at five years. In order to increase competition in the bidding process, the OFT suggests removing the requirement of having previous experience in the industry, especially given easy monitoring and limited returns to scale (which should encourage tenders from small companies). The open procurement process is also justified by the 'relatively simple' nature of the waste collection industry. The OFT notes, in line with the OECD (2000) finding, that frequent tendering invites collusive behaviour, and hence requires that appropriate measures be implemented to tackle the problem.

<sup>71</sup> DSD itself did not collect the waste but used local collecting companies with which it had 'service agreements'. See European Commission (2001a and b).

<sup>72</sup> In addition to a certain duration of the agreement, the Commission recognised that exclusivity is necessary in order to allow collectors to achieve a certain degree of efficiency. The Commission established that the collection of household packing waste requires important network economies, which result from the fact that it is only viable to collect household packaging waste if a sufficient amount of waste can be collected. As a result, it is necessary to achieve a certain degree of critical mass (or 'bundling of demand') for a system of collection to be viable. Hence, to be efficient, a collector would require exclusive access to a certain number of households.

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