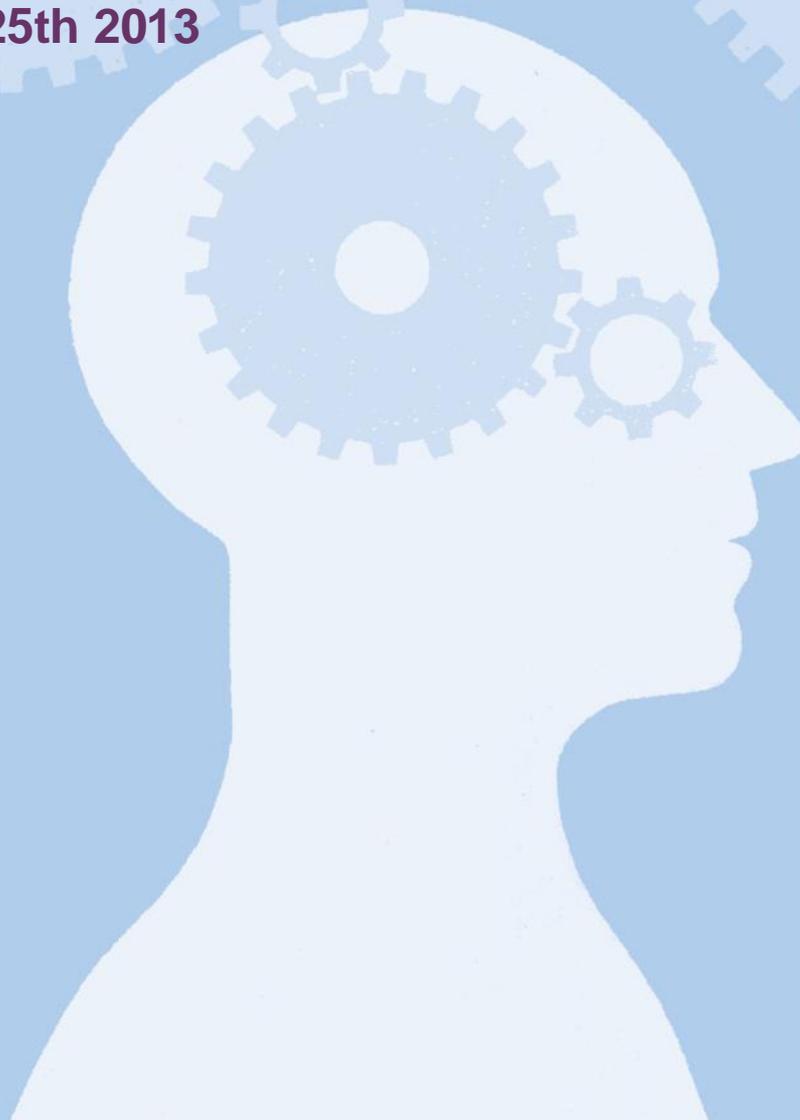


# **Study on the position of savers in private pension products**

**Prepared for the DG Internal Market and Services of the European Commission and the Financial Services User Group**

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This study has been conducted in cooperation with regulators, European and national trade associations and various research bodies.

Oxera is grateful to all of the people who have assisted this study, whose cooperation, contribution and dedication over the course of 2012/13 have made it possible. Any errors, however, remain those of Oxera.

## Executive summary

Sustainable provision of adequate retirement income has become a key topic throughout the EU in recent years. In numerous Member States, revisions of public pension funds have been accompanied by the introduction of private pension products, or modifications to existing products.

DG Internal Market and Services and the Financial Services User Group (FSUG) commissioned Oxera to conduct a study on the position of savers in private pension products across 14 EU Member States.

In addition to providing a categorisation of the systems, the key topics of investigation covered in the report include the level of charges and costs of private pension systems; returns, risk exposure and the risk management framework in place; and the information available to consumers, consumer representation and consumer behaviour with regard to private pensions.

This report describes the methodology used and summarises the findings of the study.

### Approach

The study began with a set of questions set out by the FSUG, from which a broad list of themes was created, in turn leading to a set of indicators required to assess the individual topics and questions. Extensive desk research was conducted and Oxera has been in contact with national regulators, associations representing pension providers and pan-European organisations to collect the required information. Where information availability was limited, alternative data has been analysed to provide an approach to assessing the issue. Oxera has classified these questions into the following topics, which form the structure of this report:

- pension set-up, including information on key characteristics of the systems, most prominent schemes, participation, taxation and other issues (section 2);
- charges and costs, focusing on those to be paid by consumers and including analysis of economies of scale (section 3);
- returns and risk, which are inter-related (section 4);
- information available to consumers, consumer behaviour and representation in the pension systems (section 5).

Each topic of these topics is described briefly below, together with an assessment of the information and data that have been analysed.

### Pension set-up

At their simplest, pensions are a form of savings where a future pensioner saves now in order to pay for consumption in the future, usually at a point in the life of the saver when they are older than a specified age and no longer employed. However, to persuade individuals to undertake such savings, all countries looked at in this study use either fiscal incentives and/or compulsion to encourage this type of saving, and have created special regulatory and other structures relating specifically to these pension savings. The application of these incentives or requirements means that the resulting pension systems in each country are relatively complex in their nature, and their individual set-up varies significantly between individual countries.

Understanding the set-up of pensions is important for two reasons:

- the pension set-up is likely to affect ‘outcomes’ for consumers. For example, in countries with mandatory pension systems and/or strong fiscal incentives, one is more likely to observe a relatively high participation. When assessing ‘market outcomes’ of pension systems across countries, it is useful to understand to what extent ‘positive’ or ‘negative’ outcomes are driven by certain aspects of the pension set-up (which could then potentially be redesigned to improve outcomes for consumers);
- some of the metrics in relation to the pension set-up can be used as part of ongoing monitoring of whether consumers are likely to have adequate retirement income when they retire. For example, if participation is currently low among certain groups or cohorts in society, or it looks reasonable but contributions are low, this is likely to raise concerns about the adequacy of consumers’ retirement income (and policy-makers may want to consider what to do about this now, rather than at the point when these people retire).

There is a considerable quantity of information available on pension system set-ups, and the data reveals the wide variety that exists among the Member States. However, there are some notable similarities between some of the countries in terms of the set-up of their private pension systems, and it is possible to group the countries into three broadly defined clusters, with two outliers:

- the Netherlands, France, Sweden and the UK, where the private pension systems are oldest and moderately customised. Private pensions tend to be voluntary, but include mandatory components;
- Germany, Austria and Italy, where private pensions were introduced between 1974 and 1993. The level of customisation is higher than in the other systems, since they are fully voluntary and include several schemes from which employers and individuals can select;
- the Central and Eastern European countries (Poland, Slovakia, Estonia, Romania, Hungary), with relatively young private pension programmes and strongly emphasised, mandatory occupational plans;
- Spain and Greece are classified as outliers. The Spanish system offers an unusually high level of customisation, even including schemes with regional focus; in the case of Greece, the system relies on voluntary joiners and has a low level of take-up.

## **Charges and costs**

The ultimate performance of a pension scheme, from the viewpoint of the individual saver, depends on the contributions they (and their employer) make to the scheme and the returns that the scheme produces over the lifetime of the savings. For all types of private pension scheme, the net performance will depend on the charges applied to the scheme. These charges will in part reflect the cost of providing the pension scheme. Not all costs may be directly visible to the consumer, but ultimately one could expect the costs of providing a pension scheme to be borne by the consumer.

Charges can have a large impact on the final value of the pension pot that consumers accumulate during their working life, as estimates in this section show. An annual management charge (AMC) may not initially appear to be that large to individual consumers, but as it is applied to the value of the assets every year, the cumulative impact of the charge increases over time and can be substantial. Therefore, when assessing pensions from a consumer perspective, charges are important.

Regulators, representatives of consumers and pension providers as well as other commentators have recognised the importance of pension charges, and their relationship with the costs of provision, and there is an increasing demand for analysis in this area. While some studies on charges and costs (and economies of scale) in the literature cover some of the pension systems included in this study, data on charges and costs has typically been difficult to obtain and has not been readily available on a consistent basis across countries. Reflecting the increasing importance of this topic in the pensions debate, however, the availability of data is improving and can be expected to improve further in the near future, owing to a number of initiatives, including by European authorities.

This report attempts to identify all types of charges and costs, including for example the costs of trading and post-trading for securities, which are easy to overlook.

## **Returns and risk**

When a consumer makes a decision about whether to invest in a private pension scheme, they need to consider how much they can realistically expect to receive from the investment in terms of an annual pension upon retirement. For a defined-contribution (DC) pension scheme, this requires decisions about the amount of contributions they will make; assumptions about their likely longevity, the returns of the pension scheme, rates of interest and inflation; and information about the level of charges. For a defined-benefits (DB) pension scheme, in principle there will be a guaranteed retirement income, although depending on the type of scheme the consumer may still hope for benefits in addition to the guaranteed level (typical in Germany, for example), and there can remain a risk that the minimum retirement income is not delivered as defined (which has occurred in a number of different pension systems). If the consumer's expectations for these factors fail to materialise, the pension income will not meet their expectations. The extent of this uncertainty is referred to in this report as 'pension risk'.

One of the key risks that the FSUG asked Oxera to look at is investment risk, which is particularly relevant to DC schemes. In all uncertain investments, there is a tendency for risk to be correlated with return, as investors expect to be compensated for taking on risks. Equity returns have tended to be higher, on average over long periods of time, than bond returns since equity faces a higher level of risk. The relationship between the returns and risk of securities is determined by market dynamics that tend to reflect the average preferences of investors, but different investors have different investment horizons, which can make some securities more appropriate for different investors with different circumstances.

Investment risk in pension systems can be managed to some extent, and there are mechanisms for sharing risk between pension providers, consumers and the wider financial system. The level of risk in different pension schemes needs to be understood and compared so that well-informed decisions can be made on the critical trade-off between minimising risk and maximising returns.

In most countries, readily available data on pension fund returns does not go back much more than a decade. Pension funds do assess their returns year on year, as part of normal reporting, but most regulators have not made this information available on a systematic basis, apart from in Eastern Europe (although here the pension schemes are relatively new). Oxera has therefore drawn on alternative sources of information about investment performance over the very long term, available from the wider investment literature. However, historical information can provide only an indication of possible future developments, and robust mechanisms for managing risk will always be required.

Data on relative risk exposure for consumers of different pension schemes is not typically available and there is little quantitative analysis in the literature. Oxera has therefore

developed a framework for assessing the relative importance of some of the key risk factors for consumers of DC schemes.

### **Saver information, representation and behaviour**

Until the recent development of DC-funded pension schemes in Europe, most traditional pension provisioning involved little need for consumers to make decisions. Most retirement income came from state pension systems (pillar 1) and that from the private sector often involved company-run DB schemes based simply on years of employment and final salary. However, the growing role of DC pension schemes has increased the need for consumers to make decisions with regard to both employer-arranged and personal pension schemes:

- employers may still arrange, administer and contribute towards occupational pension schemes, but consumers now tend to have a greater say in investment decisions since they face the investment risk directly; with DC schemes, consumers also need to be more aware of the impact of charges;
- personal pensions are also more likely to require consumers to make investment decisions owing to fewer DB schemes being offered.

Importantly, the number of decisions required from individuals strongly depends on the scheme type. In general, personal DC schemes would give an individual the most choice—in particular, on whether they want to join, how much to contribute and in what assets. This stands in clear contrast to the most restricted schemes, such as the employer-arranged DB contracts, where consumers are often required to join a specific scheme with no control over their assets or contribution levels, and only an option to opt out.

Are consumers well placed to make these decisions? For consumers to make good decisions, they need access to the right information and sound advice, while their needs should be considered by those controlling the pension system. There is much evidence that suggests that consumers are often not well placed to make good decisions about long-term financial products, and therefore this is an important topic for the wider pension debate in Europe.

Information has been drawn primarily from studies conducted into consumer behaviour with regard to financial markets, as well as some factual evidence (for instance, regarding saver representation and types of information) collected from national and European pension regulators. Evidence collected from the point of view of the latest thinking from behavioural economics is relatively limited in availability.

### **Conclusion**

This report collates, presents and summarises an array of information about the pension systems of 14 EU Member States, in order to provide the FSUG and others with consistent information available that can be used in the policy debate. The report identifies where information availability is currently restricted and explores possible analytical frameworks for assessing important topics where data is limited. The report does not attempt to answer policy questions, but instead aims to support the debate by helping to improve the clarity of understanding about how private pension systems work in Europe today.

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# 1 Introduction

DG Internal Market and Services and the Financial Services User Group (FSUG) commissioned Oxera to conduct a study on the position of savers in private pension products across 14 EU Member States. This section presents an overall introduction to the study, providing the context of the recent developments in private pension systems across the EU from the perspective of the beneficiaries of private pensions (the consumer). The section then defines the scope and sets out the approach for all of the sections of the study.

## 1.1 Objectives of the study: a consumer focus

Private pension provision has become increasingly important in many EU Member States, and the role of the European Commission in assisting the development of private pension systems has increased. This section explains how this study fits into the wider context of these developments.

The EU guidelines for pension provision have three common objectives:

- (1) **adequate** retirement incomes for all and access to pensions which allow people to maintain, to a reasonable degree, their living standard after retirement, in the spirit of solidarity and fairness between and in generations;
- (2) the financial **sustainability** of public and private pension schemes, bearing in mind pressures on public finances and the ageing of populations, and in the context of the three-pronged strategy for tackling the budgetary implications of ageing, notably by: supporting longer working lives and active ageing; by balancing contributions and benefits in an appropriate and socially fair manner; and by promoting the affordability and the security of funded and private schemes;
- (3) that pension systems are **transparent, well adapted** to the needs and aspirations of women and men and the requirements of modern societies, demographic ageing and structural change; that people receive the information they need to plan their retirement and that reforms are conducted on the basis of the broadest possible consensus.<sup>1</sup>

Recent demographic trends and the resulting longevity extensions have cast doubt about the financial sustainability of pension systems, as well as the adequacy of retirement compensation. For many years, the European Commission has stressed the importance of adequate pension provision for factors such as social cohesion—in José Manuel Barroso's own words:

Millions of Europeans are wholly dependent on pensions. The crisis has shown the importance of the European approach to pension systems. It has demonstrated the interdependence of the various pension pillars in each Member State and the importance of common EU approaches on solvency and social adequacy. It has also underlined that pension funds are an important part of the financial system. We need to ensure that pensions do the job intended of providing the maximum support to current and future pensioners, including for vulnerable groups.<sup>2</sup>

As a response to these challenges, over the last decade a number of Member States have sought to expand the future role for pre-funded, privately managed pension schemes. Until the early 1990s, private pension schemes were widespread in only a few Member States,

<sup>1</sup> European Commission (2010), 'Progress and key challenges in the delivery of adequate and sustainable pensions in Europe', Occasional Papers No 71, p. 16.

<sup>2</sup> European Commission (2010), 'Green Paper towards adequate, sustainable and safe European pension systems', p. 2.

most notably Denmark, Ireland, the Netherlands, Sweden and the UK.<sup>3</sup> More recently, a number of Member States—in particular, the 2004 accession states—reshaped their statutory schemes by introducing mandatory yet privately managed pension schemes to complement the traditional, unfunded tier. The result has been a wide variety of public and private pension systems across the EU, characterised by different levels of development, funding, exposure to risks, and, most fundamentally for savers and beneficiaries, expected benefit adequacy, different levels of financial sustainability and transparency.

There has been considerable debate in recent years about the financial stability of private pension schemes, most notably with the development of the IORP Directive,<sup>4</sup> which aims to create common requirements for the prudential regulation of occupational retirement schemes. While financial stability of pension schemes is important to savers in terms of building their trust in the reliability of such long-term savings vehicles, these consumers are also affected by a wider range of issues regarding the potential returns on their savings, the uncertainty surrounding those returns and the information and advice that is available to them. There is a need for more analysis of how private pension systems in the EU work from the perspective of the consumer.

The objective of this study is therefore to collect and analyse data from a consumer perspective on a wide range of specific metrics in relation to the differing levels of adequacy, safety, risks and cost-effectiveness. In the Invitation to Tender for this study, the European Commission notes that no such overreaching analysis has been conducted to date, and thus the study bridges an obvious gap in the literature.

This study forms only one part of a wide range of activities being undertaken across the EU to assist in the development of private pension systems. This study has drawn on many other studies and reports, which are listed in the bibliography (see Appendix 1).

## 1.2 Scope

The FSUG commissioned Oxera to look at the private pension systems of 14 EU Member States, which were selected by the FSUG to provide a representative sample of the EU 27. The selected countries were: Austria, Estonia, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Romania, Slovakia, Spain, Sweden and the UK. In this report, the countries are typically listed according to the country segmentation explained in section 2.2, rather than the alphabetical order provided here.

The FSUG provided Oxera with a series of questions, reproduced in Tables 1.3 and 1.4, on which this study seeks to provide information. Oxera has classified these questions into the following topics, which form the structure of this report:

- pension set-up, including information on key characteristics of the systems, most prominent schemes, participation, taxation and other issues;
- charges and costs, focusing on those to be paid by consumers and including analysis of economies of scale;
- returns and risk, which are inter-related;
- information available to consumers, consumer behaviour and representation in the pension systems.

<sup>3</sup> European Commission (2010), 'Private pension schemes—their role in adequate and sustainable pensions', p. 4.

<sup>4</sup> Institutions for Occupational Retirement Provision Directive, which was first set out in 2003/41/EC of the European Parliament and of the Council of 3 June 2003 on the activities and supervision of institutions for occupational retirement provision. It continues to be under review and development during 2012.

The study includes private pension schemes which are defined to include both Pillars 2 and 3, but Pillar 1 (the main source of pension income in most countries) is not included. The exclusion of analysis of Pillar 1 necessarily limits the extent of analysis of the overall adequacy of national pension systems, as Pillar 1 typically provides a large component of retirement income. The study instead focuses on the adequacy of the returns of private pension systems relative to the amount put in by savers, which is less dependent on the changing set-up and adequacy of Pillar 1 schemes.

The definition of schemes as Pillar 2 or Pillar 3 is not as important for this study as it will be for other issues in the development of regulatory frameworks for pension schemes. This study considers pension systems from the perspective of the consumer, and therefore an alternative approach is used, dependent on the extent to which the consumer considers the pension scheme to be an aspect of employment. These important definitions are explained in section 1.3 below.

The FSUG requested that Oxera focus on the ‘dominant’ pension products, which are broadly defined to be the pension system which is the most typical pension scheme for current active (contributing) members from a forward-looking perspective—this is defined more precisely in section 1.3. This report refers to such schemes as the ‘most prominent’ pension product, to emphasise that these schemes are most relevant from a forward-looking perspective, but may not be the largest schemes currently in existence.<sup>5</sup> The aim of this focus was primarily to manage the scope of the study, by only looking at the larger schemes; however, the approach of the study should be appropriate for all pension schemes, given further resources for expanding the coverage of the study.

The definition of the ‘most prominent’ pension scheme tends to create a focus on defined-contribution (DC) schemes (see section 1.3 below), which was a focus supported by the FSUG. The language used of ‘consumers’ and ‘savers’, rather than ‘beneficiaries’ or ‘members’, might also be seen to be more consistent with DC schemes, as it suggests a focus on investment decision-making. Nevertheless, in the long run, one would expect the costs of private pension systems to fall on consumers whatever system is used, and therefore the focus on consumer decisions between costs and returns is appropriate to all private pension schemes.

This report looks at ‘most prominent’ pension schemes from the national perspective; it does not consider issues relating to cross-border financial products (eg, charges that arise from cross-border financial transactions), and the Single Market.

The FSUG did not ask Oxera to address any particular policy questions, but instead to provide information about, and analysis of, the various pension systems, which will assist others in assessing making policy recommendations. Oxera has provided analysis of results to assist in making comparisons between different pension systems—for example, comparisons of the overall level of charges and the extent of risk faced by consumers—but drawing conclusions about whether different aspects of pension systems are preferable is beyond the scope of this report.

## 1.3 Definitions

A study of this kind necessarily uses a number of terms to describe pension systems, some of which may have different interpretations in different contexts. To avoid confusion, this section describes the definitions used for a selection of the terminology where alternative definitions may be used elsewhere, including:

- pillars of the pension system;

<sup>5</sup> For example, in the UK defined-benefit schemes have the largest number of beneficiaries and assets, but most current employees contribute to defined-contribution schemes.

- defined-contribution (DC) and defined-benefit (DB) pensions;
- the end-users of pension systems;
- most prominent pension schemes.

### 1.3.1 Pillars of the pension system

Pension systems in Europe are typically described as being either Pillar 1, 2 or 3 in the context of the World Bank's multi-pillar framework, defined as follows:

- (i) A non-contributory 'zero pillar'; that extends some level of old-age income security to all of the elderly where social conditions warrant and fiscal circumstances can sustain such a system, as:
- (ii) An appropriately sized mandatory '**first pillar**' with the objective of replacing some portion of lifetime pre-retirement income through contributions linked to earnings, and which is either partially funded or financed on a pay-as-you-go basis;
- (iii) A funded mandatory defined-contribution '**second pillar**' that typically provides privately-managed individual savings accounts establishing a clear linkage between contributions, investment performance and benefits, supported by enforceable property rights and which may be supportive of financial market development;
- (iv) A funded voluntary '**third-pillar**' taking many forms;
- (v) A non-financial '**fourth pillar**' that includes access to informal support such as from families, other formal social programs such as health and housing, and individual assets.<sup>6</sup>

This study focuses on the second and third pillars. In practice, some schemes, which can be described as 'occupational' or at least 'employment-related', are not formally classified by regulatory authorities as second pillar schemes. For example, UK group personal pension schemes<sup>7</sup> are typically classified as personal schemes under the third pillar, even though they are clearly linked to employment and considered by employers and employees as a contract-based alternative to trust-based occupational schemes.<sup>8</sup> Similarly, when considering pensions financed via open pension funds in Italy, the distinction between the second and third pillars may be unclear as the open pension funds to which employers can channel contributions on behalf of their employees also provide a vehicle for personal pension saving.

As this study considers pension systems from the perspective of the consumer, the distinction made between pillar 2 and pillar 3 for the purposes of pension regulation is not of central importance. For example, when analysing pensions from a consumer perspective, one of the important differences is whether the pension scheme is arranged by the employer or whether the consumer arranges it themselves. This is likely to determine the extent to which the consumer or the employer negotiates on the fees and the choice that the consumers will have in terms of different funds. Take-up rates and distribution costs may also differ depending on whether the employer is involved. The two definitions used in this study are:

- **employer-arranged:** the employer sets up the pension scheme for the benefit of its employees; the employer may contribute to the scheme, but not necessarily. From the viewpoint of the consumer, the pension scheme is something associated with the employer, and not a generic scheme to which the employer simply channels employee contributions;

<sup>6</sup> Holzmann, R., Hinz, R. and Dorfman M. (2008), 'Pension Systems and Reform Conceptual Framework', Social Protection Discussion Paper No. 0824, The World Bank.

<sup>7</sup> These are contract-based money purchase schemes, which are typically provided by insurance companies with a contract with the individual employee, but they are also typically arranged by the employer with both employer and employee contributions.

<sup>8</sup> Government Actuary's Department (2006), 'Occupational Pension Schemes 2005: The Thirteenth Survey by the Government Actuary', London.

- **personal**: the pension scheme is associated with the individual, not with their employment. In most cases this means that the individual saver will have needed to set up the pension scheme through their own initiative, although there are also mandatory personal pensions in some countries, such as Poland.

Most employer-arranged pension schemes will be pillar 2, but not all of them, such as the group personal pensions in the UK, which may be considered pillar 3. To avoid confusion, this report refers to employer-arranged and personal pension schemes, not to pillar 2 and pillar 3 schemes.

### 1.3.2 Defined-contribution and defined-benefit pensions

Private pension schemes are also commonly referred to as being either DC or DB schemes, with some hybrid schemes also being available. The essential difference between such schemes relates to how the final benefits are determined—for example:

- the benefits from a pure DC scheme are determined by the contribution made to the scheme (which has been ‘defined’) and any investment returns (positive or negative) on the money in the account;
- the benefits from a pure DB scheme are ‘defined’ from the outset, determined by a set formula, rather than depending on (uncertain) investment returns. Consequently, the planned contributions to the scheme may need to be augmented if investment returns differ from those expected.

The OECD provides one standardised classification of the different scheme types (see Box 1.1).

#### Box 1.1 OECD classification of pension schemes by payout level guarantees

##### Defined contribution

The DC pension plan sponsor pays fixed contributions and has no legal or constructive obligation to pay further contributions in the event of an unfavourable plan experience. Pension plan benefits are determined mainly by contribution rates and returns on the plan’s investments.

- **Unprotected DC**—the pension plan or fund itself or the pension provider does not offer any investment return, benefit guarantees or promises.
- **Protected DC**—a DC plan other than an unprotected DC plan; the guarantees or promises may be offered by the pension plan or fund itself or by the plan provider (eg, deferred annuity, guaranteed rate of return).

##### Defined benefit

The DB plan sponsor company faces legal or constructive obligation to pay further contributions in the event of an unfavourable plan experience.

- **Traditional DB**—benefits are linked through a formula to the members’ wages or salaries, length of employment or other factors.
- **Hybrid DB**—benefits depend on a rate of return credited to contributions, where this rate of return is either specified in the plan rules, independently of the actual return on any supporting assets, or is calculated with reference to the actual return on any supporting asset and a minimum return guarantee specified in the plan rules.
- **Mixed DB**—a DB plan that has two separate DB and DC components that are treated as part of the same plan.

Source: OECD (2006), ‘Pension Markets in Focus’, Newsletter, September, Issue 3; OECD (2005), ‘Ageing and Pension System Reform: Implications for Financial Markets and Economic Policies’, *Financial Market Trends*, Supplement 1.

There are many variations on these pure concepts. For example, pension schemes in Germany have to provide a minimum guaranteed defined benefit, but typically also provide a

‘surplus’ which is uncertain and may be dependent on investment returns. Elsewhere, DC schemes may have a level of insurance against poor investment returns—for example, if they were to guarantee that the final pension pot will be at least as great as the sum of the contributions.

From the consumer perspective, what really matters is the degree of uncertainty surrounding the final pension income that they will receive upon retirement. Some schemes that are defined-benefit from the perspective of the regulator, as they guarantee a minimum level of benefits upon retirement,<sup>9</sup> may look more like DC schemes to the consumer, who expects (or hopes) to receive a surplus in addition to the minimum benefits, and this surplus depends on uncertain factors (eg, stock market performance). In Germany, for example, pension schemes have typically paid out surpluses on top of the minimum guaranteed pension, and consumers are therefore likely to expect their final pension to include a surplus and to depend on investment returns. This study assesses the extent of this uncertainty in order to provide a more precise classification, from the consumer viewpoint, not prudential regulation.

### **1.3.3 Terms for the end-users of pension schemes**

This report typically adopts the term ‘consumer’ to See the end-user of a pension scheme. This is because the report considers how attractive pension schemes are to the end-user in terms of giving up consumption today (contributing from earnings) in favour of consumption tomorrow (receiving a pension). This is a choice made from the perspective of an individual consumer.

There are many other possible terms for the end-users of pension schemes, including members, beneficiaries (typically in the context of DB schemes), savers (typically in the context of DC schemes), etc. The choice of the term ‘consumer’ reflects the focus on private pension systems as a form of individual investment, rather than as a form of social insurance (which may be more appropriate for pay-as-you-go pillar 1 schemes).

### **1.3.4 Most prominent pension schemes**

The FSUG requested that Oxera conduct additional and more detailed data collection for the ‘most prominent’ pension products for both employer-arranged and personal schemes in each country. There is more than one possible way to define the most prominent scheme, depending on the purpose. This report examines pension schemes from the perspective of a consumer choosing to forgo consumption today in favour of consumption in retirement, and therefore the focus is forward-looking in perspective and concerns schemes that are currently available to employees. For this reason, this study has chosen to identify the most prominent pension scheme to be that with the largest number of active (currently contributing) members and which is available to new members. This should not suggest that other schemes are not important—indeed, they may be more important in terms of the total number of members or assets—but the most prominent pension scheme should be of a type that is most important from the perspective of a consumer looking to save into a pension today.

This relatively objective definition has required some more subjective interpretation in the cases of certain countries. The most prominent pension products are identified in section 2.3, including notes on any discussion about schemes included.

## **1.4 Focus on outcomes for consumers**

Given the focus on private pension systems from the consumer perspective, the various pension systems are considered in terms of their different impacts have on outcomes for consumers.

<sup>9</sup> A scheme that guarantees a certain benefit has taken on a liability that it needs to be able to meet in the future by holding sufficiently secure assets—and therefore prudential regulation is required.

There is an overall consumer outcome which underlies pension provision, which is that consumers have an *adequate* retirement income. To achieve this, consumers need to participate in pension schemes, there needs to be sufficient contributions to their scheme, returns (after charges) need to be reasonable and reliable, and consumers need to be able to make good decisions. Based on this thinking, the information collected and analysed can be summarised in terms of more specific outcomes (some of which can be considered intermediate outcomes) for consumers, as follows:

- **pension set-up and delivery**—basic information on how consumers interact with the pension system (eg, through their employment) and how they pay for and receive benefits (see section 2);
- **participation**—the number and type of consumers involved in the pension system (see section 2);
- **contributions**—how much is saved into the pension system (see section 2);
- **charges and costs**—what consumers have to pay for their pensions and how much the associated charges affect their retirement income (see section 3);
- **returns**—the returns that consumers typically receive from pensions (see section 4);
- **risk**—the uncertainty surrounding the final retirement income and the causes of that uncertainty (see section 4);
- **sustainability**—the risk surrounding the long-term viability of the pension system (see section 4);
- **decision-making**—the information available to consumers to make decisions, their involvement in the management of pension systems and their ability to make good decisions regarding long-term pension savings (see section 5).

These outcomes are measured on the basis of a wide range of metrics that FSUG and Oxera identified.

## 1.5 Approach

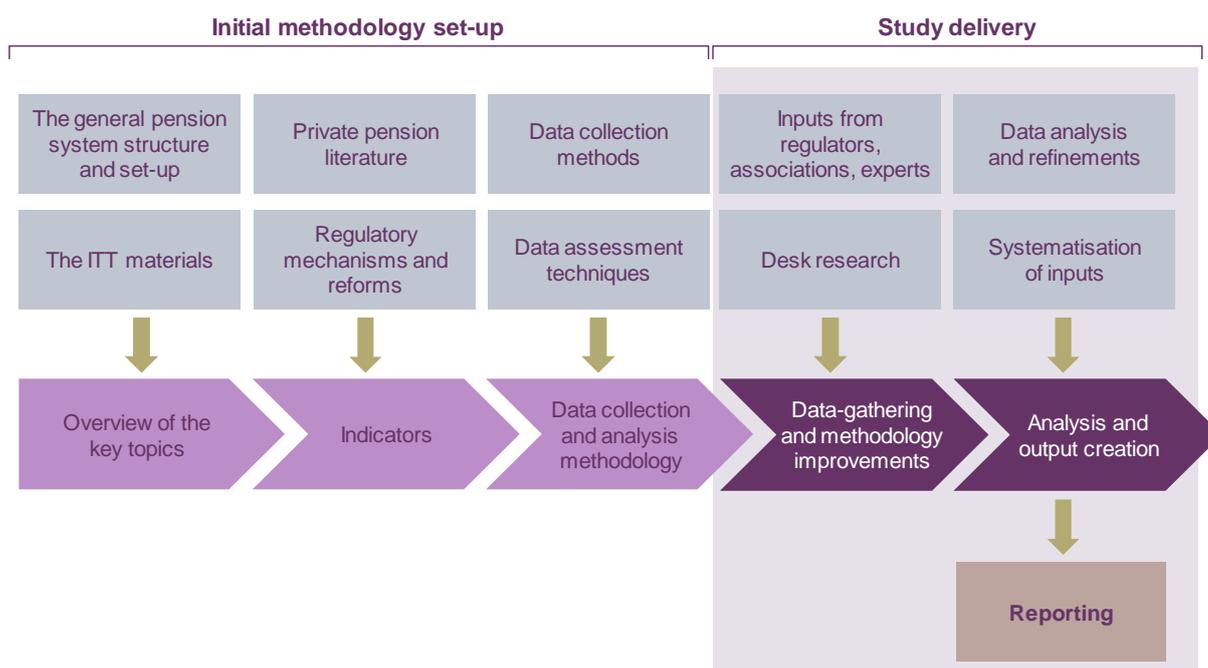
The primary purpose of the study was to collect information and data on the widely varying private pensions systems of the 14 EU Member States, and to present the information in a way that allows the reader to digest the information easily and to compare results across the countries. As explained, the study did not aim to draw conclusions or formulate recommendations based on the data.

Given this context, the approach to this study was based on three core elements:

- a **robust methodology** for assessing each question (section 1.5.1)—to assist in making comparisons across all 14 Member States, and providing the basis for information to be collected, the required economic and financial analysis, and the collation and presentation of the results;
- effective **data collection** procedures (section 1.5.2)—drawing on the input of regulators by providing the right framework for interaction to obtain their support and involvement in the project, and hence provide data, identify key sources and direct the required analysis to produce the results that were required;
- **data collation and presentation** (section 1.5.3)—required to make the best use of the information available, allowing (as far as possible) comparisons to be made between different countries, despite the significant variations in national private pension systems.

This framework is summarised in Figure 1.1.

**Figure 1.1 Framework to assess private pension systems across the EU**



Source: Oxera.

### 1.5.1 Methodology

The first stage of the study conducted desk research to determine what information would be required to answer the questions posed by the FSUG. The approach adopted is set out in detail in each of the following sections, presenting the methodology alongside the collected data. In summary, the approach involved identifying the following.

- **What to measure**—as the exact set-up of the pension system varies between Member States, it was necessary to identify and categorise a range of topics that the study is required to answer in the broader scope of the private pension system set-up. The individual topics and questions consequently define the indicators to measure. For some questions, it was necessary to consider multiple indicators together—for example, an assessment of the recent trends will draw on topics such as coverage, asset value, and changes in portfolio allocation.
- **How to measure**—having identified what should be measured, the framework was extended to discuss how the indicators can be measured in practice. Importantly, the framework considered what data might be obtained from existing sources via desk research, and what might need to be obtained via a questionnaire or interviews with national regulators, pension associations, industry experts, or other parties. It also provided initial guidance on sampling and how to interpret the data.

To design a methodology that would produce the information necessary to meet the requirements of the FSUG, the approach aimed to meet the following criteria.

- **Comprehensive**—as the set-up of private pensions varies significantly across the EU, in order to monitor the potential benefits and potential adverse effects, a range of indicators was needed.
- **Practical**—the methodology needed to take into account possible limitations to the scope and type of data that could be collected. It also needed to provide guidance on

how to select indicators to monitor the impact of specific pieces of regulation and the time horizon over which changes should be observed.

- **Flexible**—not every analysis that will be prove to be useful can be specified in advance, Therefore, in order to remain effective in monitoring the impact of regulation or other changes going forward, the framework needed to be flexible and to allow new developments and indicators to be incorporated.

The methodology used in this report evolved over the course of the project. Changes were made in light of interactions with the regulators, assessments of the available data, and further discussions with industry experts.

## 1.5.2 Data collection process

Gathering suitable data formed part of two of the main activities of the study:

- gathering **qualitative data**—in particular, detailed research of the pension system for each of the investigated countries, as well as expert reports, views, estimates and testimonies on the key metrics;
- consolidating the available **quantitative data** in order to compile a comprehensive dataset.

The data collected is described in each of the sections of this report, with full data tables provided in Appendix 3. This section describes the activities undertaken in order to collect the data.

### Overview of the qualitative data-gathering process

Qualitative data collection began with desk research of information from publicly available sources. The main sources used were websites and online materials, reports and studies available from:

- the national pension and financial market regulators;
- specialised and non-specialised international organisations (eg, the European Commission, the OECD<sup>10</sup>, EIOPA<sup>11</sup>);
- industry associations;
- individual pension product providers.

Data was collected for an array of pension schemes/products in each country, under the broad headings of ‘employer-arranged’ and ‘personal’ schemes. Table 1.1 below outlines the investigated schemes.

<sup>10</sup> Organisation for Economic Co-operation and Development.

<sup>11</sup> European Insurance and Occupational Pensions Authority, one of three European Supervisory Authorities.

**Table 1.1 Tabulation of schemes covered by the research by country by scheme type**

Country	Employer-arranged schemes	Personal schemes
Netherlands	Sector-wide pension funds Company pension funds Pension funds for liberal professions Occupational life insurance products	Insurance-based pensions
France	Contracts under Article 39 Contracts under Article 82 Contracts under Article 83 PERE Madelin Law PEE/PERCO	PERP (Plan d'épargne retraite populaire) Life insurance products
Sweden	ITP SAF-LO KAP-KL PA—03, PA—91	Premium pension system (PPM) Individual pension savings (IPS)
UK	Occupational salary-related plans Occupational money-purchase plans Group Pension Plans	Individual Pension Plans
Germany	Direktzusage (book reserves) Unterstützungskasse (support funds) Direktversicherung (direct insurance) Pensionkassen Pensionsfonds	Riester Pensions Rürup Pensions (Basisrente) Life insurance contracts
Austria	Abfertigung Neu (severance pay) Pensionkassen Direktzusage Unterstützungskasse Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
Italy	Pre-existing autonomous pension funds Pre-existing non-autonomous pension funds Contractual pension funds Group open pension funds	Individual open pension funds Individual insurance contracts (PIPs)
Poland	Employee Pension Fund (PPE)	OFE Mandatory personal pension fund Individual pension fund (IKE) Individual pension fund (IKZE)
Slovakia	PAMC pension fund	SPAMC pension fund
Estonia	Funded pension	Supplementary personal pension fund Supplementary insurance contract
Romania	<i>none</i>	Compulsory private pensions Optional private pensions
Hungary	<i>none</i>	Former occupational pension funds Personal pension funds
Spain	Fondos de pensiones (pension funds) Group life insurance contracts PPSE Non-autonomous pension funds Mutual-provided personal pensions	Mutual-provided pension funds Associated plans Planes individuales (personal plans) PPA
Greece	Occupational insurance funds (TEA) Group pension plans (IOA)	Personal pension plan (IAA)

Source: Oxera analysis.

Following the initial desk research, national regulators were contacted (as listed in Table 1.2) and the information gathered was discussed with them, to aid further information collection.

**Table 1.2 Relevant national regulators**

Country	Regulator	Successful contact
Netherlands	DNB (Dutch Central Bank)	Y
	Netherlands Authority for the Financial Markets (AFM)	Y
France	Autorité de contrôle prudentiel (ACP)	Y
	Autorité des marchés financiers (AMF)	Y
Sweden	Finansinspektionen (Swedish Financial Supervisory Authority)	Y
UK	The Pensions Regulator (TPR)	Y
	Financial Services Authority (FSA)	Y
Germany	Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)	Y
Austria	Finanzmarktaufsichtsbehörde (Financial Market Authority, FMA)	N
Italy	Commissione di Vigilanza sui Fondi Pensione (COVIP)	N
	Istituto per la Vigilanza sulle Assicurazioni Private e di Interesse Collettivo (ISVAP)	N
Poland	Polish Financial Supervisory Authority (Komisja Nadzoru Finansowego, KNF)	N
	Ministry of Labour and Social Policy	N
Slovakia	National Bank of Slovakia	Y
	Department of Social Insurance Analyses and Pension Analyses	Y
Estonia	Estonian Ministry of Finance	Y
Romania	Comisia de Supraveghere a Sistemului de Pensii Private (CSSPP)	Y
Hungary	Hungarian Financial Supervisory Authority (PSZAF)	Y
Spain	Directorate General of Insurance and Pension Funds (DGSFP)	Y
Greece	Ministry of Employment and Social Protection	Y
	Bank of Greece	Y

Note: Right hand column indicates whether this study was discussed with the regulator. All regulators were contacted in the study, and their published material was used in the study.

Source: Oxera analysis.

Specific details of the qualitative data collected (and where data was not available) can be found in each section of this report. Some general observations on qualitative data availability can be made, as follows.

- There is a wealth of publicly available sources that provide information about the **overall pension set-up**. Oxera was able to verify much of the information gathered with the respective country's regulators and supervisors.
- Qualitative data for the **charges and costs** section came mainly from published studies into costs, some of which was done by regulators. Selected regulators keep close track of the various advertised charges within the system, as well as regularly publishing fund performance figures. This seems to be the case in particular for the newer, Eastern European, pension systems. For a majority of the countries, however, this information was not easily accessible.
- There was variable data availability for the **returns and risk** section. Public sources tend not to cover the answers to the research questions to the level of detail required. Bespoke analysis was required to provide information for some questions in this section.
- Lastly, the **saver information and behaviour** section relied largely on desk research, including drawing on research by regulators and others.

Note that the detailed information gathered for each of the countries is available in individual country tabulations in Appendix 3.

### Overview of the quantitative data-gathering process

In addition to gathering qualitative information about private pension systems, Oxera identified a detailed set of data required to answer all of the key research questions. The approach to collecting quantitative data was as follows.

- In the first instance, publicly available datasets and tabulations were collected and collated. These sources involved national statistic websites of the Member States, individual national pension regulators, as well as international bodies (eg, OECD and EIOPA). The availability of this information was variable across the investigated countries, ranging from near complete transparency and access in Eastern Europe, to significant difficulties in finding the relevant sources in other countries.
- The availability of data that does not appear to be accessible from the sources described above was addressed during the interactions with industry regulators, associations and pension providers. This led to additional references being obtained and used. More detail on these sources is available in each section.

Some data was collected for all countries, but there are many gaps in datasets for specific countries. The difficulty of finding information has been variable by country; it has been possible to obtain some top-level market information for all countries, but the product-level information—critical for a number of the analytical assessments within the study—has been largely incomplete. Likewise, only selected countries openly publish the portfolio allocation of the individual pension funds; for others, even in the best case, one should expect no more than anonymised or aggregated data to be available.

Table 1.3 assesses publicly available information that was collected for this study from regulators and public information sources. This comparison is undertaken from a purely research-oriented perspective, and is not an indication of the information readily provided to consumers.

The assessment is conducted in three stages.

- Firstly, the data is assessed in terms of **completeness**, ie whether it has been possible to find the required information on all or most aspects of a particular metric. For instance, a complete set of coverage data would include a detailed breakdown of members by type (contributing, deferred, beneficiaries etc) for each of the scheme.
- Secondly, the **format** of the data is assessed in terms of its applicability for the presentation of results in this study. For instance, expressing coverage as a percent instead of a number lends itself to questions on the relevant base (working population or working age population).
- Lastly, suggestions are offered where relevant on the potential improvements that would help cross-country comparison, as well as conducting a similar study in the future.

The assessment for completeness and format is summarised using a traffic light system, with green indicating a relatively high level of completeness or usefulness of format, whilst amber indicates a more mixed picture and red indicates that little data was available in an appropriate format.

**Table 1.3 Overview of the data available to this study**

Area	Completeness	Format	General improvement comments
<b>Overall characteristics</b>			
Coverage	Green	Orange	Ideally, data would be presented with detailed member numbers by type (active versus inactive; or contributors, deferred and beneficiaries) for each of the schemes. Comprehensive data on all types of scheme, including life insurance, would be beneficial.
Gender profile	Green	Green	Separate data for different types of scheme and for new versus existing members could be beneficial.
Age profile	Orange	Green	Consistency of age bands across countries, or reporting individually year or year, would help compare across countries on a fully consistent basis.
Income profile	Orange	Orange	Ideally, the exact numerical distribution of members would be presented together with the income band cut-offs and the total population base.
Contributions	Green	Green	More detailed data by customer type and pension product would be useful.
Net asset value	Orange	Green	The major problem has been separating the net assets accumulated in plans provided by insurance companies, which are often not reported separately. Apart from that, it has been difficult to find the current asset values for a number of schemes (see Table 2.15).
Portfolio allocation	Orange	Orange	The main issue is the lack of consistency between categories across countries. Standardisation of the reporting requirements, for instance in line with the categories set out in Figure 2.13, would help cross-country comparisons. The data available for personal plans would appear poorer than for the employer-arranged plans.
<b>Charges and costs</b>			
Charges	Orange	Orange	The difficulty of finding charge data varies significantly between the investigated countries, from detailed daily publications to quotes from sample providers in the absence of such data. Ideally, full spectrum of costs should be available, including the otherwise 'hidden' costs that result in lower returns, eg trading and post-trading.
Costs	Red	Orange	Where available, the costs published vary in terms of the granularity. Disclosure of costs on each of the key activities of the pension provider (management, administration, acquisition etc) would allow for a detailed analysis of performance and 'value for money', from a saver's perspective.
<b>Risk and return</b>			
Returns	Orange	Green	Typically expressed as average annual growth rates, the main issue about returns data surrounds data availability at the required level of granularity.
<b>Saver behaviour</b>			
Switching	Orange	Orange	The information on switching has come in a number of formats; ideally one would report a complete switch matrix detailing both the origin and destination plans, also for cross-scheme transfers. Such detail may be prohibitively complex to collate, but would shed light on the trends beyond simple portfolio re-allocations.

Note: Green denotes complete or almost complete information, or at least a good format; orange— average completeness or format; red—poor completeness or format.

Source: Oxera research and analysis

With regard to the research questions set out by the FSUG, Tables A2.1 and A2.2 in Appendix 2 set out the FSUG research questions and where the relevant information can be found in the report.

### 1.5.3 Approach to bridging the gaps

As is apparent from the previous two sub-sections, some gaps still exist within the information required to answer all of the questions identified in this study. Oxera has explored a broad range of possible sources of information, but it is not possible to guarantee

that all available information has been collected and in some cases the quality of some data identified has been questionable and for that reason not included.

This report explains where data availability has been limited, and suggests areas where further research and data collection would be beneficial. In some cases, the study has explored alternative avenues for addressing questions, using a broader range of data (for example, not specifically focused on private pensions) and suggested analytical frameworks.

For example, the costs of trading are not included in information on annual charges provided by defined contribution pension schemes. Due to the lack of this information, the study explores alternative sources of information (including from past Oxera reports on the cost of trading) and provides an illustration of an analytical framework that can be used to estimate the approximate magnitude of these costs for consumers of affected pension schemes. This approach allows some analysis of the important issues of the costs of trading, even though data on these costs is not available for pension schemes.

#### **1.5.4 Analysis and presentation of results**

The information collected for this study is summarised and presented in this report. The study has attempted to develop methodologies for presenting and collating data that aid comparisons across the wide variety of pension systems. Various charts, tables and diagrams are used to explain how pension systems work across the 14 Member States.

In many cases, data availability has been limited and there is missing data for some pension systems. For some issues, data has been available only for a small selection of different pension systems. In these cases, the study has attempted to draw conclusions from whatever information is available, sourced from the relevant literature, and to provide some initial guidance on what data might be collected in future.

Sources of information are provided in all cases, with an extensive bibliography to be found in Appendix 1.

## **1.6 Structure of the report**

The remainder of the report is set out as follows:

- section 2 describes the set-up of pension schemes;
- section 3 presents information about the charges and costs of pension schemes;
- section 4 describes the returns and risks associated with pension schemes;
- section 5 explores issues around saver information, representation and behaviour;
- Appendix 1 provides a bibliography;
- Appendix 2 sets out the list of questions from the FSUG and where information can be found;
- Appendix 3 presents the country tables.

## 2 Pension set-up

### 2.1 Introduction

#### 2.1.1 Why this topic?

At their simplest, pensions are a form of savings where a future pensioner saves now in order to pay for consumption in the future, usually at a point in the life of the saver when they are older than a specified age and no longer employed. However, in order to persuade individuals to undertake such savings all countries looked at in this study use either fiscal incentives and/or compulsion to encourage this type of saving and have created special regulatory and other structures that relate specifically to these pension savings. The application of these incentives or requirements means that the resulting pension systems in each country are relatively complex in their nature, and their individual set-up varies significantly between individual countries.

Understanding the set-up of pensions is important for two reasons:

- the pension set-up is likely to affect ‘outcomes’ for consumers. For example, in countries with mandatory pension systems and/or strong fiscal incentives, one is more likely to observe a relatively high participation. When assessing ‘market outcomes’ of pension systems across countries, it is useful to understand to what extent ‘good’ or ‘bad’ outcomes are driven by certain aspects of the pension set-up (which could then potentially be redesigned to improve ‘outcomes’ for consumers);
- some of the metrics in relation to the pension set-up can be used as part of an on-going monitoring of whether consumers are likely to have adequate retirement income when they retire. For example, if participation is currently low among certain groups or cohorts in society or if participation looks reasonable but contributions are low, then this is likely to raise concerns about the adequacy of their retirement income (and policy makers may want to consider what to do about this now rather than at the point these people retire).

#### 2.1.2 What were the metrics and what information was available?

The FSUG requests that the study presented information on the overall pension set-ups to provide the basis for assessing:

- the variety of different pension scheme types that exist both within and between countries and their most relevant characteristics from the point of view of consumers;
- the coverage of different pension scheme types and the extent to which different scheme types are attractive to different types of consumers;
- the framework for being able to compare the various aspects of the different scheme types for issues of charges, returns, risk and consumer behaviour (covered in the following sections of the report).

The key comparator variables for describing how pensions are set up can be broadly divided into qualitative and quantitative measures. Qualitative comparison is required to capture the main differences in the structure of a country’s pension system; quantitative measures help to explain the dynamics of the changes and the relative scales of the individual variables, such as total accumulated assets and the extent of switching.

## Qualitative metrics

For each identified pension scheme in a country, the key metrics have been considered, as follows.

- **The functional classification**—broadly in line with the OECD tabulation,<sup>12</sup> the classification defines whether each pension scheme is ‘employer-arranged’ (linked with the consumer’s employment) or ‘personal’. See section 1.3 for details of the definition adopted within this study, and Table 1.1 for the list of pension scheme types covered in each country.
- **The funding structure (institutional classification)**—this defines the source of funding and the top-level asset governance structure implied; namely, pension funds, insurance contracts or book reserves. These have been assigned to all the schemes on a bottom-up basis—the detail is available in the country-level tables in Appendix 3.
- **The level of obligation to join**—this defines whether a particular fund is mandatory, and sets out the specifics of the enrolment/disenrolment mechanism. The cross-country tabulation is shown in section 2.4.1.
- **The contribution source**—this defines the scheme sponsor and/or scheme member who makes the payment to a pension scheme (section 2.4.2).
- **The base of contributions**—the salary base used for the contributions, typically either gross or net salary (section 2.4.2).
- **The payout method**—this describes how the beneficiary receives the benefits of the pension scheme (section 2.4.3).
- **Fiscal incentives**— tax treatment of contributions, accumulation and retirement income, and therefore a key determinant of the net income that consumers receive as a pension from any given level of contributions (section 2.4.5).
- **The payout (pension income) level guarantees**—these inform whether a particular scheme is DC or DB, or a hybrid. See section 2.4.4 and country tables in Appendix 3 for the scheme-level detail.
- **The additional benefits provided by the pension scheme**—a set of additional benefits received by the member or relative in the case of disability, sickness, survival or death. Details of benefits provided by individual schemes are set out in country tables in Appendix 3.
- **Dormant and empty accounts**—this provides an overview of the treatment of savers who stop contributions or are ineligible for private pensions (section 2.4.6).

## Quantitative assessment

The following indicators have been identified, with the associated metrics.

- **Coverage**—this measures the degree of private pension penetration among the working population. Section 2.4.7 outlines the results of both cross-sectional (comparisons between countries for a given point in time) and panel analysis (comparisons of trends over time across different countries).
- **Saver profile**—shown with gender, age and income profiling; this explains the differences in the personal characteristics across the private pension members across countries (sections 2.4.8—2.4.10).

<sup>12</sup> OECD (2005), ‘Private Pensions: OECD Classification and Glossary’.

- **Contribution levels**—typically measured as a proportion of current income, at either the individual or national level (section 2.4.11).
- **Net asset and book value**—this enables comparison of the scale of the total accumulated private pension assets/savings (section 2.4.12).
- **Market concentration and power**—a measure of the relative scale of the individual pension schemes in the respective markets (section 2.4.13).

### 2.1.3 The objectives of this section

This topic of pension set-up has resulted in the collection of a considerable quantity of information. To keep this manageable, all detailed information has been presented in Appendix 3, at country level, while most of the remainder of section 2 focuses on presenting key metrics for the most prominent pension product across countries. These ‘most prominent products’ are identified in section 2.3. Section 2.5 considers some of the recent trends observed within the private pensions across Europe.

As an introduction to the topic of pension set-up, section 2.2. provides a framework (segmentation analysis) to understand at high level the differences between the pension systems across the countries investigated in this report.

## 2.2 Top-level country segmentation

To structure the analysis of the private pension systems of 14 individual systems, it is useful to see groups or clusters of pension systems that share important common features. This allows for the joint consideration of some countries and assists a structured discussion of developments as well as trends. It may be expected that consumers in countries with similar pension systems have some similarities in their experience of pension schemes, and differences between these consumer outcomes are useful in assessing the relative merits of broadly similar schemes. Considering a small number of clusters of country systems also presents a more manageable and convenient way of analysing the pension set-up in the individual Member States.

For the purpose of such an assessment, a segmentation based on selected high-level system characteristics has been developed. This section starts by considering the existing segmentations present in the literature (section 2.2.1). Based on these and other collected metrics, defining characteristics of private pension systems are then compiled and assessed for all investigated countries (section 2.2.2), giving rise to a set of clusters of countries (section 2.2.3).

### 2.2.1 Existing segmentations

A number of studies have provided analyses of the EU Member States, sometimes including non-EU countries, based on different characteristics of their pension systems. A selection of these studies is presented below.

#### **OECD and Allianz studies: pillar 1 replacement rate and voluntary pension coverage**

In separate analyses, both the OECD and Allianz sought to identify a pattern that links the replacement rate of pillar 1<sup>13</sup> with coverage in pillars 2 and 3.<sup>14</sup> The OECD measured coverage as the share of the relevant population, whereas Allianz referred to private retirement assets per capita.<sup>15</sup> The main finding, however, is similar for both segments. They

<sup>13</sup> Defined to be the pillar 1 pension income as a proportion of the final earnings of the person in employment, typically referred to as a replacement ratio.

<sup>14</sup> OECD (2009), ‘Pensions at a Glance Briefing’ and Allianz (2011), ‘Allianz Global Pension Atlas 2011’.

<sup>15</sup> This may provide a partial explanation of the differences between the two segmentations—eg, Austria and Germany may appear in different groups because, even though a considerable share of the population owns a private pension product, the contributions of each might be relatively small.

show that a higher replacement rate in pillar 1 is linked to more limited private involvement, and vice versa. No claims about causality were made, but the result is intuitive given that higher pillar 1 pensions will be likely to reduce consumer demand for private pension provision.

**Table 2.1 OECD and Allianz segmentations of countries**

Study and group characteristics	Low public replacement rate, high private coverage	Medium public replacement rate, medium private coverage	High public replacement rate, low private coverage	Sample countries out of scope
<b>Countries using OECD criteria</b>	UK, Germany, <i>Sweden</i> , <i>Netherlands</i> , Ireland, Belgium, Canada, Czech Republic, USA	France, Slovakia, Hungary, Austria, Luxembourg, Norway, New Zealand	Spain, Poland, Italy, Greece, Finland, Portugal, Turkey	Romania, Estonia
<b>Countries using Allianz criteria</b>	UK, Netherlands, Denmark, Switzerland, USA	Sweden, France, Germany, Ireland, Norway, Belgium, Finland	Austria, Italy, Spain, Portugal (Greece as outlier)	Romania, Estonia, Hungary, Slovakia, Poland

Note: Countries in italics added by Oxera by applying the same criteria as used in the publications.  
Source: Adapted from OECD (2009), op. cit., and Allianz (2011), op. cit.

### European Commission and Ebbinghaus studies: historical development and extent of private funding

Also in separate analyses, the European Commission and Bernhard Ebbinghaus examined the historical importance and current trends of private pension schemes in the overall pensions system. Neither study has presented simple objective indicators; instead, they have considered broadly defined developments and patterns.

**Table 2.2 European Commission and Ebbinghaus segmentations of countries**

Group characteristics	Developed multi-pillar system including private funding	Emerging multi-pillar system with mandatory private funding	Strong pillar 1, but slow shift to private funding	Little and hardly increasing private funding	Sample countries out of scope
<b>Countries using European Commission criteria</b>	UK, Netherlands, Sweden, Denmark, Ireland	Hungary, Estonia, Poland, Romania, Slovakia, Sweden, Latvia, Lithuania, Bulgaria	Austria, Germany, Italy, Belgium	France, Spain, Greece, Malta, Luxembourg	
<b>Countries using Ebbinghaus criteria</b>	UK, Netherlands, Switzerland	Sweden, <i>Hungary</i> , <i>Estonia</i> , <i>Poland</i> , <i>Romania</i> , <i>Slovakia</i> , Denmark, Finland	Germany, Italy, France, <i>Austria</i> , Belgium	Greece	Spain

Note: Countries in italics added by Oxera by applying the same criteria as used in the publications. Sweden appears twice in the European Commission table. The distinction between the third and fourth groups is less clear-cut for Ebbinghaus.  
Source: Adapted from CEA Statistics N° 28 (2007), 'The role of insurance in the provision of pension revenue'.

Both studies have identified the political environment as an important factor for the original set-up of the systems (for instance, Ebbinghaus labels the third group 'Bismarckian'). Expected future developments have also been also considered—the European Commission has pointed to a lack of reform intentions in the fourth group. This has provided another explanation for the similarity of the systems that were developed in the same period since the

underlying political movements may have been related. These studies highlight the importance of the historical period during which private pension systems were developed.

### Insurance Europe: level of agreement and obligation to join

Insurance Europe has grouped countries according to one primary criterion: the nature of the decision to join a private system. For the mandatory systems, the government requires individuals to join, whereas collective bargaining agreements on a sector level usually determine the conditions in quasi-mandatory systems. For agreements on the level of a group of companies or a single company, it may be helpful to distinguish between mandatory, opt-out (eg, in Austria) or opt-in (eg, in Germany) agreements, since they have different implications for employees. This approach highlights the importance of the nature of joining a scheme for consumers.

**Table 2.3 Insurance Europe segmentation of countries**

Group characteristics	Mandatory schemes	Agreed on by industry sector	Agreed on by group of companies	Agreed on by company	Sample countries out of scope
<b>Countries included by Insurance Europe</b>	UK, Poland, France, <i>Romania, Estonia, Slovakia, Hungary, Switzerland</i>	Netherlands, Sweden, Denmark	Netherlands, Italy, Belgium	<i>Germany, Austria, Greece</i>	Spain

Note: Countries in italics added by Oxera. The Netherlands appears twice.

Source: Adapted from Insurance Europe (formerly CEA) Statistics N° 28 (2007), op. cit.

## 2.2.2 Key comparator variables

The studies presented above consider a number of defining characteristics in distinguishing between the individual private pension systems. In the analysis below, the key comparator variables have been chosen to reflect the general set-up of the private pension systems, including both employer-arranged and personal pensions. The two suggested variables—system customisation and the year of introduction—are used to capture two key aspects of how systems vary and to illustrate how some systems are more similar to one another than to other systems.

- **System customisation**—intended to measure the degree of choice and the associated complexity in the private pension system. This can be seen as a product of three underlying metrics: the level of obligation to join, the number of schemes to choose from, and the range of payout options. For instance, a mandatory system can be considered least complex from the consumer viewpoint, in particular where savers have no input into the scheme selection. The quasi-mandatory set-up with the employer/union choosing whether to join a scheme represents an increase in the degree of customisation. The variety of payout options also affects the degree of customisation, from the consumer’s perspective.
- **Year of introduction**—this corresponds to the age of the system. The hypothesis would be that systems developed in similar periods have evolved to a similar extent. They are also likely to share other features because similar developments took place across Europe and drove public policies, such as the increasing awareness of the pension gap in the 1990s. The analysis considers the year in which the legislation for pillar 2 was passed.

The above metrics are tabulated for the investigated Member States in Table 2.4 below.

**Table 2.4 Key comparator variables for the investigated countries**

Variable	Scheme	NL	France	Sweden	UK	Germany	Austria	Italy	Poland	Slovakia	Estonia	Romania	Hungary	Spain	Greece
Number of schemes	Emp.	4	6	4	3	5	6	4	1	1	0	0	0	5	2
	Pers.	1	2	2	1	3	1	2	3	1	3	2	2	4	1
Obligation to join	Emp.	QM	V (4), M (2) <sup>2</sup>	QM	V (new M (1)) <sup>2</sup>	V	V (5), M (1) <sup>2</sup>	V	M (1968 <sup>1</sup> )	QM	M (1983 <sup>1</sup> )	—	—	V	V
	Pers.	V	V	M(1), V(1)	V	V	V	V	V	V	V (2)	M (1972 <sup>1</sup> ) (1), V (1)	V	V	V
Payout options	Emp.	AN	LS (2) and AN (6) <sup>2</sup>	AN and PW	max 25% LS	LS (4) and AN (5) <sup>2</sup>	AN	max 50% LS	AN	AN and PW+AN	—	—	—	LS and AN	LS and AN
	Pers.	AN	AN	AN	max 25% LS	max 30% LS (1) and AN (2) <sup>2</sup>	LS and AN	max 50% LS	LS and PW	LS and PW	AN (LS w/o tax reduction)	AN	AN and LS	LS (4) and AN (5) <sup>2</sup>	LS and AN
Year of introduction	Emp.	1952	1961	1967	1975	1974	1990	1993	1998	2004	—	—	—	1998	2002
	Pers.	2007	2003	1972	1993	2005	2005	1993	2004	2004	2004	2006	1997	2002	2002

Notes: ‘—’ denotes a lack of schemes in a particular block. Emp.—employer-arranged pension schemes; Pers.—personal pension schemes. <sup>1</sup> The year of birth from which enrolment is mandatory. <sup>2</sup> Numbers in parentheses denote the number of schemes to which the characteristic applies if not uniform within the pillar. NL, Netherlands; V, voluntary; QM, quasi-mandatory; M, mandatory; LS, lump sum; AN, annuities; PW, programmed withdrawal; n/a—not available. Detailed, bottom-up tabulation of all the schemes feeding into this table is presented in the country tables in Appendix 3.

Sources: ISSA/IOPS/OECD Complementary and Private Pensions Database, websites of regulators and associations, and Oxera analysis.

### 2.2.3 Results of country segmentation

Two defining variables in this segmentation are the level of customisation, and the age of the system. As described above, system customisation is aimed at depicting the wealth of choices present within the country's private pension system. From the consumer perspective, the extent of customisation of the private pension system affects the nature of the decision regarding saving for retirement.<sup>16</sup> While a simple system may not offer sufficient choice for all consumer types, an excessively complex one might result in poor decision-making by consumers in some cases.<sup>17</sup> These differences are considered to be effective ways of distinguishing between types of private pension system.

To create a numerical metric of customisation, scores are attached to each of the three defining variables (see Table 2.5).

**Table 2.5 Composition of the customisation score**

Variable	0 points	1 point	2 points
Number of schemes	1	2–3	4 and more
Obligation to join	M	QM	V
Payout options	no choice	some choice	broad choice

Note: M, mandatory; QM, quasi-mandatory; V, voluntary.  
Source: Oxera analysis.

The analysis has been carried out for both employer-arranged and personal scheme types and the resulting scores added up. One example for illustration is Sweden's customisation score of six points. It receives:

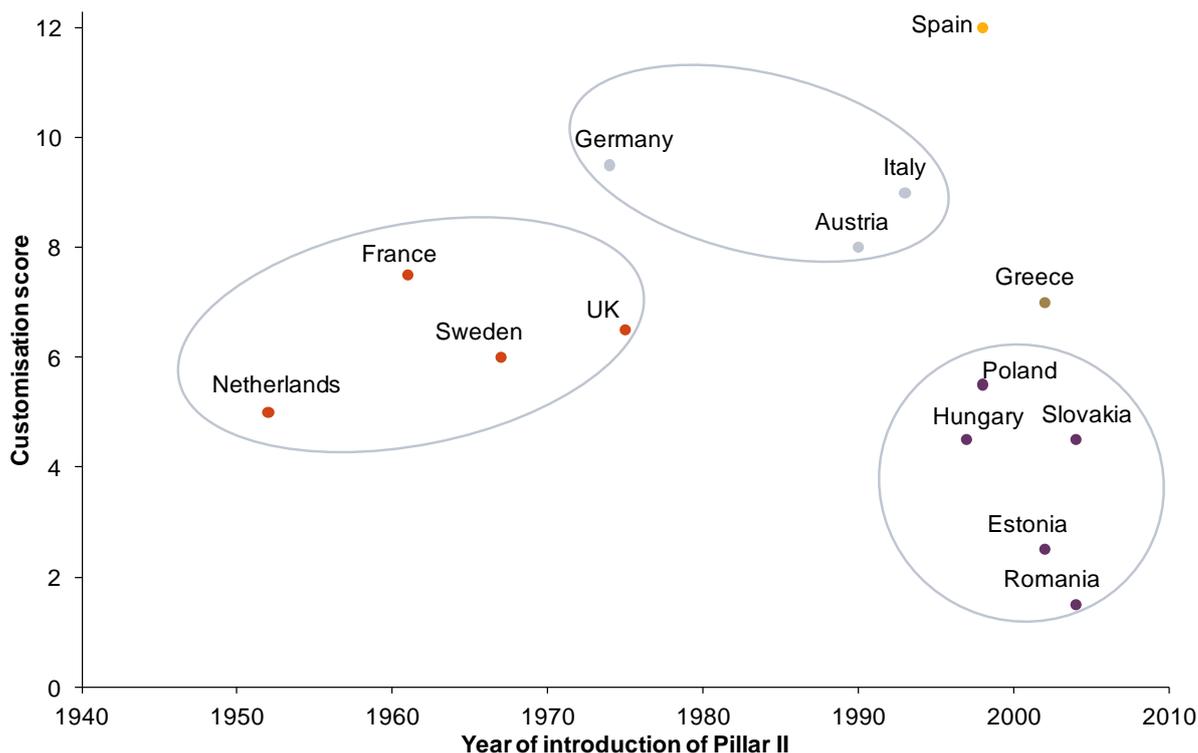
- 2 points each for offering four employer-arranged schemes and having a voluntary personal scheme;
- 1 point each for having a quasi-mandatory obligation to join as well as two payout options within the employer-arranged schemes.

Three separate clusters emerge when the sample countries are plotted on the dimensions: customisation and year of system introduction (see Figure 2.1 below).

<sup>16</sup> See further the discussion in section 5.1.

<sup>17</sup> Section 5.4 contains additional analysis of the level of information provision and its impact on the quality of choice.

**Figure 2.1 Segmentation of sample countries**



Sources: ISSA, websites of regulators and associations, and Oxera analysis.

- The **first cluster** consists of the Netherlands, France, Sweden and the UK. These four countries introduced private pension schemes early on and offer a medium level of customisation. The systems are generally voluntary, but include mandatory elements, and hence strongly encourage consumers to invest in private pensions. The cluster largely overlaps with the ‘developed multi-pillar systems’ identified by the European Commission and Ebbinghaus, which is plausible because of the long history and the strong incentives or compulsion to join.
- The **second cluster** comprises Germany, Austria and Italy. These countries adopted private pension schemes between 1974 and 1993. The level of customisation is higher than in the other systems, since the systems are fully voluntary (with the exception of ‘Abfertigung Neu’ in Austria, introduced in 2003) and include several schemes from which employers and individuals can choose. The cluster is mostly identical to the group of systems with historically little, but now increasing, importance placed on private pensions in the European Commission and Ebbinghaus studies.
- The **third cluster** is made up by Central and Eastern European countries, namely Poland, Slovakia, Estonia and Romania, as well as Hungary.<sup>18</sup> In this recent wave of introduction of new schemes, all the countries opted to require employees below a certain age to join, sometimes even independently from the employment status. Another common feature of their systems is that, even though they only offer one scheme, the insurance companies have to offer funds with different levels of risk. The European Commission and Ebbinghaus studies see the same cluster on the basis of their more limited choice of key variables, so it can be concluded that similarities extend beyond the system history and extent of private funding.

<sup>18</sup> The grouping of Hungary may change owing to recent changes in employer-arranged pension legislation, with the effective nationalisation of the occupational pension system.

- Lastly, **Spain** and **Greece** are classified as outliers because, even though their private pension systems have been developed in a similar period as those in the third cluster, they exhibit a different general set-up. The Spanish system offers a relatively high level of customisation, including schemes with regional focus, differentiating it from the second cluster. In the case of Greece, the system relies on voluntary joiners and has had a low level of take-up.

This segmentation is used throughout this section to group the countries in order to aid comparison across broadly similar private pension systems.

### 2.3 ‘Most prominent’ scheme tabulation

As introduced in section 1.3, the FSUG requested that Oxera conduct additional and more detailed data collection for the ‘most prominent’ pension products for both employer-arranged and personal schemes in each country, in order to focus the study on those schemes that are most important to consumers today.

While describing the overall set-up of the private pension system gives an overview of the breadth of choices available to employers and consumers, in many of the investigated Member States there are types of pension scheme that command a significant market share. Focusing on these selected products would allow for a more in-depth comparison of trends observed in the individual markets (data permitting).

The concept of the ‘most prominent’ scheme is used in this study to denote pension schemes that are generally both open to new joiners and cover the largest proportion of the working age population. The employer-arranged and personal products are considered separately owing to their distinct eligibility and distribution.

Table 2.6 summarises the most prominent products identified in each of the Member States. It also indicates whether the pension scheme is funded (meaning that participants’ assets are segregated from the pension provider’s balance sheet) or not (which is the case with insurance contracts).

**Table 2.6 Tabulation of most prominent schemes by country by scheme type**

Country	Prominent employer-arranged scheme	Funded?	Prominent personal scheme	Funded?
Netherlands	Sector-wide pension funds	Y	Insurance-based pensions	N
France	PEE/PERCO	Y	Life insurance products	N <sup>1</sup>
Sweden	SAF-LO	N	IPS <sup>2</sup>	Y
UK	Group Pension Plans	Y	Individual Pension Plans	Y
Germany	Pensionkassen	Y	Life insurance products	N
Austria	Pensionkassen	Y	PZV	Y
Italy	Contractual pension funds	Y	PIPs	N
Poland	Employee Pension Fund (PPE)	Y	OFE	Y
Slovakia	PAMC	Y	SPAMC	Y
Estonia	Funded pensions	Y	Supplementary insurance contracts	Y
Romania	<i>None</i>		Compulsory private pensions	Y
Hungary	<i>None</i>		Personal pension plans	Y
Spain	Fondos de pensiones	Y	Planes individuales	Y
Greece	Occupational insurance funds	N	IAA	Y

Note: There are no employer-arranged schemes, as defined here, in Romania and Hungary. <sup>1</sup> PERP insurance products in France have ring-fenced assets and liabilities, which produces similar outcomes to funded schemes, albeit with relatively more mutualisation. <sup>2</sup> Despite having significantly less accumulated assets than the PPM, the IPS represents a fully private initiative; the default fund within the PPM (AP7) is administered by the state. Source: Oxera analysis.

In the countries within the first and second cluster, there is a higher degree of customisation of the pension system, implying that it may be more meaningful to consider overall scheme types rather than specific products from pension providers in this analysis, as there may be a relatively high degree of variation between the products of different providers. This approach has been adopted for all of the remaining countries. Within the Eastern European cluster, however, owing to the presence of often only one scheme type, it is further possible to consider a comparison at a level of individual provider/plan, if data is available. This additional analysis is presented on a case-study basis in several sections below. In future research, if the quality of data available improves across the other Member States, it may be beneficial to focus on product-level, instead of scheme type-level, analysis.

## 2.4 Comparison of key metrics across the countries

One of the key issues facing the interpretation of the analysis presented in the forthcoming sections is data comparability. Where possible, bottom-up statistics were derived from the information found on the websites of, or provided by, the regulators and industry associations. In a number of cases, OECD or other general information has been used to allow for cross-country comparison. Data consistency can be an issue with such comparisons, and the relatively wide range of sources of information could benefit from future improvements in data-gathering activities by regulators in particular. Owing to the extensive use of the OECD Global Pensions Statistics database, Table 2.7 details the exact coverage of the information available.

**Table 2.7 Tabulation of product inclusion within the OECD Global Pension Statistics and the associated datasets**

Country	Occupational (employer-arranged) schemes		Personal schemes	
	Included	Excluded	Included	Excluded

Country	Occupational (employer-arranged) schemes		Personal schemes	
NL	Sector-wide pension funds Company pension funds Pension funds for liberal professions	Occupational life insurance products	<i>none</i>	Insurance-based pensions
FR	Contracts under Article 39	Contracts under Article 82 Contracts under Article 83 PERE Madelin Law PEE/PERCO	PERP	Life insurance products
SWE	ITP SAF-LO	KAP-KL PA—03, PA—91	PPM IPS	<i>none</i>
UK	Occupational salary-related plans Occupational money-purchase plans	Group Pension Plans	<i>none</i>	IPPs
DE	Pensionkassen	Direktzusage (book reserves) Unterstützungskasse (support funds) Direktversicherung (direct insurance) Pensionsfonds	<i>none</i>	Riester Pensions Rürup Pensions (Basisrente) Life insurance contracts
AT	Pensionkassen	Abfertigung Neu (severance pay) Direktzusage Unterstützungskasse Betriebliche Kollektivversicherung (group insurance)	<i>none</i>	PZV
ITA	Pre-existing autonomous pension funds Pre-existing non-autonomous pension funds Contractual pension funds Group open pension funds	<i>none</i>	Individual open pension funds Individual insurance contracts (PIPs)	<i>none</i>
PL	Employee Pension Fund (PPE)	<i>none</i>	OFE Mandatory personal pension fund	Individual pension fund (IKE) Individual pension fund (IKZE)
SLO	PAMC pension fund	<i>none</i>	SPAMC pension fund	<i>none</i>
EST	Funded pension	<i>none</i>	<i>none</i>	Supplementary personal pension fund Supplementary insurance contract
RO	<i>none</i>	<i>none</i>	<i>none</i>	Compulsory private pensions Optional private pensions
HU	<i>none</i>	<i>none</i>	Former occupational pension funds Personal pension funds	<i>none</i>

Country	Occupational (employer-arranged) schemes		Personal schemes	
SPA	Fondos de pensiones (pension funds) Group life insurance contracts PPSE Non-autonomous pension funds Mutual-provided personal pensions	<i>none</i>	Mutual-provided pension funds Associated plans Planes individuales (personal plans)	PPA
GR	Group pension plans (IOA)	Occupational insurance funds (TEA)	Personal pension plan (IAA)	<i>none</i>

Source: Oxera analysis based on the OECD Global Pensions Statistics, available online at <http://www.oecd.org/daf/financialmarketsinsuranceandpensions/privatepensions/privatepensionssystemsinoeecdcountries.htm>.

### 2.4.1 Obligation to join

The level of obligation to join defines whether, from a consumer's perspective, the participation in a particular scheme is mandatory or not. For mandatory schemes one would expect high levels of overall coverage, while the individual's decision tends to be limited to a choice of a particular provider of a particular pension plan that meets the requirement of the scheme, or a specific fund/product from a provider already selected by the employer. It is also possible that an individual would have no choice with regards to provider or fund.

Table 2.8 below categorises the employer-provided schemes within a country according to the degree of choice individuals have. A distinction has been made between participation being required by the government (referred to as 'mandatory') and participation being required by a consumers employer or union ('quasi-mandatory'), and which may not cover all employees in the country.

**Table 2.8 Tabulation of employer-provided pension schemes by country according to the level of obligation to join**

Mandatory and voluntary plans	Quasi-mandatory plans only	Quasi-mandatory and voluntary plans	Voluntary plans only	No employer-arranged plans
Austria	Slovakia	Netherlands	France	Hungary
Estonia	Sweden	UK	Germany	Romania
UK*			Greece	
			Italy	
			Poland	
			Spain	

Note: \* Mandatory auto-enrolment in the UK introduced in October 2012, with gradual roll-out across companies of different sizes until January 2015. While employees can choose to opt out of the pension scheme, this approach is treated as mandatory in this analysis, based on the assumption that inertia in consumer decision-making will result in a low level of opt-out. This assumption will be tested in the coming years, depending on the behaviour of consumers. These issues are discussed further in section 5.

Source: Oxera analysis.

None of the investigated Member States offers only mandatory employer-arranged pension plans. In a significant portion of the countries, the provision of employer-arranged plans is either fully voluntary, or non-existent. Austria's mandatory severance pay, which can be used for pension saving, and UK's Group Personal plans, are the only two fully mandatory scheme types. In addition, as a product of typically collective agreements, Netherlands and Sweden have developed a quasi-mandatory participation system whereby participation for a high proportion of the working population is de facto compulsory, as all employees of organisations taking part in these schemes are enrolled into the pension system. In Slovakia,

the consumer's decision to join up with a PAMC<sup>19</sup> has been voluntary since 2009, although it is understood that opt-outs by those already in the scheme are not allowed.<sup>20</sup>

When comparing personal products, the tabulation is significantly simpler, as shown in Table 2.9.

**Table 2.9 Tabulation of personal pension schemes by country according to the level of obligation to join**

Mandatory and voluntary plans	Voluntary plans only
Poland	Austria
Romania	Estonia
Sweden	France
	Germany
	Greece
	Hungary
	Italy
	Netherlands
	Poland
	Slovakia
	Spain
	UK

Note: In this study the UK's National Employment Savings Trust is treated as an employer-arranged pension scheme, not a personal pension scheme.  
Source: Oxera analysis.

In the Eastern European cluster, Poland and Hungary feature a mandatory personal plan, as well as a range of voluntary options. In all remaining countries the personal plans are fully voluntary.

Note that additional, scheme-type level information on this and all other sections is provided in the detailed country tables in Appendix 3.

#### 2.4.2 Contribution source

There are broadly two sources where the contributions to the pension schemes come from: the individual consumer (either privately or within the context of the consumer's employment relationship) and employer.<sup>21</sup> Table 2.10 shows the typical contribution sources across the investigated countries.

<sup>19</sup> Pension Asset Management Company.

<sup>20</sup> The system was mandatory pre-2009. The quasi-mandatory classification is driven by the lack of an opt-out option.

<sup>21</sup> In addition, there may be a reduction in tax liability if contributions to a pension scheme are made. For this part of the analysis this source of contributions is ignored.

**Table 2.10 Contribution sources across the Member States**

	Employer-arranged schemes	Personal schemes
Netherlands	Both	Individual
France	Both (with exceptions) <sup>1</sup>	Individual
Sweden	Employer	Individual
UK	Both	Individual
Germany	Both	Individual (and state for selected products) <sup>2</sup>
Austria	Both, and severance pay	Individual
Italy	Both, and severance pay	Both, and severance pay
Poland	Both	Individual
Slovakia	Both	Individual
Estonia	Both	Individual (employer optional)
Romania	n/a	Individual (employer optional)
Hungary	n/a	Individual (employer optional)
Spain	Both	Individual
Greece	Employer (employee optional)	Individual

Note: Built up bottom-up from scheme-type information, available in the country tables in Appendix 3. ‘Both’ implies both employee and employer.

<sup>1</sup> France—only the employer contributes to Article 39 contracts; only the employee contributes to PERE and Madelin Law contracts. <sup>2</sup> Germany—Riester pension support comes from the state.

Source: Oxera analysis, based on inputs from desk research and regulators.

In general, both employees and employers tend to contribute to employer-arranged schemes, although there are several exceptions: in Sweden, for instance, due to the historical evolution of the system, employer-arranged pensions were a product of collective bargaining process and seen as an additional employer-provided benefit. Among the personal schemes, several of the Eastern European countries allow for additional employer contributions into schemes that otherwise are selected and managed fully by individuals.

### 2.4.3 Payout methods

From the perspective of an individual, it is crucial to understand fully the form in which they can take their retirement savings. There are three main options:

- annuity—a fixed or variable payment of income benefit on a monthly, quarterly, half-yearly or yearly basis for the lifetime of a person or for a specified period of time; this term includes payments from defined-benefit type schemes, such as insurance-based schemes in Germany;
- lump sum—a single payment of income as opposed to a series of payments over time;
- phased/planned withdrawal—periodical withdrawal for consumption purposes according to predefined rules.

The range of options available to savers across the different Member States is shown in Table 2.11.

**Table 2.11 Payment methods across the Member States**

	<b>Employer-arranged schemes</b>	<b>Personal schemes</b>
Netherlands	Annuity (or LS if below threshold)	Annuity
France	Annuity, for some schemes LS	Annuity or LS
Sweden	Annuity	PW
UK	Annuity, max 25% tax-free LS. Also limited PW*	Annuity, max 25% tax free LS
Germany	Annuity or LS	Annuity or PW
Austria	Annuity (or LS if below threshold)	Annuity or LS
Italy	Annuity, up to 50% LS	Annuity, up to 50% LS
Poland	LS or PW	Annuity or LS/PW
Slovakia	Annuity or PW	Annuity or LS
Estonia	Annuity or LS	Annuity or LS without tax benefits
Romania	n/a	Annuity
Hungary	n/a	Annuity or LS
Spain	Annuity or LS (incl. combinations)	Annuity or LS (incl. combinations)
Greece	Annuity or LS	Annuity or LS

Note: LS, lump sum; PW, phased withdrawal. Built up bottom-up from scheme-type information, available in the country tables in Appendix 3. \* PW is allowed in the UK, but only up to the level of an equivalent annuity payout. Source: Oxera analysis, based on inputs from desk research and regulators.

In general, most of the Member States give consumers multiple options in relation to the payout method. Annuity-style payments (be it from an annuity or a DB pension) from the time of retiring are available to most consumers—the only exceptions are Polish employer-arranged schemes (PPE) and Swedish personal fund (IPS). Lump sums tend to be the second most common method acceptable, but are often limited in their scale as far as tax exemptions are concerned. For the relatively new eastern European pension systems, the provision of annuities is still being developed as there are few (if any) pension scheme members close to retirement age.

#### 2.4.4 Payout guarantees

The level of guarantees provided by a pension product is of critical importance to the consumer. As noted in section 1.3.2, private pension schemes are commonly referred to as being either defined-contribution or defined-benefit, with some hybrid schemes also being available. Section 1.3 defines these terms as they are used in this report. In summary:

- the level of benefits from a pure DC scheme are determined by the contributions made to the scheme and any investment returns (positive or negative) on the money in the account;<sup>22</sup>
- the benefits from a pure DB scheme are ‘defined’ from the outset, determined by a set formula, rather than depending on (uncertain) investment returns;
- hybrid schemes include elements of both DB and DC; arguably, many DB schemes are hybrids—for example, if they regularly provide members with ‘surpluses’ that are dependent on portfolio (and hence market) performance (eg, in Germany), or if the benefits/contributions can be flexed if market conditions are not favourable (eg, in the Netherlands).

<sup>22</sup> This process defines the level of benefits available at the end of the accumulation phase. If the benefit is taken as a lump sum at that point the contributions and investment performance in the accumulation phase fully determines the level of benefit. If the pension pot is transformed into an annuity at the end of the accumulation phase, the prevailing annuity rates will also have a bearing on the level of pension benefit achieved.

The most prominent pension schemes are specified in Table 2.12. The specification for all the different pension schemes considered in this study can be found in the country tables in Appendix 3.

**Table 2.12 Payout guarantee classification for the most prominent pension schemes**

	<b>Employer-arranged schemes</b>	<b>Personal schemes</b>
Netherlands	DB/hybrid	DB/DC (insurance)
France	DC	DB/DC (insurance)
Sweden	DC	DC
UK	DC	DC
Germany	Hybrid	Hybrid (insurance)
Austria	DC	DC (insurance)
Italy	DC	DC (insurance)
Poland	DC	DC
Slovakia	DC	DC
Estonia	DC	DC
Romania	n/a	DC
Hungary	n/a	DC
Spain	DC	DC
Greece	DC	DB/DC (insurance)

Note: Built up bottom-up from scheme-type information, available in the country tables in Appendix 3. For a definition of the most prominent schemes, see Table 2.6.

Source: Oxera analysis, based on inputs from desk research and regulators.

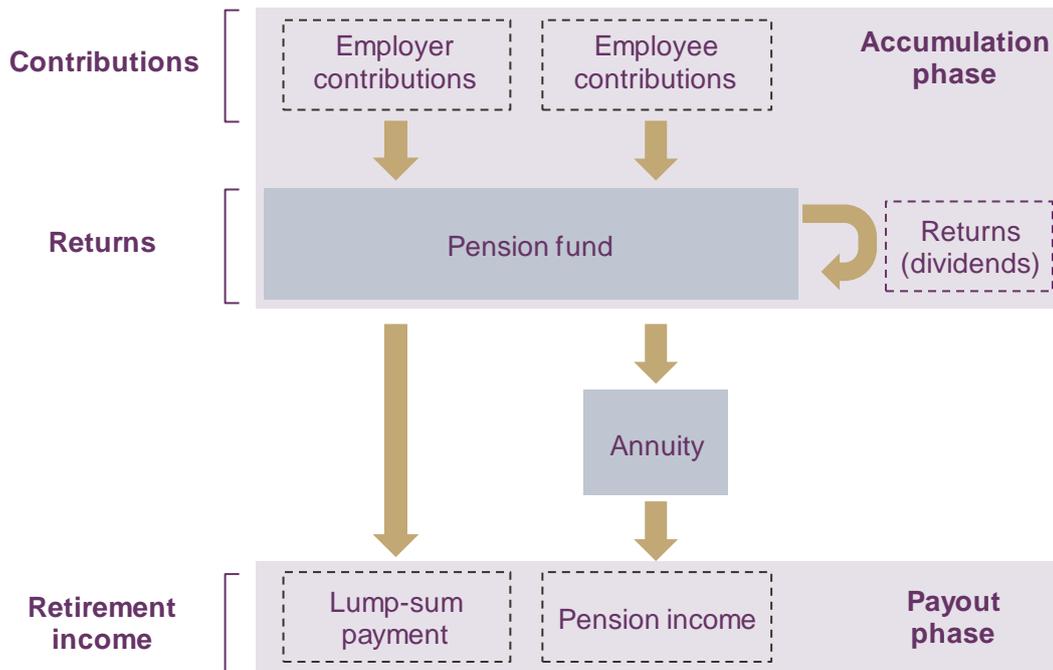
#### **2.4.5 Fiscal incentives**

Another core component of the study is the understanding of the incentive structure for joining the private pension plan. Broadly, these incentives can affect both the accumulation and the payout phases (as shown in Figure 2.2). In the accumulation phase there could be fiscal incentives for contributions, from both the employer and the employee side.

Furthermore, the periodic yields could be incentivised to induce the desired portfolio allocations. In the payout phase, savers can face differing incentives for taking out their savings in the form of a lump-sum payment or purchasing an annuity.

The incentives for consumers usually take the form of one or more of taxation benefits or additional contributions from employers, compared to non-pension savings arrangements.

**Figure 2.2 Fiscal incentives at different levels of the pension cycle**



**Legend**

 Elements possibly affected by fiscal incentives

Source: Oxera analysis.

These differences across the investigated Member States have been tabulated based on desk research and inputs from regulators in Table 2.13 below based on whether personal income tax is paid (T) or not (E, for Exempt) on:

- contributions;
- annual dividends or capital gains that the pension plans receive from the investments held;
- retirement income received (annuity) or on the lump sum payment made.

For instance, a TET regime would be one with contributions to the plan being made out of post-tax incomes, the plan returns being income tax-exempt in the accumulation phase, and the final retirement income being taxed.

**Table 2.13 Fiscal incentives across the Member States**

	Employer-arranged schemes	Personal schemes
Netherlands	EET	EET
France	EET	TET (EET for PERP)
Sweden <sup>4</sup>	ETT (with limits)	ETT (with limits)
UK	EET, but 25% tax-free lump sum	EET, but 25% tax-free lump sum
Germany	EET <sup>3</sup>	TET
Austria	EET or TEE <sup>3</sup>	TEE
Italy	ETT	ETT
Poland	EEE	TEE or EET
Slovakia	EEE	TET
Estonia	EET (with limits) <sup>1</sup>	EET (with limits) <sup>1</sup>
Romania	n/a	EET (with limits) <sup>5</sup>
Hungary	n/a	EET (with limits) <sup>2</sup>
Spain	EET	EET
Greece	EET or TTE (insurance)	EET or TTE (insurance)

Note: Built up bottom-up from scheme-type information, available in the country tables in Appendix 3.

<sup>1</sup> Contributions to voluntary schemes are tax exempt up to 15% of income or max €6.000; benefits taxed at 0, 10 or 21% over the set thresholds. <sup>2</sup> Contributions are subject to a 20% tax exemption up to a limit of HUF 100k annually. <sup>3</sup> In Austria and Germany, returns in Direktusage schemes are taxed as company income; returns in the remaining schemes are tax-exempt, but often up to certain limits. <sup>4</sup> Insurance-based products are subject to policyholder/returns taxation, set each year with respect to the average government bond yields. <sup>5</sup> Limit on the tax-free contributions for the privately managed optional component.

Source: Oxera analysis, based on inputs from desk research and regulators, and Insurance Europe (2007), 'Tax treatments of 2nd and 3rd pillar pension products'.

As a general rule, the contributions to the employer-arranged plans tend to be exempt from taxation across virtually all Member States.<sup>23</sup> With the exception of Italy, Sweden and insurance-based pensions in Greece, there are no dividend taxes on pension investment returns, and the retirement income is typically taxed, with Poland and Slovakia as exceptions.

The personal schemes, on the other hand, are more complex. For some countries, including Germany, Austria and France, typically referring to insurance type pension schemes, payments into the schemes by individuals come from their post-tax incomes, as the payments are not income tax deductible.

The taxation of pension schemes has important implications for consumers in terms of their incentives to save for retirement using pension plans, or at all.<sup>24</sup> The income tax deductibility of pension contributions (typical for employer-arranged schemes) significantly increases the size of contributions and therefore boosts consumer demand for pensions (see Table 2.14 below for the tabulation of marginal tax rates). Pension savings are also typically free of taxation on returns (eg, dividends received) during the accumulation phase, although taxation at this phase is complex and some taxes (eg, corporate tax on profits, financial transaction taxes) may still apply. Retirement incomes from pension are, however, frequently treated as taxable income, although typically only if it pushes total retirement income above income tax thresholds.

<sup>23</sup> The taxation treatment of foreign pension contributions has been an issue of concern for the European Commission, in terms of fostering a single market for pensions in the EU. This is not a focus of this study, however.

<sup>24</sup> A similar form of saving outside a pension scheme would typically take the form of TTE if the payout is taken as a 'lump sum'. If that lump sum is then used to purchase an annuity the tax treatment of the income from that annuity may also be different.

**Table 2.14 Marginal tax rates for average earner (2011, %)**

Country	Rates (%)
Netherlands	42
France	30
Sweden	31/51 <sup>1</sup>
UK	20
Germany	33*
Austria	43.2
Italy	38
Poland	18*
Slovakia	19
Estonia	21
Romania	16
Hungary	16
Spain	30*
Greece	24

Note: <sup>1</sup> Average annual earnings in Sweden are approximately €3,500 below a threshold above which an additional 20% state income tax is paid.

Source: Oxera analysis, based on OECD data on average annual wages in 2011, EU data on marginal tax rates and (where indicated \*) an Internet source ([www.worldwide-tax.com](http://www.worldwide-tax.com)) that requires further verification (2012 data). Germany has a marginal tax rate that increases linearly as wages increase, and the rate at the centre of this linear range (33%) is used here.

### Saving creation versus displacement

From the perspective of the consumer, the exact structure of the system that they face will have a significant impact on their incentives to save via a private pension. A particularly important question is whether the fiscal incentives provided lead to the creation of additional savings, or merely to displacement from other forms of saving for retirement. For instance, a recent study on the German Riester pensions showed that they are complementary to other forms of savings, and therefore the tax incentives provided by government can be seen to assist in achieving the goal of greater savings for retirement.<sup>25</sup> Inspecting the private pension coverage by income segment, however, may lead to the findings on the impact on savings being refined, as substitution may differ for different income levels. This remains an area of active research.

#### 2.4.6 Dormant and empty accounts

When considering the coverage of private pension systems, it is necessary to consider two specific groups of consumers:

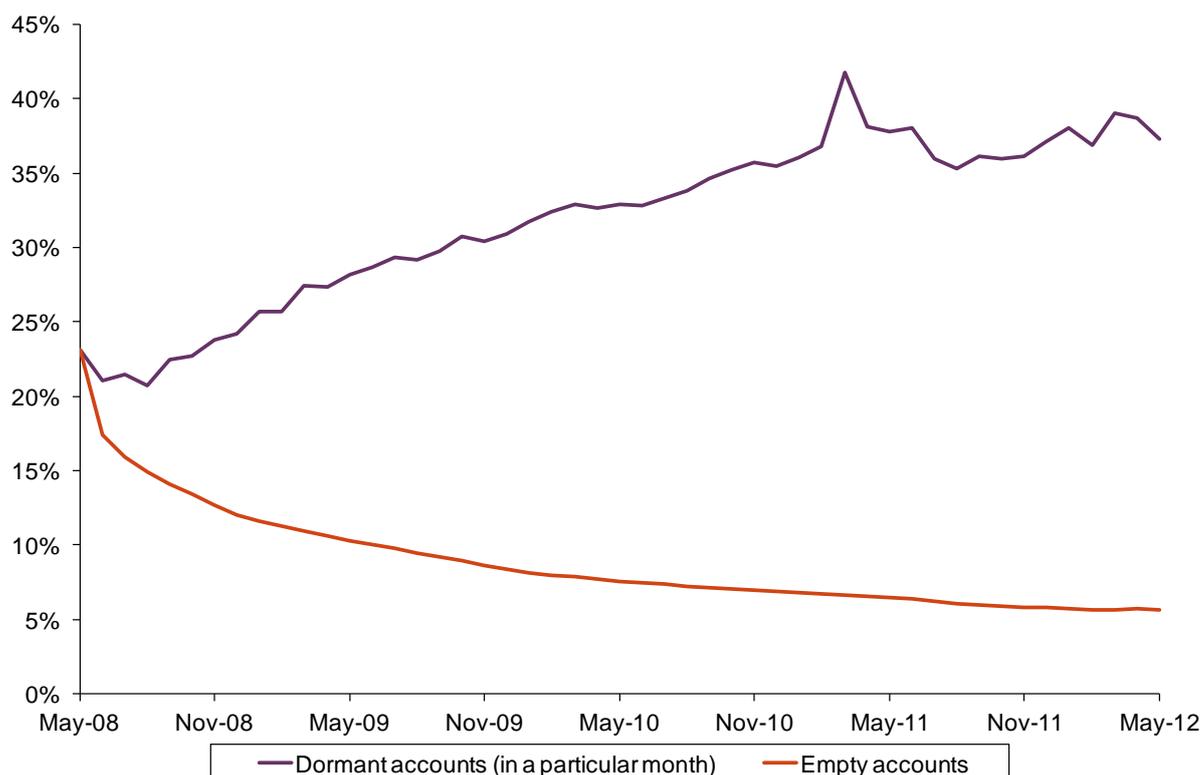
- consumers with **dormant accounts**—those where the contributions have been halted for a reason such as unemployment or parental leave, in the case of employer-provided schemes. Importantly, these consumers would have contributed a certain amount into the schemes prior to the dormancy;
- consumers with **empty accounts**, in particular those who have never been employed or are altogether ineligible to participate in the private pension system.

<sup>25</sup> Börsch-Supan, A. et al. (2012), 'Riester Pensions in Germany: Design, Dynamics, Targetting Success and Crowding-In', NBER Working Paper No. 18014.

In the UK for instance, prior to the roll-out of auto-enrolment for the occupational stakeholder pensions, it was necessary for employers to open a plan for an employee even if no contributions were ever channelled. In this context, a coverage statistic including the numerous empty accounts would misrepresent the actual level of coverage (too high) but also under-represent the level of benefits that have been accumulated by those who are actually active in the scheme.

A country with potentially the highest number of empty accounts is Romania. Figure 2.3 below shows the scale of the issue for this country.

**Figure 2.3 Illustration of the empty and dormant accounts issue in Romania (2008–12, %)**



Note: Dormant accounts based on an account receiving no contributions in a particular month. Empty accounts represent accounts with no payments since May 2008.  
Source: Oxera analysis of CSSPP data.

According to Oxera’s analysis of CSSPP data, between 2008 and 2012, the proportion of dormant accounts within the Romanian mandatory personal schemes rose from 23% to 37%. The proportion of empty accounts varied, by provider, between approximately 8 and 23% in 2008, although it has been decreasing steadily since (6% in May 2012). It has been hypothesised that this is due to the large proportion of migrant workers who are, by necessity, registered with the schemes, but never start their contributions. The numbers will also be driven by those temporarily stopping payments, perhaps due to temporary unemployment.

Further information on the extent of dormant and empty accounts can be found in the country tables of Appendix 3.

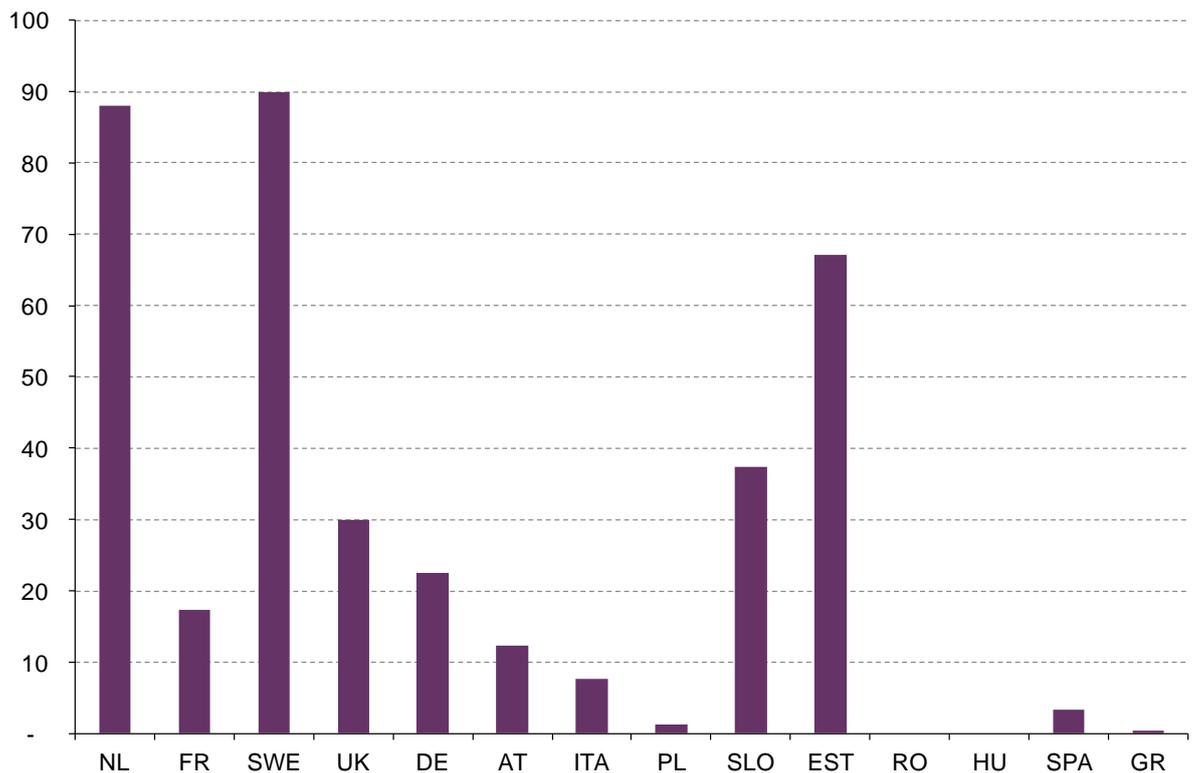
#### 2.4.7 Coverage

Coverage represents a measure of private pension penetration. Figure 2.4 shows the proportion of working population covered by employer-arranged pensions.

There is, generally, a high level of coverage within the countries in the first cluster which have had mandatory or quasi mandatory schemes for some time. In addition, the new auto-enrolment programme that is coming into force in the UK between October 1st 2012 and January 2015 is aimed at further increasing the provision of private pensions. France, on the other hand, represents a country with traditionally generous funded state pension, which explains the relatively lower private pension participation levels.

The second cluster (Germany, Austria and Italy) are characterised by medium levels of coverage, while, within the Eastern European cluster, with the exception of Slovakia and Estonia, the provision of employer-arranged pensions is limited or non-existent.

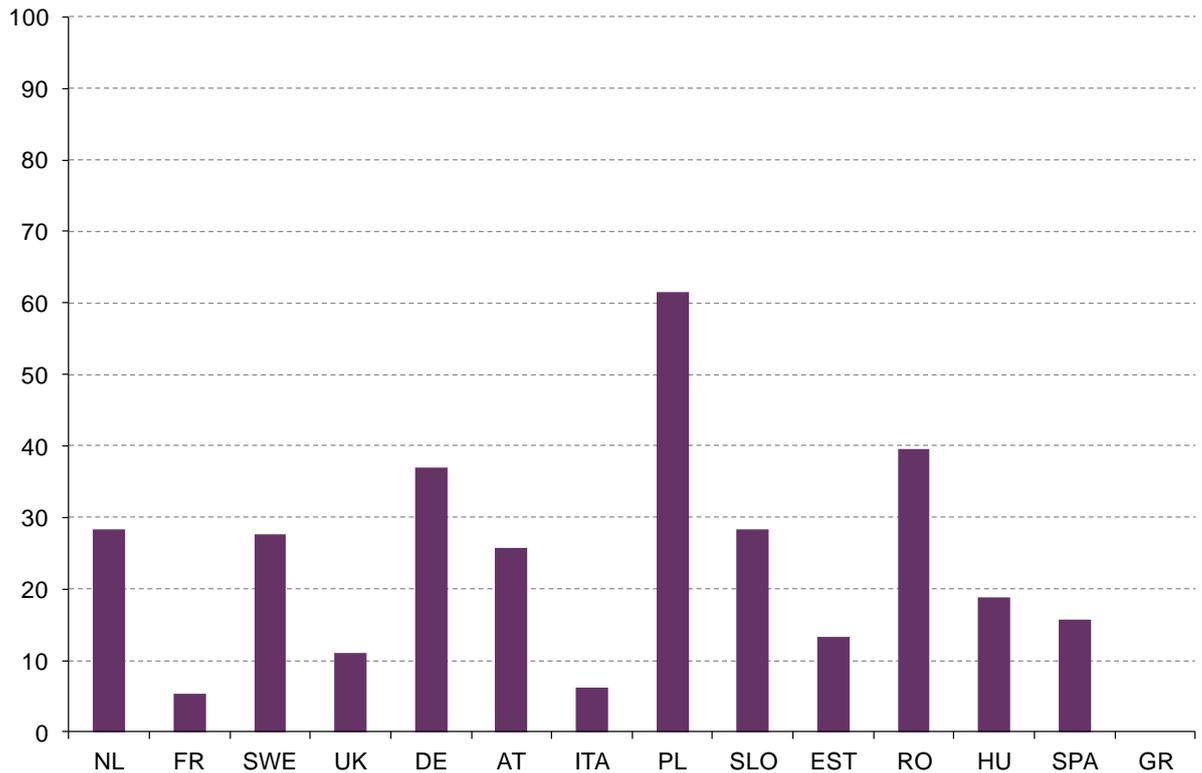
**Figure 2.4 Proportion of working age population covered by employer-arranged schemes (2010, %)**



Note: See Table 2.7 for details of OECD data coverage by country. Pension schemes have been reclassified in line with the definitions of the study (hence no employer-arranged schemes coverage in Romania or Hungary). Data for Slovakia is for 2011 and based on Oxera's own estimates, other countries based on 2010 OECD data. Source: Oxera analysis of Slovakian data from Jan Sebo's research and OECD (2012), 'Pensions Outlook 2012'.

The market looks notably different among the personal schemes. Many of the Eastern European countries have (or until recently had, eg, Hungary) mandatory personal private pensions, which by definition creates high coverage rates (see Figure 2.5 below). Given the voluntary nature of the personal pensions in all other clusters, it is not surprising to see relatively lower levels of coverage compared with employer-arranged schemes across all other countries except Germany, Austria (second cluster) and Spain.

**Figure 2.5 Proportion of working population covered by personal schemes (2010, %)**

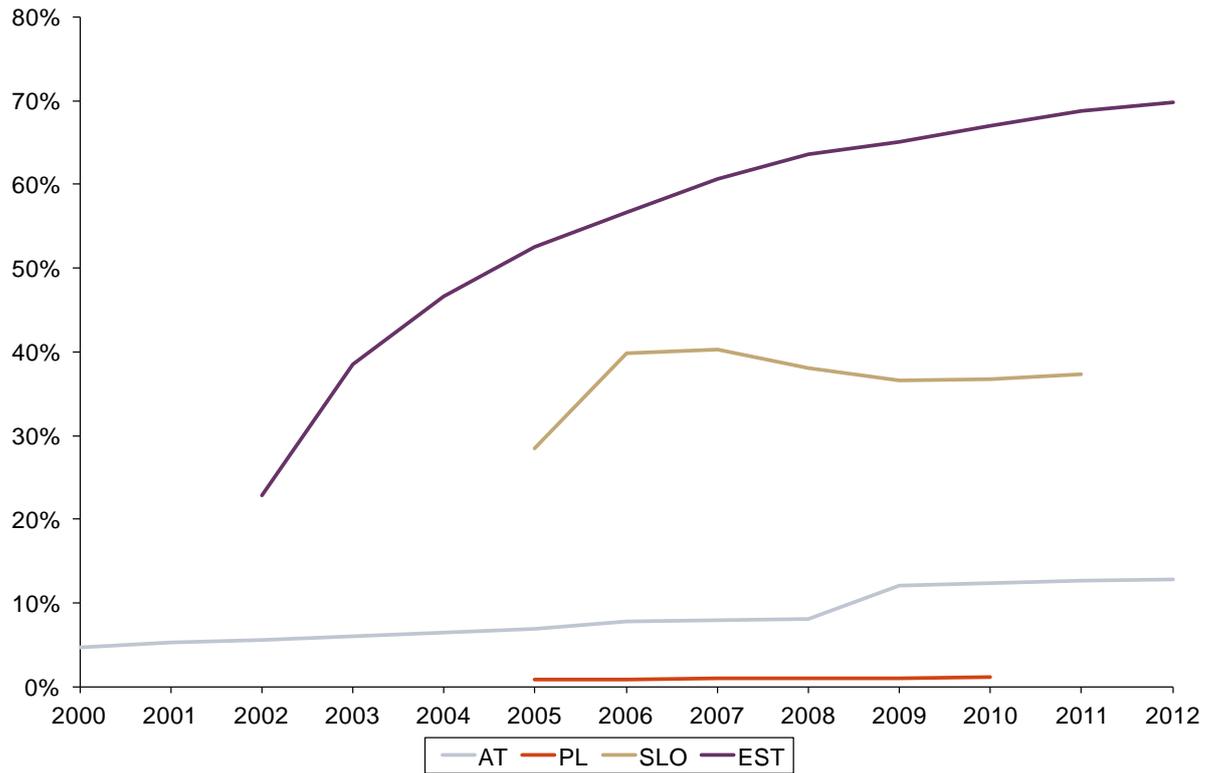


Note: See Table 2.7 for details of coverage by country. Pension schemes have been reclassified in line with the definitions of the study. Data for Poland (2012), Slovakia (2011) and Romania (2011) based on Oxera own estimates, other countries based on 2010 OECD data; no data for Greece. Swedish data excludes the mandatory PPM scheme. Insurance-based products excluded.  
Source: Oxera analysis, based on Slovakian data from Jan Sebo's research; KNF, CSSPP and Estonian Ministry of Finance data; and OECD (2012), 'Pensions Outlook 2012'.

The limited data on the evolution of coverage over time is presented in Figures 2.6 and 2.7 for employer-arranged and personal schemes, respectively. The trend across all of the investigated countries is that coverage has been increasing. The only exception is Hungary, where nationalisation of assets of the (former) occupational pension funds led to a number of consumers choosing to leave the system or transfer over to the personal funds.<sup>26</sup>

<sup>26</sup> The 'former' occupational pension scheme in Hungary now has features almost exactly in line with the personal schemes, and has therefore been categorised as a personal pension scheme.

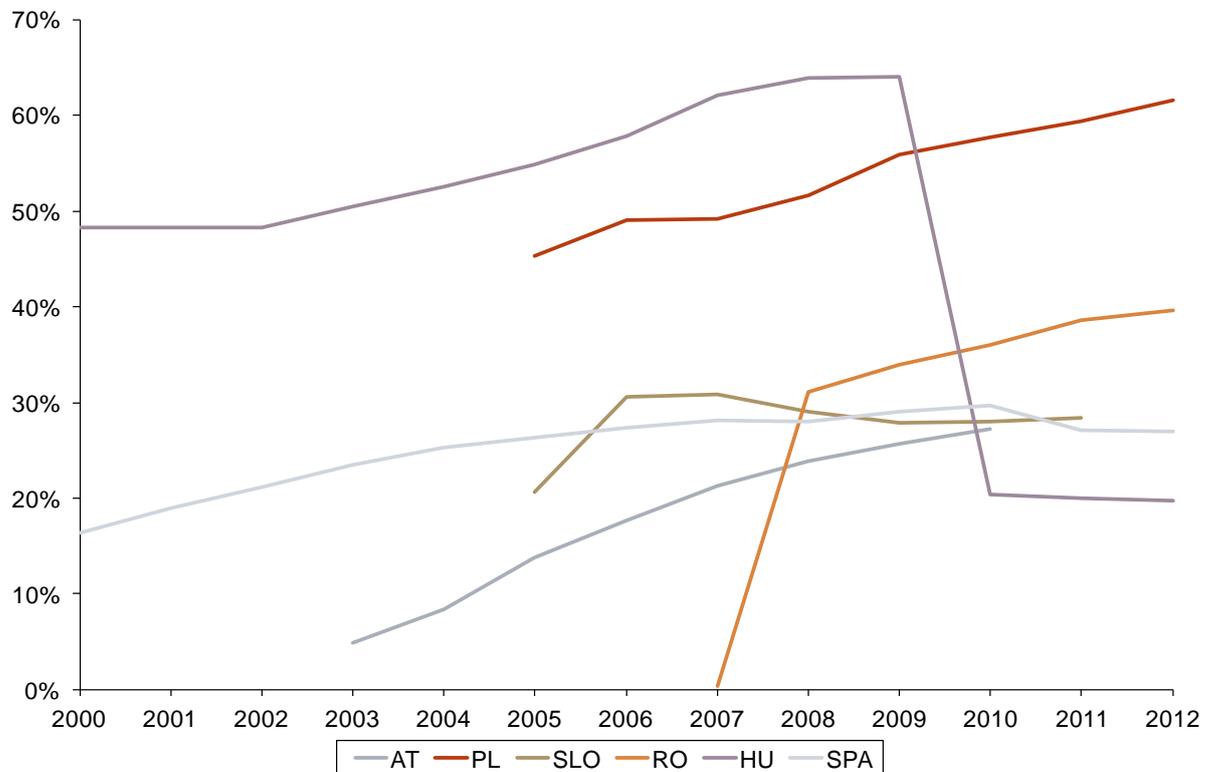
**Figure 2.6 Evolution of coverage for employer-arranged schemes (2000–12, %)**



Note: Austrian data spans Pensionkasse only.

Source: Oxera analysis, based on pension members data from Arbeitkammer (AT), KNF (PL), Jan Sebo research (SLO), Estonian Finance Ministry (EST), and population data from Eurostat.

**Figure 2.7 Evolution of coverage for personal schemes (2000–12, %)**



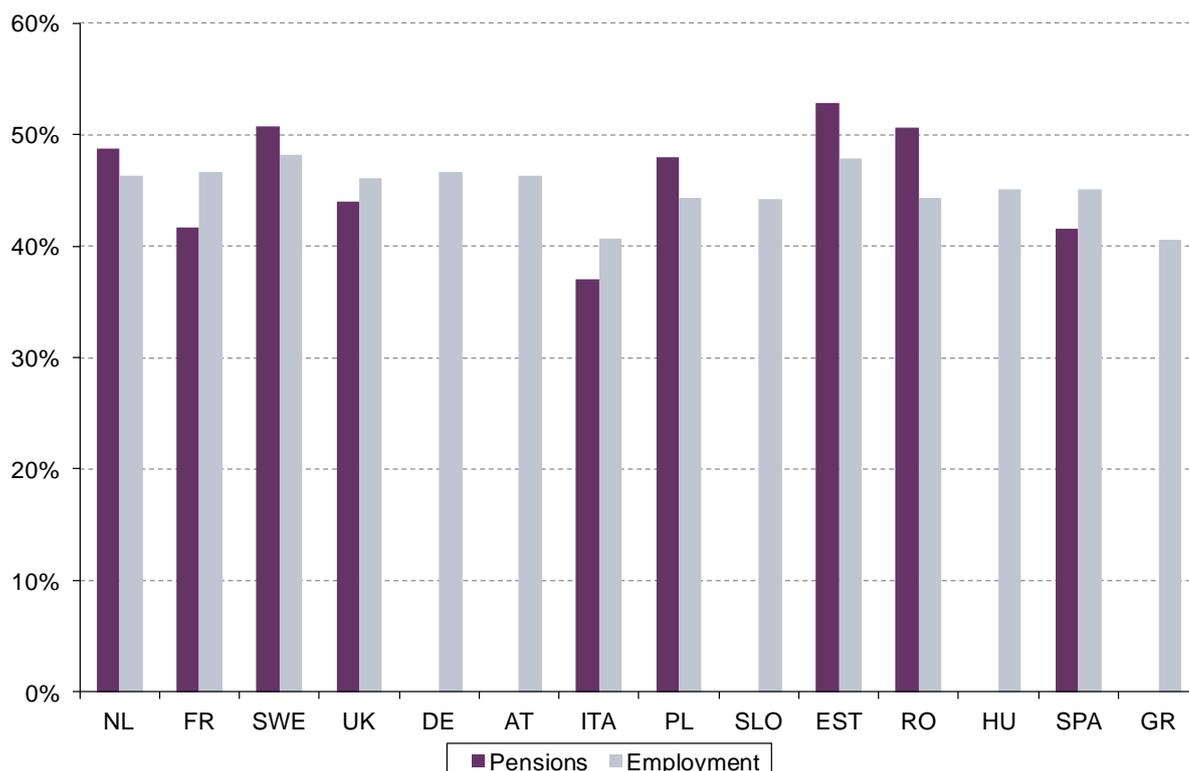
Note: The fall in Hungarian coverage data corresponds to the nationalisation of (former) occupational pension assets.

Source: Oxera analysis, based on data from FMA (AT), KNF (PL), Jan Sebo research (SLO), CSSPP (RO), FSZAP (HU) and DGSFP (SPA); population data from Eurostat.

## 2.4.8 Gender profiling

There appears to be little significant variation in the gender distribution of savers across the countries, as shown in Figure 2.8. The gender profiles for pension schemes do not appear to vary systematically from the gender profiles of labour force participation (employment), except potentially in Eastern Europe, where female pension participation is relatively higher than for employment. This may reflect the age profile of the pension schemes to some extent, as female employment participation tends to be higher for younger age groups, which are also more prevalent in the younger private pension systems.

**Figure 2.8 Gender profile of all private pension consumers, by country (latest data, % of females)**



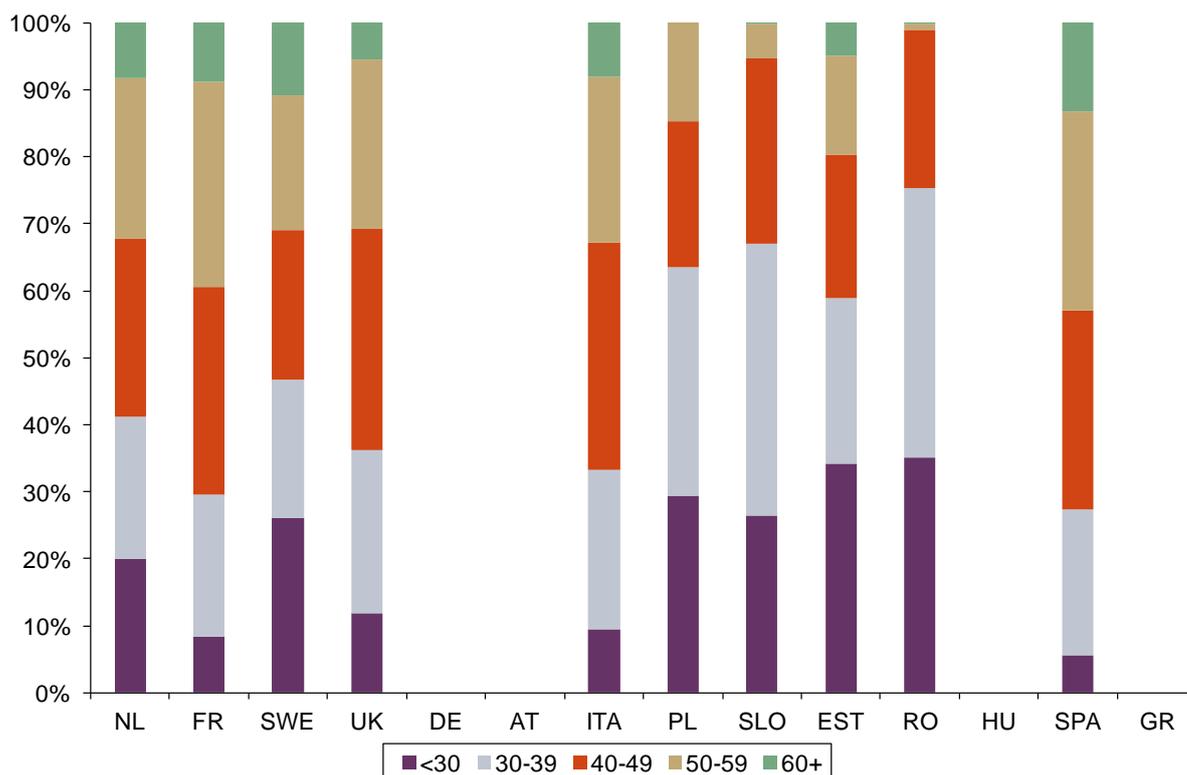
Note: Only employer-arranged schemes for NL, UK, ITA; only life insurance contracts for SWE; only selected schemes for SPA. Year of reference: 2010, NL, FR, SWE, SPA; 2011, UK, ITA; 2012, PL, EST, RO. Source: Oxera analysis, based on data from DNB (NL), Ministère des Affaires sociales et de la Santé (FR), Statistics Sweden (SWE), ONS (UK), COVIP (ITA), KNF (PL), Estonian Finance Ministry (EST), CSSPP (RO) and DGSFP (SPA); Eurostat data on employment split by gender for 2011.

## 2.4.9 Age profiling

The relevant hypothesis with regard to the age distribution would be that the observed age profile of consumers is directly correlated with the age of the overall pension system. One would expect that the older the pension system, the more consumer cohorts would manage to proceed from the ‘recently joined’ to the ‘about to retire’ bracket. There would also be the associated effects of the changes of the total asset portfolio based on the structure of the members, as via the lifestyling mechanism the assets are gradually moved to safer instruments—this is explored in more detailed in section 3.

This hypothesis regarding age profiling is largely confirmed within the investigated countries—the oldest private pension systems in the first cluster countries clearly stand out when compared with the relatively young member base in the Eastern European countries.

**Figure 2.9 Age profile of all private pension consumers, by country (latest year, %)**



Note: Only employer-arranged schemes for NL and ITA; only life insurance contracts for SWE; only selected schemes for SPA. Year of reference: 2010, NL, FR, SWE, SPA; 2011, ITA; 2012, PL, SLO, EST, RO, UK. Source: Oxera analysis, based on data from DNB (NL), Ministère des Affaires Sociales et de la Santé (FR), Statistics Sweden (SWE), COVIP (ITA), KNF (PL), Jan Sebo's research (SLO), Estonian Finance Ministry (EST), CSSPP (RO), DGSFP (SPA), and Annual Survey of Hours and Earnings (UK).

### 2.4.10 Income profiling

There are two general approaches to income profiling:

- explaining how the existing consumer base within a scheme is distributed across the individual income brackets, or
- explaining what is the coverage of a particular pension scheme or product across the individual income bands.

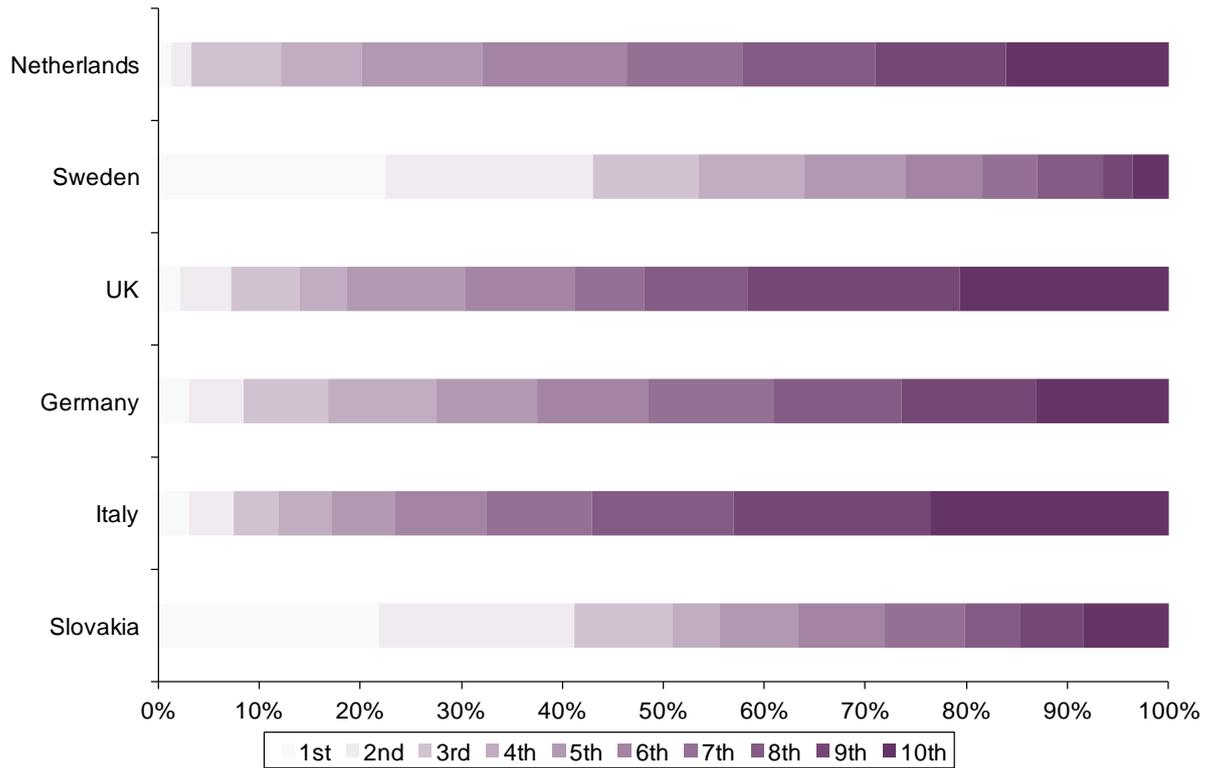
Owing to the lack of comprehensive data, case studies based on a few selected countries are presented below.

#### Distribution of existing members across income decile

Figure 2.10 below show the results of the profiling for Netherlands, Sweden, Germany, Italy and Slovakia. Broadly, there would appear to be two groupings:

- Italy, Germany and the Netherlands, whereby the scheme members tend to be in the higher income brackets;
- Sweden and Slovakia, whereby there are higher levels of participation in particular among the individuals in the lower income brackets. In fact, the exact distribution of these two countries have very similar shapes.

**Figure 2.10 Distribution of private pension members by income decile (%)**



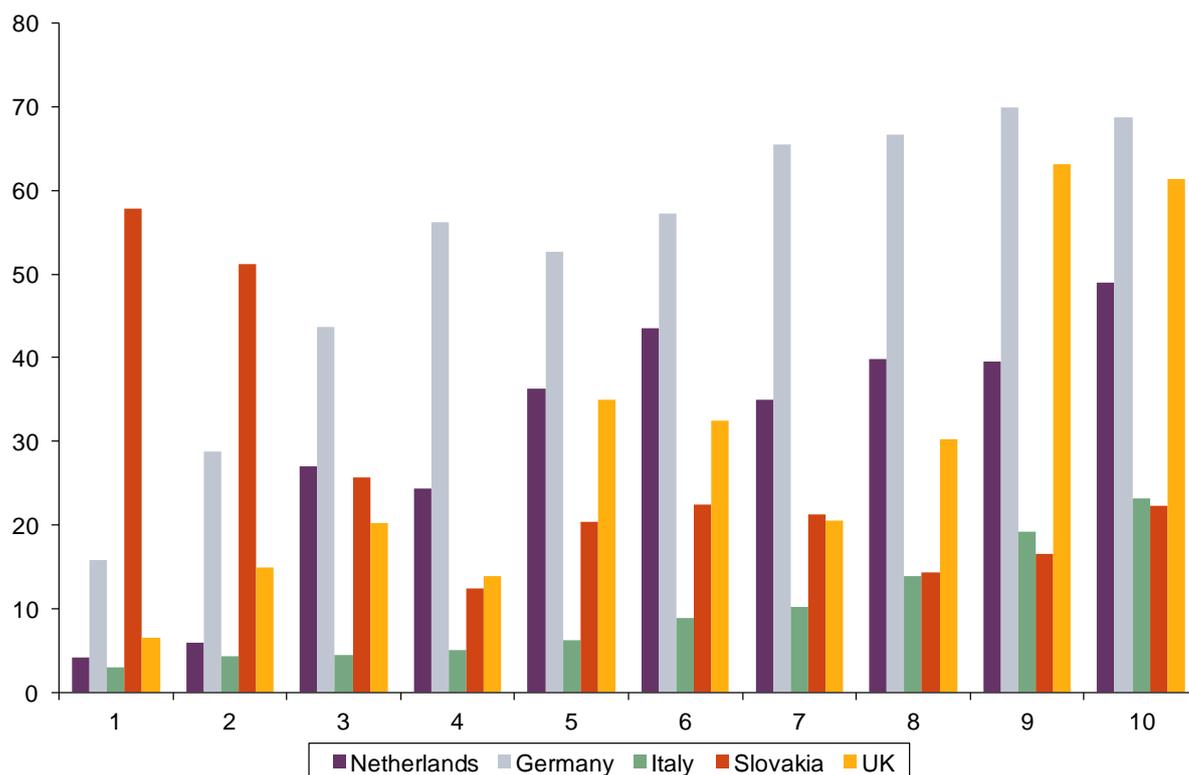
Note: Netherlands, personal schemes only, 2010 data. Italy, all schemes, 2010 data. Germany, Pensionskasse only, 2008 data. Slovakia, PAMC only, 2011 data. Sweden, all schemes, 2010 data. Netherlands, Germany and Italy based on OECD data; Oxera own estimates of income deciles in Slovakia and Sweden based on data from Statistics Sweden and Slovakia. Exchange rate converted using purchasing power parity (PPP), based on OECD data. UK, 2011 data.

Source: Oxera analysis, based on Statistics Sweden data, Statistics Slovakia, OECD exchange-rate data and from OECD (2012), 'Pensions Outlook 2012', Figure 4.5a, and Annual Survey of Hours and Earnings 2011 (UK).

### Coverage variation by income decile

Additional patterns are clear when one considers the coverage of private pension systems within individual consumer income deciles.

**Figure 2.11 Total coverage of private pension plans by income decile (%)**



Note: Netherlands, personal schemes only, 2010 data. Italy, all schemes, 2010 data. Germany, Pensionskasse only, 2008 data. Slovakia, PAMC only, 2011 data. UK, 2011 data.

Source: Adapted from OECD (2012), 'Pensions Outlook 2012', Figure 4.5a, and Annual Survey of Hours and Earnings 2011 survey (UK)

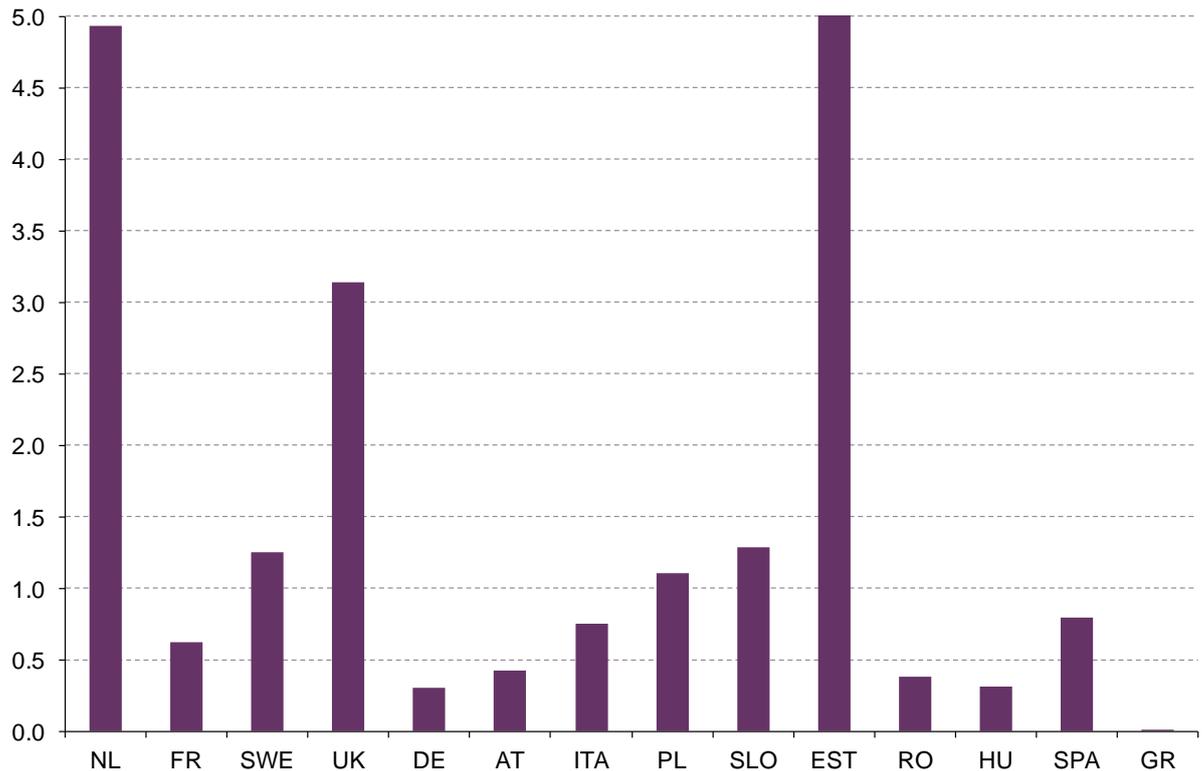
In the presented cases from Germany, the UK, Italy and the Netherlands, it would appear that participation in private pensions increases for the higher income deciles. This means that the more wealthy individuals are more likely to use private pensions as a saving mechanism. One could further hypothesise that, for these wealthier individuals, private pensions represent a tax-efficient saving method, leading to displacement of funds rather than creation of new savings—additional research in this field would be required to confirm this theory.

Slovakia, on the other hand, is an example of a system that achieves higher levels of private pension penetration among the lowest income bracket. The potential driver of this distribution is the mandatory nature of the system, which otherwise offsets the low levels of incentives to increase savings for consumers with the lowest disposable incomes.

#### 2.4.11 Contribution levels

The observed levels of contributions vary significantly across the individual countries, as shown in Figure 2.12 below. In general, the most established systems such as the Netherlands or the UK have the highest relative contributions, as opposed to the relatively low contributions in the Eastern Europe or, most notably, Greece.

**Figure 2.12 Private pension scheme contributions as a proportion of GDP (latest data, %)**



Note: See Table 2.7 for details of coverage by country; no split of employer-arranged and personal schemes. Insurance-based products excluded. Relevant year: 2011 (NL, DE, ITA, PL, SLO, EST, RO, HU and GR) and 2010 (FR, UK, AT, SPA).

Source: Oxera analysis, based on data from OECD Global Pensions Statistics, and OECD Factbook 2011.

Note, however, that comparisons such as this are particularly susceptible to data limitations. In particular, the OECD data presented here does not include contributions to insurance-based pension plans, which form a majority of the German market, for example. More comprehensive dataset would be required to assess the overall, cross-country scale of contributions. During the course of this study only partial information has been available on the most commonly observed or average contribution levels across the different schemes. This area calls for further research.

#### 2.4.12 Net asset value

##### Overall asset value

Overall, the comparison of total pension assets across the individual Member States suffers from the issue of data incompleteness, as shown in Table 2.15 below.

**Table 2.15 Total net asset value by country (latest data, € billion)**

Country	Employer-arranged			Personal		
	Asset value	Includes	Excludes	Asset value	Includes	Excludes
NL	Total pension assets estimated at €832 billion (no split available)					
France	114	PERE, PERCO, Madelin Law, Art. 39, 82, 83	none	7	PERP	Life insurance (total est. €1.4tr)
Sweden	116	Pension funds and pension-related life insurance products	none	87	PPM, IPS and pension-related life insurance products	
UK	1,570	DB and selected DC plans	Group Pension Plans	n/a		Individual Pension Plans
Germany	476	Direktzusage, Unterstützungskasse, Direktversicherung, Pensionkassen and Pensionsfonds	none	n/a		Reister, pensions, and life insurance contracts
Austria	16	Pensionkassen	Direktzusage, Abfertigung Neu, Unterstützungskasse and group insurance	5	PZV	
Italy	Total pension assets estimated at €93 billion (no split available)					
Poland	1	PPE	none	104	OFE, IKE	IKZE (small)
Slovakia	5.5	PAMC	none	1	SPAMC	none
Estonia	1.3	Funded pension	none	0.3	Supplementary personal pensions	none
Romania	0	none	none	1.9	Compulsory and optional private pensions	none
Hungary	0	none	none	6	Former occupational & personal funds	none
Spain	63	Fondos de pensiones, mutual-provided plans	Group life insurance, PPSE, non-autonomous funds	53	Planes individuales, planes asociados	Mutual-provided plans, PPA
Greece	Total pension assets estimated at €0.1 billion (no split available)					

Note: See Table 2.7 for details of OECD data coverage by country. In case of non-€ base values conversion was done using PPP exchange rates from OECD.

Source: Oxera analysis, based on data from OECD Global Pension Statistics (NL, UK, ITA, HU and GR, 2011); Ministère des Affaires Sociales et de la Santé (FR, 2010), Insurance Sweden (SWE, 2011), GDV and ISSA (DE, 2009/10), FMA (AT, 2010), KNF (PL, 2012), Jan Sebo research (SLO, 2011), Estonian Ministry of Finance (EST, 2012), DGSFP and CNEPS (SPA, 2012, except for mutual data for 2010).

The main findings are:

- the assets accumulated by the countries within the first cluster, ie one with the oldest systems, appear to be significantly larger than assets in the countries with younger systems;
- the larger countries (Germany or Spain) tend to have more assets in private pensions than smaller countries (Slovakia or Romania);
- there are significant outliers among the investigated states where the accumulated private pension assets would appear lower than expected (especially Greece and Italy).

Given the state of the research for the purpose of this study, the total assets under management within the private pension system across the investigated countries are at least €3.6 trillion. These estimates exclude insurance-based private pensions in France and Germany, and the personal DC plans in the UK, all of which are substantial.

Development of more comprehensive and reliable data on net asset values of pension systems should be a priority for regulators across Europe, in order to build a more complete picture of how private pension systems are developing.

### 2.4.13 Portfolio allocation

The distribution of pension assets has a direct impact on the returns that an individual's pension is likely to achieve, and correspondingly on the level of risk carried. Conceptually, it is necessary to distinguish between the allowed asset allocation and the actual asset allocation. Another question is how the allocation shifts over time, and—from a consumer's perspective—whether the shift is automatic or requires an active decision.<sup>27</sup>

#### Allowed asset allocation

Table 2.16 outlines the limits imposed on employer-arranged and personal schemes.

**Table 2.16 Legal restrictions on eligible assets for savers' portfolios**

	Employer-arranged schemes	Personal schemes
Netherlands	'Prudent person' rule	'Prudent person' rule
France	Maximum of 10% investment in any one company and at least three collective investment funds with different portfolios (PERCO)	none
Sweden	none	none
UK	none	none
Germany	Max 35% in equity, 5% in hedge funds and 0% in commodities <sup>1</sup>	none
Austria	FMA regulation on Special Investment Provisions for Pension Funds <sup>2</sup>	Minimum equity share 30% for under 45 year-olds; 25% for 45–55; 15% for those aged over 55
Italy	Several quantitative restrictions on cash share and risk exposure to individual issuers, derivatives, real estate and sponsoring employers <sup>3</sup>	Several quantitative restrictions on cash share and risk exposure to individual issuers, derivatives, real estate and sponsoring employers <sup>3</sup>
Poland	Max. proportion of shares in the portfolio is set to rise to 90% in 2034 <sup>4</sup>	none
Slovakia	Fully dependent on fund.	none
Estonia	Maximum 75% in equities, 40% in real estate, 10% in unlisted bonds, 10% in loans	Maximum 70% in real estate, 10% in loans <sup>5</sup>
Romania	Investments in infrastructure projects limited to 10%	Investments in infrastructure projects limited to 10%
Hungary	Classic portfolio: max. 10% shares, no derivatives or real estate investments, rest bonds  Balanced: max. 10% real estate investments, max. 3% venture capital funds (max. 2% in one), 10–40% shares, no derivatives, rest bonds  Growth: max. 20% real estate, max. 5% venture capital funds, max. 5% derivatives, min 40% shares, rest bonds	The fund can have a max. of 10% of the total securities of one issuer (except for government bonds)
Spain	Minimum of 70% in low-risk assets <sup>6</sup>	Some restrictions in place

<sup>27</sup> Owing to data limitations, it has not been possible to compare portfolio evolutions comprehensively over time.

	Employer-arranged schemes	Personal schemes
Greece	Max. 70% in bonds and stocks; max. 30% in assets other than euros and max. 5% in financial products/derivatives <sup>7</sup>	none

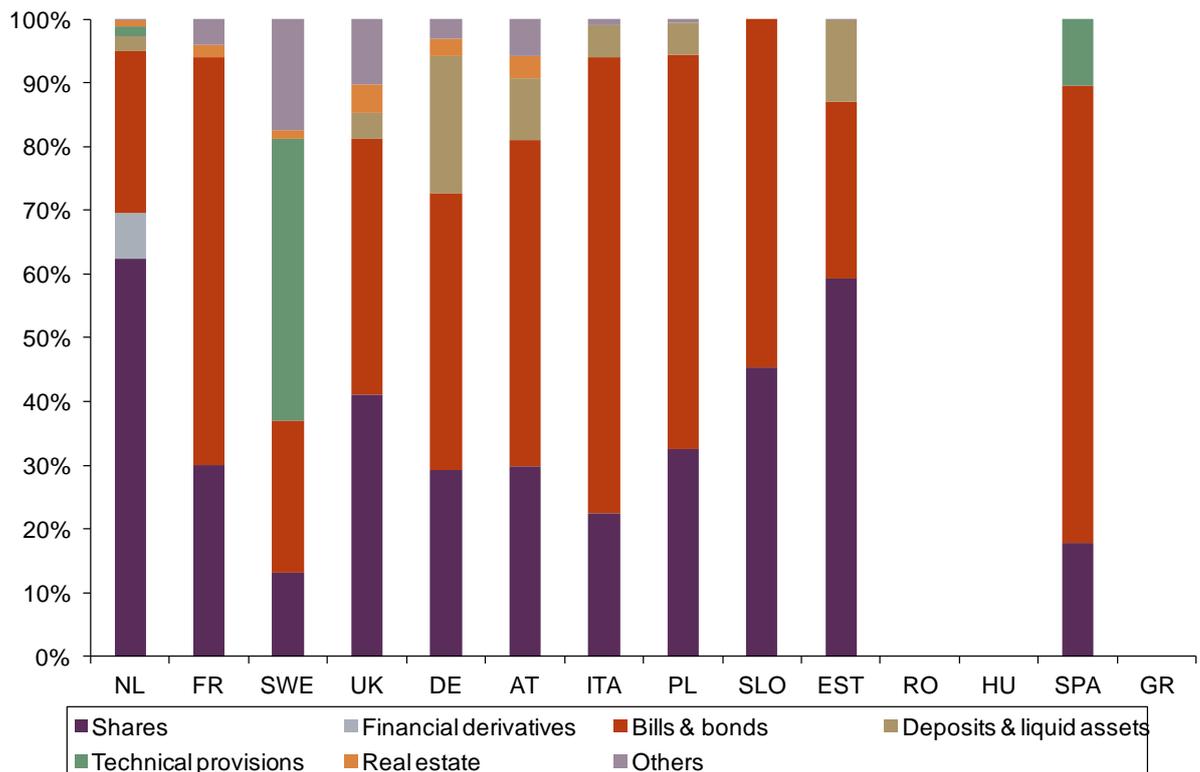
Note: <sup>1</sup> Pensionkasse only. <sup>2</sup> Pensionskassen only. <sup>3</sup> See country table in Appendix 3 for further details. <sup>4</sup> PPE only. <sup>5</sup> Supplementary funded pension—pension fund only. <sup>6</sup> Fondos de pensiones—planes de empleo only. Less restrictive constraints in place for Seguros colectivos sobre la vida. <sup>7</sup> Tameia Epagglematikis Asfalsis only. <sup>8</sup> Previous minimum investment in Slovak assets of 30%.

Source: Oxera analysis, based on inputs from desk research and regulators.

### Actual asset allocation

Among the employer-arranged plans across Member States there appears to be quite a significant variation in asset allocations, as shown in Figure 2.13 below.

**Figure 2.13 Allocation of assets of employer-arranged pension plans (latest data, %)**



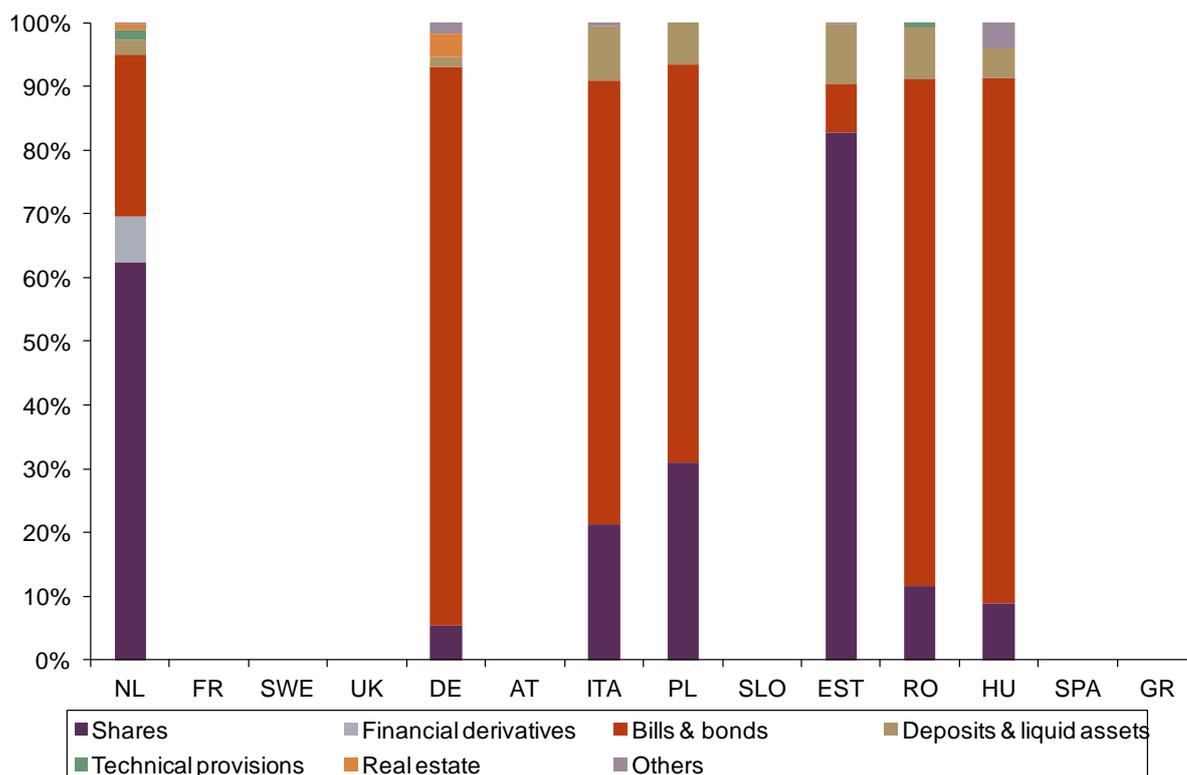
Note: Investment funds excluded from the tabulation due to the inability to split the underlying assets. The 'other' category not reported consistently across the countries. NL includes all personal and employer-arranged plans; SWE includes insurance and fund-based plans; UK includes DB schemes only; DE and AT include Pensionkasse only; ITA includes contractual pension funds (fondi negoziali) only; PL includes PPE only; SLO includes all PAMC funds except the new, equity-based index funds, and the 'bills and bonds' proportion also covers 'other' investments (no split available); SPA includes fondos de pensiones only.

Source: Oxera analysis, based on data from DNB (NL, 2012), Mercer (FRA, 2011), Statistics Sweden (SWE, 2011), TPR (UK, 2011), GDV and BaFin (DE, 2012), Arbeitkammer (AT, 2010), COVIP (ITA, 2011), KNF (PL, 2012), Jan Sebo's research (SLO, 2012), Estonian Ministry of Finance (EST, 2012), and DGSFP (SPA, 2010).

While in most countries bonds represent the majority of the investments, the proportion of shares varies significantly from over 60% in the Netherlands to approximately 15% in Sweden, implying significantly different levels of risk and return (for further analysis on this, see section 4.3).

This variation is similarly broad among the personal schemes, as shown in Figure 2.14, with the exception of Estonia, where a significantly higher proportion of assets is invested in equities compared with the employer-arranged plans.

**Figure 2.14 Allocation of assets of personal pension plans (latest data, %)**



Note: Investment funds excluded from the tabulation due to the inability to split the underlying assets. The 'other' category not reported consistently across the countries. NL includes all personal and employer-arranged plans; DE includes Kapital- und Rentenversicherung only; ITA includes PIPs only; PL includes OFE only; EST includes funded and supplementary pension funds, excludes insurance-based products; RO includes both compulsory and optional funds; HU includes both former occupational and regular occupational plans. Source: Oxera analysis, based on data from DNB (NL, 2012), GDV and BaFin (DE, 2012), COVIP (ITA, 2011), KNF (PL, 2012), Estonian Ministry of Finance (EST, 2012); CSSPP (RO, 2011); and PSZAF (HU, 2012).

Among personal schemes, a saver would typically have a choice of a specific fund to join, and an ability to select whether they would prefer a high or low equity option. One would typically expect this choice to be driven by the age of the saver, as standard financial advice for pension savings is to favour high risk, high return equity earlier during working life, shifting to lower risk, lower yield assets (such as bonds) as retirement age draws closer (see section 4 for analysis of returns and risk). Nevertheless, there is no clear relationship between the portfolio allocations and the age profiles of the individuals within the pension schemes, notably as the schemes of Eastern Europe, which mainly contain younger people, often favour bonds over equity (due in part to the impact of regulation).

There are important implications for private pension systems arising from the choice of assets in portfolios, which are considered further in sections 4 (on returns and risk) and 5 (consumer behaviour). Asset allocation choices are affected by short run market trends, even when long term trends are perhaps more relevant given the long term nature of pension savings.

### Mechanisms in place to change asset allocation over time

Other than switching products or schemes (explored further in section 5), numerous pension schemes incorporate automatic mechanisms that change consumers' portfolio allocation over time. These mechanisms can be linked to either age or income. During the course of this study, no income-based adjustment mechanism has been identified across the investigated countries. Age-based mechanisms, known as 'portfolio lifestyling', are included in the regulation of a number of Member States, as shown in Table 2.17 below.

**Table 2.17 Mechanisms limiting risk linked to age profile imposed by legislation**

	Employer-arranged schemes	Personal schemes
Netherlands	None	Some discretion to determine the risk of investments based on preferences
France	Lifestyling—the closer the retirement, the larger the proportion invested in bonds and euro funds for which capital is guaranteed	None
Sweden	Very limited <sup>1</sup>	None
UK	None	None
Germany	None	None
Austria	None	Reduction in minimum allocation of assets into equities with age
Italy	None	None
Poland	None	None
Slovakia	The funds for those aged 55 or over can be invested only in bonds  The funds for those aged 47 or over cannot be invested in growth/stock funds	None
Estonia	None	None
Romania	None	None
Hungary	The funds for savers cannot be invested in growth funds over the last 5 years before retirement	None
Spain	Lifestyling <sup>2</sup>	None
Greece	None	None

Note: <sup>1</sup> KAP-KL offers lower risk portfolio to older customers. <sup>2</sup> Fondos de pensiones—planes de empleo only.  
Source: Oxera analysis, based on inputs from desk research and regulators.

#### 2.4.14 Market concentration

Measures of market concentration are often used to describe the competitive environment in different markets, and this can also be the case for private pension systems. High market concentration indicates that there are a small number of relatively large pension providers, which may have implications for the nature of competition in the market and hence outcomes for consumers. Market concentration needs to be considered alongside the issues surrounding economies of scale, however, as discussed further in section 3.9 (economies of scale), as an excessively large number of small providers may not be in the interests of consumers.

##### The measures

The study included an assessment of the market concentration of the separate scheme types, as well as the individual products (pension plans) for both the employer-arranged and the personal schemes.<sup>28</sup> The measures used explain the relative scale of the individual pension schemes in the respective markets.

There are two issues in relation to this indicator: the choice of the metric itself, as well as the choice of the metric base.

<sup>28</sup> Note that a market share and coverage are different in terms of the population base, to which they apply. Market share is expressed in the context of the number of consumers holding a particular type of a pension product; coverage is typically expressed as a proportion of the total working age population.

- There are two key **metrics** of market concentration: the concentration ratio (representing the combined market share of the top n—typically three or five—pension plan providers in a market) and the Herfindahl–Hirschman Index (HHI), the sum of the squared market shares of all plan providers in the industry.<sup>29</sup> The latter has the major benefit that it gives more weight to larger pension plan providers, and the overall metric is computed across all market participants. Its downside, however, is that the interpretation is harder than a simple metric of concentration.
- With regard to the **base** for the calculation, the candidate variables are the number of individual members, the current levels of contributions (a flow measure) or the assets/savings under management (a stock measure). The analytical base can be chosen according to the required comparison—the market power of the customer base (numbers or purchases) or the accumulated assets/savings. The two bases would give broadly similar outcomes if the profile of an average saver does not differ significantly between the individual plans. However, in countries with a large variation in the individuals’ private pension savings, the distribution of members can be different to the holding of funds, thereby yielding different concentration results depending on the variable used.

Part of the issue with interpretation of market share results in the context of pensions is that a consumer may hold multiple pension products. This implies that the cumulative market share across all scheme types, when taking total number of consumers with pensions as a base, can exceed 100%.<sup>30</sup> This specificity of market share results must be remembered when conducting the analyses suggested above more widely.

Due to data limitations it has not been possible to compute full market shares of the individual plan providers for each country. This section, instead, provides indicative market shares of the most prominent products, and a plan provider-level comparison of market shares and HHI indices for Poland, Romania and Slovakia.

### **Market shares of the most prominent products**

Note that the computation of market shares for the most prevalent products as defined within this study can only be very limited, due to the data constraints that arise due to missing data for some types of pension scheme, resulting in no reliable estimate of the total number of people who are members of pension schemes. It should also be noted that this metric does not indicate anything in relation to the competitive dynamics of the market, as this will also depend on the number (and market shares) of the individual pension plan providers who supply the most prominent product to the market. Table 2.18 below shows the estimated market shares of the most prominent scheme type within the countries where the data has been available.

<sup>29</sup> Where market shares are measured as fractions, the HHI varies from 0 to 1, where expressed as %, the range is 0 to 10,000. In this report fractional market shares are used.

<sup>30</sup> A similar issue applies to the coverage statistics, where ideally the number of individuals covered would be compared with private pensions, but with duplicate entries removed (in the case of individuals holding multiple products).

**Table 2.18 Market shares of the prominent schemes as a proportion of total covered members within the grouping (%)**

	Employer-arranged schemes	Personal schemes
France	23	n/a
Poland	100 <sup>1</sup>	93
Slovakia	100 <sup>1</sup>	100 <sup>1</sup>
Estonia	100	n/a
Romania	None	95
Hungary	None	93
Spain	46	92

Note: For selection of prominent schemes by country, see Table 2.6. n/a in place typically due to the lack of information on total coverage. <sup>1</sup> In the marked countries, there is only one scheme type in the relevant grouping, hence the 100% market share result.

Source: Oxera analysis of data provided by regulators in the respective countries.

As with the other metrics, the data has been most easily available for the newer pension systems within the Eastern European cluster. The high market shares are often linked with the prominent scheme being mandatory for consumers, such as in Poland (OFE), Estonia, Romania, and (until 2011) Hungary.

#### **Provider-level concentration results**

Among the investigated Member States, it has been possible to use the concentration methodology outlined above for a selection of scheme types in Poland, Romania and Slovakia. The analytical results are presented in Table 2.19 below.

**Table 2.19 Market shares and HHI evolution over time of scheme providers by scheme type in Poland, Romania and Slovakia (2005–12)**

	2005	2006	2007	2008	2009	2010	2011	2012
<b>Poland: OFE</b>								
Top 3 market share (members)	56%	56%	56%	55%	55%	53%	51%	50%
HHI (members)	0.13	0.13	0.13	0.12	0.12	0.12	0.11	0.11
Top 3 market share (assets)	64%	64%	64%	64%	63%	62%		
HHI (assets)	0.16	0.16	0.16	0.16	0.16	0.15		
<i>Number of providers</i>	15	15	15	15	14	14	14	14
<b>Slovakia: PAMC</b>								
Top 3 market share (members)	77%	70%	70%	70%	70%	70%	71%	
HHI (members)	0.23	0.21	0.21	0.21	0.21	0.21	0.21	
Top 3 market share (assets)	80%	73%	73%	73%	73%	73%	73%	
HHI (assets)	0.24	0.22	0.22	0.22	0.22	0.22	0.22	
<i>Number of providers</i>	6	6	6	6	6	6	6	
<b>Slovakia: SPAMC</b>								
Top 3 market share (members)	93%	91%	91%	91%	91%	91%	92%	
HHI (members)	0.37	0.31	0.31	0.31	0.31	0.32	0.32	
Top 3 market share (assets)			97%	96%	94%	92%	91%	89%
HHI (assets)			0.34	0.33	0.33	0.32	0.32	0.31
<i>Number of providers</i>	4	4	4	4	4	4	4	4
<b>Romania: mandatory personal</b>								
Top 3 market share (members)				68%	68%	67%	65%	64%
HHI (members)				0.20	0.20	0.19	0.19	0.18
Top 3 market share (assets)		70%	71%	71%	71%	71%	70%	70%
HHI (assets)		0.23	0.23	0.23	0.23	0.23	0.23	0.22
<i>Number of providers</i>		14	12	14	12	9	9	9
<b>Romania: voluntary personal</b>								
Top 3 market share (members)			71%	65%	65%	67%	69%	70%
HHI (members)			0.20	0.18	0.18	0.19	0.20	0.20
Top 3 market share (assets)			81%	64%	64%	65%	66%	67%
HHI (assets)			0.31	0.18	0.18	0.19	0.19	0.20
<i>Number of providers</i>			7	9	13	13	11	11

Note: No data available for the missing years.

Source: Oxera analysis, based on data obtained from KNF, CSSPP and Jan Sebo's research on Slovakia.

There are a number of observations to be drawn from the analysis above:

- overall, across the Member States where data is available, the investigated scheme types are rather highly concentrated, as shown by top-3 pension providers' market shares in excess of 50%, and even as high as mid-90% in the case of Slovakian personal schemes, asset-weighted;
- markets appear to be more concentrated when measured by accumulated assets compared to members; this would be expected if those providers with more members have also been active in the market for longer when, on average, their members can be

- expected to have a larger accumulated pension pot than those of a provider who has more recently entered the market;
- the variation in the HHI indices and the top-3 concentration ratios are very similar across the whole sample, implying that there has been no major re-shuffling of market shares across the largest players over the period;<sup>31</sup>
  - in Poland and Slovakia the number of providers stayed broadly similar, while in Romania there has been a consolidation among mandatory scheme providers and an expansion of the number of voluntary scheme providers;
  - the changes in provider numbers in Romania appear to have had very limited effects on the observed measures of concentration, with the exception of the top-3 share of assets within the voluntary personal schemes—this can be explained by the relative youth of the schemes in the first year (2007) and a sharp re-balancing of total assets in 2008.

In summary, measures of concentration provide insight about the composition of the individual countries' pension markets and may explain, among others, the acquisition or marketing costs incurred by the individual providers.

## 2.5 Trends comparison and forthcoming changes

As well as understanding the exact structure of the current set-up, it is important to consider the recently observed trends, as well as any forthcoming legislative or associated changes. The analysis for each country, as presented in country tables in Appendix 3, identified a number of significant trends, some of which are common to a number of different Member States. Table 2.20 below outlines some of the key recent developments.

<sup>31</sup> Except for Romania's voluntary personal schemes, explained in detail below.

**Table 2.20 Different dimensions of the shift to DC pensions—experience from selected EU countries**

<b>Dimensions of the shift</b>	<b>Countries and schemes</b>
Closing down of existing DB schemes to new members	UK: many traditional DB occupational schemes closed to new members, with trust-based DC or stakeholder pensions offered instead  Germany: many traditional book reserve schemes closed to new members (see below)  Italy: pre-existing pension funds (DB, DC and hybrid schemes) closed to new members, new pension funds (DC only) put in place instead
Restructuring of schemes from DB to DC	Sweden: SAF-LO (country-wide scheme for blue-collar workers) fully restructured to be of DC-type; parts of ITP (country-wide scheme for white-collar workers) also already restructured and of DC-type for those born after 1979
Shift away from traditional book reserve schemes	Germany: closing of DB book reserve schemes to new members. For small/medium-sized firms, deferred compensation scheme with insurance backing. For larger firms, off-balance-sheet financing through Contractual Trust Arrangements, which, for new members, tend to be DC-type (with employer guarantee)
Move from pure final-salary DB to average-salary DB and hybrids	Netherlands: most final-salary DB schemes replaced by average-salary DB schemes and hybrids, such as conditional DB, 'combination hybrids', collective DC
Introduction of new DC schemes established by law/regulation	France: PERCO and PERCOI (since 2003)  UK: stakeholder pensions (since 2001)  Poland: employee pension programmes (PPE, since 1999)
Implementation of new law on occupational pensions	Italy: establishment of the 'new' closed and open pension funds (all DC), transfer of TFRs to the 'new' pension funds by the end of June 2007
Introduction of mandatory funded individual accounts (First pillar bis)	Sweden: premium pensions system, with about 700 investment funds of choice and near-universal coverage (since 2003)  Poland: mandatory funded system, with a choice of 15 occupational pension funds covering over half of the working population (since 1999)

Source: Oxera (2008), 'Defined-contribution pension schemes: risks and advantages for occupational retirement provision', p. 19.

While the general shift from final salary DB to average salary DB and DC schemes has been ongoing for a number of years, more recently this trend may have been further encouraged by changing legislation regarding the procedures used to value pension liabilities. This has had a particular impact in the Netherlands, whereby a significant number of DB pension schemes were forced to 'claw back' some of their promised benefits in order to improve their financial position, as mandated by the central bank.<sup>32</sup> In the Netherlands, many new members are now joining defined ambition schemes whereby a set level of retirement benefit is expected, but not guaranteed. The alteration of benefits under DB schemes and the growth of either hybrids or pure DC schemes represents a shift in the balance of risks, to be further discussed in section 4.3.

The major trends in pension provision across most, if not all, Member States include:

- the move from pay-as-you-go (PAYG) state-funded pensions usually provided from current taxation to asset funded pension provision, usually provided through private sector providers (often with some form of state guarantee of minimum performance); and
- the move from pension systems that are provided as defined benefits to the consumer, to one where the consumer has to take on both the investment return risk in the

<sup>32</sup> A description of the decision can be found in Financial Times article: 'Dutch funds face cutting pensions', October 7th 2012.

accumulation phase and the longevity risk at the payout phase (one notable exception to this being the Netherlands).

Related to this, the increasing voluntary uptake of private pensions, as shown by growing coverage in section 2.4.11, is consistent with the lowering of expectations of the level of replacement ratio achieved through state-provided pensions across all countries. As consumers' expectations of state provided retirement incomes falls in light of ageing population across most European countries, additional steps are taken by individuals in order to compensate for the expected reduction in retirement income—this will be discussed further in Section 5.

A further ongoing development is the trend towards more mandatory systems in recognition of consumer inertia in terms of saving for retirement. In some Member States (eg, Poland) the provision of some form of private pensions were designed as mandatory from the outset; in others, they are becoming mandatory as the revealed consumer (and employer) incentives proved insufficient. The introduction of auto-enrolment in the UK from October 2012 is a step designed to increase savings, for example.

## 3 Charges and costs

### 3.1 Introduction

#### 3.1.1 Why this topic?

The ultimate performance of a pension scheme, from the viewpoint of the individual saver, depends on the contributions they (and their employer) make to the scheme and the returns that the scheme produces over the lifetime of the savings. For all types of private pension scheme, the net performance will depend on the charges applied to the scheme. These charges will in part reflect the cost of providing the pension scheme. Not all costs may be directly visible to the consumer, but ultimately one could expect the costs of providing a pension scheme to be borne by the consumer.

Charges can have a large impact on the final value of the pension pot that consumers accumulate during their working life, as estimates in this section show. An annual management charge (AMC) may not initially appear to be that large to individual consumers, but as it is applied to the value of the assets every year, the cumulative impact of the charge increases over time and can be substantial. Therefore, when assessing pensions from a consumer perspective, charges is an important topic.

#### 3.1.2 What were the metrics and what information was available?

This section therefore considers the charges that are applied to pension schemes and the related costs of providing the schemes. The FSUG asked Oxera to look at a range of metrics including:

- the level of charges applied to contributions, returns and fund value;
- the impact of those charges on final pension returns;
- operation, distribution and other costs associated with pension scheme provision;
- evidence for economies of scale in the provision of pensions.

Regulators, representatives of consumers and pension providers as well as other commentators have recognised the importance of pension charges, and their relationship with the costs of provision, and there is an increasing demand for analysis in this area

While there are some existing studies on charges and costs (and economies of scale) in the literature covering some of the pension systems included in this study, data on charges and costs has typically been difficult to obtain and has not been readily available on a consistent basis across countries. But reflecting the increasing importance of this topic in the pensions debate, the availability of data is improving and can be expected to improve further in the near future, due to a number of different initiatives (detailed in this section), including by European authorities.

This study has used data from existing studies and collected further new data from regulators and from providers, but there is still clearly room for improvement in the analysis of costs and charges.

#### 3.1.3 The objectives of this section

This study assesses available information but also discusses what further analysis could be done given more information and, in particular, increased transparency in the pension sector.

In order to identify the source of the charges that will be applied, it is necessary to first map out the different stages of the pension system in a 'value chain', identifying all of the costs that arise and the charges that are applied up to the point that the person receives their retirement income. This framework also provides a basis for assessing how taxation impacts

upon pension schemes, as another form of cost (or, in some cases, subsidy). This analysis is set out first in section 3.2.

To understand charges in terms of the impact they have on consumer, which is the primary focus of this study, charges can be considered in terms of what impact they can be expected to have on the future pension received by the consumer. For example, if a consumer gives up €1,000 of annual consumption today, by saving extra into their pension fund, what will be the increase in their retirement income, with and without charges? To answer this simple question about the performance of pension schemes, it is necessary to build an understanding of the charges that are applied and the manner in which they are applied. This analysis is set out in section 3.3.

Charges also arise due to the cost of trading and post-trading of securities held by pension schemes—these costs are considered in section 3.4. As the cost of trading is not typically included in explicit annual charges, this section presents a framework for assessing whether these charges could be significant in terms of impacting upon final pension returns.

The overall impact of all of the charges on the final pension pots of consumers at retirement is examined in section 3.5, using a methodology which allows comparisons across different systems and different types of charges. There are also charges implicit in the provision of pension annuities, as considered in section 3.6, although analysis here is limited by the lack of data.

As data on charges is restricted to defined contribution schemes, this section also considers evidence on the costs of providing pension schemes,<sup>33</sup> where data is available for defined benefit and hybrid schemes. These costs arise primarily from fund administration and management costs (see section 3.7) and distribution costs (see section 3.8).

Economies of scale in the provision of pension schemes is also an important topic in the wider pensions debate, and evidence on economies of scale is reviewed in section 3.9.

## 3.2 Value chains—overview of players and charges

To conduct a comprehensive comparison of charges and related costs that affect the returns on pension savings, it is necessary to have a thorough understanding of the value chain for the different pension systems. The value chain describes the players in the accumulation phase of the pension system in terms of their activities, and assists in identifying the sources of charges on the accumulation of savings with the pension fund (and ultimately the retirement income received by consumers). This provides a basis for understanding where and why costs arise, as well as maximising identification of these sources of charges that are applied to pension funds, given that some of the costs may not be immediately apparent. The value chain also provides a useful basis for identifying the impact of taxation on pension savings.

There are many different pension systems and many possible interpretations of pension system value chains. For the purposes of this report, the following four pension systems have been considered, which cover the majority of the most prominent pension systems of the 14 Member States:

- DC employer-arranged pension scheme;
- DB employer-sponsored pension scheme;
- personal insurance-based pension scheme;
- personal DC-funded schemes.

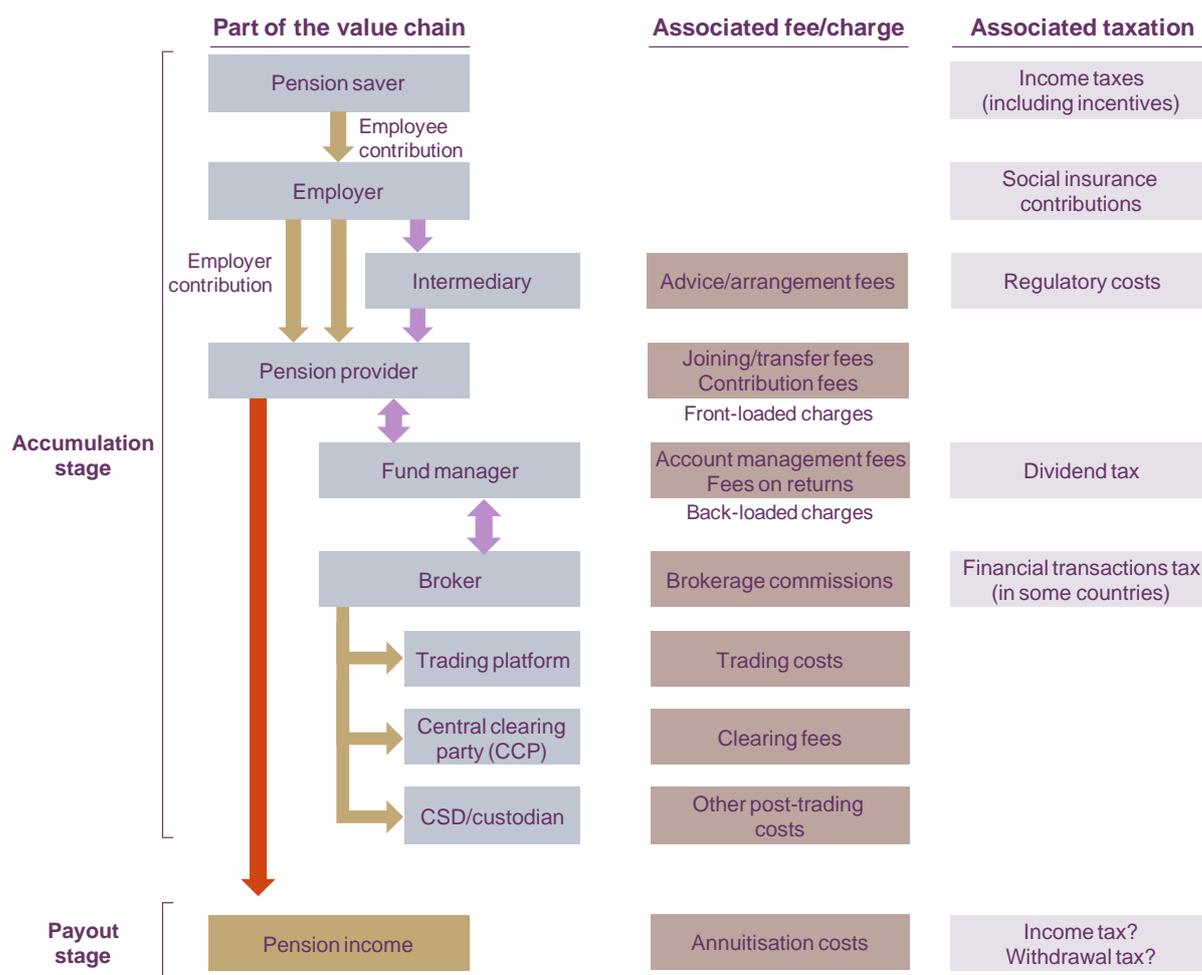
<sup>33</sup> In this report, costs refer to the costs of providing pension schemes to consumers, whereas charges refer to the amount that consumers have to pay for pension schemes through charges to their savings.

This section describes the value chain for each of these, and identifies the associated charges and taxes. The parts of the value chain and associated charges and taxes are described in full for the first type of pension system (DC, employer-arranged pension scheme), with the descriptions of the following value chains identifying the primary differences in relation to this first value chain.

### Defined contribution employer-arranged pension scheme

Figure 3.1 illustrates a high-level value chain for the accumulation phase of this common type of pension system, which includes the Group Personal Pension schemes in the UK and contractual pension funds in Italy, for example.

**Figure 3.1 Value chain of the DC employer-arranged pension plan**



Source: Oxera analysis.

The individual parts of the value chain are as follows.

- The **pension saver** provides contributions as an employee to the pension scheme provided by their employer. Contributions may be made out of gross income and therefore avoid income tax (eg, in most employer-arranged schemes across the Member States), or out of income after income tax (eg, which is the case with a number of the personal pension schemes considered in this study).
- The **employer** may provide additional employer contributions, with amounts varying in different schemes and likely to be specified in employment contracts. These contributions may affect income taxation and social insurance contributions. Importantly, the employer arranges the pension for the employee (and negotiates on the charges and may agree on a selection of funds that is offered to employees). In most cases, the

employer also provides contributions, but does not typically bear any responsibility (and therefore risk) for the final outcome.<sup>34</sup>

- The employer may involve an **intermediary** to provide advice and/or set up the pension plan for employees and provide other services in relation to the provision of the pension. In this value chain, the involvement of the employer means that the consumer may not use the services of a financial adviser. For example, in the UK, although a financial adviser or an intermediary may be involved in setting up the pension arrangements, they usually do not provide financial advice.
- The **pension provider** administers individual pension plans (individual contracts for the provision of retirement benefits) and mediates between the individual/sponsoring institution and the pension funds. Schemes can levy joining and transfer fees for new members, and ongoing contribution fees for active members—these fees are often referred to as front-loaded charges. The pension scheme is also likely to collect back-loaded charges (eg, account management fees), which are typically included under the fund manager charges (see below), as they are linked to the operating costs of the fund.
- The **fund manager**—a pension fund is ‘the pool of assets forming an independent legal entity that are bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits. [Its] members have a legal or beneficial right or some other contractual claim against the assets’.<sup>35</sup> The funds may levy back-loaded charges, such as account management fees or explicit fees on returns. From a certain set of financial instruments that they include in the portfolios, funds may be required to pay dividend taxes. The pension fund manager may be part of the same organisation as the pension scheme, but not necessarily.
- The **broker** is the party engaged by the pension fund manager to conduct the trading activities. Brokers may charge explicit trading fees on the value of trading, which may also cover the costs of providing research and access to analysts, or they may charge for these services separately.<sup>36</sup> There may also be costs that are not reported to the pension funds, but manifest themselves only in a reduction in yield—for example, the implicit costs of trading (such as market impact).
- **Trading/post-trading service providers**—often referred to as infrastructure providers—include stock exchanges, multi-lateral trading facilities (MTF) and other trading venues through which the pension fund purchases and sells assets. The post-trading service providers include the central clearing counterparties (CCPs) through which each trade undertaken by a pension fund is cleared and then settled and the asset is held for safekeeping in central security depositories (CSDs).

In addition, the payout stage may be subject to specific charges and taxation requirements. For instance, withdrawal of the pension assets in the form of a lump sum may be permitted tax-free up to a certain threshold, thereby incentivising individuals to select annuity purchases, which would incur additional charges. Any retirement income-specific taxation would also have to be included for comparison.

### Defined-benefit employer-sponsored pension scheme

DB pension schemes guarantee some level of pension benefits to the beneficiaries of the pension scheme. Therefore, if the scheme does not have sufficient assets to cover its

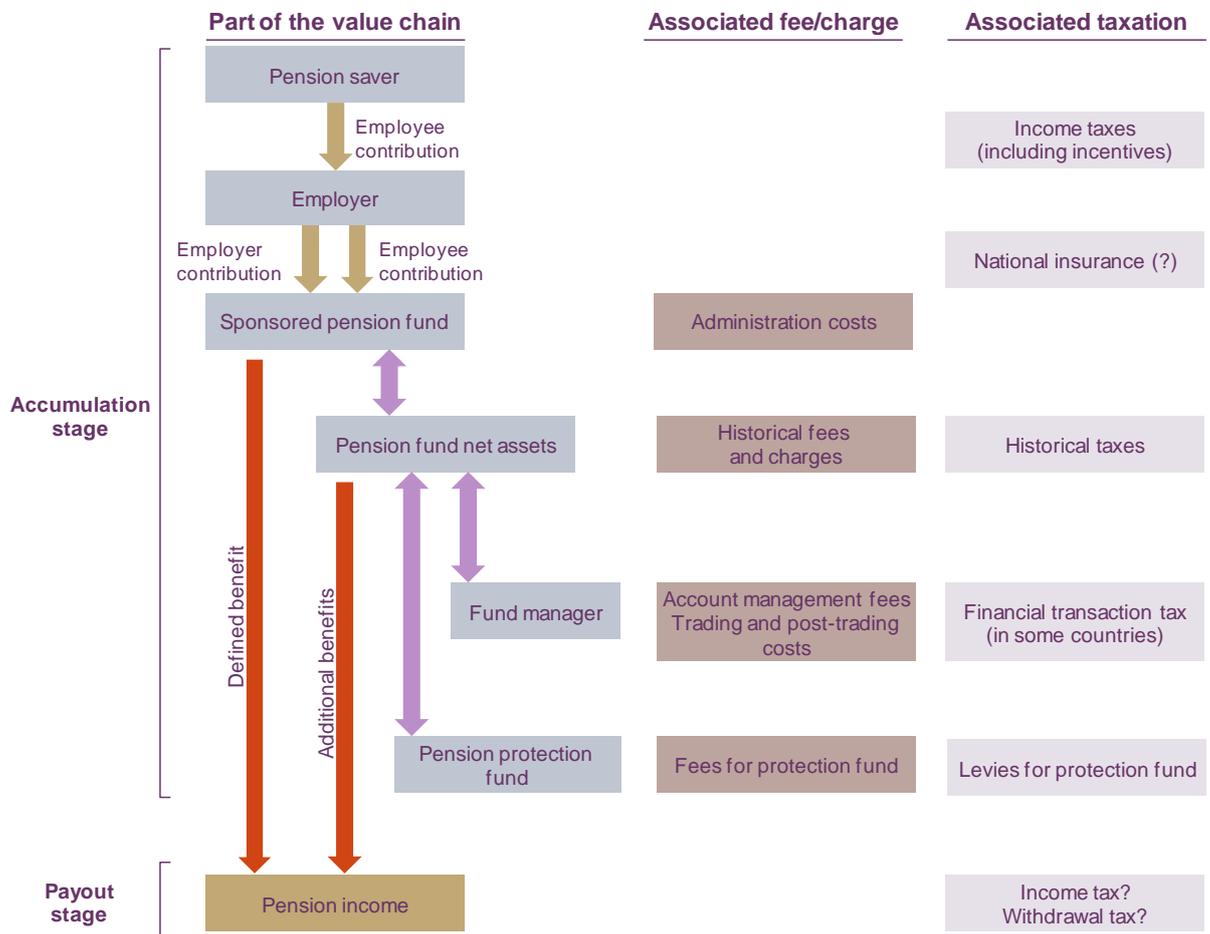
<sup>34</sup> The risks associated with DC and DB pension schemes, from the perspective of the consumer, are described in section 4.

<sup>35</sup> OECD definition from OECD (2008), ‘Private Pension Outlook’, p. 307.

<sup>36</sup> For a discussion of the arrangements between fund managers and brokers, see Oxera (2011), ‘Monitoring prices, costs and volumes of trading and post-trading services’, report prepared for European Commission, DG Internal Market and Services, May; Oxera (2006), ‘Soft commissions and bundled brokerage services: post-implementation review’, report prepared for Financial Services Authority, October; Oxera (2009), ‘A second big bang in brokerage? The new regime in softing and bundling’, *Agenda*, April, available at [www.oxera.com](http://www.oxera.com).

liabilities, the sponsor of the scheme may need to provide additional resources, or the defined benefits will need to be altered. Consequently, with an employer-sponsored scheme it is typical for the employer to make up some of the shortfall, although DB schemes may include some ability for benefits to be altered if there are insufficient assets in the scheme. If the employer is unable to make up any shortfall in the required financial resources (typically owing to its insolvency), a pension protection fund may be required to step in.

**Figure 3.2 Value chain of the defined-benefit employer-sponsored pension plan**



Source: Oxera analysis.

The main differences in the value chain for DB employer-sponsored schemes compared with DC schemes arise from the risk of the pension fund net assets being insufficient, necessitating some external body, such as a pension protection fund, to guarantee the liabilities. Many such schemes (eg, the Pensionskasse in Germany) have a minimum guaranteed defined benefit and then beneficiaries may receive additional benefits, or a 'surplus', depending on the performance of the pension fund in the accumulation phase. As these schemes will typically and simultaneously have active, deferred and retired members, the historical asset accumulation and benefit guarantees for deferred and retired members will affect today's active members.

The fund manager for the pension scheme includes the same costs as for the DC scheme<sup>37</sup>, but costs are less apparent to the consumer as they do not directly affect the 'defined benefit' returns of the scheme—although they will affect any surplus in relation to the guarantee.

<sup>37</sup> This includes the costs of trading and post-trading.

In the event that the pension scheme is unable to meet its minimum obligations to members, the following forms an important part of the value chain for some countries.

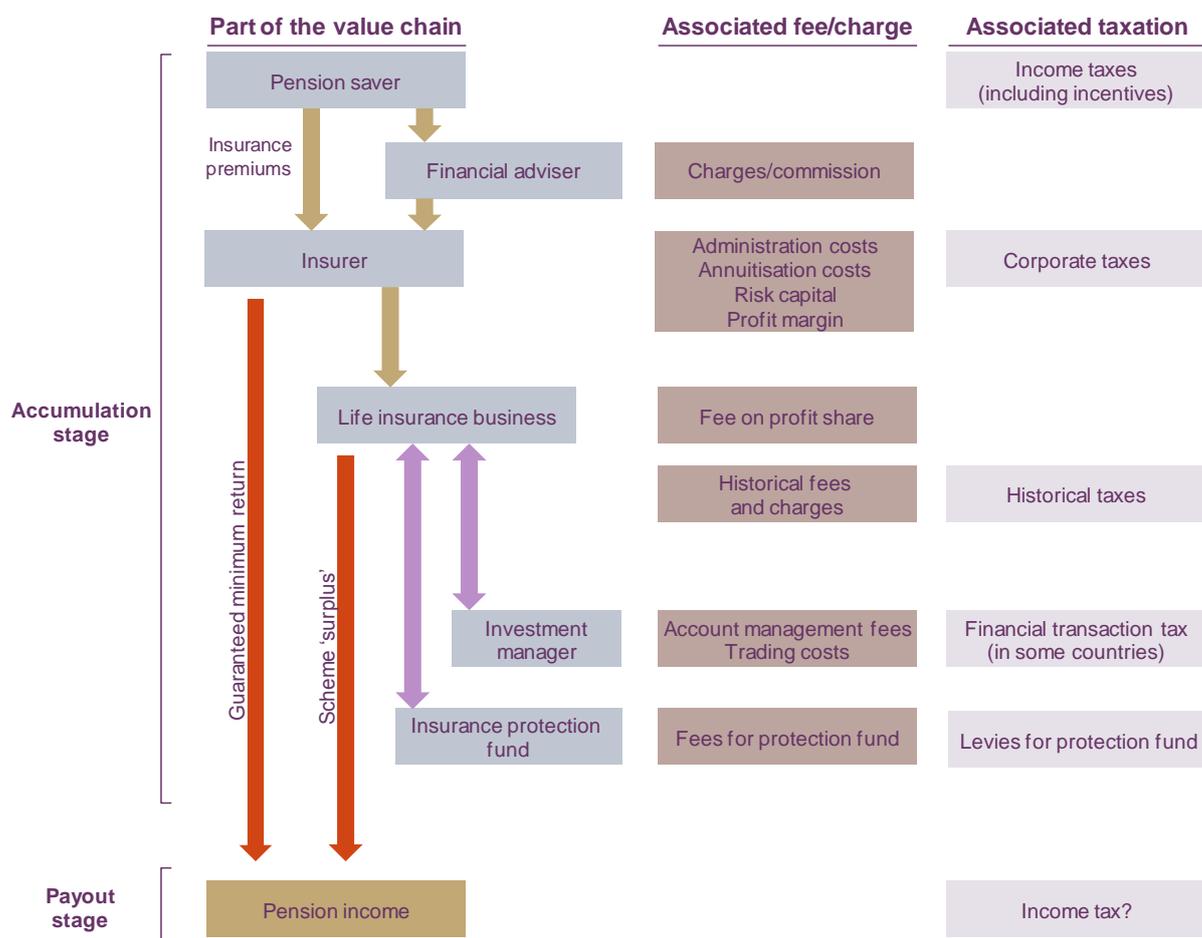
- **Pension protection fund (PPF)**—typically government-run or government-guaranteed insurance for pension schemes such that if the sponsoring company is unable to ensure that net assets will be sufficient, typically because the company is no longer solvent, the PPF will take over the pension scheme, which may involve some alteration to the benefits provided.

Not all countries have a pension protection fund explicitly set up (see section 4.5 for further details). There may exist an implicit expectation that the government will bail out a pension scheme in trouble, although without any explicit guarantees.

### Personal insurance-based pension scheme

In some countries, the most prominent form of personal private pensions are insurance-based schemes, where a consumer purchases a future pension, with either a series of payments or a lump-sum payment. As with the relatively popular personal pension schemes in Germany, it is often the case that the insurance company will guarantee a minimum pension level with some surplus, dependent on either the performance of the insurance portfolio, stock market performance or interest rates.

**Figure 3.3 Value chain of the insurance-based personal pension scheme**



Source: Oxera analysis.

In terms of risk-sharing, these schemes are therefore comparable with the DB employer-sponsored schemes. The exception is that the individual saver arranges the pension directly with an insurance company, albeit often with the involvement of a financial adviser, as is the

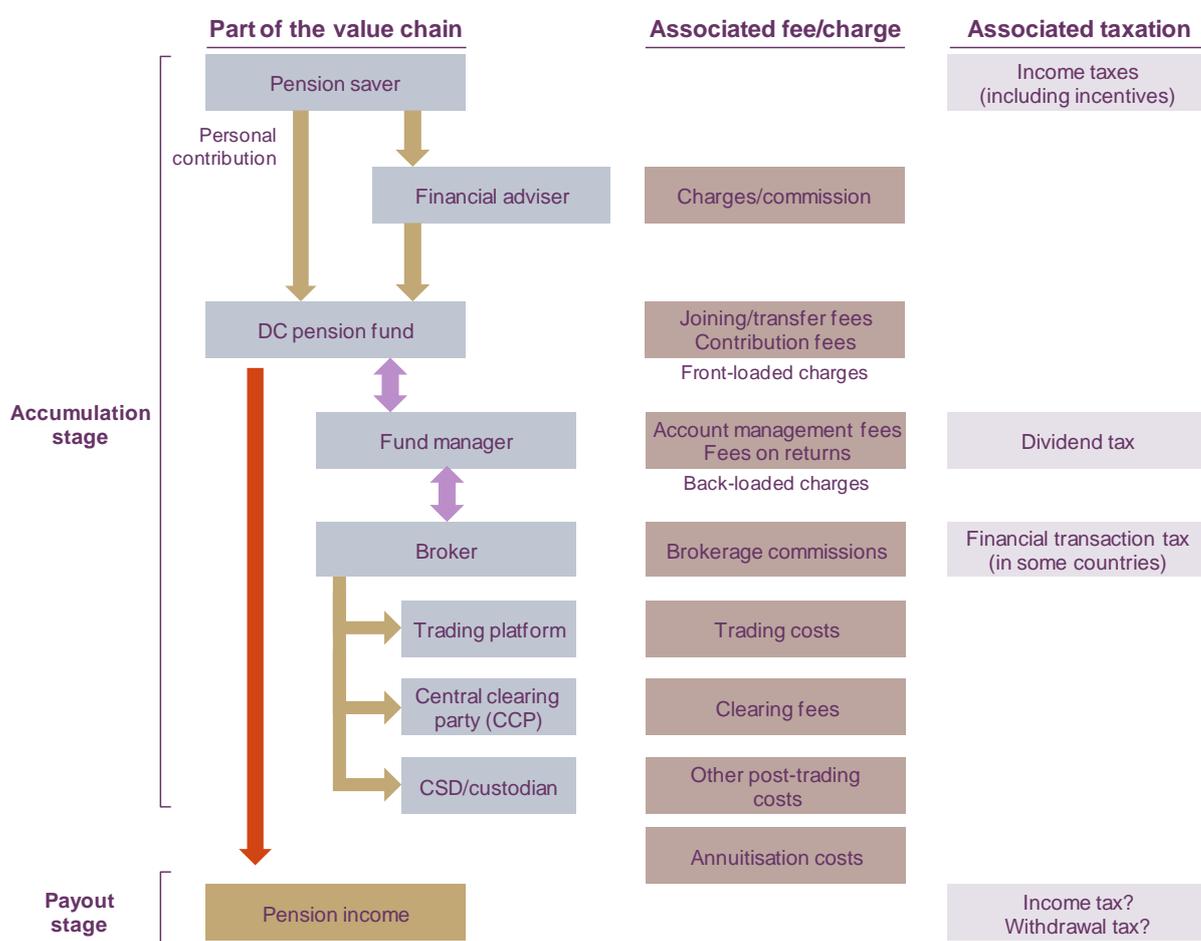
case with any personal pension scheme products, including DC products. Consequently, the value chain for this type of pension scheme includes:

- **life insurance businesses**—which typically offers various products, such as term life insurance (which pays out to a beneficiary in the event of the insured person’s death) and pension annuities. The surplus provided to pension savers may be dependent on the performance of the life insurance portfolio as a whole, including the past performance, and hence historical fees, charges and taxation;
- **an insurance protection fund**—which may have a clear function to guarantee the liabilities of life insurance companies in the case of their insolvency, such as the German PSVaG, or may be an implicit government guarantee of the pensions provided by insurance companies;
- **an intermediary**—which charges in some way for its services of connecting pension savers with insurers. This may include explicit charges to consumers for providing advice or implicit charges through the receipt of commissions from insurers, which would ultimately be expected to be borne by consumers.

### Personal defined-contribution funded schemes

This type of scheme, which is the most prominent personal pension product in Sweden, the UK and the eastern European countries, has a value chain similar to the DC employer-arranged schemes, as the risk surrounding the final pension is borne by the saver. The exception is that the individual saver arranges the pension directly with the pension provider (which may be an insurance company). For this reason, the intermediary may not only arrange the pension but also provide financial advice.

**Figure 3.4 Value chain of the personal defined-contribution funded pension scheme**



Source: Oxera analysis.

There are no additional elements to this value chain that have not been discussed in the context of the above schemes.

### 3.3 Charges levied by defined-contribution schemes

From the consumer's perspective, it is the charges that are applied to their pension savings that are of primary importance, rather than the costs of providing those services. Pension providers recoup their costs by applying charges to the pension savings in various forms. The value chains described in section 3.2 identify the parties involved in the provision of pensions and where charges may arise.

Charges tend not to be explicit with DB schemes, as the costs of providing the pension are incorporated into the resultant guaranteed benefits and any surplus. For these schemes it is more typical to consider data on operating costs, as discussed in section 3.7. The analysis of this section on charges therefore focuses on the more explicit charges of DC schemes. For these schemes, there are broadly three mechanisms in which charges are administered:

- contribution-based charges;
- return-based charges;
- back-loaded charges (based on the total accumulated assets).

In most DC pension schemes, the back-loaded charges—principally in the form of the annual charge (referred to commonly as the AMC)—<sup>38</sup> is the most significant source of charges, from the consumer's perspective.

During the course of this study it became apparent that the availability of information on contributions is highly variable across the individual Member States. In the relatively new systems of Eastern European countries such as Slovakia, Poland or Estonia, the charges tend to be transparent and easily accessible; whereas for the more mature systems, there tends to be no central tabulation of the charges by the regulator. Data on charges has instead been collected from academic or industry studies, or quotes provided by individual providers.

The issue of charges remains high on the agenda of international organisations, with a dedicated IOPS (International Organisation of Pension Supervisors) teams currently updating the tabulation of individual charges across numerous Member States.<sup>39</sup> The level of charges is likely to be evolving, as schemes mature and the amount of assets increases (which one would expect to result in a gradual decline in charges applied as a percentage of assets), and therefore data on charges needs to be as up to date as possible. A number of initiatives around Europe are seeking to improve the transparency of charges, including:

- the introduction of more comprehensive measures of charges, such as the 'annual charge' defined by the EU UCITS IV Directive, which aims to capture all charges except for the cost of trading (this is examined in section 3.4 for some relatively simple investment funds);
- industry-led comparisons of charges, such as through price-comparison websites or driven by trade associations; for example, the Association of British Insurers (ABI) has announced that its members (private DC pension providers) will adopt a common

<sup>38</sup> The UCITS IV Directive, discussed in section 4.4, introduces the use of an 'annual charge', which is a more complete measure of costs than the AMC, as it includes post-trading costs and some other costs. However, this change is recent, and therefore historical analysis is based on the AMC.

<sup>39</sup> The research paper will be published in 2013, and is an update of the previous paper: Hernandez, D.G. and Stewart, F. (2008), 'Comparison of Costs + Fees in Countries with Private Defined Contribution Pension Systems', IOPS Working Paper No. 6, June.

- definition of all charges to be disclosed at the outset to pension scheme members, which will be developed in the first half of 2013;<sup>40</sup>
- data collection initiatives, such as that led by the dedicated IOPS team noted above.<sup>41</sup>

The analysis presented below is therefore aimed at showing the overall patterns across the Member States, separately across the employer-arranged and personal pension plans. The presented charge values represent average identified charges across all pension schemes for each country.<sup>42</sup>

Charges are also considered in terms of their potential impact on the consumers' final retirement incomes, as this study considers pensions from the consumer perspective. As charges can change over time—particularly as pension systems mature and grow in terms of assets under management—it may not be appropriate to assume the same charge for a consumer's lifetime. However, with this limitation in mind, the analysis helps to put charges into the context of the consumer.

### 3.3.1 Employer-arranged defined-contribution pension schemes

In order to better understand the charges applied to employer-arranged DC pension schemes, Oxera examined a wide range of information sources to provide a tabulation of the observed individual charges for employer-arranged DC pension schemes (see Table 3.1). Information was collected with the aim of understanding the charges that a employee arranging a pension scheme at this point in time would be likely to pay, rather than the average charges paid on existing pension schemes. Where a type of charge is not normally applied, the table provides a result of zero. Where data on charges was not available, but a charge is expected to be applied, the table indicates that the data was not available (n/a). A variety of sources have been drawn upon, as summarised in Table 3.2, with further detail available in Appendix 3.

**Table 3.1 Tabulation of the range of the individual charges by country, employer-arranged defined-contribution schemes (%), latest available data**

Charge type	FR	SWE	UK	DE	AT	ITA	PL	SLO	EST	RO	HU	SPA
Contribution	2–6.5	0.15–1	0	0	0	1	n/a	0–1	0	–	–	0
Return	0	0	0	0	0	0	n/a	0-10	0	–	–	0
AMC	0.5–0.96	0.54	0.5	1–2.2 <sup>3</sup>	0.1–0.3	0.17	n/a	0.3	2	–	–	0.24

Note: '0' indicates a zero charge; n/a, charge expected but level unknown; employer-arranged schemes do not exist in Estonia, Romania and Hungary. Range of estimates drawn from a variety of sources for countries where data on charges for employer-arranged DC schemes was available. See Table 3.2 for details of the assumptions.<sup>1</sup> Additional charges are imposed on the unit-linked products; these have been ignored in the analysis.<sup>2</sup> Charges for the German and Austrian schemes are not strictly comparable to other schemes, as the data is on reported costs rather than charges, and there are minimum guarantees on the rate of return in Germany.<sup>3</sup> Excludes acquisition costs, which lower the surplus pool but are not directly charged to savers. Source: Oxera analysis, based on interviews with regulators and desk research of publicly available sources.

<sup>40</sup> See ABI press release of January 11th 2103, available from [http://www.abi.org.uk/Media/Releases/2013/01/Pension\\_charges\\_to\\_be\\_made\\_clearer\\_to\\_UK\\_savers.aspx](http://www.abi.org.uk/Media/Releases/2013/01/Pension_charges_to_be_made_clearer_to_UK_savers.aspx)

<sup>41</sup> The research paper will be published in 2013, and is an update of the previous paper: Hernandez, D.G. and Stewart, F. (2008), 'Comparison of Costs + Fees in Countries with Private Defined Contribution Pension Systems', IOPS Working Paper No. 6, June.

<sup>42</sup> For detailed charges at scheme level, see the individual country tables in Appendix 3.

**Table 3.2 Summary of sources and assumptions**

Country	Sources	Assumptions
France	Industry survey by Les Dossiers	Contracts under Articles 39 and 83, latest data collected in October 2012
Sweden	Data directly from pension providers, including Collectum, Alecta and KPA	Latest data collected in October 2012
UK	Data for schemes with at least 1,000 members from the Department for Work and Pensions (UK government)	Data for 2011. Industry commentary confirms that a level of 0.5% is now typical for employer-arranged schemes. <sup>43</sup>
Germany	Online cost and charge comparison websites	Assumes the reported cost levels correspond to charges
Austria	FMA and online cost comparison websites	Data accurate for Pensionskassen at the time of writing
Italy	COVIP estimates of expenses	Assumes the reported cost levels correspond to charges
Poland	KNF (Polish Financial Supervisory Authority)	Information current at the time of writing
Slovakia	Regulation set by the government of Slovakia	Information current at the time of writing
Estonia	Regulation set by the government of Estonia	Information current at the time of writing
Spain	Information from DGSFP	Data for 2011

Note: Due to a lack of data on charges, costs have been used as proxy in Germany, Austria and Italy. The final consumer charges are likely to be higher than the costs reported.

Sources: Detailed sources to be found in country tables in Appendix 3.

Two principal observations can be made from the table of results:

- only administration and management charges are used consistently across Member States. Contribution charges are present in half the investigated countries with employer-arranged DC schemes, while only Slovakia features returns-based charges;
- the level of all charge types varies significantly across the countries, showing no clear patterns.

The estimates of the level of charges are subject to uncertainty and, as noted above, can be expected to change over time owing to scheme maturity and competitive market dynamics. Other sources have found alternative estimates—for example, the Royal Society of Arts in the UK collected quotes for pension fund AMC's ranging from 0.25% to 1.5%<sup>44</sup>—which could be used, and the above dataset would benefit from regular updating. The IOPS working paper comparing costs and charges across Europe is expected to address this important issue.<sup>45</sup>

These charges can also be compared with other, perhaps less clear-cut, charges, such as the impact of trading and post-trading costs (see section 3.4). In section 3.5, the impact of charges on consumers is presented in terms how these charges affect the final pension pot upon retirement.

<sup>43</sup> The ABI reported in August 2012 that the average AMC of new DC pension schemes set up ahead of auto-enrolment was 0.52%. See "Time to act: Tackling our savings problem and building our future", available from the ABI website ([www.abi.org.uk](http://www.abi.org.uk)).

<sup>44</sup> Royal Society of Arts (2012), 'Seeing through British pensions', July.

<sup>45</sup> The research paper will be published in 2013, and is an update of the previous paper: Hernandez, D.G. and Stewart, F. (2008), 'Comparison of Costs + Fees in Countries with Private Defined Contribution Pension Systems', IOPS Working Paper No. 6, June.

### 3.3.2 Personal pension schemes

An exercise similar to that above was performed for personal schemes (see Table 3.3 below). Data availability is more restricted for personal pension schemes and the results are subject to a greater degree of uncertainty, and therefore need to be treated accordingly. Table 3.4 provides details on the sources for this data.

In general, it would appear that the charges for the personal schemes are of a similar level to, or higher than, those for employer-arranged schemes. This might be expected given that personal pension schemes are typically smaller (and therefore do not benefit from economies of scale) and may face higher distribution costs (as noted in section 3.8 for the Polish pension schemes).

**Table 3.3 Tabulation of the range of the individual charges by country, personal defined contribution schemes (%)**

Charge type	FR	SWE <sup>1</sup>	UK	DE <sup>2</sup>	AT <sup>2</sup>	PL	SLO	RO	EST <sup>2</sup>	HU	SPA
Contribution	0–5	0	0–1	0	0	3.5	0-2	2.5	0	0.9–6 <sup>3</sup>	0
Return	0	0	0	0	0	0	0-20	0	0	0	0
AMC	0.5–1	0.8	0.95	1.5–3	1.5–2	0.54	0-2	0.6	2	0.2–0.8 <sup>4</sup>	1.72 <sup>5</sup>

Note: Range of estimates drawn from a variety of sources for countries where data on charges for personal DC schemes was available. OFE (the Polish mandatory personal scheme) features additional, small back-loaded fees conditional on fund performance (<0.005%)—they have been ignored in this calculation. Range of estimates drawn from a variety of sources for countries where data on charges for employer-arranged DC schemes was available.<sup>1</sup> Additionally, a small fixed amount can be levied each month (eg, SEK 12 for one of the providers). Given the small magnitude of these small fixed charges, they have been ignored in the analysis.<sup>2</sup> Charges for German and Austrian schemes are not strictly comparable to other schemes as the data is on reported costs rather than charges, and there are minimum guarantees on the rate of return in Germany.<sup>3</sup> Maximum 0.9% for the former occupational pension; maximum 6% for the occupational pension, with the exception that the charge can be up to 10% annually if annual contributions are below HUF 10,000.<sup>2</sup> Mandatory funds can also charge a unit redemption fee, and voluntary funds can charge a unit issue fee—both have been assumed to be zero in this tabulation.<sup>4</sup> Maximum 0.2% for the former occupational plans, and 0.8% for the occupational pension plans.<sup>5</sup> The limit is 2.5%, composed of 0.5% maximum 'comision deposito' and 2% maximum account management charge.

Source: Oxera analysis, based on interviews with regulators and desk research of publicly available sources.

**Table 3.4 Summary of sources and assumptions**

Country	Sources	Assumptions
France	Industry survey by Les Dossiers	Contracts under PERP. Latest data collected in October 2012
Sweden	Industry survey by Pensions Myndigheten	Latest data collected in October 2012
UK	Data for all contract-based schemes from the Department for Work and Pensions (UK government)	Data for 2011 (AMC) and 2010 (contribution charges)
Germany	Online cost and charge comparison websites	Assumes the reported cost levels correspond to charges
Austria	FMA and online cost comparison websites	Assumes the reported cost levels correspond to charges
Poland	Regulation set by the KNF	Information current at the time of writing; assumption that fees are equal to the annual cap <sup>1</sup>
Slovakia	Regulation set by the government of Slovakia	Information current at the time of writing
Estonia	Quotes from the Estonian Ministry of Finance and online sources	Midpoint of estimates accurate at the time of writing
Romania	Maximum allowable fees as set by regulation under the CSSPP	Assumption that fees are equal to maximum allowable
Hungary	Information from PSZAF, the Hungarian Financial Supervisory Authority	Information current at the time of writing
Spain	Information from DGSFP	Data for 2011

Note: <sup>1</sup> At the time of writing, all but two OFE funds were charging the maximum allowed fees. Sources: Detailed sources to be found in country tables in Appendix 3.

Section 3.5 presents these charges in terms of their impact on the final pension pot upon retirement.

### 3.3.3 Tying charges to performance

In some countries with actively managed investment funds, there are mechanisms for setting pension plan charges in order to create incentives for plan/fund managers to outperform the competitors or the market, including:

- an incentive of high returns-based charges, whereby the fund manager captures a significant proportion of the realised returns independently of the performance of other funds or the market as a whole;
- an allowed additional charge based on the particular fund's performance versus other funds within the same scheme;
- a long-term incentive to grow the net asset value in order to generate high levels of ongoing administration and management charges.

Slovakia (among the DC schemes) is the only country where return-based charges have been observed. The level of incentive is particularly clear among the Slovakian personal schemes, where the fund can charge up to 10% of returns.

Poland was the only Member State which has performance-related fees that are tied to the performance of the fund relative to the performance of other funds. Among the mandatory personal plans (OFE), the best-performing fund can keep 0.005% of its net asset value as a performance-related bonus. All the other funds receive a bonus in proportion to their performance relative to the leader, with the worst-performing fund granted no reward. This creates a clear incentive structure centred on performance.

The most widespread incentive is the last of the three: the implicit incentive to promote long-term asset growth. Management charges (or back-loaded charges in general) feature across all investigated schemes, and in some cases constitute the only observed charges.

### 3.4 Charges for trading and post-trading

Most pension funds included in this study, including those run by insurance companies, have portfolios of tradeable securities (including bonds and equities) that are held as assets and managed by the pension scheme. This management involves the trading of these securities, which in turn incurs costs that can be classified as being either:

- **trading costs**, which pension funds pay to brokers in the form of commissions, and in turn the brokers use the services of financial infrastructure providers, including stock exchanges, MTFs and other trading venues, when the pension fund buys and sells securities; or
- **post-trading costs**, which are paid when each trade undertaken by a pension fund is cleared, settled and the asset is held for safekeeping. Post-trading service providers include CCPs, CSDs, and custodians.

The European Union UCITS (Undertakings for Collective Investment in Transferable Securities) IV Directive<sup>46</sup> defines the calculation of the AMC in the Key Investor Information Document (KIID) provided to investors at the point of purchase. The new 'ongoing charge' will be calculated to include all charges previously included in the AMC, plus post-trading costs, as defined above, and some other costs, such as audit fees. The only exclusions from the annual charge (which is consistent with the total expenses ratio in the UK, as described below) are the costs of trading, and performance fees.

The AMC previously reported by pension funds (which is presented above) does not typically include the costs of trading and post-trading services that the funds incur. There is a perception among some commentators that these charges could be significant and have been 'hidden' from consumers as a reduction in the value of assets, and not explicitly stated in charges to consumers.<sup>47</sup>

Analysis is available to directly test the relevance of these charges. Oxera has conducted past studies into the costs of trading and post-trading, including for the European Commission.<sup>48</sup> The study for the Commission included a survey of the typical costs of trade execution services in a selection of European countries, as summarised in Table 3.5. In most of these countries, these broker commissions do not only cover the costs of trade execution but also the costs of access to analysts and research. An analysis of commission rates in the UK showed that the costs of trade execution may amount to around 50% of the commission rate.<sup>49</sup>

<sup>46</sup> The UCITS IV Directive, which came into force in July 2011, covers most of the investment vehicles used by DC pension schemes.

<sup>47</sup> For example, in a recent presentation to the UK's HM Treasury, it was claimed that the 'hidden' cost of trading could account for as much as 1.4% of assets per year. See Sier, C. and Norman, D. (2011), 'Complexity and overintermediation in UK equity fund management', November.

<sup>48</sup> Oxera (2011), 'Monitoring prices, costs and volumes of trading and post-trading services', May.

<sup>49</sup> Oxera (2006), 'Soft commissions and bundled brokerage services: post-implementation review', report prepared for Financial Services Authority, October;

**Table 3.5 Average commission rates charged by institutional brokerage firms for trade execution services (by domicile of security), 2009**

Country	Cost of trading (basis points, bp)
France	9.1
UK	8.1
Germany	7.2
Spain	6.9
Italy	4.1

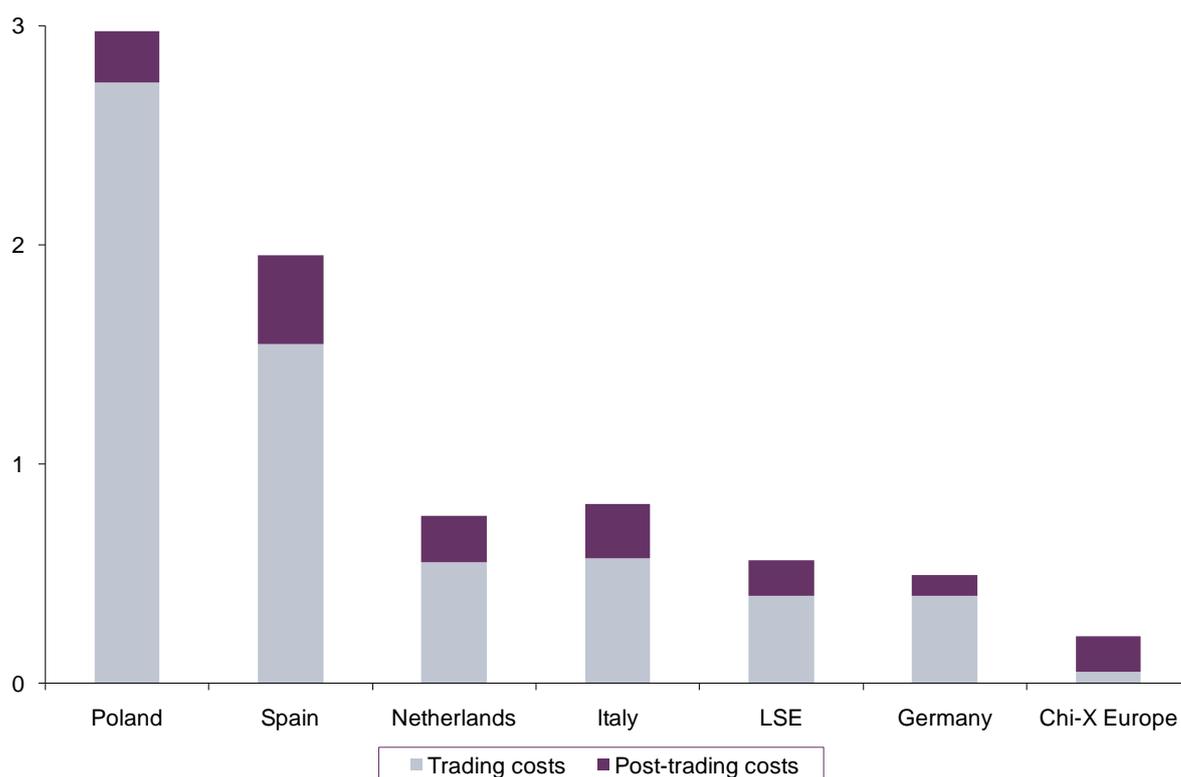
Note: The costs are shown as values in basis points (bp), a term used in financial markets to see one hundredth of a percentage point, relative to the value of the securities being traded. For example, two basis points means that the cost is equal to 0.02% of the value of the security.

Source: Oxera (2011), 'Monitoring prices, costs and volumes of trading and post-trading services', May.

The costs of trading have generally been coming down in recent years owing to technological advancements and increasing competition among infrastructure providers.

Another more recent Oxera study collected information on the costs of trading and post-trading services used by brokers and investors, as summarised in Figure 3.5.<sup>50</sup>

**Figure 3.5 Estimates of the cost of trading and post-trading in selected European stock markets (bp)**



Note: The data shown is for a relatively large user of stock market services that can be compared to a pension fund—specifically user profile 3 in Oxera (2011), 'Monitoring prices, costs and volumes of trading and post-trading services', May 2011.

Source: Oxera analysis.

<sup>50</sup> Oxera (2012), 'What would be the costs and benefits of changing the competitive structure of the market for trading and post-trading services in Brazil?', June. See Section 4.

The brokerage commissions were around four to nine basis points in 2009 but are likely to have declined somewhat since, primarily due to the fall in the underlying cost of trading services. The costs of trading services are relatively higher in Poland and Spain compared to the other countries shown, although the difference (around two basis points) is small relative to the value of the assets and the typically brokerage commissions (4-9 basis points).

The estimates of the cost of trading and post-trading can be translated into broad-brush estimates for costs for pension funds, depending on assumptions about the amount of trading. Examples are presented below.

- Passive funds, such as equity market tracker funds, may only trade around 15% of their asset holdings each year<sup>51</sup>; hence trading/post-trading costs of ten basis points (the upper end of costs suggested by the above data<sup>52</sup>) would suggest that the total costs per year sum to be around 0.03% of the total asset value of the portfolio;<sup>53</sup> in the case of the UK, where there is a stamp duty of 0.5% is levied, the cost could be around 0.1% of the total asset value.
- Active funds may trade considerably more, with estimates suggesting trading of up to 70% of the assets each year for a typical active investment fund.<sup>54</sup> With this assumption, the total cost of trading could be around 0.14% of the total asset value of the portfolio, or 0.5% if stamp duty is applied.

With active trading and a UK-style stamp duty, the costs appear significant, at up to 0.5% of assets.

The UCITS IV Directive requires that only the cost of execution services is included in the cost of trading, and that other costs (such as the provision of investment research or the management of accounts) are included in the annual charge. This was not historically the case, however, and these costs were often bundled with the cost of trading. For example, an Oxera study for the FSA found that before the new rules on 'soft commissions' and 'bundling' stopped the inclusion of non-execution costs, fees for non-execution costs accounted for approximately one-half of brokers' commissions to institutional investors.<sup>55</sup> An assessment of the historical costs of trading would need to bear in mind that other costs may have been included in the past.

### 3.4.1 Testing the overall reduction of returns to simple investment funds

In order to explore whether these costs could be significant, a methodology was constructed to assess the total charges of a simple investment product, to see what might be in addition to the AMC. Data on the returns of a simple and identical set of investment funds was compared with the returns that might be expected without charges. While there are no perfect comparators for understanding what returns should be without charges, one approach is to compare the returns produced by equity market tracker funds to the total shareholder returns data for that equity market index. So, for example, the returns of a FTSE 100 index market tracker fund can be compared with the index of FTSE 100 total shareholder returns. Total shareholder returns are calculated to be the sum of increases in capital value plus dividends, and therefore a perfect tracker fund with no costs and no taxation should follow this index.

<sup>51</sup> See Oxera (2007), 'Stamp duty: its impact and the benefits of its abolition', May.

<sup>52</sup> This over-estimates the costs since this commission rate also covers research and passively managed fund are unlikely to use research.

<sup>53</sup> Any change in the portfolio results in costs being incurred twice, as the existing assets must be sold and new assets purchased. The estimate is therefore calculated as 10bp x 2 x 15% of the assets.

<sup>54</sup> Oxera (2007), 'Stamp duty: its impact and the benefits of its abolition', May.

<sup>55</sup> Oxera (2009), 'The impact of the new regime for use of dealing commission: post-implementation review', April—in particular, Table 4.3.

Tracker funds are not perfect, however. The returns of a tracker fund would be expected to differ from the total shareholder return index for at least four reasons:

- explicit management fees (eg, the AMC);
- trading and post-trading costs;
- financial transaction taxes (eg, stamp duty in the UK);
- tracking error.

Tracking error arises as the portfolio of shares in the tracker fund does not exactly match that in the index owing to changes in the component shares and weights of the index. Tracking error always arises to some degree, although the tracking error of a FTSE 100 tracker fund would be expected to be fairly limited given that the fund covers only 100 shares (and therefore it is realistic for the fund to hold amounts close to the appropriate weights of all 100 shares).

Using data readily available about the past performance of eight different FTSE tracker funds, this comparison of returns with the FTSE total shareholder return index (TSRI) was conducted, as summarised in Table 3.6 below. The time period used was the five years up to November 2012 and the source of the fund information was FE Trustnet, an Internet site that collates publicly available information on fund returns over the past five years, as well as published information on the total expense ratio (TER) for retail investors.<sup>56</sup> This ratio is a relatively new measure of back-loaded charges used in the UK and is equal to the AMC plus 'other' charges incurred in running the fund. The TER is broadly consistent with the 'annual charge' defined in the EU UCITS IV Directive. These other charges can consist of share registration fees, fees payable to auditors, legal fees, and custodian fees. Not included in the total expense ratio are transaction costs as a result of trading of the fund's assets and any performance fees. Any difference between the returns of the fund and the total shareholder returns index, other than that explained by the TER, is therefore equal to the tracking error plus the cost of trading the fund's assets.

The identities of the selected funds is not relevant to this comparison and has been excluded from the table, which presents the following metrics:

- the quoted AMC and TER of the fund;
- the average annual rate of return of the tracker funds over the past five years (up to November 2012);
- the average annual rate of return of the FTSE total shareholder return index (TSRI) over the past five years (up to November 2012) of 1.9% (same in all cases);
- the tracking error, after taking account of the TER, which is equal to the average return of the fund minus the average return of the total shareholder return index plus the TER.

Any variation in the performance of the funds is largely explained by the variation in the TER, which is quite significant. The remaining tracking error varies between  $-0.2\%$  and  $+0.3\%$ , with an average close to  $0\%$ . In fact, the average tracking error is slightly above  $0\%$  (at  $0.1\%$ ), which is not significantly different from  $0\%$  given the margins of error, but does indicate that the remaining costs not accounted for by the TER appear to be immaterial.

The interesting conclusion of this limited analysis is, therefore, that, for FTSE 100 tracker funds, the cost of trading appears to be significantly smaller than the annual charge. This result is consistent with the above analysis, which suggested that brokerage commissions and financial taxes are unlikely to sum to much more than  $0.1\%$  of assets per annum for a passive investment fund in a country such as the UK. That said, the cost of trading applies to the assets of the fund every year, and hence, like the annual charge, it adds up over time (see section 3.5 for analysis).

<sup>56</sup> Consumers investing in these types of funds through a pension fund are likely to be charged different AMCs to those quoted for retail investors.

This analysis also highlights that the new TER is not much higher than the AMC (averaging 0.14 percentage points higher), which in turn reflects that post-trading costs (which are included in the TER, but not the AMC) are not particularly high either.

With suitable data, this analysis could be repeated for other countries, although fund return data for simple tracker funds was not readily available for other countries at the time of writing.

**Table 3.6 Comparison of tracker fund returns with FTSE shareholder index (%)**

Fund no.	Quoted AMC	Quoted TER	Average 5-year return of fund	Average 5-year TSRI	Tracking error after TER
1	0.25	0.27	1.5	1.9	-0.2
2	1.00	1.00	1.0	1.9	+0.1
3	0.40	0.46	1.8	1.9	+0.3
4	1.00	1.00	1.1	1.9	+0.2
5	1.52	1.52	0.4	1.9	0.0
6	0.35	0.35	1.9	1.9	+0.3
7	0.65	0.81	1.2	1.9	+0.1
8	1.00	1.00	1.2	1.9	+0.2
<b>Average</b>	<b>0.66</b>	<b>0.80</b>	<b>1.2</b>	<b>1.9</b>	<b>+0.1</b>

Sources: Oxera analysis based on fund data collected by FE Trustnet.

Owing to the considerable uncertainties involved, it has not been possible to estimate these costs separately for different countries. Based on the analysis above, it has been judged to be appropriate to test (in the analysis described next in section 3.5) an additional cost of 0.1% of net asset value per annum in order to reflect the costs of trading.

### 3.5 Impact of charges on retirement funds

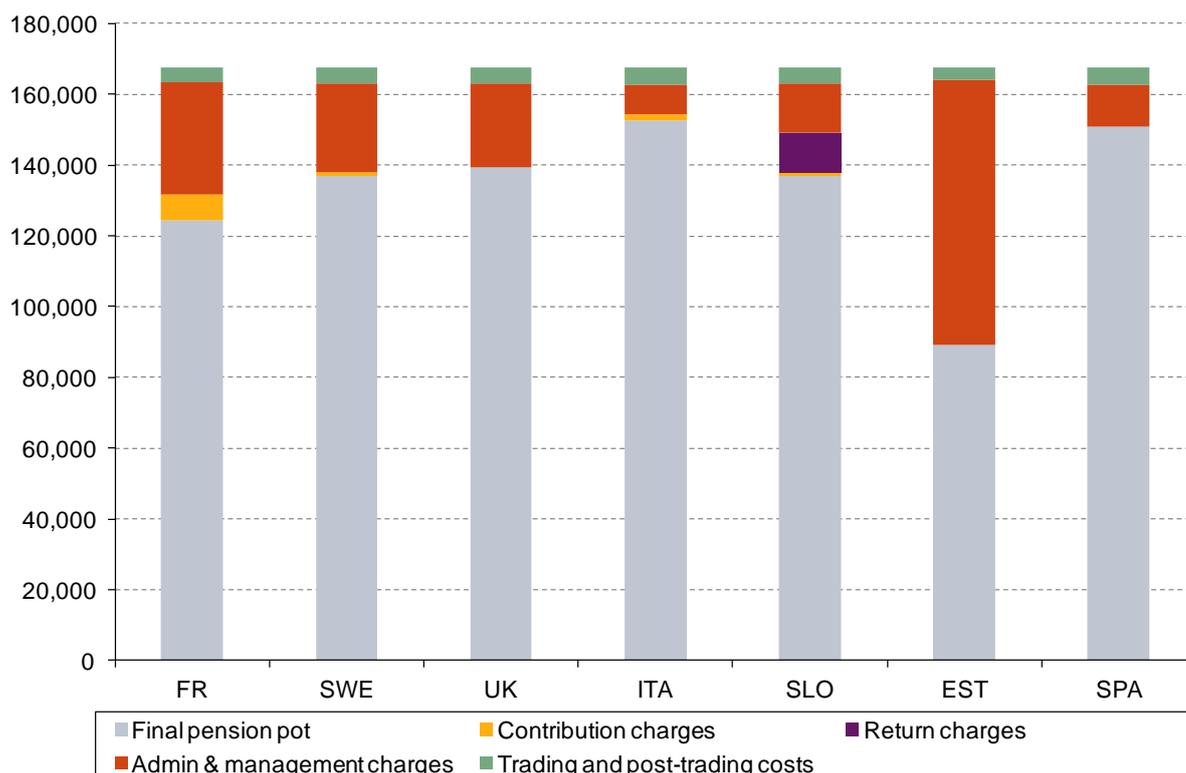
In order to understand how the different charges affect the outcomes for consumers, the study considered their impact on the final pension pot at retirement, given simple and identical assumptions for each country.

The analysis is split between employer-arranged and personal pensions schemes.

#### Personal pension schemes

Figure 3.6 below shows the impact of charges on illustrative individuals paying in annually 1,000 units of a currency into employer-arranged pension schemes for a period of 45 years (in a world without taxes, in real terms). Without any charges, given the assumptions used, the pension pot would reach a value of 168,000 after 45 years, based on a 5% annual nominal, and real, return. Figure 3.6 shows the reductions in the pension pot due to the various charges over time. This has been done by estimating the resultant pension pot with and without charges, using the assumptions set out in the note to the figure.

**Figure 3.6 Tabulation of the reduction in yield through charges, employer-arranged schemes across all Member States (currency)**



Note: Based on an individual paying in 1,000 units of a currency a year for a period of 45 years, achieving annual gross returns of 5% each year in real terms. Inflation and taxation impacts have been ignored; only the averages of charges listed in Table 4.1 above apply. Without any charges, the pension pot would reach a total of 168,000 in each country as identical assumptions have been applied. Owing to the wide range of cost estimates and the unknown cost of providing minimum guarantees, it was not possible to include Germany or Austria. Source: Oxera analysis.

It becomes apparent that over a saver's lifetime, the contribution charges of even up to 3.5% in Poland constitute only a small proportion of the overall charges imposed. Indeed, a sample saver in France, Romania or Poland—the three countries with the highest levels of contribution-based charges—will be paying less in charges over their lifetime than savers in countries with higher levels of account management and administration charges. This analysis suggests that, other aspects being held constant, the fund management and administration fees, or generally the back-loaded charges, should be given most attention when considering cross-country and cross-scheme comparisons.

While the costs of trading are relatively small as a percentage of funds, these costs add up over the lifetime of pension savings and could represent a material reduction in the final pension pot.

There may be a relationship between fund maturity and the AMC, as a less-mature pension scheme will have fewer assets and therefore a relatively high AMC would collect limited revenues. The relationship between the observed charge levels and the scale of the funds is further explored in section 3.9.

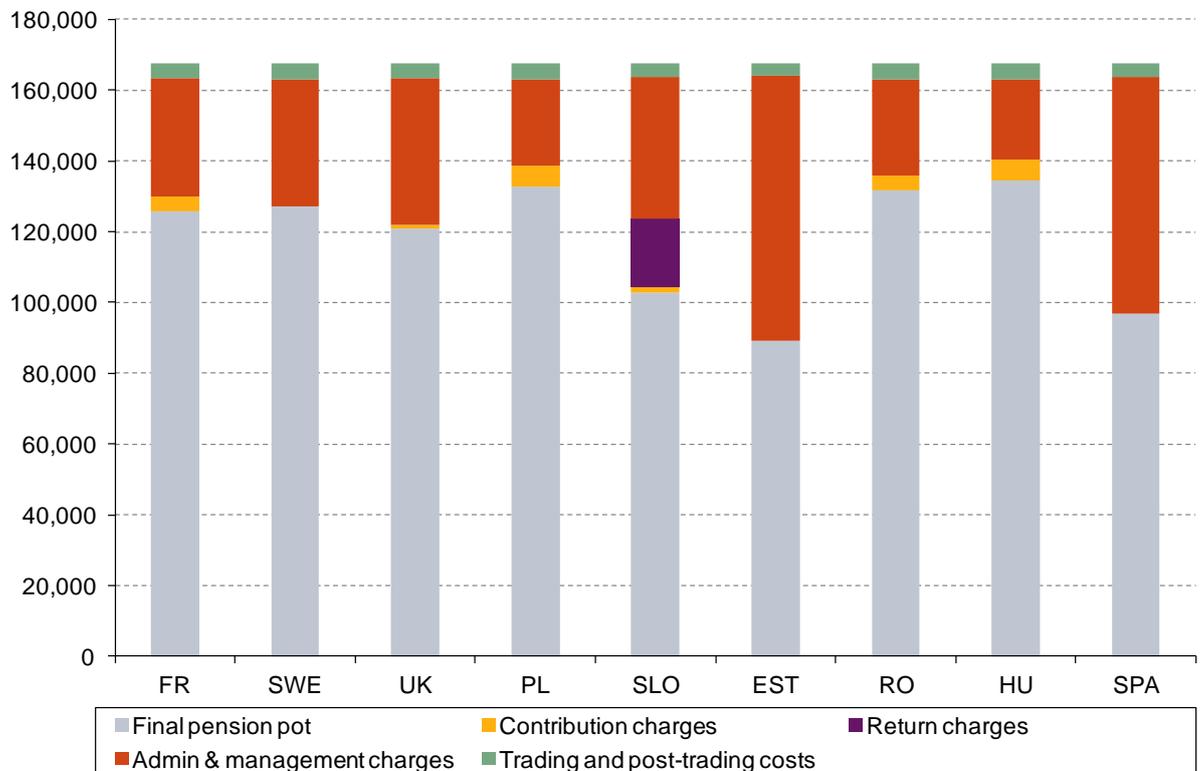
### Personal pension schemes

The higher level of charges typical of personal pension schemes relative to employer-arranged schemes can be shown in terms of the total hypothetical pension pot accumulated by savers over the course of their accumulation phase, as shown in Figure 3.7 below.

As with the employer-arranged plans, the back-loaded charges are most important, and imply a heaviest burden on savers in Slovakia, Spain and the UK. That said, the data for

personal pension schemes is uncertain, and high levels of charges in some countries, such as Slovakia, may not apply over time as schemes mature. This analysis assumes fixed charges for the full lifetime of the consumer, which may not be appropriate given evidence that charges come down as schemes mature.

**Figure 3.7 Tabulation of the reduction in yield through charges, personal schemes across all Member States (currency)**



Note: Based on an individual paying in 1,000 units of a currency a year for a period of 45 years, achieving annual gross returns of 5% each year. Inflation and taxation impacts have been ignored; only the charges listed above apply. Owing to the wide range of cost estimates and the unknown cost of providing minimum guarantees, it was not possible to include Germany or Austria.

Source: Oxera analysis.

### 3.6 Charges for pension annuities

Consumers also face implicit charges when they use their pension funds to purchase an annuity at the point of retirement. As discussed further in section 4, the amount of regular pension that a consumer receives from buying an annuity depends on long-term interest rates (typically determined by low-risk government bonds) and the consumer's life expectancy, as calculated by the provider of the annuity. The pension also depends on the charges that the annuity provider includes in this calculation to cover the administration costs.

No data was available to this study on what these charges might be.

In theory, it may be possible to backsolve the level of charges from annuity quotes if one had the predictions of life expectancy for the individual applicant. However, the provider's prediction of life expectancy is not known and cannot easily be guessed with the necessary precision, as the typical customer for annuity products is likely to be wealthier than the average individual in the country, and wealth is associated with increase longevity. National life-expectancy tables would therefore be likely to produce underestimates of the life expectancy of annuity customers and thus overestimate the charges applied by annuity providers (as longer life expectancy raises the costs of providing annuities).

This issue is compounded by the availability of ‘enhanced annuities’ in some countries (most notably the UK); namely, higher pensions provided to customers with reduced life expectancies, owing, for example, to long term medical conditions. The availability of enhanced annuities in the UK means that the life expectancies of those purchasing standard annuities (without evidence of reduced life expectancy) will, on average, have higher life expectancies than the overall national average, and will therefore receive lower monthly pensions. In contrast, enhanced annuities are not allowed by law in the Netherlands, and they are not common in Germany.

Future analysis of pension annuities could be conducted if suitable life expectancy data were available, matching the customer base on the annuity products. This data could then be used to estimate what the total present value of the expected future stream of pension income payments would be, using a suitable long-term low-risk interest rate, and comparing this present value to the actual cost of the annuity. The difference between these figures would indicate the implicit cost of the annuity to the consumer.

## 3.7 Fund operating costs

The above analysis of charges is primarily relevant to DC pension schemes, which typically involve investment funds with explicit charges, primarily in the form of the AMC. To understand the costs of DB schemes, it is necessary to consider data collected on the costs of providing pension schemes. There are also other costs that can be considered, including distribution costs (see section 3.8).

The main source of costs arising in the value chains described in section 3.2 is associated with the costs of operating the pension fund, which are referred to here as fund operating costs. These costs include the administrative costs (eg, maintaining pension accounts, communicating with members, etc) and some of the investment costs (eg, investment decision-making and explicit broker fees), although some costs are likely to be incorporated into the value of the assets.

The extent of reporting of fund operating costs (as opposed to the charges for fund administration and management) is limited for most of the Member States, with a few exceptions. Within the investigated Member States, data is presented for two countries: Poland and the Netherlands, and reveals higher costs in Poland than in the Netherlands, as a proportion of net asset value. This may reflect the relative maturity of the Dutch pension schemes, relative to Poland. The OECD has also published data on total operating costs, which is reproduced in section 3.7.3.

### 3.7.1 Poland: defined-contribution personal pension scheme costs

Poland requires the funds and fund managers of the mandatory personal pension scheme (OFE) to report a detailed breakdown of costs, and publishes the results. It has therefore been possible to investigate further the composition of the individual costs for both entities. This is presented in Table 3.7 below.

**Table 3.7 Breakdown of total operating costs borne by the fund managers in the Polish mandatory defined contribution personal scheme (OFE, 2010)**

	Total cost (PLN m)	% of total cost	% of total net asset value
<b>OFE management costs</b>	<b>533</b>	<b>43</b>	<b>0.24</b>
Transfer agency/register costs	140	11	0.06
Pension Protection Fund costs	103	8	0.05
National Insurance	189	15	0.09
Other	101	8	0.05
<b>Administration costs</b>	<b>699</b>	<b>57</b>	<b>0.32</b>
Acquisition	464	38	0.21
Marketing	23	2	0.01
Staff costs	113	9	0.05
Other	98	8	0.04
<b>Total (management and administration)</b>	<b>1,232</b>	<b>100</b>	<b>0.56</b>

Note: Data shows cumulative costs across all fund managers. Total net asset value of approximately PLN 221 billion.

Source: Oxera analysis, based on KNF data.

The investigation of fund managers' costs gives some useful results. First, the total level of costs is approximately 0.56% of the total net asset value, consistent with the level observed in the other Eastern Europe countries, but higher than comparators in more established systems.<sup>57</sup> Second, more than half (57%) of the fund manager's costs is due to administration, in particular to the high acquisition costs. The acquisition costs can be shown to have been rising steadily since 2005 (when they accounted for 29% of operating costs).<sup>58</sup> This has prompted a legislative change that came into effect in April 2011, preventing agents from encouraging switching among the consumers who have already selected a fund (although they continue to compete for potential new joiners). This is intended to drive the acquisition costs down.

In the Polish system, the fund managers' costs are recouped through two different charge types: a contribution fee and a back-loaded administration and management fee, imposed on the asset value. It remains to be seen whether the changes in acquisition policies will translate into lower effective charges.

### 3.7.2 Netherlands: defined-benefit employer-arranged pension scheme costs

Empirical research in the Netherlands provided estimates of the costs of administration and investment management for the mainly DB pension schemes of the Netherlands, summarised in Table 3.8.<sup>59</sup> This breakdown compares scheme size to costs, highlighting the economies of scale that arise for administration costs (but less so for investment management costs), as discussed further in section 3.9. When reproducing these results, De Nederlandsche Bank considered that the figures might underestimate the true cost owing to pension funds failing to report some costs.

<sup>57</sup> The difference between this number and the 0.46% reported in Figure 3.7 stems from differences in periods selected, as well as the focus on only one of multiple scheme types in the present analysis.

<sup>58</sup> Oxera analysis of KNF data, confirmed by online sources (eg, <http://fundusz.info/zakaz-namawiania-do-zmiany-ofe-przez-akwizytora-ofe>).

<sup>59</sup> Bikker, J.A. and de Dreu, J. (2009), *Operating costs of pension funds: the impact of scale, governance, and plan design*, Cambridge University Press, January.

**Table 3.8 Cost of administration and investment management by pension fund size (2004)**

<b>Number of members</b>	<b>Costs of administration (% of assets)</b>	<b>Costs of investment management (% of assets)</b>
<100	0.59	0.13
100–1,000	0.46	0.14
1,000–10,000	0.23	0.14
10,000–100,000	0.17	0.11
100,000–1 m	0.24	0.13
More than 1 m	0.07	0.08
<b>Average</b>	<b>0.15</b>	<b>0.10</b>

Note: Members includes active, dormant and retired members.  
Source: Bikker and Dreu (2009), op. cit.

Administration and investment management costs for the mainly DB Dutch pension schemes average at around 0.25% of net asset value per annum, according to this data. The Dutch pension schemes are relatively large and mature, with high net asset values, which may explain why costs are lower, as a percentage of assets, than in the Polish data described above. Evidence from the OECD on pension costs over time for Sweden, Poland, Hungary and a selection of non-European countries has found that pension costs decline in line with fund maturity.<sup>60</sup>

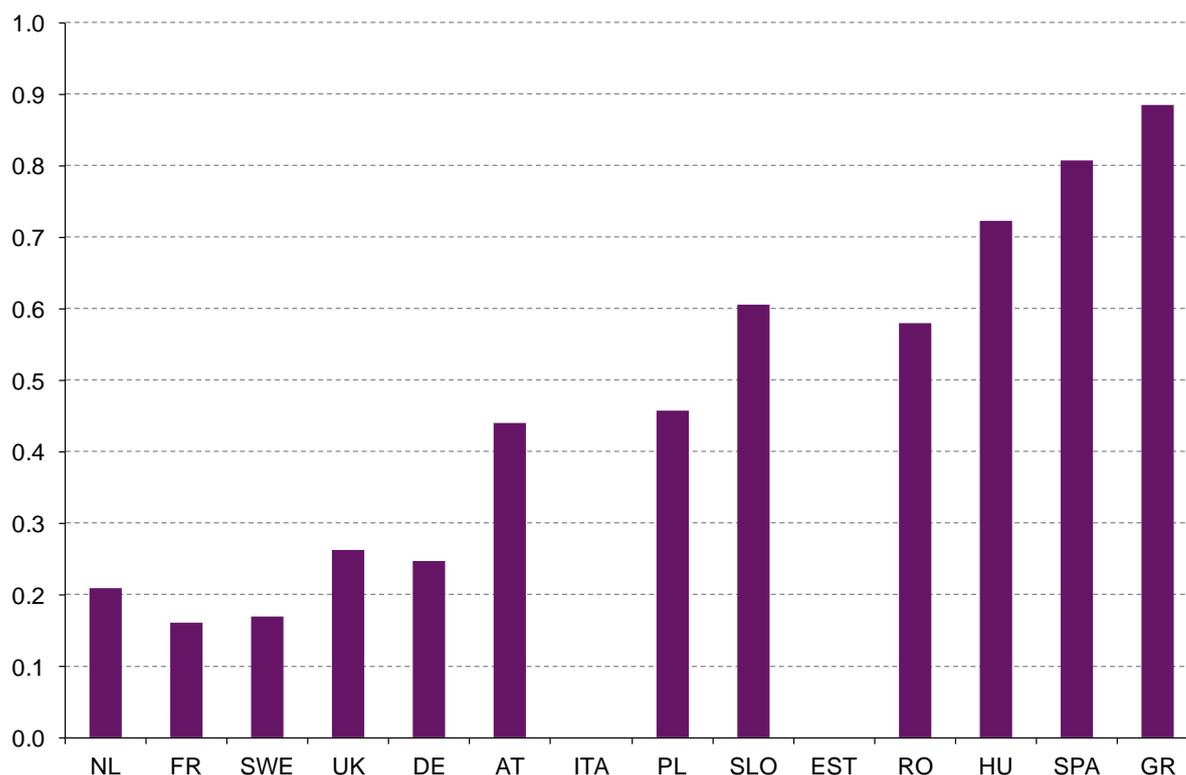
### 3.7.3 OECD data on total operating costs

The OECD has also published data for a number of countries on total operating costs as a percentage of assets, reproduced in Figure 3.8 below. These estimates include reported administration and investment costs as a proportion of the total accumulated assets, based on the OECD data for several different years (see notes), although not for all types of pension scheme owing to lack of data availability (see Table 2.7 for details of the schemes included in the OECD database). The data covers administrative costs and some investment costs, although not typically the costs of trading, and does not reflect the operating costs of schemes run by insurance companies.

There is a wide divergence of costs across the individual Member States, with lower charges in the more established systems of the Netherlands and the UK, and gradually increasing cost levels across the other country segments.

<sup>60</sup> See OECD (2008), 'Fees in individual account pension systems', working paper.

**Figure 3.8 Tabulation of the total operating costs by country (% of total assets)**



Note: Administrative and investment costs for selected schemes only. No data available for Italy or Estonia. Data spans multiple years: 2011 (NL, RO, GR); 2010 (DE, AT), 2009 (UK, SLO, HU, FR, SWE); 2006 (PL) and 2004 (SPA). Full details of the assumptions used and the types of pension funds included are provided by the OECD in its Global Pensions Statistics. France and Sweden refer to specific schemes (FRR and AP3 respectively). Source: OECD Global Pensions Statistics and OECD (2010), 'Pension in Focus', Issue 7 (for FR and SWE).

### 3.8 Distribution costs

Distribution costs are the costs incurred in linking consumers to pension schemes, before any costs of providing the pension scheme have been incurred. These costs can arise from:

- activities aimed at attracting new customers, including marketing and special promotions;
- other types of payments to intermediaries in return for activities to acquire new customers;
- the provision of financial advice to consumers.

Most distribution costs are recovered through providers' charges such as the management and contribution charges. Financial advisers often receive payment in the form of commissions from the pension provider, and the pension provider will cover these costs through its standard charges. In the detailed analysis of the costs of Polish pension schemes in section 3.7, distribution costs are included in the significant 'acquisition costs' for pension providers.

In the analysis of charges above, distribution costs have not been identified as a separate fee, as they are typically included in the AMC. Commissions to intermediaries (eg, advisers and distributors) provide an indication of distribution costs, although in some countries (eg, the UK) this is changing as a result of legislation limiting the use of such commissions. In the UK, the results of the Retail Distribution Review (RDR) has resulted in regulation requiring advisers to be paid directly by consumers and not through commissions from

providers, in order to align advisers' incentives with consumers and to improve competition.<sup>61</sup> Without commissions, financial advisers may need to charge consumers directly for providing advice, which would then need to be recorded in order to estimate the full cost of pensions to consumers.

Evidence on distribution costs is limited. The acquisition costs of the Polish pension schemes appear to be high, at 0.21% of net asset value, although these estimates may include more than distribution costs alone.<sup>62</sup> For the UK, work by Oxera on distribution costs for personal pension schemes found the cost to be relatively limited, suggesting a cost of no more than 0.05% of net asset value, based on evidence on the typical commissions for intermediaries relative to asset values.<sup>63</sup>

For employer-arranged schemes, distribution costs may also arise if the employer uses an intermediary to deliver the pension scheme to employees or if the employer has sought financial advice. These distribution costs are likely to be covered by the employer, so it will be unclear how much of any cost is passed on to consumers.

Distribution costs could be high in some pension systems for a number of reasons, two of which are outlined below.

- There may be inefficient churn of consumers among products if advisers are recommending customers to switch provider so that the adviser gets a commission. This will increase the general distribution cost base. This could have other negative implications for customers if advisers are incentivised to encourage consumers to switch to less beneficial pension schemes (but perhaps with higher commissions for the adviser). This has been suggested with regard to customers being encouraged to shift from DB to DC pension schemes in the UK, as the latter schemes typically have been much more generous and lower risk for consumers.
- If there is a lack of effective competition, marketing spend by pension providers might become disproportionate. This has been noted as a possible issue in Poland, where the regulator has introduced limits to the acquisition costs of pension funds.<sup>64</sup>

Distribution and marketing costs arise in all industries. They can be beneficial to consumers if they encourage competition between providers and improve the match between customers and pension products. Analysis of cost data, if it becomes available, should be considered in terms of the effectiveness of the sector in delivering quality products to the right consumers. Ideally, regulators should monitor trends in distribution costs in the pension system and compare costs over time and relative to comparator sectors.

### 3.9 Economies of scale

The provision of pension funds has commonly been associated with economies of scale—ie, average unit costs may fall as the size or scale of the pension fund increases. Economies of scale for pension funds are an important part of the pensions debate, as, in more mature private pension systems, there is concern that there could be too many small pension schemes, raising average costs. This concern has been noted in the Netherlands and the UK, and this has driven policy development in Eastern European countries, such as Poland.

<sup>61</sup> For a debate on the economic drivers for the RDR, see Oxera (2009), 'Retail distribution review proposals', June, report for the UK FSA. The UK move towards banning commissions is not universally accepted in Europe, however, and a partial ban in the UK alone could create inconsistencies in the Single Market.

<sup>62</sup> Based on Oxera analysis of KNF data, presented in Table 3.7.

<sup>63</sup> For a summary, see *Financial Adviser* (2006), 'Oxera provides first economic analysis of competition and costs in NPSS', October 27th.

<sup>64</sup> See, for instance, Fundusz.info website, available online at <http://fundusz.info/zakaz-namawiania-do-zmiany-ofe-przez-akwizytora-ofe>, accessed on November 21st 2012.

The market structure of the private pension system can have important implications for the level of costs, and therefore outcomes for consumers, as discussed in this section.

### Existing evidence

The literature on economies of scale in the provision of pension funds has focused on three main components in the value chain:

- **administration costs**—insofar as administrative processes incur a high proportion of fixed costs (such as upfront investments in IT systems), average costs will be lower per account as the number of accounts increases;
- **fund management**—the costs of managing a fund are unlikely to rise in direct proportion to the number of accounts, or the average value of each account;<sup>65</sup>
- **trading and post-trading costs**—larger funds may also be able to benefit from greater bargaining power, thus benefiting from lower costs of trading and post-trading services.

In general, the conclusions of research into pension fund economies of scale have been mixed. Some studies have found no evidence of economies of scale, or have found that these are limited. In research undertaken for the World Bank, for example, Whitehouse (2000) found no significant relationship between the size of funds and the charges imposed on participants in Latin America and the UK.<sup>66</sup> While this does not preclude the existence of economies of scale, it implies that, if such an inverse relationship between costs and the size of funds did exist, the savings were not passed on to the consumer in the form of lower charges. An explanation for this finding is that pension funds face low levels of competitive pressure to pass on cost savings. The extent to which this is the case remains to be determined. From their analysis of the relationship between administration costs and the size of assets under management in the USA, Turner and Beller (1989) concluded that economies of scale existed only until the fund reached \$75m in assets.<sup>67</sup>

Other studies have found greater evidence of economies of scale. Dyck and Pomorski (2011) examined a dataset of 842 pension plans in the USA, Canada, Australia and New Zealand, covering the period 1990 to 2008.<sup>68</sup> They found increasing returns to scale for pension plans, with large pension plans outperforming smaller pensions by 0.43–0.50% per year in terms of their net abnormal returns.<sup>69</sup> Between one-third and one-half of the benefits of being larger are linked to cost savings through undertaking a greater proportion of fund management internally rather than outsourcing management to external parties:

Large plans manage 13 times more of their active assets internally (2.7% in the first quintile versus 35.4% in the fifth quintile). This leads to substantial cost savings. While delivering similar gross returns, external active management is at least 3 times more expensive than internal active management, and in alternatives it is 5 times more expensive.<sup>70</sup>

Bikker and de Dreu (2009) also found evidence of economies of scale in their study of Dutch pension funds over the period 1992–2004.<sup>71</sup> They observed a large dispersion in both

<sup>65</sup> Some fund management costs could be linked to the value of the account, such as the cost of stamp duty, but most costs are unlikely to rise in proportion to asset value.

<sup>66</sup> Whitehouse, E. (2000), 'Administrative charges for funded pensions: An international comparison and assessment', World Bank Social Protection Discussion Paper Series, June, p.57.

<sup>67</sup> Turner, R. and Beller, D. (1989), 'Trends in Pensions', Department of Labour, Washington DC, cited in Whitehouse (2000).

<sup>68</sup> Dyck, A. and Pomorski, L. (2011), 'Is Bigger Better? Size and Performance in Pension Plan Management', Rotman School of Management, University of Toronto, July, available at [http://www.rotman.utoronto.ca/pomorski/Is\\_Bigger\\_Better.pdf](http://www.rotman.utoronto.ca/pomorski/Is_Bigger_Better.pdf), accessed May 31st 2012.

<sup>69</sup> Net abnormal returns are defined as gross returns minus actual costs minus plan-specific benchmarks for each asset class.

<sup>70</sup> Dyck and Pomorski (2011), op. cit., p. 4.

<sup>71</sup> Bikker, J.A. and de Dreu, J. (2009), *Operating costs of pension funds: the impact of scale, governance, and plan design*, Cambridge University Press, January.

administrative and investment costs across funds; with administrative costs ranging from 0.1% to 1.2% of the value of pension funds assets. This dispersion in operating costs is directly linked to economies of scale, with the authors finding that:

- an increase in pension fund size of 1% raises administrative costs by 0.64%. These economies of scale for administration decrease as the pension fund size increases;
- an increase in total assets by 1% raises investment costs by 0.78%;
- outsourcing raises costs, with a 1% increase in outsourcing leading to a 1.08% increase in costs;
- all these coefficients are significantly different from 1, the constant-returns-to-scale value.

Similar results have been observed in studies undertaken in other countries, including in the following four analyses.

- Bikker, Steenbeek and Torracchi (2010) extended the analysis of Dutch pension funds to estimate the scale coefficient for administration costs (ie, the percentage by which administrative costs would increase for a 1% increase in the number of accounts) in Australia (0.739), Canada (0.945) and the USA (0.788).<sup>72</sup>
- Mama, Pillay and Fedderke (2011) estimated the scale coefficient for administration costs to be 0.696 in South Africa.<sup>73</sup>
- A 2005 study into Irish pension funds found that a fund with 50 accounts incurs unit costs (ie, costs per accounts) two-and-a-half times greater than a scheme with 500 accounts.<sup>74</sup> Moreover, costs borne by smaller schemes represented 3.64% of assets compared with just 0.32% of assets in larger schemes.
- In 2000, the US Securities Exchange Commission analysed the ratio of operating costs to total assets for mutual funds. It found that the operating expense ratio of a mutual fund with assets of \$10m was 22bp (0.22%) lower than a fund of \$1m. Similarly, a fund of \$1 billion had an operating expense ratio 66bp lower than a fund of \$10m.<sup>75</sup>

Table 3.9 shows the impact of size, in terms of number of participants and total assets, on administrative and investment costs for Dutch pension funds in 2004. Administrative costs range from €927 per participant for the smallest pension funds to €33 per participant for those with more than 1m participants. Likewise, investment costs per participant are €270 for funds with fewer than 100 participants, but €33 for those with more than 1m participants. The authors concluded:

Economies of scale may indeed be expected in pension fund administration and investment activities, as many costs are likely to increase less than proportionally with size. Examples are the costs of policy development (especially asset and liability management), data management systems and reporting, and the expert personnel required, such as actuaries, accountants, legal staff, and investment managers.<sup>76</sup>

<sup>72</sup> Bikker, J., Steenbeek, O. and Torracchi, F. (2010), 'The impact of scale, complexity, and service quality on the administrative costs of pension funds: A cross-country comparison', DNB Working Paper No. 258, August.

<sup>73</sup> Mama, A.T., Pillay, N. and Fedderke, J. (2011), 'Economies of Scale and Pension Fund Plans: Evidence from South Africa', mimeo, April 3rd.

<sup>74</sup> Mahon, A. (2005), *Irish Occupational Pensions: An Overview and Analysis of Scale Economies*, Waterford: WIT.

<sup>75</sup> US Securities Exchange Commission—Division of Investment Management (2000), 'Report on Mutual Fund Fees and Expenses', December.

<sup>76</sup> Bikker and de Dreu (2009), op. cit., p. 65.

**Table 3.9 Dutch pension fund administrative costs (2004)**

	Administration costs per participant (€)	Administration costs as a % of total assets	Investment costs <sup>1</sup> per participant (€)	Investment costs <sup>1</sup> as a % of total assets	Number of pension funds
<b>Number of participants</b>					
<100	927	0.59	270	0.13	56
100–1,000	302	0.46	101	0.14	225
1,000–10,000	156	0.23	97	0.14	264
10,000–100,000	86	0.17	45	0.11	87
100,000–1m	28	0.24	13	0.13	20
> 1m	33	0.07	39	0.08	3
<b>Total assets (€m)</b>					
0–10	159	1.23	25	0.15	105
10–100	129	0.55	31	0.14	289
100–1,000	51	0.27	25	0.14	209
1,000–10,000	45	0.17	24	0.10	44
>10,000	43	0.10	39	0.10	8

Note: <sup>1</sup> Investment costs span trading and post-trading costs.

Source: Bikker and de Dreu (2009), op. cit., p. 69.

The table indicates that there is an increase in both the administrative and investment costs per participant for the largest class size, suggesting there is an optimal size above which pension funds begin to experience diseconomies of scale. However, the sample size for the largest pension class in Bikker and de Dreu's study is small (only three pension plans had more than 1m accounts) and assets under management per participant were much higher for the largest pension class than for the class below. For example, the average assets under management per participant for pension funds with more than 1m accounts was €46,000, while for funds with between 100,000 and 1m accounts, each account held only €12,000 on average. This disparity could (partly) explain the differences in costs per participant.

The latest evidence from the Pensions Regulator for defined contribution pension schemes in the UK<sup>77</sup> finds evidence that larger schemes benefiting from economies of scale are more likely to display the features of good governance and to provide the value for money features that the Pensions Regulator is seeking to encourage.

### Case study—Poland

Data gathered during the present study allows for a replication of the Dutch results for the Polish mandatory personal scheme (OFE).<sup>78</sup> Table 3.10 below shows the results of this analysis.

<sup>77</sup> 'DC trust-based pension scheme features', the Pensions Regulator, January 2013.

<sup>78</sup> For a more detailed description, see section 4.3.

**Table 3.10 Polish mandatory personal pension plans (2005 and 2010)**

	2005		2010	
	Admin & management costs as a % of total assets	Number of funds	Admin & management costs as a % of total assets	Number of funds
<b>Number of participants (m)</b>				
<0.5	1.79	10	0.96	4
0.5–1.0	1.66	1	0.88	4
1.0–2.0	1.70	2	0.90	3
2.0+	1.27	1	0.81	3
<b>Total assets (PLN billion)</b>				
0–5	1.78	9	0.92	5
5–10	1.77	2	0.91	5
10–	1.78	1	0.91	1
20+	1.45	2	0.81	3

Note: Administration costs cover fund operating costs, contribution charges and management fees chargeable to the individuals' accounts. Within each band, the administration and management costs are calculated as a simple average across the relevant funds.

Source: Oxera analysis, based on KNF data.

Results of the analysis show rather unambiguously that there appears to be a material difference in administration costs between smaller and larger funds. A number of more specific observations come out from the analysis:<sup>79</sup>

- between 2005 and 2010, the administration costs fell by nearly a half—driven by the halving of the allowed contribution fees from 7% to 3.5%;
- there would appear to be two step changes in the observed administration costs—first, once the fund reaches approximately 0.5m members, and another once it surpasses 2m;
- there appears to be only one step change in terms of assets under management, evident once the fund accumulates more than PLN 20 billion.

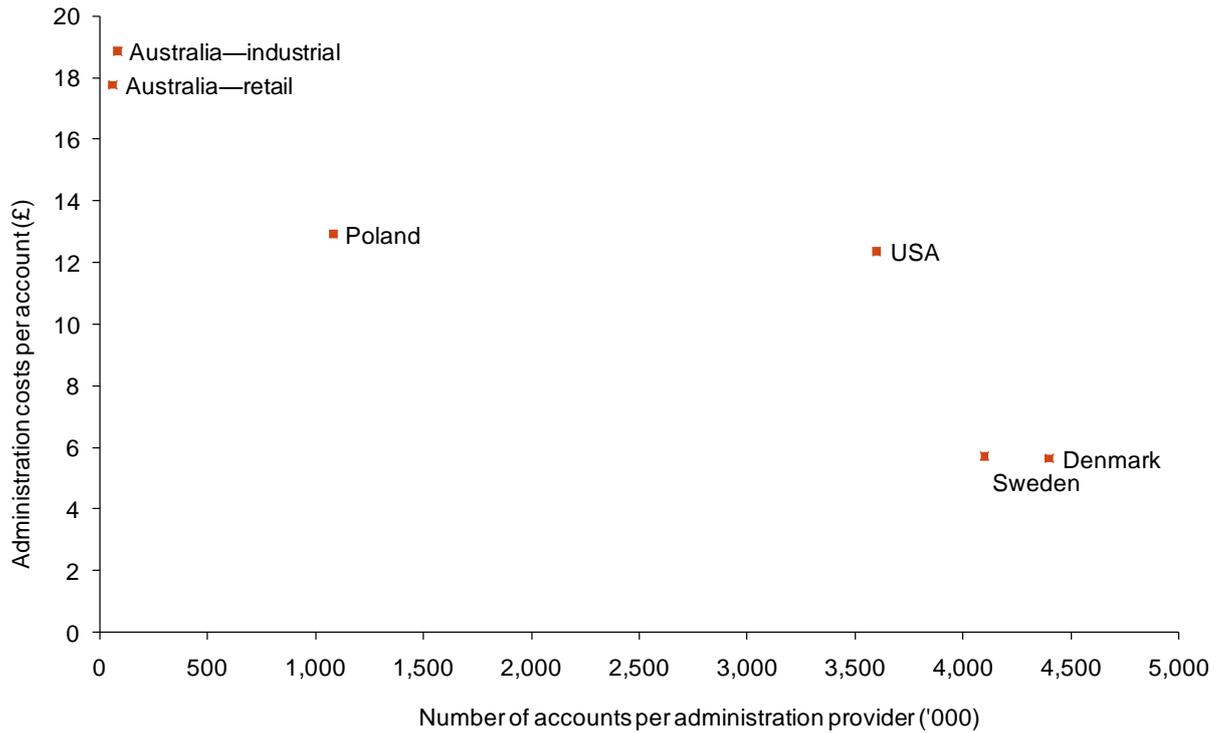
### Optimal size

The concept of an optimal size of pension, up to which there are economies of scale and beyond which there are constant returns to (or even diseconomies of) scale, has been a feature of several studies. In a previous review of this literature, and from additional analysis undertaken at the time, Oxera (2006) found that there are likely to be significant economies of scale up to a fund size of £500m, but that economies of scale become less significant in the range £500m to £1 billion and in particular once assets under management reach around £1 billion.<sup>80</sup> The relationship between administration costs per account and the number of accounts, as found in Oxera's study, is shown in Figure 3.9 below, while the relationship between fund management costs and fund size (in terms of total assets) can be seen in Figure 3.10.

<sup>79</sup> The relatively small number of funds may affect the conclusions from this analysis. The relative growth in fund size and accumulated assets between 2005 and 2010 is driven predominantly by the relatively young age of the overall OFE system.

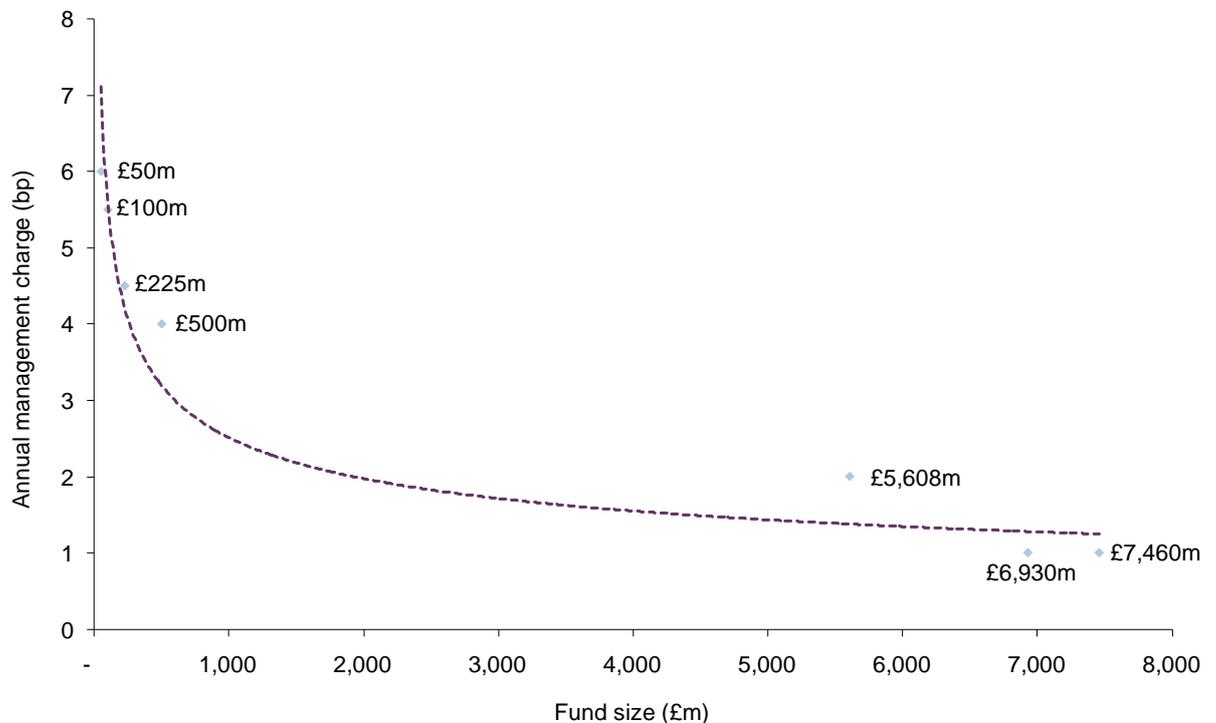
<sup>80</sup> Oxera (2006), 'How to Evaluate Alternative Proposals for Personal Account Pensions – An economic framework to compare the NPSS and Industry models', prepared for the Association of British Insurers, October.

**Figure 3.9 Administration costs per account versus number of accounts per provider—purchasing power parity-adjusted**



Source: Oxera (2006), 'How to Evaluate Alternative Proposals for Personal Account Pensions – An economic framework to compare the NPSS and Industry models', prepared for the Association of British Insurers, October.

**Figure 3.10 Relationship between fund size and fund management fee in the UK**



Note: The fees See 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). Source: Oxera (2006), op. cit.

In a more recent study from 2011, Autoriteit Financiële Markten drew the following conclusions:<sup>81</sup>

- there is significant variation in the costs of pension funds of similar size—in particular in relation to administration costs. It is not clear what factors drive these differences; further research would be required to determine these;
- the smaller and medium-sized funds, in particular, could reduce costs by merging with other funds and thereby exploiting economies of scale;
- various pension funds do not report all the costs that they incur.

### Case study—Italy

Evidence on economies of scale from Italy confirms the findings in other countries (see Table 3.11).<sup>82</sup> While Italian pension funds are reported to have, on average, administration costs of approximately 0.42% of net asset value, the two largest players have reported costs of approximately half this benchmark. Cesari and De Rossi (2008) argue, in line with other studies, that there are certain fixed costs of administration that require minimum operating scale, in terms of either total assets or the associated member base.

**Table 3.11 Administration costs in sample Italian pension funds (2006)**

	Total market	Comet	Fonchim
Net asset value (€ billion)	~6.0	2.4	1.4
Market share (%)	100	40	23
<b>Reported admin costs (% of net asset value)</b>	<b>0.42</b>	<b>0.22</b>	<b>0.20</b>

Source: Oxera analysis, based on Cesari and De Rossi (2008), op. cit.

### Implications for savers

In practice, of the investigated countries Estonia is the only one where the fund management fee is legally required to decrease in fund value in order to reflect the observed economies of scale. The reduction required is 10% for every €100m in accumulated assets.<sup>83</sup>

It is in the interests of consumers for pension costs to be minimised, but this needs to be weighed against any loss in competition in the private pension market that could arise from increased market concentration. This trade-off will determine an ‘optimal size’ for pension funds.

<sup>81</sup> Autoriteit Financiële Markten (2011), ‘The costs of pension funds deserve more attention’.

<sup>82</sup> Cesari, R. and De Rossi, P. (2008), ‘Analisi. L’incidenza delle commissioni.Rendimenti maggiori per i fondi più grandi’, MEFOP discussion paper, available online at [http://www.mefop.it/documento/8526/AiE\\_070108.pdf](http://www.mefop.it/documento/8526/AiE_070108.pdf).

<sup>83</sup> Based on information received from the Estonian Ministry of Finance.

## 4 Returns and risk

### 4.1 Introduction

#### 4.1.1 Why this topic?

When a consumer makes a decision about whether to invest in a private pension scheme in particular, or even a decision to save, they are trading off consumption now against consumption in the future. In the case of pensions, this is consumption when they are in receipt of their retirement income. In order to evaluate the consumption that investing in a private pension will deliver they need to consider how much they can realistically expect to receive from the investment in terms of an annual pension upon retirement. For a DC pension scheme, this requires decisions about the amount of contributions they will make; assumptions about either their likely longevity (when the pension payout is in the form of a lump sum) or the likely general longevity (when the pension payout is in the form of an annuity), the likely investment returns of the pension scheme, rates of interest and inflation; and information about the level of charges levied by the pension provider.

For a DB pension scheme, generally there will in principle be a guaranteed retirement income, although, depending on the type of scheme, the consumer may still hope for benefits in addition to that which is guaranteed (typical in Germany, for example), and there can remain a risk that the level of retirement income is not delivered as defined (which has occurred in a number of different pension systems). If the consumer's expectations for these factors fail to materialise, the pension income will not meet their expectations.<sup>84</sup> The extent of this uncertainty is referred to in this report as 'pension risk'.

One of the key risks that FSUG asked Oxera to look at is investment risk, which is particularly relevant to DC schemes. In all uncertain investments, there is a tendency for risk (volatility of returns) to be correlated with (average) return, as investors expect to be compensated for taking on risks. Equity returns have tended to be higher, on average, over long periods of time, than bond returns, as equity faces a higher level of risk (ie volatility of returns). The relationship between the returns and risk of securities is determined by market dynamics that tend to reflect the average preferences of investors, but different investors have different investment horizons, which can make some securities more appropriate for different investors with different circumstances.

The likely rates of return and the risk of different investments are difficult to gauge, and for a consumer saving into pension schemes over their working life, there is a level of uncertainty that is difficult for even a very well-informed financial services practitioner to judge. The exposure and management of risk differs markedly between pension products, and some products offer protection against investment risk. New products are being developed (for example, hybrids between DC and DB) which would alter risk exposure for consumers. For these reasons, any analysis of private pension products from the perspective of consumers needs to consider risk (volatility of returns) together with expectations of (average) returns.

#### 4.1.2 What were the metrics and what information was available?

Risk in pension systems can be managed to some extent, and there are mechanisms for sharing risk between pension providers, consumers and the wider financial system. The level of risk in different pension schemes needs to be understood and compared so that well-

<sup>84</sup> It could be more or less, depending on the relationship between the assumptions and the outcome. However, recent history is that the assumptions made at the time of investment have generally been overoptimistic in terms of delivery of retirement income.

informed decisions can be made about the critical trade-off between minimising risk (volatility of returns) and maximising (average) returns.

Given this background, the FSUG asked Oxera to look at a range of metrics including:

- the performance of the most prominent pension schemes over time;
- the risk profile of different types of pension scheme;
- mechanisms for managing the amount of risk faced by consumers;
- outcomes for consumers, in terms of the protection of the real value of the contributions that they make to pension schemes.

The issue of pension returns and risk has become increasingly important in the debate on the development of private pension schemes, for two reasons in particular:

- the adverse financial developments over the past decade, which have created funding problems for DB pension schemes;
- the associated increasing prevalence of DC schemes, which place investment (accumulation phase) and annuity (payout phase) risk directly on the consumer.

Consequently, regulators have been focusing on these issues, including the appropriate portfolio allocations for long-term investments, the levels of risk faced by consumers, and the need for mechanisms to manage risk. Returns (and their volatility) have been a focus of the regulators of the new Eastern European schemes and the OECD provides cross-country analysis.

In most countries, readily available data on pension fund returns does not go back much more than a decade. Pension funds do assess their returns on a year-by-year basis, as a part of normal reporting, but most regulators have not made this information available on a systematic basis, apart from in Eastern Europe (although in these countries the pension schemes are relatively new). Oxera has therefore drawn on alternative sources of information about investment performance over the very long term, available from the wider investment literature. It should, however, be kept in mind that historical information can only provide an indication of possible future developments, and robust mechanisms for managing risk will always be required.

Data on relative risk exposure for consumers of different pension schemes is not typically available and there is little quantitative analysis in the literature. Oxera has therefore developed a framework for assessing the relative importance of some of the key risk factors for consumers of DC schemes.

### **4.1.3 The objectives of this section**

This section gives an overview of how pension returns and risk vary over time and between Member States. The analysis draws on information about pension schemes from the regulators as well as a broader range of literature and financial analysis to explore the issues where data availability has not been sufficient, either by using information about investments in general or developing new frameworks for analysis (such as in the case of pension risk).

The section begins by assessing the information available from regulators on the rates of return that private pension schemes have achieved in recent years, highlighting the degree of volatility and hence the investment risk (section 4.2). The types of pension risk that exist for consumers are then reviewed (section 4.3), and a methodology for assessing the relative magnitudes of selected risks for DC schemes is developed (section 4.4). This new framework provides a basis for comparing the relative risk profiles of DC schemes (section 4.5), which helps to close the gap in the existing literature on the issue of relative risk. Section 4.6 considers risk factors for DB schemes, and section 4.7 compares risk levels across schemes. Finally, implications for the adequacy of private pensions schemes are considered in section 4.8.

## 4.2 Pension returns

From a consumer's perspective, accumulation of funds over time in a pension plan which does not solely offer defined benefits depends critically on the returns of the pension fund assets. Even schemes with defined benefits may include the possibility of a surplus being received, which will also depend on market performance or the performance of the insurance portfolio.

Returns on a particular fund are a product of a multitude of factors, and encapsulate market performance and its susceptibility to global, regional or country-specific risks and shocks, as well as charges and taxation. Recent financial crises have had a significant impact on the performance of investments, and these risk factors can have important implications for the consumer (see section 4.5). From the perspective of the consumer, all these factors can be captured with the actual returns received from the investment portfolio.

As discussed further in section 4.3, there is a trade-off for consumers between risk and return. Typically, investments that have more certain returns (eg, government bonds) also have, on average, lower rates of return, but the high degree of volatility of some of the major asset classes, notably equity, means that these averages are only apparent in long-term returns data. As sufficiently long time series of data for pension returns are not available, it is necessary to consider alternative sources of information on the returns of different asset classes.

Consequently, when considering returns on pensions investment, both short- and long-term returns are of importance:<sup>85</sup>

- short-term returns may affect savers' willingness to invest into a pension scheme, especially in the context of voluntary products, or to transfer their savings between providers in the expectation of being able to recover the transfer costs via increased returns;
- long-term returns provide the basis for consumers to estimate the likely overall size of their pension pots in the longer term (at retirement), being a more representative measure of performance that nets off short-term fluctuations;
- and even over the long term the actual performance of a particular pension fund is unlikely to exactly match the average performance of all pension funds or funds of that particular type.

This section explores in turn the short- and long-term returns performance of fund and insurance-based pensions over recent years. This study does not seek to address how returns have varied according to pension fund asset allocations, as there is insufficient data to do this.

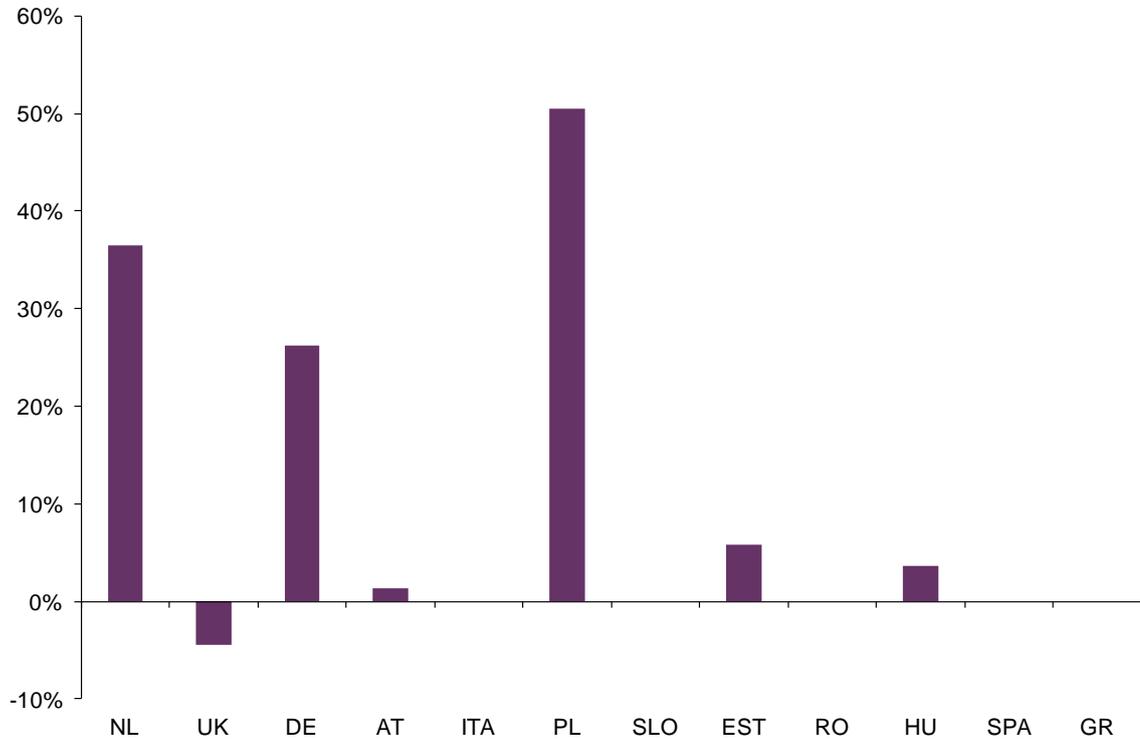
### Recent pension returns

Available data for the past decade suggests that there has been considerable variation in the average returns made by pension funds across Europe (see Figure 4.1 below). This primarily reflects variations in the average asset allocation in pension funds in different countries and the performance of those assets held by the pension funds, due to divergences in returns from equities and bonds, and for the same asset classes between different countries. The variation in cumulative returns is striking and significant, even over a relatively long ten-year horizon. This is supported by the evidence on long-run equity returns presented below, which found significant variation in equity performance over a long periods of time between European countries.

<sup>85</sup> The discussion here centers around DC products. Nevertheless, in DB world the individual pension providers would face concerns over the financeability of their contracted benefits, as briefly discussed in section 4.6.

For selected countries, Figure 4.2 compares the average returns to pension funds compared to the total shareholder returns of holding a portfolio of the main equity market index. This comparison is not made for the smaller or Eastern European countries, as the pension funds in those countries are less likely to have a strong home bias towards their national equity markets, which, in any case, are likely to be too volatile to allow a meaningful comparison. There is no clear correlation between the performance of national equity market indices and that of the pension funds, presumably reflecting the significant holdings of other types of asset in pension funds and the holding of foreign equity.<sup>86</sup>

**Figure 4.1 Reported real cumulative pension fund investment returns (2002–11, %)**

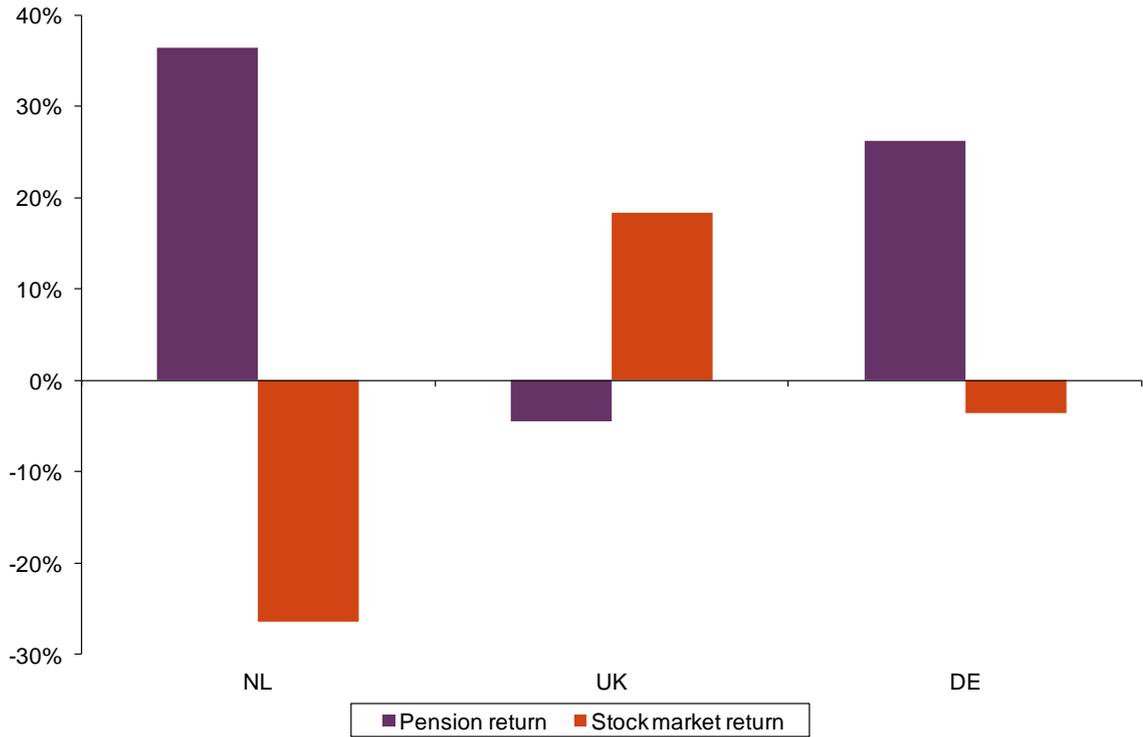


Note: No breakdown of occupational and personal schemes, data for pension funds only. OECD refers to the OECD weighted average. German data for 2002–10, insufficient data to compute returns for the full period for Italy, Slovakia, Romania, Spain or Greece.

Source: Oxera analysis based on OECD data.

<sup>86</sup> The data available is not of a sufficiently high level of detail to calculate an equivalent market rate of return for the same portfolio of assets, which would be the ideal comparison.

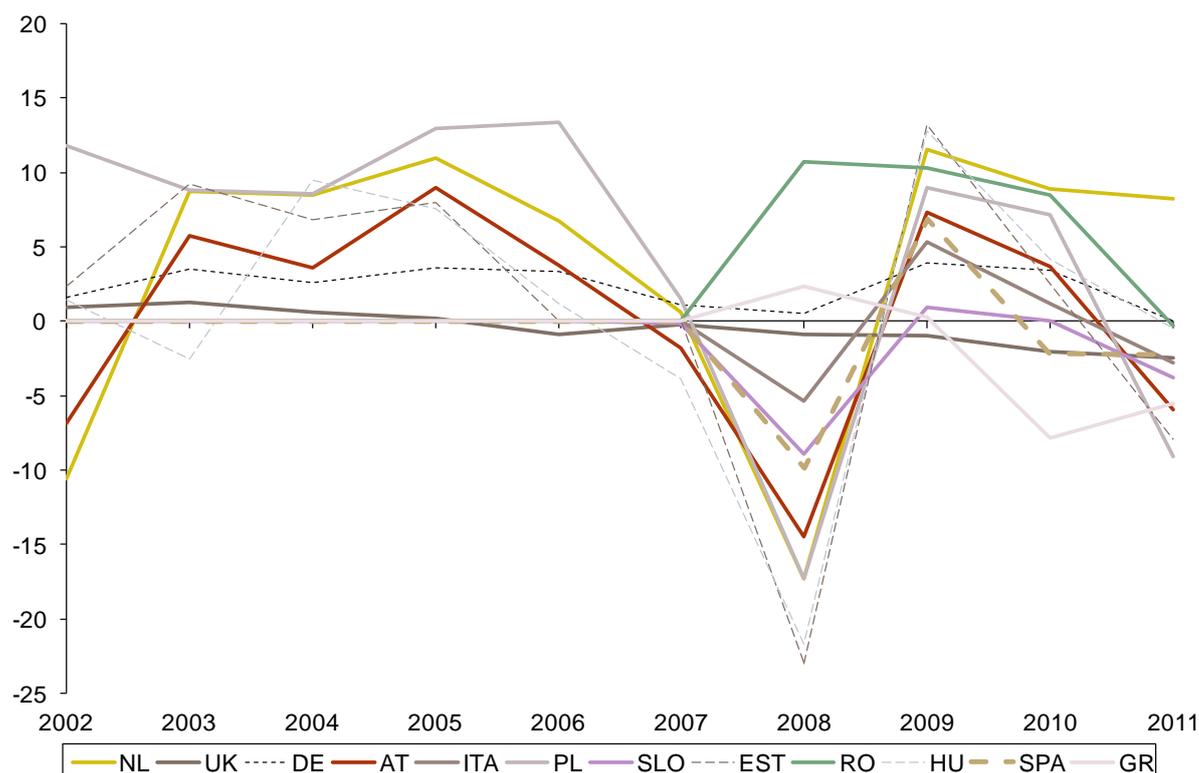
**Figure 4.2 Real cumulative pension fund investment returns versus real total shareholder returns of main stock market indices (2002–11, %)**



Source: Oxera analysis based on OECD data. Datastream data on total shareholder returns for AEX, FTSE100 and DAX indices in each country, end of 2002 to end of 2011.

The recently observed low returns are a recent feature of the overall plan performance due to the financial crisis, as shown more clearly in Figure 4.3. Numerous countries recorded negative real growth at the outset of the current financial crisis in 2008, with temporary recovery in 2009–10.

**Figure 4.3 Tabulation of the observed real average net annual rate of investment returns to pension funds (2002–11, %)**



Note: No breakdown of occupational and personal schemes, data for pension funds only.  
Source: OECD (2012), 'Pensions Market in Focus', Table A9.

Insurance-based products appear to have a similar pattern of performance where data is available, as shown for a selection of products in Table 4.1.

**Table 4.1 Annual net returns for a selection of schemes (%)**

	2007	2008	2009	2010	2011	2012
<b>Occupational products</b>						
Austria: Pensionkasse	n/a	n/a	9.0	6.5	(3.0)	4.3
<b>Personal products</b>						
Germany: Kapital & Rentenversicherung	4.7	3.5	4.2	4.3	4.1	n/a
Sweden: IPS	3.8	(7.2)	11.9	n/a	n/a	n/a

Note: Aggregation of data from individual sources. n/a indicates information which was not available.  
Source: Oxera, based on data from Insurance Sweden, GDV Statistisches Taschenbuch 2012 and Arbeiterkammer (available online at [http://noe.arbeiterkammer.at/bilder/d162/BVK\\_performance\\_2010.pdf](http://noe.arbeiterkammer.at/bilder/d162/BVK_performance_2010.pdf)).

### Long-term equity and bond returns

The recent market performance is not indicative of the overall, long-term performance of the individual investment classes. Although there is no sufficiently long and coherent dataset that would contain returns data on the individual schemes or products, there is long-term data on the returns on equities and bonds. Table 4.2 and Table 4.3 show the known long-term ex post real returns on equity and bonds respectively across Europe over selected 30-year periods, from the results of a regularly updated study.

**Table 4.2 Annualised real equity returns, 1950–2010 (%)**

	1950–80	1960–90	1970–2000	1980–2010
France	5.3	4.9	8.9	8.2
Germany	10.3	4.9	6.9	6.8
Italy	1.9	0.4	2.5	5.5
Netherlands	4.6	5.5	10.5	9.5
Sweden	4.4	7.9	11.5	12.5
UK	6.1	6.6	8.1	8.3

Source: Oxera analysis, based on Dimson, E., Marsh, P. and Staunton, M. (2012), 'Global Investment Returns Yearbook 2012'

**Table 4.3 Annualised real bond returns, 1950–2010 (%)**

	1950–80	1960–90	1970–2000	1980–2010
France	2.1	4.1	6.6	<b>8.5</b>
Germany	2.9	3.1	4.0	5.4
Italy	-0.6	-0.6	2.2	<b>5.8</b>
Netherlands	-2.3	0.6	3.8	6.0
Sweden	-2.2	0.2	3.8	7.0
UK	-2.7	0.4	4.0	7.3

Notes: Figures in bold are the only examples where the return to bonds is higher than the returns to equities (by 0.3% in both cases). Returns to equities are, on average, just under 4% higher across all time periods and countries.

Source: Oxera analysis, based on Dimson, Marsh and Staunton (2012), op. cit.

After taking account of inflation, average annual equity returns over a 30 year period averaged around 6.8% across the selected countries, but the average annual return varied from as low as 0.4% (over the period 1960–90 in Italy) to as high as 12.5% (over the period 1980–2010 in Sweden). Over the same time period, there has been considerable variation between countries, even within the relatively integrated European economy.

The long-term performance of nominal government bonds needs to be considered in terms of the unexpected inflation during the post-war period, in order to evaluate their performance in real terms, as index-linked bonds are a relatively modern phenomenon (Table 4.3). The average annual real bond returns were around 3% per annum, but there has been considerable variation in this rate of return, primarily due to the unexpected inflation of the 1970s (which resulted in negative real bond returns during the period).

At the time of writing, a 25-year index-linked government bond in the UK provided a real yield of 0.13%,<sup>87</sup> while an index-linked ten-year French government bond provided a real yield of 0.6%. It is worth noting that in none of the 30-year periods since the Second World War for the selected countries in Table 4.2 did average real equity returns turn out to be as low as the real bond returns currently implied by current bond yields. If the future distribution of equity returns turns out to be like that in the past (although there are reasons to suspect that equity returns may be lower in the future<sup>88</sup>), this could suggest that the likelihood of bonds outperforming equity over the next 30 years is very low. However, it is possible that current real yields are underestimating actual market expectations of long-term bond returns, given

<sup>87</sup> Source: [www.ft.com](http://www.ft.com) on November 14th 2012.

<sup>88</sup> For a discussion of changing equity returns, see PricewaterhouseCoopers (2012), 'Review of FSA Projection rates'.

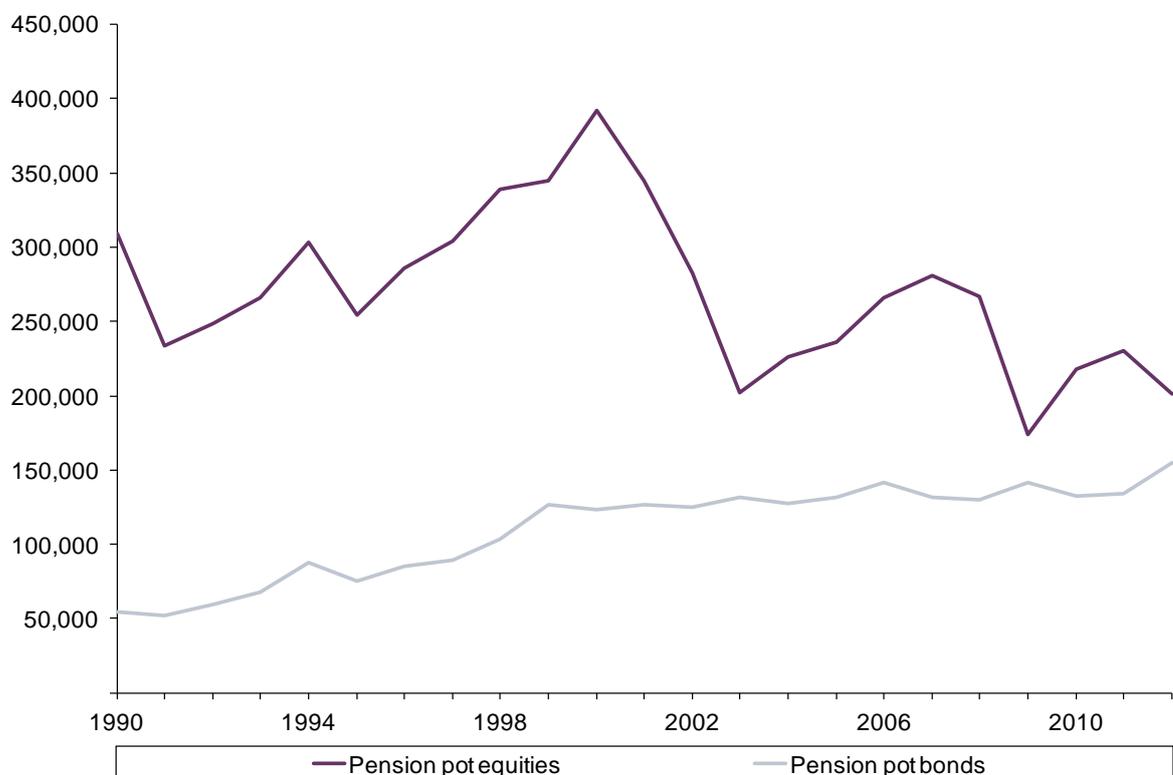
the current climate of heightened risk aversion and as a result of quantitative easing policies by central banks around the world.

### Equity and bond returns over time

An alternative perspective on equity and bond returns can be obtained by considering how cumulative returns over a lifetime of pension savings have varied over time. This provides a consumer perspective on how uncertain pension fund returns can be when assets are invested in equity or bonds (and there are no guarantees on benefits received).

Figure 4.4 presents the results of some illustrative analysis of UK equity and bond returns over a 40-year period, assuming that the consumer contributed £1,000 per year (in real terms) to their pension fund for 40 years. Using data on real equity and bond returns over the period 1950 to 2011—again taken from Dimson, Marsh and Staunton (2012)—the funds grew (or shrank) over time in line with the real asset returns,<sup>89</sup> with the resultant final value of the pension pot reported (in real, inflation-adjusted, terms) in Figure 4.4.

**Figure 4.4 Accumulated pension pot over time: equity versus bonds**



Source: Oxera analysis, based on Dimson, E., Marsh, P. and Staunton, M. (2012), 'Global Investment Returns Yearbook 2012'.

The variation in the final value of the pension pot for equity investments is quite striking. The pension pot based on savings in the 40 years up to the beginning of 2000 would have been worth approximately £392,000, while the pension pot based on savings in the 40 years up to the beginning of 2003 (only three years later) would have been worth around £202,000, not much more than one-half of the value if the person had retired three years earlier. This variation over three years would be due entirely to the variation in equity returns.

The short-term variation in the final value of a pension pot invested entirely in bonds would have been much less, although there have been large changes in real returns over longer periods of time. Real returns on bonds in the 40 years up to 1990 were poor, primarily due to

<sup>89</sup> This simple illustration makes no adjustments for pension fund charges, which would reduce the pension pot.

the poor returns on nominal bonds during the high inflation periods of the 1970s. Bond returns for later periods benefited from the relatively high real returns of nominal bonds in the 1990s.

It is important to note, however, that this analysis finds no occasions where real equity returns over a 40-year period did not outperform real bond returns over the same period. While bond returns were more stable in the short run, they were always lower over the long run.

From the perspective of the consumer, this uncertainty in the value of pension pots (particularly with equity investments) can be exacerbated by uncertainty in annuity rates. DC pension schemes that convert pension savings into an annual income using pension annuities also face uncertainty over the annuity rate, which is affected by bond yields and assumptions about life expectancy. This additional aspect of uncertainty is explored further in sections 4.3 to 4.5 below. The resultant high degree of uncertainty in the final pension income likely to be produced by a DC pension scheme was assessed in a recent study by the Institute for Fiscal Studies, which found that many consumers (relatively close to retirement age) struggled to estimate the income that their DC pension schemes were likely to produce, and, when they did have a view, they tended to be somewhat optimistic.<sup>90</sup>

### **Forward-looking perspectives on equity and bond returns**

Financial analysts use a combination of forward-looking indicators of investor expectations as well as historical data in an attempt to estimate likely returns from securities in the future. For example, a recent study concluded that average real equity returns in the UK and Continental Europe are likely to be within 4–5.5% over the next 10 to 15 years, while real returns on government bonds and on corporate bonds are expected to lie within a 0.5–1% and 1.5–3% range, respectively.<sup>91</sup> These estimates suggest that real bond returns over an even longer period of time (eg, 30 years) are likely to be substantially higher than currently implied by bond prices, but they also indicate two notable trends compared with past performance:

- real equity returns are expected to be lower in future than they have been over the past 60 years;
- real bond yields are also expected to be lower in future than they have been in the past, although they are expected to rise somewhat from current low levels.

The absence of granular datasets for pension funds in each country or the relatively young age of the pension systems where the data is abundant prevents a more detailed conclusion on long-term portfolio returns at country level from being drawn. However, there is some information on the returns achieved at product level within Spain and Germany, which are discussed below as case studies.<sup>92</sup>

### **Case study: pension returns in Spain**

Table 4.4 below shows average annual returns by product in Spain.

<sup>90</sup> See Institute for Fiscal Studies (2012), 'Expectations and experience of retirement in Defined Contribution pensions: a study of older people in England'. The study found that 28% of people aged 52 or over and on a DB pension scheme struggle to estimate, even within a range, how much income they should receive from that pension. That percentage goes up to 37% for those with DC pensions. Furthermore, half of DB (DC) scheme members who started drawing their pension income received an income that was between 75% (44%) and 111% (113%) of their previously expected level.

<sup>91</sup> PricewaterhouseCoopers (2012), 'Review of FSA Projection rates'.

<sup>92</sup> Additional data has been gathered for Poland, Sweden and Slovakia, but has not been presented here.

**Table 4.4 Average annual returns tabulation for a range of Spanish pension products (% , 2012)**

Product	Contract duration (years)						
	22	20	15	10	5	3	1
<b>Occupational plans</b>							
Fondos de pensiones (pension funds)	5.5	5.8	3.7	2.7	1.0	5.7	2.5
<b>Personal plans</b>							
Planes asociados (associated plans)	6.4	5.8	3.7	2.7	0.3	4.7	0.2
Funds—Renta fija corto (short bonds)	4.8	4.0	2.0	1.5	1.5	1.2	2.0
Funds—Renta fija largo (long bonds)	5.0	4.3	2.6	1.8	1.8	1.9	2.8
Funds—Renta fija mixta (mixed bonds)	4.9	4.1	2.0	1.0	(0.6)	2.6	(0.8)
Funds—Renta var. mixta (mixed equity)	5.4	4.8	3.5	0.6	(3.3)	5.7	(5.3)
Funds—Renta variable (equity)	2.4	1.5	3.2	(1.0)	(5.6)	10.9	(8.8)
Funds—Garantizados (with guarantees)	–	–	5.0	3.0	0.1	0.6	2.3
<b>Total weighted average</b>	<b>4.9</b>	<b>4.7</b>	<b>2.8</b>	<b>1.8</b>	<b>0.1</b>	<b>4.0</b>	<b>1.0</b>
Ibex 35 index	n/a	7.1	1.9	4.2	(10.1)	(9.5)	(1.8)
Spanish Dow Jones index	n/a	6.2	1.0	2.8	(11.9)	(11.5)	(2.0)

Note: Calculated as an average cumulative real rate of return over a specific period. Index returns calculated as cumulative annual average growth rates and normalised with CPI inflation data. Two indices shown (Ibex 35 and Spanish Dow Jones index) as the latter covers a broader range of companies.

Source: DGSFP data (2012) and Oxera analysis based on Datastream and OECD data.

Table 4.4 shows that, on the whole, the fund-based pension schemes in Spain achieved positive levels of average annual returns. Pure equity and mixed bond/equity funds have noted the worst returns in the short term, also affecting the longer-term averages. This shows the impact of the current financial crisis on the short-term investment performance (notably negative for equity funds), but also the ‘averaging out’ of weak performances over time.

Interestingly, among the personal products, a saver with a bond-oriented portfolio would not have suffered from a significantly worse performance than one with an equity-oriented one, despite the long-term return data shown in Table 4.2 above. This is likely to be driven by the significant impacts of the financial crisis. Indeed, the relatively good performance of bonds over the most recent periods is often seen as a key driver of savers switching to a more bond-oriented portfolios (as is discussed in more detail in section 5.6).

#### **Case study: pension returns in Germany**

Data on the real returns of German pension products, for the pre-financial crisis period, provides useful comparison of long-term returns that have been achieved in the past, as summarised in Table 4.5. These returns have averaged at around 4% per annum in real terms.

**Table 4.5 Average annual real returns tabulation for a range of German pension products (% , 2007)**

Duration (years)	Riester	Rürup	Direct insurance, Pensionfonds, Pensionskasse		Unsubsidised pensions
			With social security	Without social security	
3	–	8.8	–	–	2.1
4	–	7.8	–	–	2.5
5	8.6	7.1	5.4	8.5	2.8
10	6.4	5.5	3.6	6.4	3.3
15	5.6	5.0	3.5	5.6	3.6
20	5.2	4.7	3.5	5.2	3.7
25	4.9	4.6	3.6	4.9	3.7
30	4.7	4.4	3.6	4.7	3.8
35	4.6	4.3	3.7	4.6	3.8
40	4.5	4.3	3.7	4.5	3.9

Note: Average real returns tabulated for contracts with a particular duration in 2007.

Source: Stiftung Warentest (2007), available online at <http://www.test.de/Staatlich-gefoerderte-Altersvorsorge-Rie-Rue-Rente-1493700-1502911/>, accessed November 11th 2012.

### 4.3 Pension risk

For a long-term savings product, the exposure and management of risk are of vital importance to consumers, and differ markedly between pension products, with past performance providing only limited information about the future. For these reasons, any analysis of private pension products from the consumer perspective needs to consider risk.

There are many potential risks in the pension system. All pension savings are invested in some form of asset, and these have different and varying average rates of return, including the possibility of default (and therefore losing a significant portion of their value). The provider of the pension fund may itself default, leading to possible losses for consumers. The pension benefits received upon retirement are also uncertain, as they may depend on the way in which the benefits are calculated, and in some cases the life expectancy of the beneficiary.

The risks facing a consumer with a ‘pure’ DC scheme tend to differ from those with a ‘pure’ DB scheme, albeit recognising that many schemes contain elements of both types. One major risk factor common to all types of private pension scheme, however, is contribution risk: the risk that there are insufficient savings for the future, from either the consumer or their employer.

This section considers the risk that surrounds the level of income that the consumer will receive from a given level of contributions during their working life, compared with what can reasonably be expected on average. The risk that the consumer fails to contribute enough into their pension (taking into account the contributions from the employer) is considered in section 5 in terms of consumer behaviour. A wider assessment of whether the consumer will have sufficient income in retirement would require an analysis of the future prospects for pillar 1 pensions, which remain the core element of retirement income in many countries, which is outside of the scope of this study.

Given this context, the risk factors that are distinct for DC schemes include<sup>93</sup>:

- return on investment funds—these vary considerably in relation to both the average expected return and the variability of that return (risk) according to the asset class, which includes equity, bonds, property and other investment vehicles;
- investment fund selection, as the returns of different funds can differ significantly from the average return of the asset class as a result of both the level of charges and the idiosyncratic returns of the specific securities held;
- annuity rate (in the payout phase), which varies according to changes in bond yields and projected life expectancies.

Consumers with DB schemes face different risks, as, in the first instance, the investment and annuity risks are borne by the pension scheme (and its sponsoring company). The risks to the consumer concern how the pension benefits are calculated and the risk of the scheme failing to deliver what it has promised, and therefore include:

- wage path and job tenure, which can affect the level of defined benefits received upon retirement—particularly for final-salary DB schemes, which have become less common in recent years;<sup>94</sup>
- scheme default, typically owing to unfunded pension liabilities combined with the default of the sponsoring organisation (eg, the employer). More broadly, the consumer faces legal risk from not having a direct contract with the holder of the pension assets (the pension fund), as they do have with contract-based DC schemes;<sup>95</sup>
- changes in defined benefits or required contributions, which were not expected by consumers when they joined the scheme. This risk essentially passes some of the investment and annuity risk from the scheme on to the consumer, which means that the scheme is not a pure DB scheme, but it is included here owing to its importance in the current climate.

Previous analysis by Oxera has shown that when DC and final-salary DB schemes are compared in terms of the advantages and disadvantages they offer to employees when the total contributions to the pension fund are the same, the superiority of one scheme or the other as a saving vehicle for retirement is not clear-cut when the impact of all these risks is taken into account.<sup>96</sup> However, final-salary DB schemes have become much less common and now none of the ‘most prominent’ schemes typically offers final salary-type benefits to current members, which in turn makes the analysis of wage path and job tenure risks less relevant.

In light of the above considerations, the focus of the remainder of this section will be the risk assessment of the most prominent DC schemes (sections 4.4 and 4.5). The risk of DB scheme default or changes in defined benefits is considered in section 4.6. Section 4.7 then brings this analysis together to provide a comparison of risk magnitudes across schemes of the same type, as well as insights for potential alternative schemes, reflecting on the importance of other risks not included in the analysis—most notably, that the consumer does not make sufficient contributions to the scheme.

#### **4.3.1 An initial methodology for assessing pension risks**

While the range of risk factors is well known in the pensions debate, what are less clear are the relative magnitudes of different risk factors for different pension schemes. To assess these magnitudes, it is necessary to produce a quantitative measure of the extent of risk

<sup>93</sup> For contract based DC schemes there is also a risk that the provider (usually an insurance company) will default. This risk is not covered in this analysis as it is generally subject to specific insurance industry regulation.

<sup>94</sup> For further details of the risks associated with final-salary DB schemes, see Oxera (2008), ‘Defined-contribution pension schemes: risks and advantages for occupational retirement provision’, a report for EFAMA, January.

<sup>95</sup> This legal risk also exists for trust-based DC pension schemes.

<sup>96</sup> For further detail, see Oxera (2008), ‘Defined-contribution pension schemes: risks and advantages for occupational retirement provision’, a report for EFAMA, January, and the literature referenced in the report.

facing consumers that allows for direct comparison of different types of risk for different types of pension system. This type of analysis faces significant challenges and there is no commonly agreed approach, leaving considerable debate about the possible levels of risk. Keeping this important caveat in mind, this section presents some ideas for a methodology for making this assessment of pension risk.<sup>97</sup>

A main challenge for a consumer in assessing risk is the relationship between risk and reward. Historically over long periods of time, equity investments, while subject to considerable risk (ie, volatility of returns), have tended to outperform safer government bonds. A consumer choosing to invest in a pension would need to weigh up the increased variability of the outcome of equity against the higher average returns, as the probability of equity underperforming government bonds over a 40-year period may be rather low (as noted in section 4.2). As data in Table 4.2 above showed, there have been no examples of major European national equity indices producing negative real returns over a 30-year period in the post-War period, while the current long-term real bond yields in core European countries and the UK are close to zero.<sup>98</sup> In addition, as set out in tables 4.2 and 4.3, there are only two countries in one time period where bonds have marginally outperformed equities, while on average equities have outperformed bonds by just less than 4% per annum. If historical data can be relied upon, this would suggest that equity is unlikely to underperform government debt over a 30-year period, even given the riskiness of equity. It is important to remember, however, that, as discussed in section 4.2 and portrayed in Figure 4.4, equities are likely to increase the pension risk to which consumers of DC schemes are exposed, compared with bonds.

While this relationship between risk and reward is very important for the consumer, it is still important to understand how different risks can affect the final outcome for the consumer saving into a pension pot over a long period of time. For that reason, this report assesses some of the main forms of risk that consumers face, in order to provide an initial judgement on the relative importance of different types of risk. This assessment is then applied to the prominent pension products in the cases where sufficient data exists to do so, to provide an assessment of the relative riskiness of different systems. This approach, albeit necessarily complex, can help to provide the information required to assess:

- the importance of different risk factors relative to one another;
- the risk grade of different prominent pension systems relative to one another;
- the potential riskiness of different possible pension models, which may not currently exist (such as schemes that share risk between employer and employee).

The analysis is split between risks associated with DC schemes (sections 4.4 and 4.5) and those associated with DB schemes (Section 4.6), as described above. Section 4.7 then brings this together to provide a comparison of risk magnitudes across schemes and for potential alternative schemes, reflecting on the importance of other risks not included in the analysis—most notably, that the consumer does not make sufficient contributions to the scheme.

## 4.4 Assessment of key risks for DC schemes

To assess the relative magnitude of different risks, from the consumer perspective, this study considered another simple thought experiment, in which an employee saved an extra €100 into their private pension scheme, 30 years before their retirement date. The thought experiment assumes that the employee is well-informed and has used readily available financial information (as described below) to predict their likely increase in retirement pension

<sup>97</sup> Other studies have also considered relative risk factors. For example, De Nederlandsche Bank (2006), 'The Sustainability of the Dutch pension system'. This analysis is applied to the Dutch pension system, however, and not across European countries.

<sup>98</sup> The lowest average real return from equity in the data in Table 4.2 was for a 0.4% per annum increase in Italian equity between 1960 and 1990.

(in real terms) due to the extra €100 of pension savings 30 years before retiring. Consistent with previous analyses in this report, taxes and charges are abstracted away. In order to understand this risk, the thought experiment then considers, in a realistic downside scenario, how much of an impact each selected risk factor could have on that expected increase in retirement income.

The realistic downside scenario for equity investment returns over the next 30 years could be described (as it is below) as a one-in-20 poor outcome, meaning that the chance of an even worse outcome occurring over the next 30 years is only thought to be approximately 5%. This level is chosen as it represents a significant downside outcome, but remains relatively likely.<sup>99</sup> The impact of this downside scenario on equity returns and hence pension income (for a relevant DC scheme) can then be compared to what the consumer would have expected on the basis of the central case for equity returns.

This type of scenario analysis is difficult as the probability distribution for the risk factors over such a long period of time involves considerable guesswork and data is not readily available. Consequently, this analysis could only be performed for a subset of risk factors in this study, as described below. However, even this limited analysis provides a basis for evaluating the relative risk grading of different dominant pension systems in selected EU Member States.

The discussion below goes through each identified risk factor and describes where an assessment of the relative magnitude of risk has been possible. Section 4.5 then looks at the relative risk grade of different pension systems based on this analysis. The analysis is restricted to a number of prominent, employer-arranged pension plans, owing to data limitations. This is unlikely to weaken the generality of the conclusions reached, however, given that, in terms of their risk, pension plans mainly differ from each other for the amount of their exposure to investment risk, and the panel of schemes considered is quite diverse in that respect. The conclusions on the relative importance of different risk factors are likely to extend to personal pension plans as well.

#### **4.4.1 Contributions**

As noted earlier, uncertainty over future contributions to a pension scheme, both from the consumer and the employer, is one of the most important determinants of final pension income. However, in the context of this analysis, these contributions are to some extent under the consumer's control.<sup>100</sup> Furthermore, the thought experiment of €100 pension savings assumes that the contribution is one-off and certain. For these reasons, contributions are not included in this analysis, but their importance to final outcomes is clear.

#### **4.4.2 Return on investment funds**

For DC schemes, the return on investment funds is a vital risk factor for consumers. Owing to the long-term nature of pension savings, these savings are often invested into equity, which is subject to significant variations in rates of return, even over a 30-year period, as shown in Table 4.2 above.

Consumers may deal with the risk to equity return by including safer assets, such as government bonds, in their investment portfolios. While such strategy is likely to reduce the risk that the overall return on their contributions to the funds will be lower than anticipated, it also reduces expected future returns, as noted before.

<sup>99</sup> It is possible to consider more severe downside scenarios, but, for the purposes of assessing future risk, there is precedent for looking at downside scenarios in this probability range. For example, in the past the FSA in the UK has required banks to look at the '1-in-25-year' downside scenario for the UK economy.

<sup>100</sup> The consumer as an employee may have some degree of influence over the contributions they receive from their employer, as a part of the wage negotiation. The consumer does not, however, have much direct influence over the impact of government decisions on contributions. Governments can affect contributions by changing tax allowances and, in some eastern European systems, may be able to force contributions into state tax receipts rather than private pension schemes.

The risk assessment exercise assumes that a DC pension scheme member invests in a diversified portfolio of European equities and bonds. Section 4.3 reported a recent study which forecasts equity and bond returns over the next 10 to 15 years. However, those estimates may underestimate the future returns over the much longer period (30 years) considered here, as shorter-term forecasts are more negatively affected by the current slow economic recovery. The same study also reported the 2007, pre-financial crisis medium-term forecasts for the same asset returns. The lower ends of those 2007 forecasts seem more likely estimates for future returns on bonds and equities over the next 30 years. Drawing on those estimates, it is assumed that European bonds and equities would return 1.75% and 4.75% in annualised, real terms, respectively.

Furthermore, it is assumed that in a 1-in-20, adverse scenario, real equity returns could fall to 1.8%, which is consistent with a statistical analysis of the variation of the historical equity returns presented in Table 4.2 above.<sup>101</sup> This downside scenario is based on the relatively benign experience of post-War Europe, and there may be reasons to expect lower equity returns in the future, but, for the purposes of this thought experiment, this estimate is used as the downside scenario over a 30-year period.

For real bond returns, the thought experiment simply assumes no risk, and therefore real bond returns remain unchanged at 1.75%, even under a downside scenario.<sup>102</sup> The no-risk assumption for bonds is based on the assumption that the pension fund invests in index-linked bonds (removing inflation risk) for the long investment horizon (which, in turn, filters out possible shorter-term fluctuations).

In more detailed future analysis, this no-risk assumption for bonds could be flexed. In particular, this assumption is reasonable only for index-linked bonds for a country facing no sovereign risk threat. In the current climate, many EU Member States are facing problems with financing the public sector and government bonds are not seen to be riskless. Private pension systems have already been affected by these developments, most notably in Greece (the impact of debt restructuring) and Hungary (nationalisation of the private pension schemes). However, this level of risk in government bonds is difficult to judge and the illustration considered here focuses purely on equity risk.

While consumers can reduce their contributions' exposure to investment risk by carefully choosing their investment portfolio, a number of pension schemes, such as Germany's Pensionkassen, provide some protection against that risk by offering guaranteed minimum returns on invested funds. However, the guaranteed level of returns is generally quite low, as they often only protect the invested capital, and, in practice, none of those schemes reduces the risk posed by the adverse scenario considered here.

The results of this analysis are presented in section 4.5, after setting out the methodology for the other risk factors.

#### **4.4.3 Investment fund selection**

The analysis in section 4.2 considered the volatility of returns from the broadest national equity market indices, including all types of firm. Investment funds exist that target specific types of company and can therefore expose the investor to a great degree of risk (ie, volatility of returns). In some countries, pension funds can allow savers to choose specific funds in which to have their pension savings invested, and therefore there can be an additional risk associated with investment fund selection.

<sup>101</sup> This has been calculated from the distribution of results in Table 4.2. Assuming that these results are normally distributed (a typical assumption in statistical analysis), statistical analysis suggests that the chance of a result being more than 1.645 times the standard deviation from the median is approximately 5%—consistent with the 1-in-20-year downside scenario. The standard deviation is 3.0%, the median is 6.7% and the outcome of this calculation is therefore 1.8%.

<sup>102</sup> It should be noted that currently (November 2012), the real return on indexed linked government bonds is considerably lower than this. See figure 4.4.

This risk factor has not been included in the analysis, however, for two reasons. First, the selection of specific investment funds (which create additional risk) is typically limited by regulation and not common practice among pension holders. Some choice of investment fund is allowed in the UK, for instance, but most DC pension fund members tend to keep their savings in broad funds.<sup>103</sup> Second, data is not readily available on the long-term performance and volatility of specific types of fund.

The analysis here does require assumptions about the relative weight of risky assets relative to risk-free assets, however.

An investment fund's overall return depends to a large extent on the relative shares of the different assets in the fund. Indeed, in some countries (eg, Germany) legal restrictions limit how much exposure to riskier assets, such as equities, consumers can take. Ideally, the thought experiment would use allocation data on the exact assets in which scheme members invest during the earlier stages of their work life, in order to assess the impact of investment. This information is not currently available, and it has been necessary to draw conclusions from the existing data on total portfolio allocations.

The thought experiment, therefore, uses stylised investment portfolios based on data on current asset allocations for those schemes (see Figure 2.13).<sup>104</sup> The experiment would underestimate the true investment risk (volatility) and the average return, to the extent that scheme members invest relatively more in riskier assets in early stages of their work life than closer to retirement. Nonetheless, current asset allocations are believed to be a useful proxy of the relative differences among prominent schemes in terms of their exposure investment risk. The detailed data in Figure 2.13 was used to construct stylised 'equities' and 'bonds'-only portfolios for each dominant scheme, where the 'bonds' component captures the share of relatively safer assets (eg, deposits, government and corporate bonds) in pension schemes' portfolios, and the 'equities' component the remaining, riskier assets in which employees can invest. These stylised portfolios are presented in Table 4.6.

**Table 4.6 Stylised investment portfolios for most prominent schemes in selected European countries (%)**

	Bonds	Equities
Sweden	62	38
UK	49	51
Germany	67	33
Italy	77	23
Poland	67	33
Slovakia	87	13
Spain	80	20

Note: As at January 2012, 64% of the assets of Slovakian private pensions were invested in 'growth' funds, which would normally indicate a focus on riskier equity investments. Since 2009, pension funds have reportedly stopped investing in shares ('Pensions, Health-care and long term care', Annual National report 2012—Slovakia). However, since April 2012, equity funds in Slovakia have to invest at least 20% of their assets into riskier assets, such as shares. As data since that change is not available, Slovakia's equity share was computed assuming that 64% of savers invest 20% in their portfolio in shares and the remaining are invested in bonds.

Source: Illustrative assumptions based on the data underlying Figure 2.14.

<sup>103</sup> For an assessment of the use of default funds, see Oxera (2008), 'Defined-Contribution Pension Schemes: Risks and Advantages for Occupational Retirement Provision', a report for EFAMA, January.

<sup>104</sup> The only exception is Slovakia, for which legal restrictions were taken into account. See note to Table 4.6.

#### 4.4.4 Annuity rate—bond yield

At the point of retirement, DC pension holders may use the accumulated pension pot to purchase a lifetime annuity, which will provide a guaranteed income for the rest of their lives. The use of pension annuities varies by country, with the most-developed markets existing in the Netherlands, UK and Germany at this time. However, annuities are expected to become more common in other markets as the DC pension schemes mature.

The size of the pension paid by an annuity depends on the annuity rate, typically calculated as the annual pension income over the value of the pension annuity. This in turn depends on:

- charges for providing the annuity;
- the prevailing bond yield (as the insurance company will typically invest the sum in a low risk asset);
- projected longevity (as the indicator of the likely lifespan of the beneficiary).

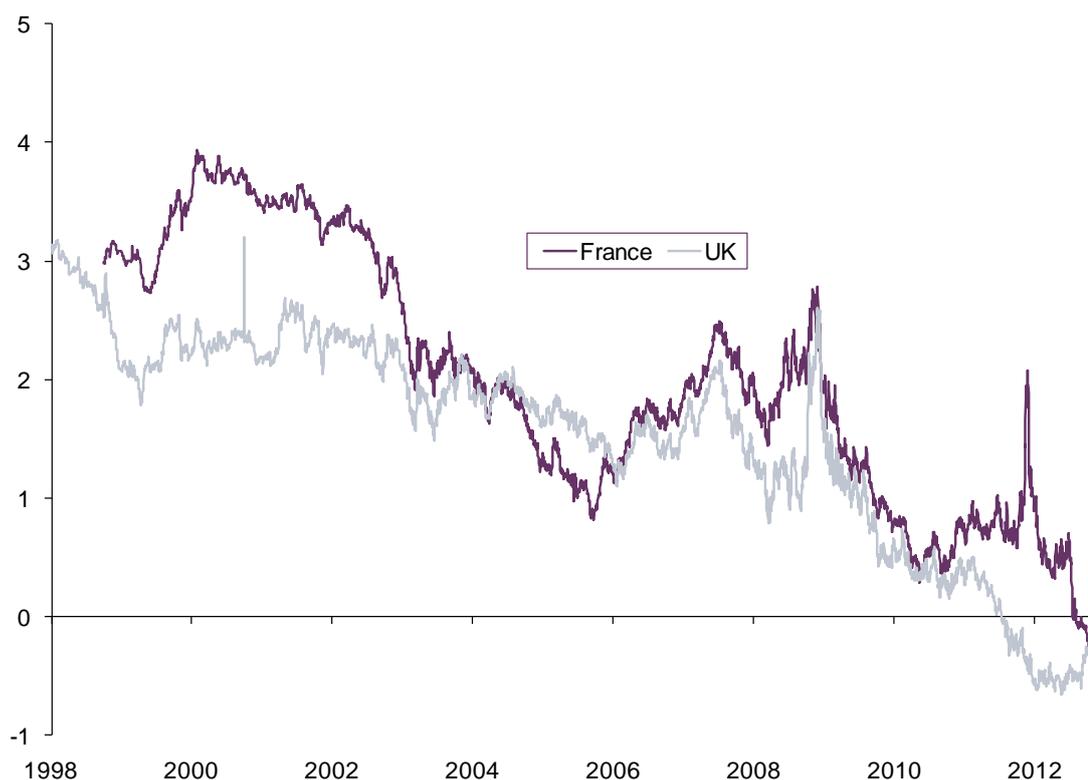
This sub-section examines the risk surrounding the bond yield at the time of retirement. Section 4.4.5 examines the risk that arises from the uncertainty of future longevity for annual retirement income.

Historical data on index-linked government bond yields was used to compute consumers' expectations for bond yields in 30 years' time. Figure 4.5 shows historical yields on index-linked UK and French government bonds since 1998. The 1998–2007 average yield on index-linked UK (2%) and French (2.5%) bonds was used as the consumers' baseline forecasts for the UK and the rest of Europe, respectively.<sup>105</sup>

The downside scenario considered is one of lower-than-expected bond yields, since, in that case, the level of pension income that a scheme member would be able to receive by purchasing annuities would be lower than previously anticipated. The average yields observed since 2008 are assumed as the downside case level in this report. While the lack of long time series for real yields makes it difficult to assign a precise probability to such an adverse scenario, real long-term bond yields have reached very low levels several times in the previous century—notably during periods of high inflation, such as in the 1970s. A judgement has been taken here that the drop of yields to the average level observed since 2008 is a suitable assumption for an event that could happen with approximately a 1-in-20 probability.

<sup>105</sup> Data over a sufficiently long period of time for comparable index-linked bond yields was available only from France and the UK, which is why these two countries data has been used.

**Figure 4.5 Yields on index-linked UK and French government bonds (1998–12, %)**



Source: Oxera analysis, based on Datastream.

#### 4.4.5 Annuity rate—longevity

The annuity rate available at retirement is also affected by projected longevity. As with bond yields, the informed consumer could have an expectation of likely longevity at the time of their retirement, perhaps based on actuarial projections in existence at the time of their investment into the pension fund, but these projections can turn out to be wrong. Indeed, projections for future life expectancy in the UK made in the 1970s and 1980s considerably underpredicted the increases in life expectancy that actually occurred over the subsequent 30 or so years (see Figure 4.6).

Two sources of data were available for considering uncertainty of future life expectancy: data produced by Statistics Netherlands, as reported by the Dutch central bank,<sup>106</sup> and data on life expectancy projections for the UK, provided by the Office for National Statistics (ONS).

The Statistics Netherlands data estimated the probability range for the life expectancy (from birth) of men for projected mortality rates in 2050. This forecast suggests that mortality rates in 2050 would produce a median life expectancy from birth of 80 years, but with a standard deviation for the estimate of approximately 4 years. Based on standard statistical assumptions, this would suggest that the 1-in-20 scenario would see life expectancy turning out to be approximately 7 years longer than expected. However, life expectancy at birth (and the risk surrounding it) is related only to the residual life expectancy at retirement, which is what influences annuity rates, and therefore such information can be used only as a reference point.

For the UK, a similar estimate of the uncertainty of longevity is based on the unexpected increase in life expectancy in recent years. The ONS's 2010 forecasts for mortality rates imply that a 35-year-old male today is likely to live approximately 25 more years once he turns 65. However, based on past overestimations of mortality rates, the residual life of the

<sup>106</sup> See De Nederlandsche Bank (2006), 'The Sustainability of the Dutch pension system', p. 15.

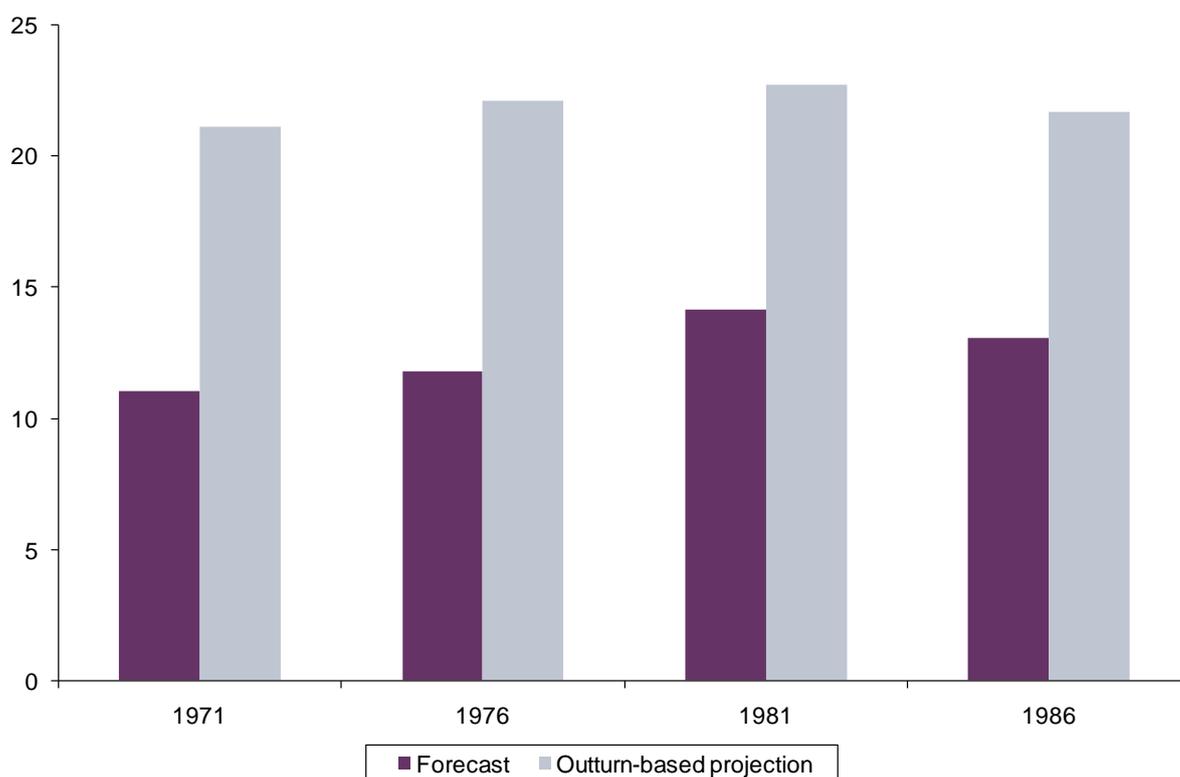
same male once aged 65 could turn out to be 32 years. This suggests that the unexpected increase in longevity was 7 years, which matches the estimates from the Netherlands.

It is not possible to associate a precise probability to such a scenario, given the limited observations available. However, a recent study estimated that there is a 5% probability that the central expectation for residual life at age 65 in 2056 (for males in England and Wales) could turn out to be around another four years.<sup>107</sup> Another study, which uses a similar, but larger database and extends the model used in the previous study, forecast that there is a 5% probability that the residual life at age 60 in 2056 will be more than nine years longer.<sup>108</sup>

Based on this data, the assumption for the 'downside' scenario for residual life expectancy at retirement for males is an increase of approximately seven years with a probability of 5%, in line with the UK data (but also supported by the Netherlands data). An analogue analysis, which reached consistent conclusions, was carried out for female workers.

In relation to the soundness of that simplifying assumption, it is worth noting that, although life expectancy may vary across European countries, it is not obvious that the uncertainty surrounding them, which is the focus of the analysis in this report, should also differ significantly. Indeed, the data for the UK and the Netherlands suggests that this is not the case.

**Figure 4.6 Expected residual life expectancy of a 35-year old male when aged 65—UK forecasts versus outturn-based projections (years)**



Note: Owing to the limited horizon of the ONS forecast, the forecasts in the table are estimated by extrapolating the exponential trend observed in the ONS forecast for mortality rates. The outturn-based projections are based on observed mortality rates for years before 2010 and on the 2010 ONS forecasts for mortality rates for subsequent years.

Source: ONS and Oxera analysis.

<sup>107</sup> Dowd, K., Blake, D., and Cairns, A.J.G. (2010), 'Facing up to uncertain life expectancy: The longevity fan charts', *Demography*, 47:1, pp. 67–78.

<sup>108</sup> Sweeting, P.J. (2011), 'A trend-change extension of the Cairns-Blake-Dowd model', *Annals of Actuarial Science*, 5:2, pp. 143–62.

## 4.5 Relative risk of selected prominent defined-contribution schemes

The estimates for the three sources of risk analysed in the previous section are summarised in Table 4.7. The downside scenario estimates are used to assess the potential loss in income that the crystallisation of any of those risks could generate. It is important to recall that each downside scenario has been estimated to have approximately a 5% probability to materialise, so the losses in income from different risks should be broadly comparable with each other. This allows both cross- and within-country comparison of DC schemes' exposures to those risks. The simple methodology to carry out the risk assessment is presented below.

**Table 4.7 Key parameters for risk assessment (% , years)**

	Investment return risk		Annuity rate: bond yield risk		Annuity rate: longevity risk	
	EU real equity return (%)	EU real bond return (%)	UK real bond yield (%)	Non-UK real bond yield (%)	Residual life expectancy at age 65: males (years)	Residual life expectancy at age 65: females (years)
<b>Baseline scenario</b>	4.75	1.75	2	2.5	24.8	27.3
<b>Downside scenario</b>	1.8	1.75	0.5	1	32.5	35.4

Source: Datastream, Dimson, Marsh, and Staunton (2010), ONS and Oxera analysis.

These parameters, together with the assumed investment portfolios shown in Table 4.6 above, are used to compute the annual pension income (in real terms) that a 35-year-old could expect to receive after retiring at age 65 if they made a one-off €100 contribution to their pension pot today.

First, the annualised returns on the invested €100 are computed and reported in Table 4.8. The relatively high share of equity in the UK portfolio implies higher expected returns than the other countries. The opposite holds for Germany and Spain, for example, given the assumed greater importance of bonds. Consequently, a UK consumer is exposed to a much larger fall in income, were the downside investment risk to crystallise. The downside scenario real returns are very similar for all countries, due to the downside scenario for equity returns being close to identical to the assumed real bond return. While many German pension schemes have a minimum real return floor, this floor is currently at 1.75%, which is not high enough to protect consumers against the downside scenario considered in this study.<sup>109</sup>

<sup>109</sup> The guaranteed minimum return (Garantiezin) is determined by the Ministry of Finance. It started in 2004 with 2.75% and was decreased from 2.25% in 2011 and to 1.75% in 2012, reflecting declining asset returns. This minimum interest rate is applicable to the Direktversicherungen, Pensionskassen, Pensionsfonds, life insurance products and Rentenversicherungen. There will be a cost to providing this minimum return guarantee, which is presumably reflected in the reduced upside potential for 'surpluses' from the schemes. This cost is not, however, captured in this downside scenario analysis.

**Table 4.8 Annual real returns on stylised investment portfolios for dominant schemes in selected European countries (%)**

	Baseline scenario	Downside scenario
Sweden	2.88	1.76
UK	3.27	1.76
Germany	2.74	1.76
Italy	2.43	1.75
Poland	2.73	1.76
Slovakia	2.13	1.75
Spain	2.35	1.75

Source: Oxera simulation analysis.

Under the hypothetical scheme, the 35-year-old is assumed to retire at age 65. This implies that the €100 in contributions are invested for 30 years. Using the returns in Table 4.8, the pension pot at retirement  $P$  can therefore be estimated, under the baseline and downside scenario, using the following equation:

$$\text{Accumulated pension pot at retirement: } P = \text{€}100 (1 + r)^{30}$$

where  $r$  is the annual return on investment portfolio. The amount of annual pension income (in real terms) that the pension pot guarantees via the purchase of a lifetime annuity is then estimated using the following two equations

$$\text{Value of annuity paying €100 a year: } p = \text{€}100 \sum_{i=1}^T \frac{s_i}{(1 + R)^i}, s_i = \prod_{j=1}^i (1 - d_{j,j-1})$$

$$\text{Annual pension income} = \text{€}100 \frac{P}{p}$$

where  $P$  is the value of the accumulated pension pot at retirement,  $R$  is the expected real bond yield (in 30 years' time) and  $d_{j,j-1}$  is the mortality rate within 1 year for an employee who is 35 years old today, projected forward  $j-1$  years after their retirement. For each scheme and scenario, all variables in the three equations above are estimated from the correspondent parameters in Tables 4.7 and 4.8.

Table 4.9 below shows the results of the risk assessment exercise. The three columns present the percentage difference between pension income in the downside scenario and the base-case scenario. So, for example, based on the assumptions used, the downside scenario for equity returns would reduce the pension income from the Swedish scheme by 28% compared with the base case scenario.

**Table 4.9 Falls in annual pension income under downside scenarios (%)**

	Income loss due to investment (equity) risk (%)	Income loss due to bond yield risk (%)	Income loss due to longevity risk (%)
Sweden	-28	-18	-16
UK	-36	-20	-17
Germany	-25	-18	-16
Italy	-18	-18	-16
Poland	-25	-18	-16
Slovakia	-11	-18	-16
Spain	-16	-18	-16

Source: Oxera simulation analysis.

Investment risk is the largest single threat to pension income in countries, namely the UK, Sweden, Germany and Poland, where scheme members are estimated to invest larger shares of their portfolios in riskier assets; whereas, in Italy and Spain, investment risk is on a par with annuity risk. In Slovakia investment risk is relatively small, but still significant, reflecting the estimated large allocation of funds into bonds.

Annuity risk, in terms of both bond yields being lower and life expectancy being longer than expected (at retirement), also poses a sizeable threat to pension income for all schemes. The combination of an unexpected fall in real bond yields combined with an unexpected increase in longevity, consistent with the experience in recent years, has an impact on DC pension income that is at least as great as what might be expected from a downside scenario for equity returns.

It is worth noting that the analysis in this report treats all sources of risk as independent, for the sake of simplicity rather than because those risks are necessarily unrelated. For example, the recent financial crisis has shown that equity prices can indeed significantly underperform over a prolonged period, while bond yields fall to very low levels. However, the assumption of independence between bond yield risk and longevity risk seems reasonable, at least at face value. This assumption implies that the probability of a joint downside scenario for bond yields and longevity is only 0.25%. Further data and analysis would be needed to confirm the likelihood of such an adverse scenario.

The implications of these findings for the relative riskiness of different types of pension scheme is discussed further in section 4.7 below.

## 4.6 Assessment of key risks for DB schemes

In theory, assuming that the pension scheme is able to honour its commitments in terms of benefits paid, a pure DB pension scheme should not place any of the above DC pension scheme risks on the consumer. All of these risks should be met by the scheme itself and, hence, in the case of most employer-arranged DB schemes, on the sponsoring company. However, the recent experience of DB pension schemes suggests that this assumption may not be valid. For example:

- in the UK, a significant number of schemes have been taken over by the Pension Protection Fund because the sponsoring company is unable to ensure that the pension liabilities will be met (usually owing to insolvency) and this has resulted in benefits being cut by 10% (see section 4.6.1);

- in the Netherlands, the relevant authorities have mandated that a significant number of pension schemes must reduce benefits to members in order to ensure their financial viability;
- in other countries, such as Germany, consumers typically expected ‘surpluses’ from DB schemes, which resulted in them facing investment risk through variations in the surplus element.

The main risk considered here is therefore that DB schemes fail to deliver the benefits that consumers were expecting, which, from the consumer’s point of view, means that the schemes are not pure DB, but in some sense still pass on some investment and annuity risk to consumers. This risk is considered in section 4.6.1.

However, perhaps the most pressing threat to DB pension schemes in recent years has been one of sustainability over time. Poor investment returns combined with low bond yields and increasing longevity have significantly increased the cost to sponsoring companies of such schemes, and thus resulted in many of them being closed to new members.

In the Netherlands, the regulator (the central bank) has responded to this issue by mandating that poorly funded pension schemes must reduce benefits to all members, including those receiving pensions.<sup>110</sup> This has, however, created a DB pension system which, to some extent, places the risk of uncertain investment returns on consumers so is moving towards a DC system.

#### **4.6.1 Defined-benefit scheme default risk**

The risk that the consumer does not receive the defined benefits they were expecting arises from the risk of the pension scheme being unable to meet its liabilities and, hence, defaulting.

There are many different approaches to scheme default risk among the Member States, as summarised in Table 4.10. Further information on risk management procedures can be found in the individual country tables in Appendix 3. In summary:

- ensuring that DB schemes are able to meet their liabilities is an important issue in Germany, the Netherlands and the UK, where such schemes are relatively large;
- new private pension systems in Eastern Europe include pension protection funds, although primarily to provide protection against the misallocation of funds, as the funds are defined contribution in nature;
- there are no pension protection funds in France, Spain and Greece, where the size of the private pension system is more limited.

<sup>110</sup> Of the 454 pension funds, 81 were directed by the central bank in October 2012 to cut their pension benefits in order to ensure that pension assets are worth at least 105% of pension liabilities by the end of 2013.

**Table 4.10 Management of DB scheme default risk**

	<b>Organisations/roles</b>	<b>Notes</b>
Netherlands	Central bank prudential regulation but not explicit protection fund	Central bank can require DB schemes to reduce benefits paid to members, including to currently retired members
France	No protection fund	
Sweden	Pension Guarantee Mutual Insurance Company (FPG)	FPG takes over the pension scheme in the case of default
UK	Pension Protection Fund	PPF takes over the pension scheme in the case of default. Funded by the PPF levy on sponsoring company. Provides 90% of benefits to current and deferred members, and 100% of benefits to retired members, up to a maximum pension size limit
Germany	PSVaG	Funded by levies on pension schemes/insurance companies. All benefits, up to a maximum pension size limit, are guaranteed in case of default. Pensionskasse typically not included, however
Austria	Pensionskasse not protected by fund	There is a fund to protect severance pay
Italy	Payment of 'solidarity contribution' used by government to compensate pension members in case of default.	No explicit pension fund, but similar construct
Poland	Fundusz Gwarancyjny (Guarantee Fund)	Rules vary by scheme type but typically provide 100% of benefit protection up to a limit. All schemes are defined contribution in nature
Slovakia	The Social Insurance Company would take responsibility	In the case of default, the government would take responsibility. All schemes are defined contribution in nature
Estonia	Guarantee Fund Act sets out legislation for protection.	Schemes pay contributions to the government. All schemes are defined contribution in nature
Romania	Guarantee Fund (2011)	Funded by contributions from the schemes. All schemes are defined contribution in nature
Hungary	State guarantee	Before nationalisation, all schemes were protected by the government, paid through contributions.
Spain	No protection fund	
Greece	No protection fund	

Source: Oxera.

### **Assessment of the risk magnitude**

Where pension protection funds do provide 100% guarantee of the defined benefits of a typical employee (as is typically the case for pension schemes covered under the German PSVaG<sup>111</sup>), there would be no risk for consumers from default (although surpluses above the minimum guarantee are typical in Germany, and these would not occur in the case of default).

Where pension protection funds do not guarantee the full amount of the accumulated pension liabilities (ie, the defined benefit), for example, in the UK, there is a risk to the consumer that their pension entitlement will be less than they expected if the pension scheme were to default, even though it is protected by the pension protection fund. This risk

<sup>111</sup> There are legal limits to the protection provided by pension protection funds, including the German PSVaG and the UK's Pensions Protection Fund. These legal limits (in Germany and the UK) would not typically affect the average employee, but may affect those earning wages that are much higher than the average (such as company directors).

can be compared with the risk assessments for the DC schemes, if an estimate of the probability of a scheme defaulting can be assessed.

Pension protection funds and regulators in general do not publish estimates of the probability of pension schemes defaulting. The UK Pension Protection Fund does, however, publish information about the number of members of schemes that have defaulted in the past, although it is difficult to draw conclusions from this historical data regarding the likely future default rate, particularly given the recent economic downturn. The assessment here must therefore be treated with suitable caution, which should be applied to all estimates of future levels of risk, given the inherent uncertainties.

In the past four years for which data is available (2008/09 to 2011/12), the pension schemes which were taken over by the UK PPF had a total of approximately 117,000 members, which represents 1% of the total number of DB pension scheme members in the UK ( around 12m).<sup>112</sup> Based on the assumption that this average default rate of around 0.25% for scheme members applies over time,<sup>113</sup> the likelihood of a scheme member suffering from the default of its pension scheme over a 30-year period could be assumed to be in the order of 7%. Consequently, while a consumer with a scheme protected by the PSVaG is fully protected from scheme default risk, a consumer with a DB pension scheme in the UK faces a 10% loss of pension benefits with a 7% probability, due to the same risk.

Where no pension protection fund exists, it is difficult to judge the risk of default since the private pension systems are typically small and less well developed, and in practice there may be an implicit government guarantee.

## 4.7 Relative risks of current schemes and potential alternatives

Bringing all of the above analysis together, it is possible to draw conclusions about the relative risk profiles of different pension schemes, including possible alternative schemes that do not currently exist, based on the extent of exposure to different risk factors.

With regard to the main types of private pension scheme:

- pure DC pension schemes place the burden of investment and annuity risk on the consumer. Both of these risks are significant and, for a scheme with relatively high equity holdings, a combined downside scenario for both risk factors could see benefits being only a half of what could have reasonably been expected at the start of the 30-year time horizon;<sup>114</sup>
- pure DB pension schemes do not place this risk directly on the consumers, although to some extent part of the risk may still be faced by consumers through the risk of scheme default or that the promised benefits are altered at a later date;
- some DB schemes are hybrid in nature as they typically provide consumers with surpluses that are dependent on investment returns, and therefore expose consumers to investment risk.

<sup>112</sup> The Pensions Regulator (2012), 'DB Pensions Universe Risk Profile 2011', The Purple Book.

<sup>113</sup> This assumption could be open to considerable doubt, as the data is for a scheme that is still relatively new, having been established in 2004, and therefore the recent rate at which the PPF has taken over pension schemes may not be a reliable indicator of the long term rate. Moreover, the data relates to a period of severe economic downturn. However, this estimate is close to the long-term insurance premium rate of the German PSVaG, reported to be 0.22% of pension liabilities at risk in the case of default for the 1975–2004 period in Deutsche Bundesbank (2006), 'Empirical risk analysis of pension insurance –the case of Germany', No 07/2006. The German estimate is liability-based, rather than based on the proportion of members, but should be broadly comparable.

<sup>114</sup> This combined downside scenario is likely to be less likely than the 1-in-20 probability assumed for each individual risk. As noted before, further analysis would be needed to estimate the degree of interdependence of these individual risks.

There has been debate about alternative possible pension schemes that share risk between employers and employees. For example, the term ‘cash balance schemes’ has been used to describe a pension scheme in which the company guarantees a fixed pension pot on retirement and then the employee faces only the annuity risk at retirement (determining what their pension income will be from the given pension pot). The analysis of relative risk magnitudes above provides an indication of the proportion of the overall risk that would be removed from the consumer in such a scheme, assuming that there were no default risk (or other risk typically associated with DB schemes).

An alternative mechanism would be one where employees are guaranteed a certain pension income upon retirement, but the date of retirement can be flexed to ensure that they have a sufficient pension pot to guarantee that income. In theory at least, this type of scheme could still pass all the investment and annuity risk on to the consumer, by requiring them to work longer, but such a scheme is likely to involve some inter-generational risk-sharing.<sup>115</sup>

With regard to asset allocation, there is an important trade-off between risk and return in long-term investments. While equity investments produce more volatile returns, the likelihood of negative real returns over long periods of time may still be quite low, as shown by historical data on equity returns across Europe.

There is a wide range of possible issues to be analysed, and the framework therefore provides a useful guide to the relative magnitude of different risks under consideration.

## 4.8 Adequacy

One of the central issues in the debate about pension systems is that of adequacy. Adequacy is typically considered in terms of the replacement ratio—the ratio of retirement income to the income received before retirement. In a recent EU report, adequacy was defined as follows:

The purpose of pensions is to provide an adequate income stream in retirement. Pension adequacy is defined and measured along the two dimensions of income replacement and poverty protection. To achieve adequacy pensions also need to be sustainable, safe and adapted to changing circumstances as reflected in the three European pension objectives of adequacy, sustainability and modernisation (or adaptability). In the framework of the Social OMC these policy objectives have formed the basis for development of the indicators that are used for the analysis of current and future pension adequacy in this report.<sup>116</sup>

Public pension provision (pillar 1) provides a significant proportion of retirement income to most people in all the Member States included in this study. As pillar 1 pensions are not covered in this report—and, in particular, the likely development of those pensions in the future—it has not been possible to consider adequacy in terms of replacement ratios or poverty protection. These concepts of adequacy are examined in considerable detail in the European Commission report, drawing on data from the OECD.<sup>117</sup> For reference, Table 4.11 reproduces OECD data on replacement ratios from public and private pension systems.

<sup>115</sup> It would be possible to create this arrangement with an individual DC pension scheme by simply working until the pension pot is of a sufficient size to buy an annuity with a required level of pension income. Consequently, it may offer no more risk protection than a pure DC scheme. However, in practice short-term investment fluctuations are not likely to translate into short-term changes in retirement age; as such, there would be some cross-subsidy between age groups to smooth out short-term fluctuations.

<sup>116</sup> See European Commission (2012), ‘Pension Adequacy in the European Union, 2010-2050’, May, p. 12, prepared jointly by the Directorate-General for Employment, Social Affairs and Inclusion of the European Commission and the Social Protection Committee.

<sup>117</sup> Ibid.

**Table 4.11 OECD data on net replacement ratios**

	Public	Mandatory private	Voluntary DC	Total mandatory	Total with voluntary
Austria	89.9			89.9	
Belgium	52.1		19.3	52.1	71.4
Estonia	31.0	27.3		58.3	
France	60.4			60.4	
Germany	56.0		22.6	56.0	78.6
Greece	111.2			111.2	
Hungary	62.1	43.9		106.0	
Italy	71.7			71.7	
Netherlands	33.1	66.7		99.8	
Poland	33.2	35.0		68.2	
Slovak	33.6	40.9		74.5	
Spain	84.9			84.9	
Sweden	35.4	22.4		57.7	
UK	37.4		43.1	37.4	80.5
<b>OECD 34</b>	<b>50.1</b>			<b>67.8</b>	<b>77.0</b>

Note: Replacement ratios, after taxes, for average earners. OECD pension model estimates are based on national parameters and rules applying in 2008.

Source: OECD (2012) 'Pension Outlook'.

Instead of examining replacement ratios, and as directed by the FSUG, the concept of adequacy used in this study is couched in terms of the ability, as a minimum, to protect the real value of pensions. Table 4.12 outlines the measures employed across the investigated states aimed at promoting adequacy.

**Table 4.12 Mechanisms to ensure adequacy imposed by legislation**

	Employer-arranged schemes	Personal schemes
Netherlands	Contributions are tax-exempt up to a certain percentage of income. Contracted returns on life insurance products	Contributions are tax-exempt up to a certain percentage of income. Contracted returns
France	A few schemes impose minimum returns <sup>1</sup> Fiscal incentives on contributions and benefits payout Capital invested in euro funds is guaranteed	Fiscal incentives on benefits payout
Sweden	Employers' contributions are tax-deductible Minimum contributions are imposed Limited offer of guaranteed returns <sup>2</sup> Pension protection fund <sup>3</sup> Upon insolvency of the sponsoring employer, a guarantee fund administered by Fora pays outstanding contributions <sup>4</sup>	Contributions are tax-exempt up to a certain threshold Minimum contributions are imposed

	<b>Employer-arranged schemes</b>	<b>Personal schemes</b>
UK	Fiscal incentives on contributions and benefits payout, including tax-free lump sum (up to 25%) Selected schemes impose minimum contributions PPF in place for DB schemes offers 90% protections	Fiscal incentives on contributions and benefits payout, including tax-free lump sum (up to 25%) Selected schemes impose minimum contributions
Germany	Fiscal incentives on contributions Guaranteed minimum returns PPF offers 100% protection of benefits <sup>6</sup>	Reduced tax rate on annuities and lump sum <sup>5</sup> Guaranteed minimum returns Minimum contributions <sup>7</sup> Some protection against scheme default <sup>8</sup>
Austria	Fiscal incentives on contributions and payout benefits Minimum returns <sup>9</sup> Limited protection against scheme default <sup>10</sup>	Fiscal incentives on contributions and payout benefits Minimum returns
Italy	Fiscal incentives on contributions and payout benefits Minimum returns guaranteed on severance pay when transferred to a pension plan Companies have to pay a 'solidarity contribution', which is used to compensate employees if their employer has not been paying its portion of the contributions	Fiscal incentives on contributions and payout benefits Minimum returns guaranteed on severance pay when transferred to a pension plan
Poland	Fiscal incentives on contributions and payout benefits Minimum returns, minimum contributions and protection against scheme default <sup>11</sup>	Fiscal incentives on contributions and payout benefits Some protections against scheme default depending on type of provider <sup>12</sup>
Slovakia	Tax-exemption of contributions and payout benefits Minimum returns	Payout benefits are taxed at 19% Minimum returns
Estonia	Fiscal incentives on payout benefits Level of employee contributions is fixed at 2% (individual) + 4% (from social insurance) Protection against scheme default	Fiscal incentives on payout benefits
Romania	Fiscal incentives on contributions and payout benefits Minimum returns Protection fund against scheme default	Fiscal incentives on contributions and payout benefits Minimum returns Protection fund against scheme default
Hungary	Fiscal incentives on contributions Minimum returns (0% in real terms) 100% protection against scheme default	Fiscal incentives on contributions
Spain	Fiscal incentives on contributions Minimum returns <sup>13</sup>	Fiscal incentives on contributions
Greece	Fiscal incentives on contributions Minimum contributions <sup>14</sup> Minimum returns (0–3.35%), excluding mutual funds <sup>15</sup>	Fiscal incentives on contributions Minimum returns (0–3.35%), excluding mutual funds

Note: <sup>1</sup> PERCO and PERP only. <sup>2</sup> For example, KAP-KL offers capital preservation. <sup>3</sup> ITP (pension fund and book reserves). <sup>4</sup> SAF—LO and KAP—KL only. <sup>5</sup> Kapital-und-Rentenversicherung only. <sup>6</sup> does not include Pensionkasse. <sup>7</sup> Riester Pensions only. <sup>8</sup> Riester Pensions and Rürup Pensions only. <sup>9</sup> Abfertigung Neu and Betriebliche Kollektivversicherung only. <sup>10</sup> Abfertigung Neu only. <sup>11</sup> OFE only. <sup>12</sup> See country tables in Appendix 3 for further details. <sup>13</sup> Plan de Prevision Social Empresarial only. <sup>14</sup> Tameia Epagglematikis Asfalisis only. <sup>15</sup> Idiotiki Omadiki Asfalisis only.

Source: Oxera analysis, based on inputs from desk research and regulators.

The general trends observed in the measures above fit closely with the findings on pension risk presented in the remainder of this section. In particular, they can all be considered in terms of the protection of real value of contributions put into pension schemes. The following conclusions can be drawn.

- Private pension schemes often favour bonds over equity in order to ensure that real value is protected, although, over long periods of time, historical evidence suggests that equity is unlikely to produce negative real returns.
- Some countries provide guarantees for the real value of pensions, such as with minimum guaranteed benefits in Germany, but the consumer still faces considerable investment risk through scheme surpluses and uncertain future annuity rates.
- Lifestyling (switching from equity to bonds as retirement draws closer) helps to avoid short-term financial market volatility, but does not help consumers to avoid the impact of longer-term trends.
- Sovereign risk remains a threat to consumers, even when adopting a defensive investment position for their pension provisions.

# 5 Saver information, representation and behaviour

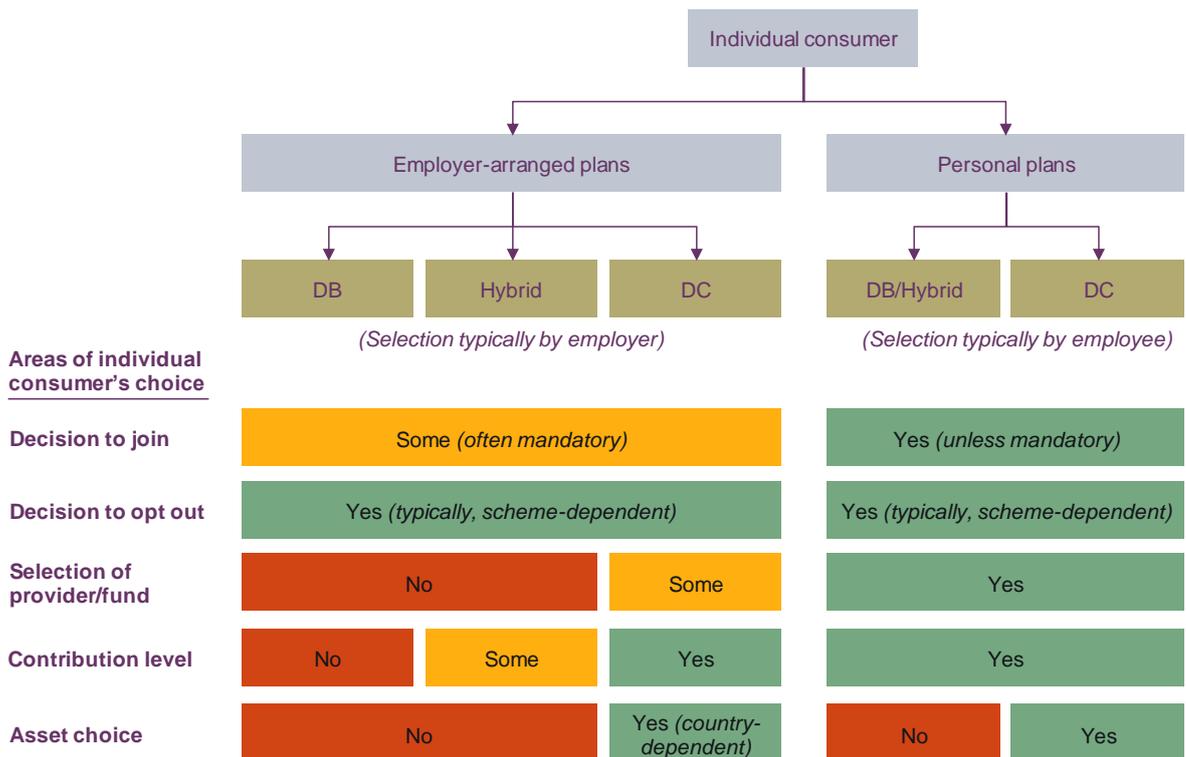
## 5.1 Introduction

### 5.1.1 Why this topic?

Until the recent development of DC-funded pension schemes in Europe, most traditional pension provisioning involved little need for consumers to make decisions. Most retirement income came from state pension systems (pillar 1) and that from the private sector often involved company-run DB schemes based simply on years of employment and final salary. However, the growing role of DC pension schemes has increased the need for consumers to make decisions with regard to both employer-arranged and personal pension schemes, as shown in Figure 5.1:

- employers may still arrange, administer and contribute towards occupational pension schemes, but consumers tend to now have a greater say in investment decisions as they face the investment risk; with defined contribution schemes, consumers also need to be more aware of the impact of charges;
- personal pensions are also more likely to require consumers to make investment decisions, due to fewer defined benefit schemes being offered.

**Figure 5.1 Consumer decision-making with defined contribution schemes**



Source: Oxera analysis.

Importantly, the number of decisions required from individuals strongly depends on the scheme type. In general, personal DC schemes would give an individual the most choice, in particular of whether they want to join, how much to contribute and in what assets. This stands in clear contrast to the most restricted schemes, such as the employer-arranged DB

contracts—in this case, consumers are often required to join a specific scheme with no control over their assets or contribution levels, and only an option to opt out.

Are consumers well placed to make these decisions? For consumers to make good decisions, they need access to the right information and sound advice, while their needs should be considered by those controlling the pension system. There is much evidence that consumers are often not well placed to make good decisions with regard to long-term financial products, and therefore this topic is important for the wider pension debate in Europe.

### 5.1.2 What were the metrics and what information was available?

The FSUG asked Oxera to look at a range of topics to help understand:

- the quality and breadth of information available to individuals on pension products;
- the representation of consumers;
- the ability and observed level of switching between products;
- the overall factors that may affect decision-making with regard to private pensions.

Information for this section has been drawn primarily from studies conducted into consumer behaviour with regard to financial markets, as well as some factual evidence (for instance, regarding saver representation and types of information) collected from national and European pension regulators. There is a large body of literature on the developing field of behavioural economics, which is relevant for understanding consumer behaviour in relation to pensions, although the amount of quantitative evidence collected from the point of view of the latest thinking from behavioural economics is still relatively limited.

### 5.1.3 The objectives of this section

This section provides information that can help to understand the environment in which consumers make decisions in relation to the various pension systems. The section is structured as follows:

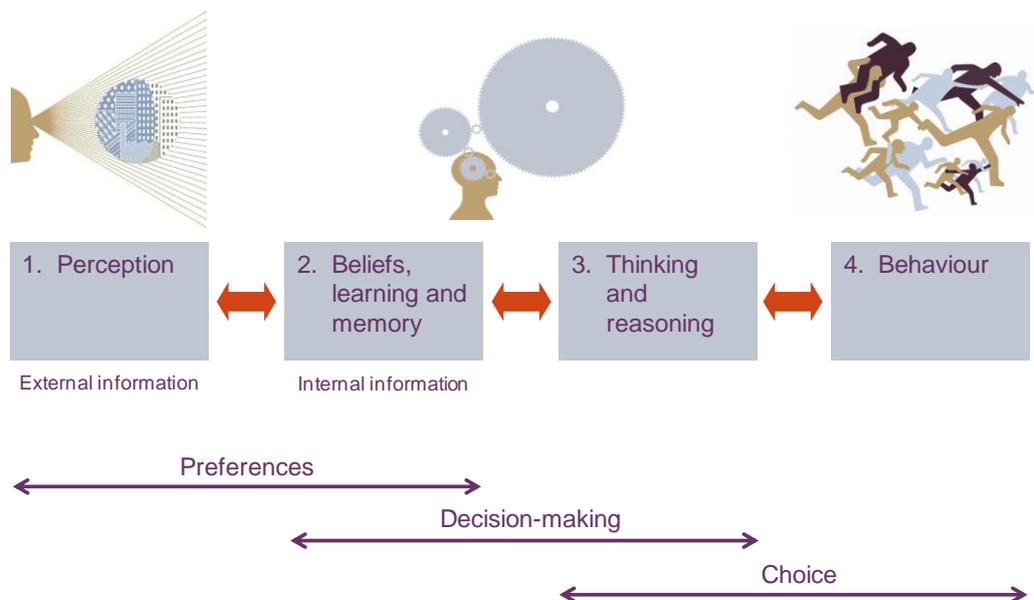
- section 5.2 assesses factors affecting consumer decision-making, based on behavioural economics, which provides a framework for understanding how consumers use information when making decisions about financial products, such as pensions;
- recent regulatory developments with regard to consumer decision-making are summarised in section 5.3;
- information available to consumers at the three key decision stages is compared in section 5.4.
- an overview of how the savers are represented is given in section 5.5;
- insights into how consumers behave in the presence of all the above is shown in section 5.6.

## 5.2 Factors affecting decision-making

Figure 5.1 above summarised some of the key decisions made by consumers when making choices about DC pensions. To explore the decision-making process further, it is important to have a suitable economic framework for understanding how consumers use information when making decisions about financial products, such as pensions.

Many economic models traditionally assumed that consumers are rational and well-informed. Figure 5.2 below presents a basic model showing the ways in which consumers are assumed to make choices in traditional economics versus how—adopting more realistic psychological assumptions—they make choices in practice.

**Figure 5.2 Consumer decision-making processes**



Source: Oxera.

The top half of the figure contains processes that will be more familiar to psychologists—how people perceive information, how they draw on internal information (eg, memory), how they think and weigh up the best course of action, and how they subsequently behave. The bottom half matches these to concepts that will be more familiar to economists—consumers’ preferences, their decision-making process, and the choices they make in practice.

Working from left to right, traditional economics makes some important assumptions. First, the way in which people perceive information and form their preferences is not affected by the way in which this is presented or ‘framed’. These preferences are also stable over time. People also perfectly recall past experience, and learn from it. In making decisions and choices, consumers then use fully rational ‘formal’ reasoning to calculate a best course of action, using all the available information, and subsequently acting on this in a way that is in their long-term best interests (‘time consistency’).

Therefore, according to traditional economic theory, in choosing whether to take out a private pension, it makes no difference to the consumer if information is presented in absolute or percentage terms, in terms of gains versus losses, or if pages of information or simply a summary of the salient points are provided. It also makes little difference if a consumer is defaulted into a pension scheme (with the option to opt out), or if they instead must actively choose to take out a private pension. In addition, it is likely that consumers will take out a pension scheme based on a fully rational calculation of current versus future needs, and will select the best provider. In doing so, they also resist the temptation simply to put off opting into a pension scheme.

However, the real world is not necessarily like this. Behavioural economics adopts more psychologically realistic assumptions about consumers’ preferences, decision-making and how they act.

- **Preferences depend on context**—‘framing’ matters. People dislike losing what they perceive they already have more than they like gains (‘loss aversion’, which can lead to the ‘endowment effect’). Preferences are also somewhat malleable, and can be constructed during the choice-making process, rather than being fixed. In turn, how providers present information to consumers can affect consumer preferences.

- **Decision-making involves taking shortcuts**—conscious, fully rational, deliberation of every single decision would be exhausting to apply to all day-to-day tasks. Instead, some decisions are made purely subconsciously and/or through a series of shortcuts known as ‘heuristics’. Regarding the latter, individuals may make quick decisions based on a selection of the information provided in the marketplace, memories of recent experiences, looking at what others are doing, or focusing on (what they think are) salient aspects of the information. While instinct and heuristics provide useful shortcuts for making quick decisions, they can also be vulnerable to the perception-related framing effects discussed above, and other forms of bias more directly connected to recall and reasoning (below). In turn, providers may seek to manipulate these forms of bias. This can harm consumers’ ability to make sound decisions.
- **Decision-making over time involves resisting short-term urges**—traditional economics assumes that, once a consumer is presented with information on the best course of action for them over the longer term, the person involved will then act on this in a consistent way over time. In practice, however, consumers can face a conflict between short-term desires versus what would be best for them in the long term. They can put off making important decisions for the future. In sum, they can be time-inconsistent. Providing information alone to tackle this problem is not enough, and can even be counterproductive.

Retail financial services products are particularly complex, and can involve decision-making over long timescales involving ‘now’ versus ‘later’ decisions. Among the forms of bias that are most relevant in financial services are the following.

- **Framing affects preferences**—since consumers are loss-averse, the way in which information is framed (as a loss or a gain) in the provision of financial services can affect the way in which consumers assess whether a product suits their needs, and how they choose between alternative offerings. This can lead to ‘status quo bias’ or a preference for the ‘default option’. Some examples are provided below.
  - People may respond differently when they are defaulted into a private pension scheme (with the option to opt out) than when they are obliged to choose whether they want to opt into a private pension scheme.
  - A consumer may be unwilling to switch their pension provider if they perceive that doing so will incur potential costs in future (both tangible costs and ‘hassle costs’).
  - Consumers may be more prepared to pay for an add-on product at the point of sale of a primary product (eg, insurance sold alongside a pension product), as they already regard themselves as owning the primary product, and do not take account of the full combined cost of the two products.
- **Instinct and heuristics can be wrong**—for a number of reasons.
  - In terms of framing, consumers may latch onto information that seems salient to assessing whether they are being offered a good deal. For example, consumers may attach undue importance to adviser fees when comparing the cost of alternative pension plans, as they may perceive the existence of these as indicating a conflict of interest or as being a key element of overall fund performance.
  - Consumers may suffer from ‘information overload’, given limits on their computational ability and willingness to put effort into the choice process. Too much information or choice may be as bad as too little.
  - Consumers may suffer from ‘availability biases’, in terms of their ability to recall recent experience or events. For example, consumers may be prone to ‘optimism bias’, thinking that they will get round to opting into a pension scheme in future.

- Consumers may suffer from ‘representative bias’—what a consumer may think is the right computational strategy for undertaking calculations, and comparisons between products, may not represent the correct strategy for the problem in hand. Again, this bias can also affect consumers’ abilities to forecast probabilities.
- **People can find it difficult to make decisions between the present and future**—this is particularly relevant to financial services products that involve decisions over the longer term, such as pension plans.
  - Consumers may not know what is in their best long-term interests. In this sense, there is a role for consumer education in financial services in order to inform them of the best course of action for them.
  - However, even if consumers are made aware of what is in their best long-term interest, they may not act on this knowledge. Consumers can be ‘present-biased’ or ‘time-inconsistent’. For example, individuals may delay investing in a private pension, even though they know that it will benefit them in the long term. In practice, consumer education may have a limited impact on outcomes. Default options and ‘forced choice’ are more powerful tools.

Such factors can also hinder competition in financial services. If consumers face difficulties in accessing, assessing and acting on information, providers of financial services may not compete effectively and deliver what consumers want. Indeed, providers of financial services may instead face an incentive to exacerbate these forms of bias.<sup>118</sup> ‘Good’ firms—eg, those that provide clear and salient information, and do not obscure their pricing or benefits packages—may drive out the ‘bad’ in certain situations, but not always.<sup>119</sup>

There is emerging empirical evidence that the above sorts of factors are important to consumer decision-making in financial services, and there is also an emerging experimental economics evidence base on these issues.

### 5.2.1 Optimal information

The information available to a consumer making a decision can radically change that decision. A large number of behavioural studies have studied the effects of information on decision-making. The literature on behavioural economics suggests that more information can lead to poorer decision-making—examples include subjects exhibiting greater deviation from expert judgements after more thorough decision-making,<sup>120</sup> ‘cue competition’ between relevant and irrelevant pieces of information,<sup>121</sup> and worse choices when more low-quality options are available.<sup>122</sup> In general, theories of consumer behaviour suggest that consumers follow several simple rules to make decisions, and that increasing information levels can lead to these rules being applied inefficiently. In particular, researchers have found that increasing the number of choices available makes people reluctant to choose, and increases the probability of exercising a default option.<sup>123</sup> Another example of this is that subjects choosing from a selection of six different chocolates were happier with their choice than those who had

<sup>118</sup> See, for example, Office of Fair Trading (2010), ‘What does Behavioural Economics mean for Competition Policy’, March, p. 9.

<sup>119</sup> See, for example, Gabaix, X. and Laibson, D. (2006), ‘Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets’, *Quarterly Journal of Economics*, May, 121:2, pp. 505–40.

<sup>120</sup> Wilson, T.D. and Schooler, J.W. (1991), ‘Thinking too much: Introspection can reduce the quality of preferences and decisions’, *Journal of Personality and Social Psychology*, 60:2, pp. 181–92.

<sup>121</sup> Kruschke, J.K. and Johansen, M.K. (1999), ‘A model of probabilistic category learning’, *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 25:5, pp. 1083–19.

<sup>122</sup> Diehl, K. (2005), ‘When two rights make a wrong: searching too much in ordered environments’, *Journal of Marketing Research*, XLII, pp. 313–22.

<sup>123</sup> Tapia, W. and Yermo, J. (2007), ‘Implications of Behavioural Economics for Mandatory Individual Account Pension Systems’, OECD Working Papers on Insurance and Private Pensions, No. 11. See, also, Iyengar, S., Jiang, W. and Huberman, G. (2003), ‘How much choice is too much? Contributions to 401(k) retirement plans’, Pensions Research Council Working Paper 2003-10.

a selection of 24.<sup>124</sup> Similarly, people's choices regularly exhibit 'framing effects,' whereby an equivalent result is evaluated differently according to the method of presentation (eg, presenting '90% of participants win' versus '10% of participants lose' may change a person's decision—see the discussion of Bateman et al's work on presentation effects below).<sup>125</sup>

In support of this, a study of investment behaviour in Italy found that investors chose not to access all the information available to them (even when this information was statistically relevant). They repeatedly looked at a small subset of information and spent little time or effort on their investment decisions, even when handling 'meaningful sums of money'. In summary, decision-making does not necessarily relate to information access in a predictable and positive way.<sup>126</sup> However, there is also evidence that empirical choices are actually rational, on the basis that people are acting rationally using information that is incorrect. Chan and Stevens found that when evaluating pension decisions in light of self-reported data: 'ill-informed individuals respond to their own misperceptions of the incentives rather than being unresponsive to any measured incentives.'<sup>127</sup> This result suggests that the level of information provided is potentially important to choice-making and that apparent irrationality is due to a mismatch between the reality and the (mis)information held by savers.

As a summary to this literature, Box 5.1 contains findings from a recent report by the European Commission on the impact of behavioural economics on retail financial services.

### **Box 5.1 Behavioural economics insights in the area of information provision**

1. *Do not* rely on financial education as a silver bullet
  - financial literacy/education has a relatively small impact in getting consumers to act
2. *Do* simplify product information disclosure
  - require or encourage the presentation of a small number of key pieces of information, clearly separated from any extraneous information
3. *Do* standardise product information disclosure
  - the same information for different products within a class and, where possible, across product classes (eg, regular savings versus pensions)
4. *Do* standardise the information disclosure format
  - so that alignment of product information is straightforward

Source: Decision Technology (2010), 'Consumer Decision-Making in Retail Investment Services. A Behavioural Economics Perspective', presentation at 'Behavioural Economics, so What: Should Policy-Makers Care?', European Commission conference, November 22nd, Brussels.

The same European Commission report translated the findings on information provision into findings for investment advice, as shown in Box 5.2 below.

<sup>124</sup> Iyengar, S. and Lepper, M. (2000), 'When choice is demotivating: can one desire too much of a good thing?', *Journal of Personality and Social Psychology*, **76**, pp. 995–1006.

<sup>125</sup> Tapia, W. and Yermo, J. (2007), 'Implications of Behavioural Economics for Mandatory Individual Account Pension Systems', OECD Working Papers on Insurance and Private Pensions, No. 11.

<sup>126</sup> Monti, M., Martignon, L., Gigerenzer, G. and Berg, N. (2009), 'The impact of simplicity on financial decision-making', in Taatgen, N. and Van Rijn, H. (2009), 'Proceedings of the 31st Annual Conference of the Cognitive Science Society', Cognitive Science Society, pp. 1846–51.

<sup>127</sup> Chan, S. and Stevens, A. (2003), 'What You Don't Know Can't Help You: Pension Knowledge and Retirement Decision Making', NBER Working Papers 10185

## Box 5.2 Key findings from behavioural economics within the area of financial advice

1. Financial advice is critical, in particular for less capable consumers
  - *do not* take for granted that consumers are sufficiently wary of potential conflicts of interest, with regard to both the existence and size of individual commissions, and the implications of ‘tied’ sales
2. *Do not* rely on the impact of unspecific disclosure of conflicts of interest
  - disclosure has to be specific and clearly visible; and negative ‘knee-jerk’ reactions by consumers seem less likely when there is communication
3. *Do not* trust solely in conflicts of interest being disclosed
  - this may be insufficient, in particular when it is buried in ‘communication’
  - without changed incentives, do not count on advisers as a cure for customer misperceptions, errors, or potential ‘bias’

Source: Decision Technology (2010), op. cit.

The most important lessons from the literature for this section are therefore that:

- increased quantity of information is not necessarily beneficial—consumers benefit most from the right information, including information provided in a standard form;
- consumers benefit from independent and reliable financial advice, to help overcome difficulties in decision-making.

Some of the regulatory developments that have arisen from concerns about consumer decision-making are explored next, followed by analysis of the types of information that are available to consumers and their ability to use that information.

## 5.3 Regulatory developments

Across the EU there have been important regulatory changes that aim to improve consumer decision-making for financial products, including improving the quality of information and advice. In this light, developments in the UK and Italy are considered, before a discussion of the reforms embedded in the PRIIPS (packaged retail investment products) legislation at the EU-wide level.

### 5.3.1 The UK Retail Development Review

In the UK, the FSA has been undertaking a review of the relationship between financial advisers and investment product providers in order to make the market more efficient and beneficial for consumers. One important issue is commission bias, whereby advisers have an incentive to recommend products that give them the highest commission, instead of those in the customer’s best interests. More specifically, this can be divided into provider bias (ie, recommending a product from a provider that offers a high commission) and product bias (eg, recommending investment products with higher commission rather than more suitable or cheaper products with lower commission). Provided that consumers have access to a number of brokers or providers then, in general, commissions may not result in significant concerns from a competition or consumer protection perspective. However, for more complex products where consumers often rely on one adviser, competition and/or consumer protection issues may arise. In the UK, this was one of the reasons why a ban was imposed

on commissions in relation to the provision of retail investment products.<sup>128</sup> There is currently a discussion at the EU level about whether a similar Europe-wide ban should be imposed in Europe and a discussion in the Netherlands about banning commissions in relation to certain non-life insurance products.<sup>129</sup> Commissions may also result in ‘inefficient’ switching (in this context, typically referred to as churn or sales bias). Commissions give intermediaries an incentive to sell products and to advise existing customers (eg, with pension products) to switch provider.<sup>130</sup> Therefore, where a commission is involved, high switching rates are not necessarily an indication of healthy competition.

To combat this, the RDR aims to divorce advice on the most appropriate product from other incentives. The FSA therefore proposed a selection of changes to financial advisers under their regulation, summarised in Box 5.3.

### **Box 5.3 Summary of RDR changes in the UK**

The Retail Distribution Review makes a number of changes to the regulation of financial advisers in order to improve the quality of their advice to consumers, including the following.

- *Remuneration of advisers*—under the new regime, advisers are banned from taking commissions from providers as part of their work as intermediaries and must separate their adviser fees from product cost.
- *Independence requirements*—independence requirements will include a requirement for advisers to consider products in the ‘relevant market’, to offer consumers a full choice. ‘Pensions’ would be an example of one such market.
- *Professional standards*—the FSA is raising the minimum level of qualification for investment advisers, instituting an overarching Code of Ethics and enhanced standards for continuing professional development, which will be enforced by a Professional Standards Board. There will be a benchmark qualification for all investment advisers in both the independent and non-independent sectors.
- *Capital requirements*—a consistent set of capital requirements will be established for all personal investment firms. The overall minimum capital requirement will be raised from £10,000 to £20,000. Firms will be required to hold additional capital, based on a sliding scale, as a provision against potential liability for any activities excluded by their professional indemnity insurance policies.

Source: Oxera (2009), ‘Retail Distribution Review Proposals: Impact on Market Structure and Competition’, June, reproduced by FSA, 2010. Oxera, (2010), ‘Buying investment products from 2012: the impact of the Retail Distribution Review’, *Agenda*, July. Oxera (2009) ‘Reform of retail financial services: the end of commission payments?’, *Agenda*, August. Oxera (2008), ‘Retail financial advice: is anybody listening?’, *Agenda*, September. Oxera (2007), ‘Regulating financial markets: what about the retail consumer?’, *Agenda*, April.

<sup>128</sup> See FSA (2009), ‘Distribution of retail investments: Delivering the Retail Distribution Review’, June; Oxera (2009), ‘Retail Distribution Review Proposals: impact on market structure and competition’, prepared for the Financial Services Authority, June; Oxera (2010), ‘Retail Distribution Review proposals: Impact on market structure and competition’, prepared for the Financial Services Authority, March; and Oxera (2010), ‘Buying investment products from 2012: the impact of the Retail Distribution Review’, *Agenda*, July.

<sup>129</sup> See, for example, Ministry of Financial Affairs (2011), ‘Uitwerking regelgeving provisieverbod’, Letter to the Dutch Parliament, April 14th; Ministry of Financial Affairs (2012), ‘Aanpassingen in het Wijzigingsbesluit Financiële Markten 2013 naar aanleiding van de consultatiereacties’, September 13th; and Steven Maijor (Chair of European Securities and Markets Authority) (2012), ‘Restoring investors’ trust in Europe’s markets’, BBA Annual Conference in London, October.

<sup>130</sup> See FSA (2009), ‘Distribution of retail investments: Delivering the Retail Distribution Review’, June, p. 71.

As can be seen, these reforms force financial advisers to state their fees clearly and avoid commission-based distortions. These reforms are much more revolutionary than others, and represent a substantial departure from normal practice.

### Italian reforms

Another example of regulatory reform is provided in Italy, where the regulator expanded a ban on exclusivity contracts between insurance product providers and brokers in the automobile market to affect the brokers of all non-life insurance products (therefore applying to insurance-based pension products).<sup>131</sup> The idea behind this reform was to enhance competition and choice by allowing brokers to offer a range of providers' products to consumers and to break relationships between brokers and providers that were seen to be detrimental to consumers. However, the reform still allowed commission payments. Subsequently, an early criticism was that consumers were given a false perception of broker independence by the reform and that the reform simply shifted the market to a different set of problems in insurance product choice.

### EU-wide changes—PRIPS

The two case studies above show that national regulators have been actively intervening to improve the provision of investment advice. At the EU level, the forthcoming PRIPS legislation is widely expected to influence at least personal pension plans, if not occupational plans. The purpose of this legislation is broadly to improve outcomes for investors in 'packaged retail investment products'—products such as pension plans that are often sold to individual, non-professional investors in a relatively fixed format. The European Commission noted that

The retail investment market is largely dominated by 'packaged retail investment products'. These provide retail investors with easy access to financial markets, but can be complex for investors to understand. Those selling these products can also face conflicts of interest since they are often remunerated by the product manufacturers rather than directly by the retail investors.<sup>132</sup>

The concerns exhibited by the EU-level regulators are clearly in line with those identified by national level regulators. An important outcome from the PRIPS legislative process is the introduction of a 'Key Information Document' (KID) for PRIPs, designed to facilitate investor comparison and understanding of products.

#### Box 5.4 PRIPS—what is a KID?

KIDs are short, plainly worded documents (no more than a few pages) that will provide investors with answers to their key questions about the features, risks, and costs of investment products. Designed for the retail investor rather than the professional, the intention is that KIDS will help the retail investor to make a more informed decision on whether an investment is right for them.

In order that the investor can better compare investment products, every KID will follow the same structure. They will answer a standard set of questions, such as: what is the investment? Can I lose money? What are the risks and what might I get back? What are the costs?

Information that is vital for comparing different investments—on how risky the investment is, on whether it has guarantees and what these are, on the costs of the investment—will be carefully selected and presented so as to make comparisons as straightforward and accurate as possible.

This is closely related to the 'Key Investor Information Documents' (KIIDs) required under the

<sup>131</sup> Associazione Nazionale fra le Imprese Assicuratrici, Focarelli, D. (2010) 'Protezione dei consumatori e tutela della concorrenza nei mercati finanziari. Il caso delle assicurazioni', *Studi*, pp. 7–8, available at [http://www.ania.it/export/sites/default/documenti/cc633dde-3cb4-11df-ae87-f3c446ddb06\\_bancaborsa\\_Focarelli.pdf](http://www.ania.it/export/sites/default/documenti/cc633dde-3cb4-11df-ae87-f3c446ddb06_bancaborsa_Focarelli.pdf), accessed November 22nd 2012. See, also, Associazione Nazionale fra le Imprese Assicuratrici (2009), 'Relazione del Presidente', July, p. 13, available at [http://www.ania.it/export/sites/default/documenti/562602ef-3666-11df-ae87-f3c446ddb06\\_Relazione\\_Annuale\\_2009\\_del\\_Presidente\\_Fabio\\_Cerchiai.pdf](http://www.ania.it/export/sites/default/documenti/562602ef-3666-11df-ae87-f3c446ddb06_Relazione_Annuale_2009_del_Presidente_Fabio_Cerchiai.pdf)

<sup>132</sup> See the European Commission Packaged Retail Investment Products website, available online at [http://ec.europa.eu/internal\\_market/finservices-retail/investment\\_products\\_en.htm](http://ec.europa.eu/internal_market/finservices-retail/investment_products_en.htm), accessed 21/11/2012

recently implemented EU UCITS IV Directive. This Directive specifies the length, format and information to be included in a summary document for investors, and is very specific about the nature of the information and how it is presented. For example, the information required on the fees and charges would include:

- a one-off entry charge;
- a one-off exit charge;
- ongoing charges, broken down by type;
- charges taken from the fund under specific conditions, such as performance fees.

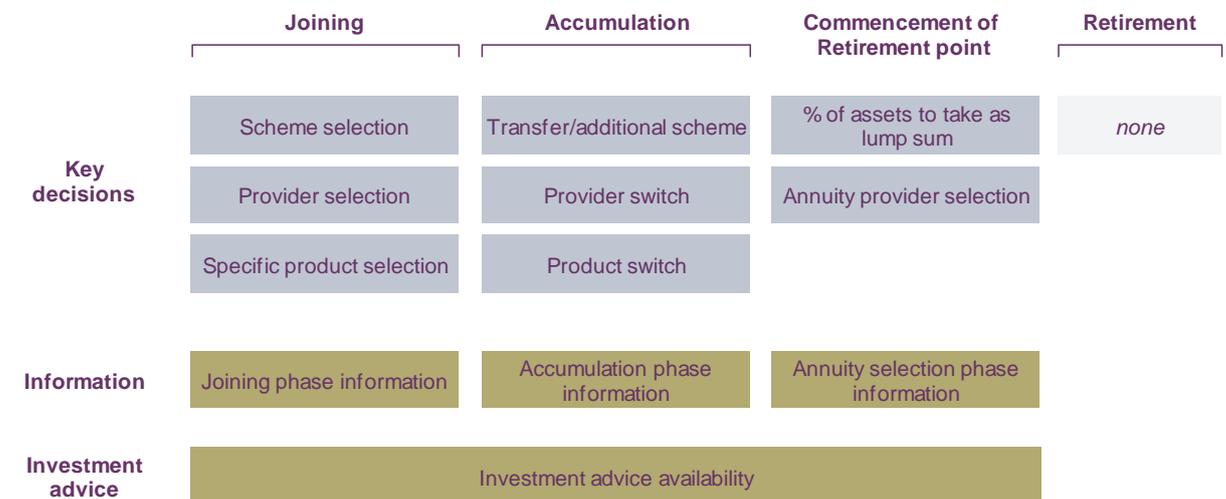
Source: European Commission (2012), 'Key Information Documents (KIDs) for packaged retail investment products - Frequently asked questions', press release MEMO/12/514, available online at [http://europa.eu/rapid/press-release\\_MEMO-12-514\\_en.htm?locale=en](http://europa.eu/rapid/press-release_MEMO-12-514_en.htm?locale=en), European Commission (2010), Commission Regulation (EU) 2010/583, available online at [http://www.esma.europa.eu/system/files/5-Reg\\_583\\_210.pdf](http://www.esma.europa.eu/system/files/5-Reg_583_210.pdf).

Overall, the recent reforms are aimed at improving the quality of information and advice received by consumers. The next section looks more broadly at the information that is currently provided to consumers with regard to private pension systems. This assessment needs to be considered in light of the lessons from the developing field of behavioural economics and the resultant regulatory developments discussed above.

## 5.4 Information access comparison

One of the more tangible elements of the consumer decision-making process, which can be objectively measured and compared across countries, is the access to information. Consumers require information for decision-making at the three key decision stages: joining, accumulation and upon retirement. This section assesses the information available to consumers at each of these stages, in line with Figure 5.3.

**Figure 5.3 Consumers' decisions in the context of private pensions, and the associated information provision framework**



Source: Oxera analysis.

This section contains:

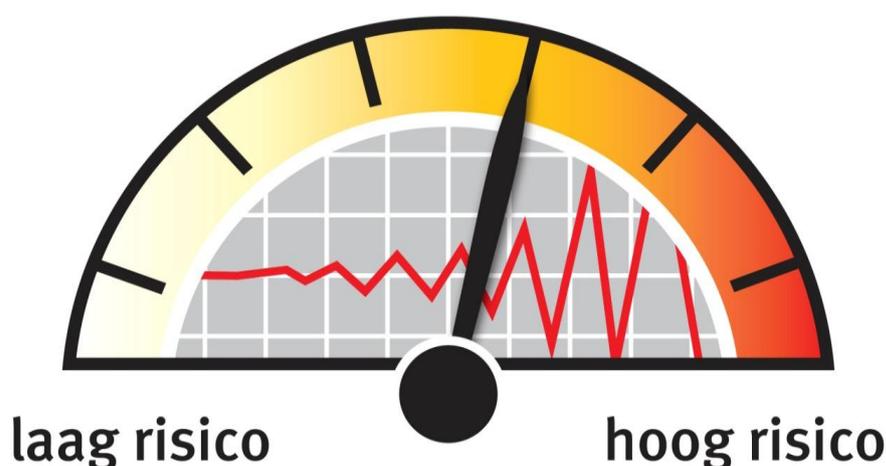
- a segmentation of Member States based on the information available to consumers during the joining phase;
- a comparison of the type of information typically available to consumers in the accumulation phase;
- an assessment of financial advice available to consumers of private pension products.

At the time of writing this report, there have been no studies or evidence on the types of information available to consumers at the point of making annuity purchases. The current analysis would be reinforced by such information.

#### Information quality assessment—side note

While the information presented in this section attempts to categorise the quality of the information provided to individuals using the types of metrics typically used in the context of private pensions, another important aspect is the actual method of presenting specific metrics. Whether projected returns, for instance, are presented in the form of a (clearly labelled) chart or a table can make significant difference to savers' ability to fully understand the messages. Similarly, usage of statistical concepts of standard deviation or confidence intervals, while carrying important information about return volatility, could simply risk overcomplicating the message for an average saver. In the Netherlands the AFM presents the riskiness of products in a series of standardised pictures, such as that in Figure 5.4 below, display the extremity of the risk in a speedometer style along with a representative time series.

**Figure 5.4** Example of a graphical representation of risk in the Netherlands



Note: The two labels read 'low risk' and 'high risk' from left to right.

Source: AFM, available online at

<http://www.afm.nl/nl/professionals/regelgeving/informatieverstrekking/riscowijzer.aspx>.

These concerns have been already tackled in the USA via the Simplification Directive—see Box 5.5.

#### **Box 5.5** US Simplification Directive

In the USA, a Simplification Directive has been introduced.<sup>133</sup> This is a guideline that government agencies should follow in disclosing information to people in various forms, but it also seems relevant to the information that financial services providers might disclose. The Directive notes that:

well-designed disclosure policies attempt to convey information clearly and at the time when it is needed. People have limited time, attention, and resources for seeking out new information, and it is important to ensure that relevant information is salient and easy to find and to understand. There is a difference between making a merely technical disclosure—that is, making information available somewhere and in some form, regardless of its usefulness—and actually informing choices. Well-designed disclosure policies are preceded by a careful analysis of their likely effects.

The guidance on 'summary disclosure' appears particularly relevant to the current study. Here,

<sup>133</sup> Sunstein (2010), 'Disclosure and Simplification as Regulatory Tools', Memorandum for the Heads of Executive Departments and Agencies, Administrator Office of Information and Regulatory Affairs, June.

agencies should provide 'clear, salient information at or near the time that relevant decisions are made'. This is often 'at the point of purchase', in which 'agencies highlight the most relevant information in order to increase the likelihood that people will see it, understand it, and act in accordance with what they have learned.' Relevant principles outlined include the following:

- summary disclosure should generally be simple and specific, and should avoid undue detail or excessive complexity;
- summary disclosure should be accurate and in plain language;
- disclosed information should be properly placed and timed;
- summary disclosure through ratings or scales should be meaningful;
- to the extent feasible, agencies should test, in advance, the likely effects of summary disclosure, and should monitor the effects of such disclosure over time.

The guidance also notes that there is 'considerable evidence' that the choice of the default rule can have a 'significant effect on behaviour and outcomes', even when it is 'simple and essentially costless to opt in or opt out'. Here, 'a typical finding is that under an opt-in system, fewer people are likely to participate than in an opt-out system'.

Bateman et al. (2011) provide a study examining the effects of presenting information about retirement plans in different formats.<sup>134</sup> Overall, the format differences have a more predictive power over choice than the underlying risk profile of the product. Interestingly, susceptibility to presentation effects was reduced as the financial literacy of participants increased. In this study, participants were offered an 'allocation task', choosing between three profiles for a retirement savings scheme: 'safe' (bank account), 'risky' (growth assets) and 50:50 safe:risky. Participants were presented with different levels and presentations of risk with the same average return, including probabilities of return ranges as frequencies (eg, 9 out of 10 receive a specific level of return), graphs and comparisons to benchmarks. Several key conclusions about behaviour were made:

- consumers are risk-averse, but those with poor financial literacy are not responsive to risk;
- choice variation due to risk presentation is large compared with the investment risk change;
- presentation in terms of above or below a benchmark leads to more conservative choices, and is more sensitive to reframing than when risk is displayed as a probability of being within a certain range of returns;
- reframing benchmark presentations as losses or gains causes migration to the 50:50 account, rather than to a safer or more risky account as expected;
- graphs encourage riskier behaviour than text;
- as knowledge and financial ability increases, presentation effects become less important.

#### 5.4.1 Information available to savers in the joining phase

The evidence on interpretation of information in section 5.2 above shows that information should not be purely considered in a single quantity-based dimension.

In light of the empirical results discussed, an optimal scheme would be expected to strike a delicate balance between providing the right amount of information, without leading to information overload. It should also present the information in a sufficiently clear way for the consumers to be able to act upon—hence the necessity for a qualitative assessment of the format in which information is presented.

In general, the current state of research in this area could be further refined, although the debate has been started. Existing empirical research typically assesses the information that is available, but it is more difficult to assess whether that information is appropriate interpreted and used by consumers. A recent example of existing empirical research is provided by the detailed research study conducted by 2011 by EIOPA, which was focused on

<sup>134</sup> Bateman, H., Eckert, C., Geweke, J., Louviere, J., Stachell, S. and Thorp, S. (2011), 'Financial competence, risk presentation and retirement portfolio preferences', CEPAR Working Paper 2011/20.

the formats and contents of the information available to potential new joiners of the private pension schemes across the EU.<sup>135</sup>

#### 5.4.2 Information available to savers in the accumulation phase

Information provided to consumers during the accumulation stage is crucial to enable them to make educated decisions when it comes to changing their investment portfolio or providers. Typically the information is provided by means of periodic statements. The challenge of communicating information adequately in this phase has been highlighted in a recent OECD study.<sup>136</sup> The key finding is that the:

primary objectives of many pension statements are confused. Some pension providers appear to use statements largely to comply with regulatory disclosure requirements, while others use the statement to increase understanding and to prompt member action. The key difference here is that the former represents a passive document, while the latter is proactive: it aims to engage members and to encourage them to take important actions to improve their retirement income.<sup>137</sup>

In this context it becomes crucial to analyse the information provided in light of reporting of both backward- and forward-looking metrics, whereby the latter would be most helpful in enabling consumers to be proactive about their pension choices.

Information provided to savers in the accumulation phase was gathered via a survey of individual regulators. The survey collected data for a small selection of key metrics which were used to develop an overall 'score' of the range of formats of information. These metrics can be broadly split into measures representing known information (backward-looking metrics) and predictions (forward-looking metrics).<sup>138</sup>

**Known** information provided to customers refers to the past and present state of the pension assets, without the need for judgement or assumptions. The metrics identified in this category are:

- investment policy;
- portfolio composition;
- historical returns;
- total charges;
- a breakdown of charges by type.

**Predictions**, on the other hand, cover the forward-looking aspect of the pensions, featuring uncertainty about the future and incorporating a set of assumptions and judgements. They include various forecasts and risks, as well as estimations of probabilities and likelihoods. The relevant identified metrics are:

- expected level of retirement income;
- description of risk;
- expected replacement rate (versus final salary);
- quantification of risk;
- projected returns;

<sup>135</sup> EIOPA (2011), 'Report on Pre-Enrolment Information To Pension Plan Members', July. The study was conducted from the regulators' perspective, with no consumer input. An updated version of the segmentation discussed in this section would offer results based on homogenised cross-country comparison of consumer perceptions.

<sup>136</sup> Antolín, P. and Harrison, D. (2012), 'Annual DC Pension Statements and the Communications Challenge', OECD Working Papers on Finance, Insurance and Private Pensions, No. 19.

<sup>137</sup> Ibid, p. 5.

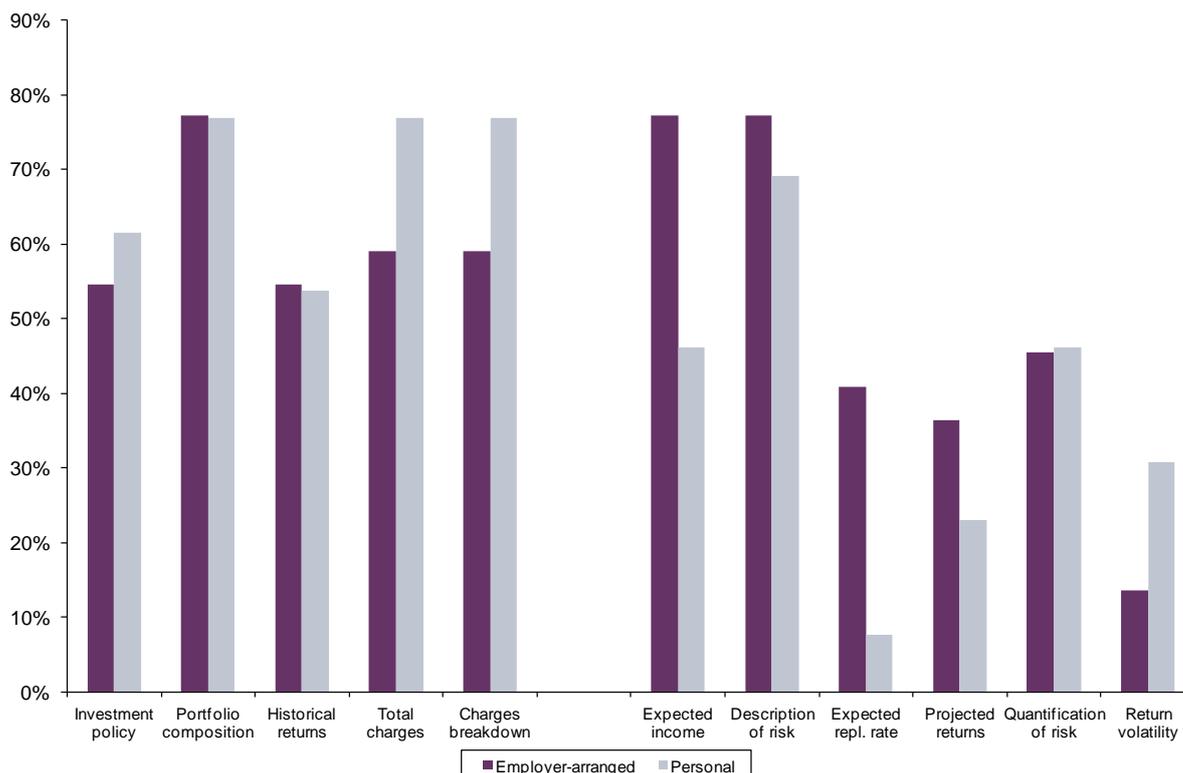
<sup>138</sup> In the absence of a comprehensive dataset, it has been necessary to consider a simpler approach—future research in this area could consider building up a measure similar to that presented for the joining phase.

- return volatility.

The regulators were asked to indicate, at a scheme-type level (ie, for all the individual schemes listed in Table 1.1 and covered in this study), which of the information listed above is available to consumers in the accumulation stage. The analysis of the received data proceeded as follows.

First, the responses from the national regulators were aggregated to investigate the likelihood that a particular piece of information is provided. Figure 5.7 shows the results of the segmentation. For example, two-thirds of responses indicated that investment policy information was provided to customers by both employer-arranged and personal schemes.

**Figure 5.7 Overview of information formats during the accumulation stage**



Note: Score expressed as a % of all schemes included across NL, SWE, DE, EST and GR. NL—excludes personal life insurance; DE data excludes Direktzusage, Unterstützungskasse and Rürup pensions. Source: Oxera analysis, based on regulators’ responses to an Oxera survey.

There are several important insights:

- the ‘known’ information is relatively well supplied, with most schemes providing information during the accumulation phase;
- this is in contrast to the provision of the ‘predictive’ data, which is often not supplied by either employer-arranged or personal pension schemes;
- personal schemes tend to provide less predictive information regarding the expected retirement income levels or returns, when compared with employer-arranged schemes.

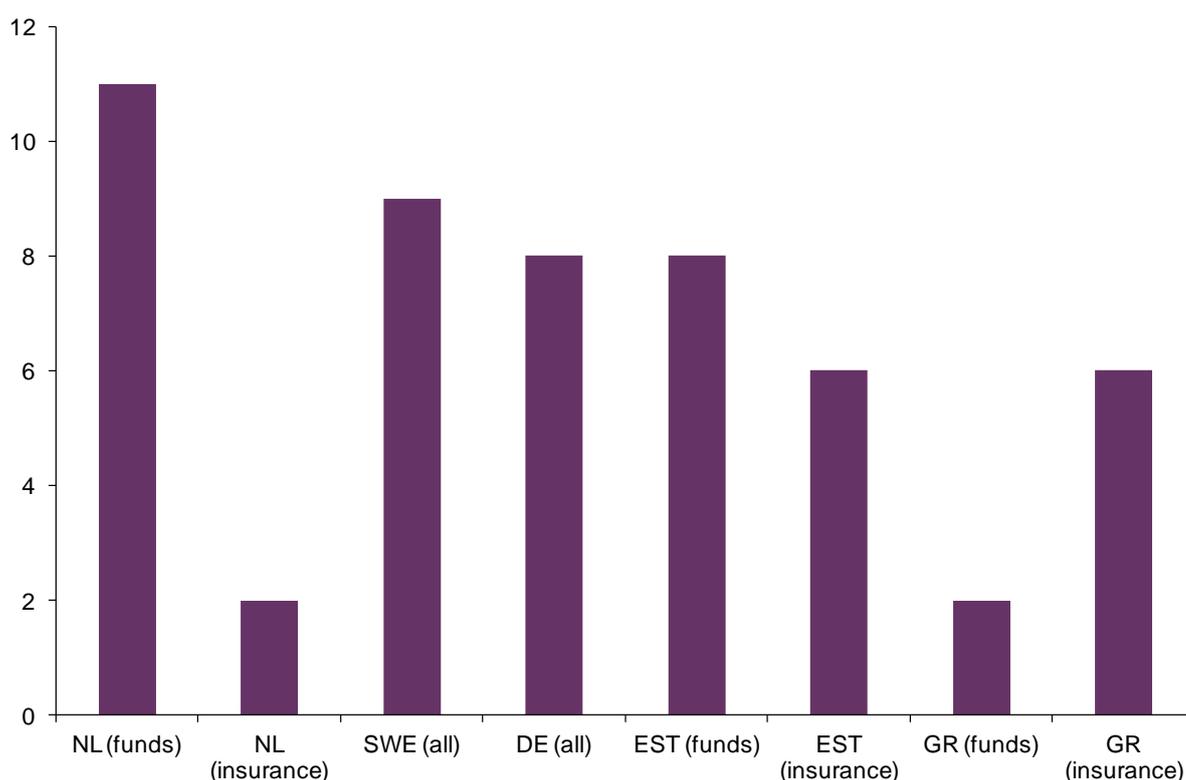
The implications of relatively lower coverage of the predictive statistics are important for the quality of customer choice. As shown in a recent study, when asked about the key information required in selecting stocks, investors considered forward-looking risk the most

important.<sup>139</sup> Regulations and guidance can offer strict prescriptions for projections and similar features,<sup>140</sup> and some regulators have been closely involved so far with the provision of the key information that would help consumers to make informed pension investment decisions.

### Comparison of information provided by country

Another question is whether the overall provision of information varies significantly across the investigated Member States. To answer this, a simple metric has been developed, as follows. Each of the features above is given one point, and the total number of features is averaged for a particular group of schemes at a country level. Hence, the maximum score is 11 (there are 11 metrics feeding into the total tabulation). Figure 5.8 shows the results of this simple segmentation.

**Figure 5.8 Overview of information format during the accumulation stage by country**



Note: The score is equal to the number of features identified for each scheme type, as an indicator of the provision of information. NL—excludes personal life insurance; DE data excludes Direktzusage, Unterstützungskasse and Rürup pensions.

Source: Oxera analysis, based on regulators' responses to an Oxera survey.

Several findings can be made on the basis of this information:

- there is considerable variation across the individual Member States in the amount of information provided to savers;
- the information tends to be better for fund- than insurance-based products, which presumably reflects the likelihood that fund-based schemes are DC in nature and therefore require consumers to make more decisions (necessitating more information);

<sup>139</sup> Monti, M., Martignon, L., Gigerenzer, G., Berg, N. (2009), 'The impact of simplicity on financial decision-making', in Taatgen, N., Van Rijn, H. (2009), *Proceedings of the 31st Annual Conference of the Cognitive Science Society*, Cognitive Science Society, pp. 1846–51.

<sup>140</sup> Antolín, P. and Harrison, D. (2012), 'Annual DC Pension Statements and the Communications Challenge', OECD Working Papers on Finance, Insurance and Private Pensions, No. 19.

- the Netherlands has the best information provision for fund-based products, and relatively poor information availability for insurance-based products;
- the remaining countries (Sweden, Germany, Estonia and Greece) exhibit broadly the same level of information provision.

### 5.4.3 Investment advice

Investment advice received by consumers at the various decision stages links closely with other types of information received, and may have a significant impact on consumer decisions. This section provides information about how investment advice is provided in the EU at present.

The data for conducting analysis in this area has proved to be unavailable from publicly available reports or studies, and the responses received through the questionnaire and interviews with the regulators lacked the required level of detail. Owing to the relative scarcity of data on investment advice specifically related to pension products, a wider concept of investment advice for retail financial services generally is employed in this section.

The limited evidence suggests that consumers typically receive one-off advice on investments related to pension funds, but not typically ongoing advice, unless they seek it out. However, the evidence is too limited to assess this with any certainty owing to the lack of information about how advisers interact with consumers on an ongoing basis. These areas require additional research.

#### Sources of advice

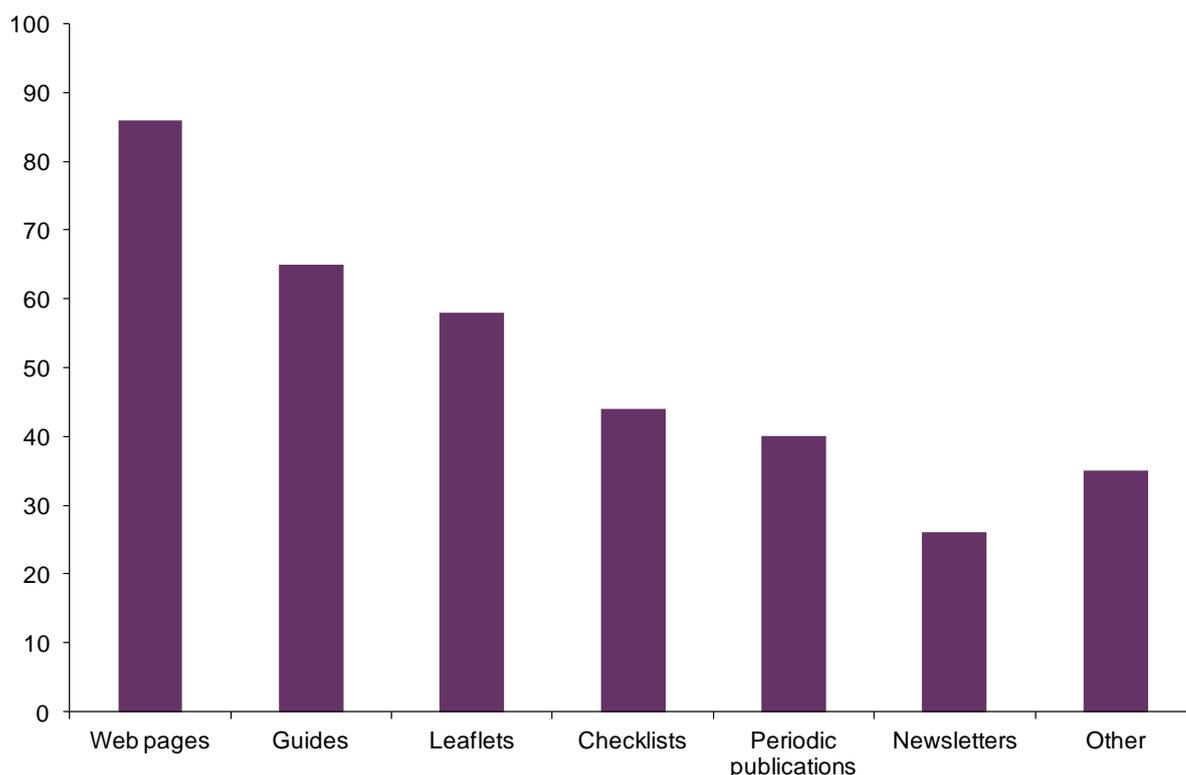
A consumer can seek investment advice from broadly five sources:

- regulators, financial supervision authorities and other government agencies;
- non-governmental organisations and associations;
- friends and family, colleagues, Internet sites and discussion groups;
- individual providers of financial products;
- independent financial advisers.

Given the wide range of possible sources for the provision of investment advice, it is difficult to specify the amount of advice that consumers actually have access to and use in making decisions. This section considers some analyses that has been conducted into the sources of advice for consumers.

Advice can be provided in a number of formats, and individual providers tend to use a range of vehicles to convey the information. Figure 5.9 below shows the range of formats used across the EU by non-profit organisations providing general financial advice.

**Figure 5.9 Formats of material produced by the general (non-profit) financial advice entities**



Note: Chart presents percentage of entities using the specified format.

Source: European Commission, Directorate General Health and Consumers (2011), 'Mapping of Non-profit Entities in the EU Providing General Financial Advice', July, p. 34.

Websites and traditional literature appear to be the most common format. The penetration of these materials is difficult to ascertain across the individual Member States. It is reported that, in the UK, when choosing an annuity, 7% used a UK government website, 5% used an online planner provided by The Pensions Advisory Service (TPAS) and 3% used a TPAS helpline.<sup>141</sup>

### **Demand for advice**

The prevalence of investment advice is high in selected Member States, with 72% of surveyed UK consumers receiving advice when choosing an annuity and 55% receiving advice from a professional financial adviser of some form.<sup>142</sup> Personal pensions also make up a significant portion (23%) of purchased retail investment services, with higher levels in Eastern Europe.<sup>143</sup>

### **Quality of advice**

The quality of financial advice is difficult to evaluate, although a study across the EU found that, in undercover visits, less than 10% of advisers followed all MIFID guidelines when approached by researchers posing as consumers aiming to buy a low-risk investment product.<sup>144</sup> Advisers spent little time assessing their customers and there was concern over

<sup>141</sup> Association of British Insurers (2010), 'Annuity Purchasing Behaviour', Paper 23, July.

<sup>142</sup> Ibid.

<sup>143</sup> Chater, N., Huck, S. and Inderst, R. (2010), 'Consumer Decision-Making in Retail Investment Services: A Behavioural Economics Perspective—Final Report', prepared for European Commission Directorate-General Health and Consumers, November.

<sup>144</sup> Synovate Ltd (2011), 'Consumer Market Study on Advice within the Area of Retail Investment Services – Final Report', prepared for European Commission, Directorate-General Health and Consumer Protection, p. 60.

due diligence in the recommendations given, although the more developed markets (eg, UK, France) had higher proportions adhering to guidelines.<sup>145</sup>

## 5.5 Saver representation

Another important question when considering a position of an individual consumer in the broader world of private pensions is their level of influence on the shape of the overall pension policy. One of the key mechanisms through which this could happen is when savers are represented at either individual pension providers or the relevant regulatory/supervisory authority. These two types of representation across the Member States are explored below. The information presented here is based on survey responses received from the regulators across the individual Member States.

### 5.5.1 Representation at the pension regulatory/supervisory authority

In general, savers were not represented at the pension regulators and supervisors across the investigated countries, with the notable exception of the Netherlands (see Table 5.3).

**Table 5.3 Tabulation of the different levels of representation of ‘savers’ on boards of regulatory bodies**

Country	Represented	Not represented
Netherlands	DNB	AMF
France	ACP	—
Sweden	—	Finansinspektionen
UK	FSA	tbc
Germany	—	BaFin
Austria	tbc	tbc
Italy	tbc	tbc
Poland	tbc	tbc
Slovakia	tbc	tbc
Estonia	—	Financial Supervision Authority
Romania	tbc	tbc
Hungary	—	PSZAF
Spain	tbc	tbc
Greece	—	Ministry of Employment and Social Protection, Bank of Greece

Source: Oxera analysis, based on responses from the individual national regulators/supervisors.

### 5.5.2 Representation on the boards of pension providing institutions

Table 5.4 below outlines the representation of savers on the boards of the individual pension providing institutions.

<sup>145</sup> Ibid, p. 60.

**Table 5.4 Tabulation of the different levels of representation of savers on boards of pension providing institutions**

Country	Employer-arranged		Personal	
	Represented	Not represented	Represented	Not represented
NL	Pension funds	Insurance-based products	–	Insurance-based products
FR	–	All products	–	All products
SWE	ITP	–	–	–
UK	Typically with traditional DB schemes	Typically with more recent DC schemes	–	–
DE	Pensionkasse and Pensionfonds (optional)	All other	–	All products
AT	–	–	–	–
ITA	–	–	–	–
PL	–	–	–	–
SLO	–	–	–	–
EST	n/a	n/a	–	All products
RO	n/a	n/a	–	–
HU	n/a	n/a	All products	–
SPA	–	–	–	–
GR	–	All products	–	All products

Note: <sup>1</sup> Represents information that could not be gathered during the course of the study.  
Source: Oxera analysis, based on responses from the individual national regulators/supervisors.

The conclusion, given the current state of research on this topic, is that the Netherlands offers most representation to savers, with a regular, four-yearly election process. There is also a range of schemes in other countries within the employer-arranged category that also admit members on their boards, for instance Pensionkasse and Pensionfonds in Germany (where their participation is optional), or the ITP in Sweden. Interestingly, there appears to be no such representation among the personal schemes in the reviewed countries.

## 5.6 Consumer behaviour

In the presence of all the factors explained below—namely, the wealth (or lack of) information available to them either through standard pension information channels or investment advice, or indeed via the specific distribution channels—consumers face a set of complex decisions. The choices, and hence decisions, vary significantly in the joining, accumulation and annuity selection phases. This section tackles these three phases in turn.

### 5.6.1 Saver behaviour in the joining phase

Saver behaviour in the joining phase has perhaps been the main focus of those designing private pension systems, in order to encourage participation. Governments, regulators and pension providers have developed various incentives to encourage or even force participation, many of which were assessed in section 2 of this report as features of the pension set-up. These include:

- mandatory requirements for participation in private pension systems, ranging from mandatory enrolment with or without an opt-out option to requirements for employers to offer pension schemes (see section 2.4.1);

- employer contributions to pension schemes, increasing the financial incentive for consumers to save (see section 2.4.2);
- minimum contribution levels (see section 2.4.11);
- protection of real value and payout guarantees (see section 2.4.4 and section 4.3);
- fiscal incentives to save, such as tax-deductible contributions (see section 2.4.5).

The lessons from behavioural economics, as summarised in section 5.2 above, suggest that, without certain incentives or encouragements, pension saving levels are unlikely to be sufficient. The assessment of pension system coverage (sections 2.4.7 to 2.4.11) shows the need for mandatory or semi-mandatory requirements for participation in order to achieve high levels of participation.

The information base for assessing the issues surrounding the joining phase is developed and presented in section 2. This section therefore focuses on the accumulation and pension annuity phases.

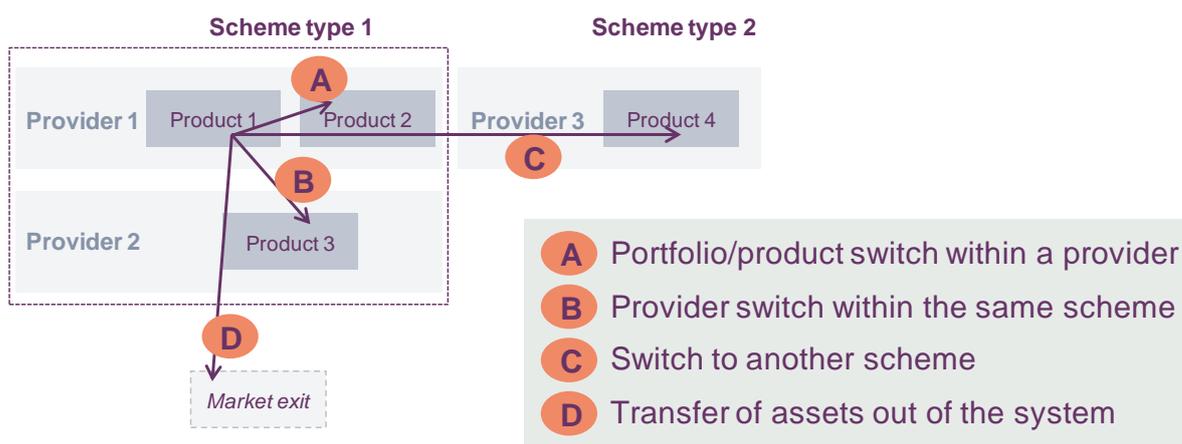
### 5.6.2 Saver behaviour in the accumulation phase

Conceptually, within the accumulation phase, a consumer faces the following decisions:

- whether to adjust the contribution level to their existing product(s);
- whether to maintain the current portfolio allocation or to change it (eg, closer to retirement it would make sense to switch to lower-risk assets);<sup>146</sup>
- whether to switch from their existing provider/product to another;
- whether to increase their pension savings by adding another product to their portfolio.

This sub-section focuses on the changes in products and providers. Figure 5.10 below outlines the generic options available to an individual in the context of private pensions. It is intended as a general overview of switching options; however, not all of these would apply in all the investigated Member States. For instance, in Slovakia there is just one scheme type among the employer-arranged schemes (pension funds provided by the pension asset management companies, PAMCs)—in this context, only a switch of products (equivalent to portfolio switch) or providers is permitted. Switching is also often not permitted cross-border, limiting consumers' pension portability options.

**Figure 5.10 Understanding the switching concepts intrinsic to private pensions: a stylised representation**



Source: Oxera analysis.

<sup>146</sup> Changing portfolios requires changing the exact product that is held if the existing product offers only one portfolio allocation.

There are four potential notions of switching in this context, representing differing levels of complexity in terms of the process, as well as traceability in officially published data:

- switching between products within the same provider (labelled ‘A’ in the chart)—for instance, switching between funds with different portfolio compositions;
- switching between providers offering the same scheme type (B)—for instance, transferring one’s occupational pension savings from one PAMC provider to another in Slovakia;
- switching between providers offering different scheme types (C)—for instance, moving assets between the two voluntary personal scheme types in Poland (IKE and IKZE);
- abandoning the current provider and taking out the assets from the private pensions market altogether (D).

### Ability to switch

The feasibility for consumers to engage in switching products and providers is defined by legislation in the individual Member States, and summarised in Table 5.5 below.

**Table 5.5 Comparison of the ability to switch products and providers by country**

Country	Employer-arranged	Personal
Netherlands	Feasible and encouraged (fund-based products); Contract-dependent (insurance products)	Feasible and encouraged (fund-based products); Contract-dependent (insurance products)
France	Limited switching between Art. 83 and Madelin Law contracts, and into PERP (personal)	Feasible
Sweden	Feasible for ITP and SAF—LO No cross-sector portability for sector-dependent plans (KAP-KL, PA—03, PA—91)	Feasible
UK	No switching for book reserve DB plans; Feasible for all other plans	Feasible
Germany	Allowed but for pension pots below a certain threshold size (Direktversicherung, Pensionskasse, Pensionsfonds); Limited feasibility for Unterstützungskasse and Direktzusage	Allowed for Riester an Rürup pensions; Contract-dependent (insurance products)
Italy	Feasible after two years of membership	Feasible after two years of membership
Poland	Only transfers out from PPE into IKE (personal)	OFE switching permitted once a quarter; Feasible switching between providers and funds (IKE and IKZE), free after one full year of membership
Slovakia	Free to switch funds within single provider, cost to switch provider with one year, free after one year of membership	No switching fees among funds of the same provider, exit fee of 5% NAV.
Estonia	n/a	Once a year (mandatory component); Only partial transfer allowed (supplementary component)
Romania	n/a	Feasible across providers and funds
Hungary	n/a	Feasible after six months of membership
Spain	Contract-dependent	Feasible across providers and funds
Greece	Feasible across providers and funds	Feasible across providers and funds

Source: Oxera analysis, based on responses from the individual national regulators/supervisors.

In most of the Member States examined here, consumers are able to switch freely between plans and providers in the case of fund-based products. In selected cases a minimum period is required with the new provider before a switch is permitted. Complexity often arises with

regard to insurance-based products, whereby individual schemes may impose additional restrictions on switching, such as termination fees—this would appear to be of particular importance in Germany and the Netherlands.

### Optimal switching levels

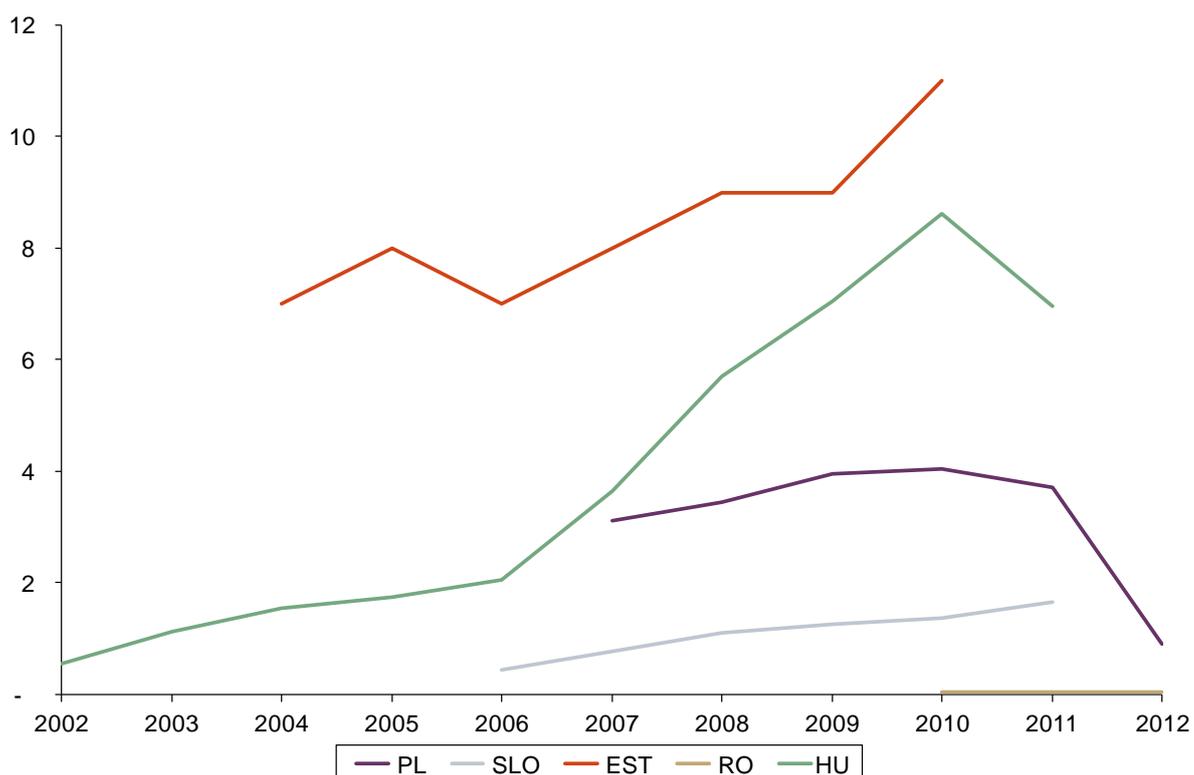
Ordinarily, a fully rational agent would consider switching only if the net gains expected from being a member of a new scheme exceed the transfer costs and the expected net gains of the old scheme. This would be a combination of the expected returns and the costs of the two schemes, as well as their asset allocations and the associated risk levels. Consumers may be expected to have certain expectations and preferences over all of these elements.

Owing to the high complexity and uncertainty intrinsic in pension products, especially related to the ability to project outcomes, consumers face a challenging decision often marred by poor quality of information. Future returns from investment products are highly uncertain, and in practice consumers may be able to make effective switching decisions only with regard to charges.<sup>147</sup> No studies on this level have been conducted so far, but as the data quality improves, it may be possible to conduct ex post analysis in the future.

### Observed levels of switching

In general, the best data on switching is available at the provider-switch level, but only within the countries in the Eastern European cluster (see section 2.2 for information about clusters of countries). The trends over the recent years are shown in Figure 5.11.

**Figure 5.11 Observed levels of switching providers and products across selected personal schemes (latest data, %)**



Note: PL—OFE only, 2012 estimate based on extrapolation of results from Q1 and Q2; SLO—PAMC only; EST—both compulsory and optional component; RO—compulsory scheme only; HU—personal scheme only (excludes the former occupational scheme).

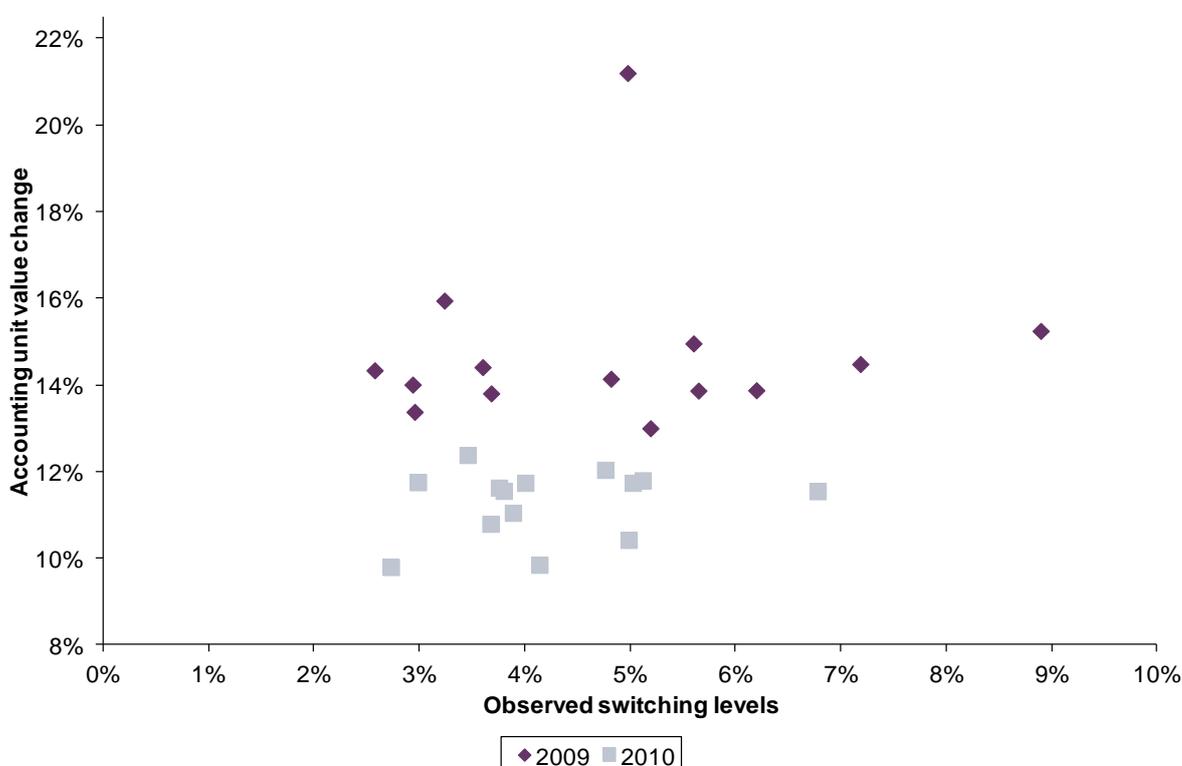
<sup>147</sup> For example, in the case of passive (tracker) funds, consumers would be expected to focus primarily on costs as returns are dictated purely by market trends. Even with actively managed funds, past strong performance in no way ensures future strong performance of the fund in terms of returns.

Source: Oxera analysis, based on data from KNF (PL), Jan Sebo's research (SLO), Estonian Ministry of Finance (EST), CSSPP (RO) and FSZAP (HU).

Generally, it should be noted that most countries exhibit increasing switching trends. The sharp decline in Poland in 2012 is related to the introduction of a ban on acquisitions;<sup>148</sup> a fall in Hungary would be expected to be correlated with the instability surrounding the former occupational scheme and the nationalisation of its assets in 2011.<sup>149</sup>

Certain trends become apparent when investigating the possible reasons for switching. One could for instance hypothesise that consumers tend to switch away from funds that are performing poorly, to ones that offer (or promise) higher levels of return—as such, this would imply a downward sloping relationship between returns and switching. Analysis of the switching pattern at provider/fund level within the Polish mandatory personal scheme (OFE) would indicate that switching did not occur because of the fund realising poor returns (Figure 5.12).<sup>150</sup>

**Figure 5.12 Switching levels observed among the members of Polish OFE funds versus fund returns (2009–10, %)**



Note: Observed switching levels measured as total members leaving a particular fund during a given year over the year-end fund member base. Accounting unit value change measured from December 31st of the preceding year to December 31st of the year in question.

Source: Oxera analysis of KNF data.

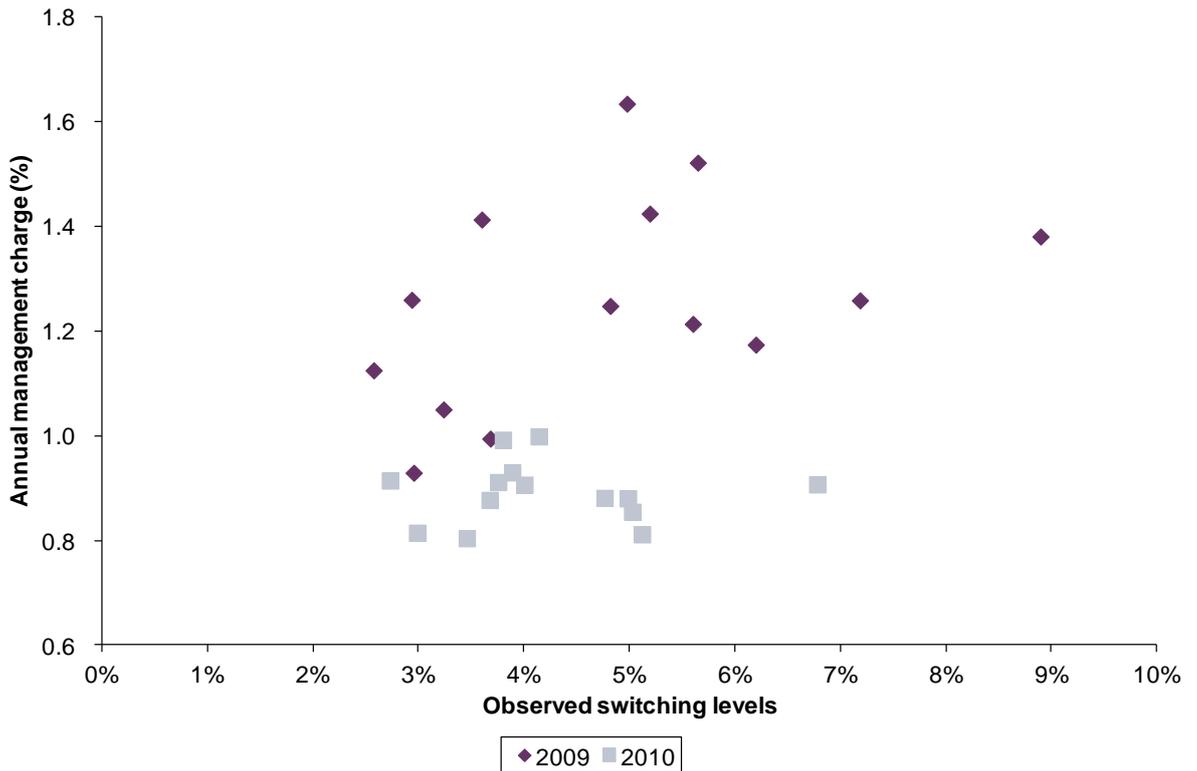
Given that the individual funds achieved broadly similar levels of return, one could expect consumers to pay closer attention to costs. However, Figure 5.13 shows that it would appear that high degree of switching was only very moderately linked to consumers switching away from the most costly funds in 2009, and practically not at all in 2010.

<sup>148</sup> For detail, see Section 3.7.

<sup>149</sup> See Section 2.4.7.

<sup>150</sup> Each provider offers only one fund within OFE, hence a fund switch is equivalent to a provider switch.

**Figure 5.13 Switching levels observed among the members of Polish OFE funds versus fund costs (2009–10, %)**



Note: Observed switching levels measured as total members leaving a particular fund during a given year over the year-end fund member base. Total AMC as a proportion of net assets measured based on reported fund and provider costs.

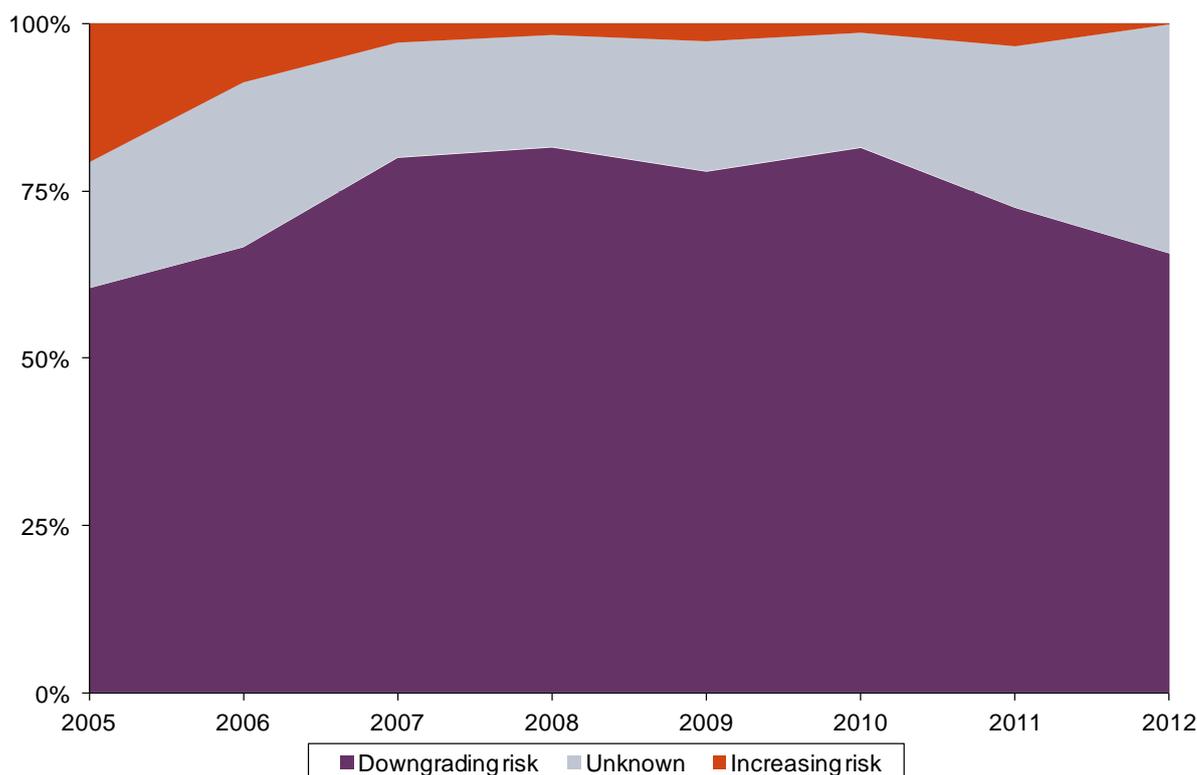
Source: Oxera analysis of KNF data.

The data for both 2009 and 2010 shows that OFE members did not tend to leave funds that achieved particularly poor levels of return, or ones with significantly high costs. If one was to plot best fit lines through this data, they would likely come fairly flat. This could be explained, once again, by the high levels of inefficient acquisition activity, subsequently banned across the OFE agents.<sup>151</sup>

Another key question is whether consumers have been switching away from risky products, especially since the beginning of the financial crisis. A case study from the Slovakian PAMC would confirm that they indeed tend to reduce their risk exposure, as shown in Figure 5.14 below.

<sup>151</sup> See section 2.7.1 for more details.

**Figure 5.14 Distribution of PAMC savers in Slovakia switching between funds based on the impact on their portfolio risk profile (2005–12, %)**



Note: 2012 data based on Q1 only. Based on the number of consumers switching away from a particular fund type.

Source: Oxera analysis of Slovakian data provided by Jan Sebo.

Slovakian PAMCs offer three types of funds in decreasing order of risk exposure: growth, balanced and conservative. It can be seen that since 2007, there has been an increase in the number of individuals switching to the lower-risk funds. This increase would appear too large to be explained by the simple savings lifestyling in operation in Slovakia—as a relatively young system, the size of the customer cohorts being automatically switched to lower-risk products is by definition relatively low.

### Switching and information access—the UK case study

There is very limited evidence of saver responses to changing information availability. One such study, conducted by Peter Andrews, concerned the UK market.<sup>152</sup> In mid-1990s a set of new regulations was introduced in the UK pension market, requiring disclosure of product-specific price information. At the time, there were two principal distribution channels for pension products:

- the tied sales channel (agents employed by insurance companies directly or on a tied agreement basis);
- the Independent Financial Adviser (IFA) network, which has no affiliation to any particular provider.

Increased information requirements were expected to increase the level of search undertaken by the consumers directly, and hence increase the acquisition costs of providers. The econometric study focused on the changes in the level of acquisition expenses in the tied channel relative to the level in the independent channel, separately for general insurance and pension products. The report finds that ‘expenses incurred on acquiring non-pensions

<sup>152</sup> Andrews, P. (2009), ‘Did life and pensions “disclosure” work as expected?’, FSA Occasional Paper 32, April.

business increased in the tied sales channel relative to the IFA sales channel. This was not the case for pensions business'. The result could be due to the fact that the IFAs used to shop around already on behalf of their customers, although the report also quotes the firms' reaction to pension misspelling as a potential reason.

Even though a study may appear dated, there are a number of conclusions that it draws from the analysis and which remain applicable even at present:

- changing disclosure requirements led to consumers shopping around more;
- consumers who shop around more are likely to increase the efficiency of their consumption;
- as a response to consumers shopping around, firms are likely to work to improve their product portfolio.

### 5.6.3 Behaviour at annuity selection phase

Annuity remains the most common payout method among all of the investigated Member States (see Section 2.4.3). Typically, various providers would offer differing rates based on their individual assumptions on mortality rates, market evolution etc. For an average consumer, these differences can be substantial. In the absence of data across all Member States, this section is a case study based on the UK market—additional research in other countries will be required.<sup>153</sup>

In the UK, the annuity market has been developing rapidly over the recent years. In the context of pensions specifically, there has been a notable change in the degree of switching away from the default provider. In mid-2006, 74% of all annuities were sold internally; by Q1 2012 this proportion has decreased to 53%.<sup>154</sup>

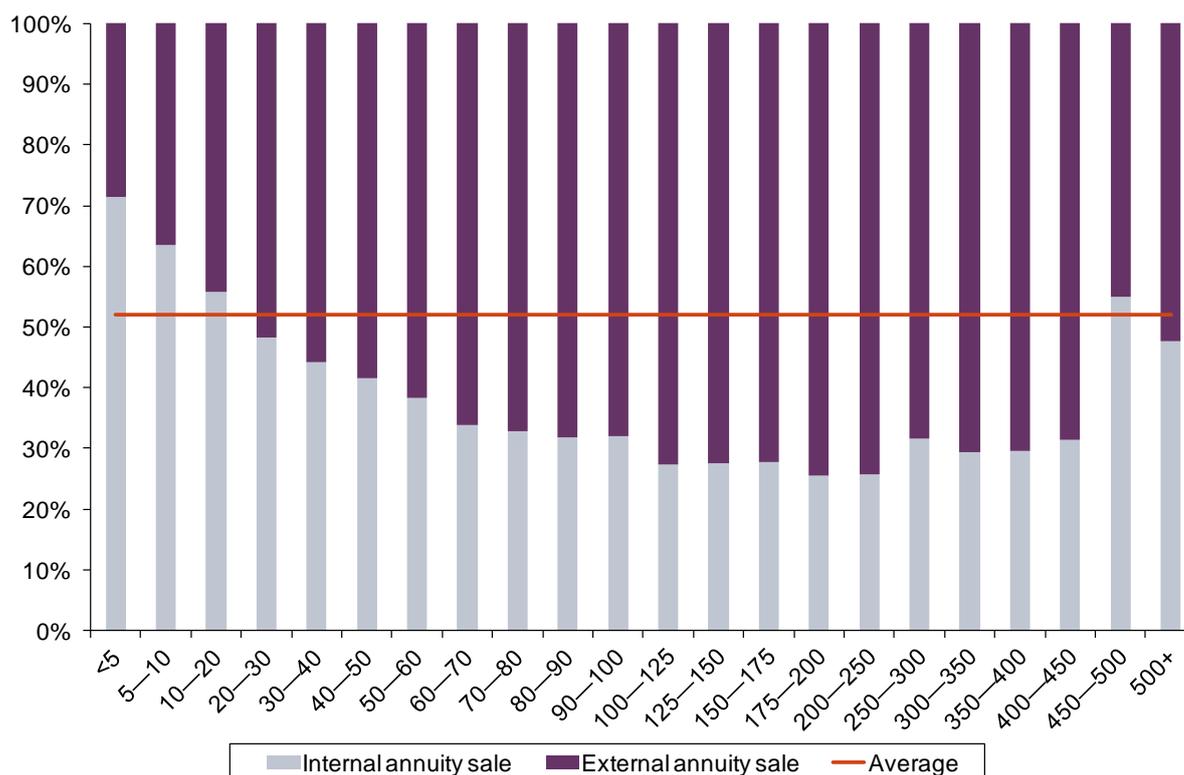
It appears to also be the case that the higher the total accumulated assets in the pension pot, consumers are more likely to shop around for a better annuity offer. Figure 5.15 shows that on average, consumers are as likely to remain with their existing pension provider for the annuity purchase; however, as the total accumulated assets exceed approximately £20k, they are more likely to switch to another provider, presumably offering them better rates.<sup>155</sup>

<sup>153</sup> It is understood that switching pension providers at the annuity stage is relatively limited in Germany due to pension schemes offering relatively favourable annuity rates to existing members based on historical annuity rates (which were higher due to bond yields being higher in the past).

<sup>154</sup> Based on information received during the course of the study from the ABI.

<sup>155</sup> Note that the overall average is approximately 50% due to the heavy skew of the savers towards the lowest pension pot size segments. Based on the data received during the course of the study from the ABI.

**Figure 5.15 Choice of internal or external annuity provider by total accumulated pot size (Q1 2012, £m)**



Note: Simple average of the number of policies, not asset value weighted.  
 Source: Oxera analysis of ABI data.

## 5.7 Conclusions on consumer information and behaviour

The analysis presented in this section is inspired largely on the recent theoretical literature on behavioural economics. While steps are already being taken to fully understand the nature of consumer behaviour in the presence of information of varying quality and quantity, it becomes clear that further research and policy responses are required in order to inform regulators about the optimal policies.

Similarly, additional investigation would be needed to further the understanding of consumer behaviour, in particular when faced with fluctuating market conditions brought about by the recent financial crisis. Consumers have over time become more engaged with their private pension saving, as shown by the increasing switching levels. However, the exact reasons as to why switching may occur are not clear. The example of the mandatory personal scheme in Poland (OFE) shows that it may often be driven by excess acquisition spend by the pension providers, rather than consumers making educated decisions with their long term spending in mind.

Any further research and policy redesign in this area would have to include a comprehensive assessment of information access across the complete pensions lifecycle, starting with the joining, throughout accumulation and concluding in the payout phase (see Figure 5.3). Only reliable, forward-looking metrics would enable consumers to make informed choices. The quality of this information is inherently more important than in the case of other financial products such as current accounts, due to the large potential financial impacts on the final level of retirement incomes. As this is increasingly becoming a key element of the ongoing economic and political debate, and coupled with the latest findings in the theoretical literature, the question of information is likely to remain key in the foreseeable future.

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This section lists all of the reports, studies and public sources used in producing the report, grouped under cross-country studies (covering multiple Member States) as well as country-specific literature.

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## A2 Research questions

Tables A2.1 and A2.2 set out the research questions that the FSUG asked Oxera to investigate in this study. The tables indicate which sections of the report provide the information for each of the research questions.

**Table A2.1 Research questions set out in the ITT: Level 1**

Code	Question	Section reference
<b>Group 1: Private pension system's set-up and coverage</b>		
1	What are the default options for 2nd and 3rd (where appropriate) pillars of private pension systems with regard to:	
a	entering the system (automatic enrolment, opt-out, opt-in, fully voluntary)?	2.4.1
b	contribution source (individual only/individual + employer) and base (salary, target level of accumulated capital, negotiated base, free)?	2.4.2
c	exposure to risks (defined contributions/defined benefits; fluctuation of real value of accumulated capital)?	2.4.4
2	What are the development trends and changes between 2nd and 3rd pillar of private pension systems with regard to:	
a	overall population coverage?	2.4.7
b	gender profile?	2.4.8
c	age profile?	2.4.9
d	income profile?	2.4.10
3	What is the market concentration and market power of pension products providers within the 2nd and 3rd pillars?	2.4.14
4	Are there direct and indirect fiscal incentives to encourage saving in the studied private pension schemes? What are these fiscal incentives?	2.4.5
5	What is the level of these fiscal incentives?	2.4.5
<b>Group 2: Adequacy</b>		
1	Is adequacy of the studied private pension systems pillars defined and if yes how is it defined?	4.8
2	Does the current regulation of the studied private pension systems impose mechanisms to ensure a certain level of adequacy such as protecting the real value (purchasing power) of pension savings/contributions? If yes, what are these mechanisms?	4.3–4.5, 4.8
<b>Group 3: Safety and investment risks</b>		
1	To what extent does the current legislation of the studied private pension schemes impose a mechanism to guarantee a minimum return?	4.4
2	Does the current legislation of the studied private pension schemes impose risk limitation tied to the age profile of the contributor? If yes, what are these limitations?	2.4.13
3	Does the current legislation of the studied private pension schemes impose risk limitation tied to the income profile of the contributor? If yes, what are these limitations?	2.4.13 (none)
4	What are the eligible assets, respectively financial instruments (defined by their nature in terms of risk), allowed by current legislation for 2nd and 3rd pillars of private pension systems?	2.4.13
5	Does the current legislation of the studied pension schemes require the creation of a pension protection fund? If yes, what are the key specifications of the fund?	4.6
6	What are the risks and to what extent are these risks covered by the existing pension protection funds?	4.3/4.6
7	Do savers have the possibility not to be completely locked in the product to limit the risk (by switching to another pension product or through another action, like early redemption for example)? If yes, what are the possibilities granted to the savers and what are the penalties imposed on the contributor?	5.6
8	What are the alternatives to avoid risk for savers?	4.3
9	To what extent has the current crisis encouraged more savers to favour safety over investment performance?	5.6

<b>Group 4: Cost-effectiveness and long-term performance</b>		
1	What is the total level of charges imposed on contributions (front-loaded charges)?	3.3
2	What is the total level of charges imposed on fund value (back-loaded charges)?	3.3
3	What is the total level of reduction in yield for representative pension scheme?	3.5
4	To what extent is the fee structure tied to performance?	3.3
5	Is there an effect of scale (size of private pension provider) on cost, and are scale economies already fully realised in the 2nd and 3rd pillar of private pension systems?	3.9
6	Which is the average percentage of investments in low, medium and high-risk products of the 2nd and 3rd pillars of the private pension system?	2.4.13/ 4.4
7	Is there an 'adequate' track record of the pension product's net return (going back at least 20 years, where available)?	4.2
8	Have ex post long-term net returns at the very least protected the purchasing power of pension savings invested in pension products? To what extent?	4.2–4.4
<b>Group 5: Participant information and governance</b>		
1	What key information on private pension products is available to potential contributors/savers in pre-contractual phase?	5.4.1
2	What key information on private pension products is available to savers during the term of a contract?	5.4.1
3	Is the information presented in an understandable way for an 'average' pension contributor?	5.4 but lack of data
4	Is the additional investment advice provided to savers adapted to their personal characteristics provided by pension funds?	1.4.3
5	Do representative pension schemes require provision of ongoing investment advice?	1.4.2
6	Are participants represented on the board or supervisory body? To what extent?	1.5
7	Do they elect their representatives? If yes, what is the election procedure?	1.5
8	Are the participants' savings/assets segregated in the financial provider's balance sheet or not?	2.3

Source: Oxera.

**Table A2.2 Research questions set out in the ITT: Level 2**

<b>Code</b>	<b>Question</b>	<b>Section reference</b>
<b>Group 1: Coverage</b>		
1	What is the market share of the dominant pension product?	2.4.7
2	What is the net asset value (NAV) managed by the dominant pension product?	2.4.12
3	What is the growth in market share of the dominant pension product?	2.4.7
4	What is the age profile of savers considering the dominant pension product?	2.4.9
5	What is the gender profile of savers considering the dominant pension product?	2.4.8
6	What is the income category of savers considering the dominant pension product?	2.4.10
<b>Group 2: Cost-effectiveness, performance and investment risk</b>		
1	What is the reduction in yield for the dominant pension product?	3.5
2	Is the cost-effectiveness of the dominant pension product affected by the investment horizon? If yes, to what extent?	3.5
3	What is the risk-grade profile of the dominant pension product?	4.5–4.7
4	What are the eligible assets, respectively financial instruments (defined by their nature in terms of risk) allowed by current legislation for the dominant pension product?	2.4.13
5	What is the average percentage of investments in low, medium and high-risk financial instruments of the dominant pension product?	2.4.13 but lack of data
6	What is the dominant pension product's overall (net historical and also risk adjusted) excess return <sup>4</sup> during the last 20 years (where available)?	4.2
7	What is the dominant pension product's overall volatility in NAV – Net Asset Value (or any proxy of the NAV for measuring the volatility of returns) during the last 20 years (where available)?	4.2–4.4
<b>Group 3: Saver behaviour</b>		
1	Have many savers changed (supposing they are allowed to) the dominant pension product when the NAV decreased compared to other pension product with lower/higher risk grade?	5.6
2	What is the risk profile of the average saver of the dominant pension product?	5.2 but lack of data
3	What is the inertia level for savers in the dominant pension product?	5.6
4	What is the savers' response to the performance changes of the dominant pension product?	5.6
5	Which factors are the most influential on savers' decision-making in the process of:	
a	– selection of the pension product?	5.2/5.6
b	– changing (switching) pension products during the saving period (accumulation phase)?	5.2/5.6

Source: Oxera.

## A3 Country tables

Tables A3.1 to A3.14 below provide an overview of the country information collected in the study. Additional quantitative data has been collected but is not presented here, as it will be included in a separate document.

The tables are set out as follows:

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**Table A3.1 Overview of the Dutch private pension system**

Category	Sector-wide pension funds	Company pension funds	Pension funds for liberal professions	Employer-arranged life insurance products	Banking and life insurance products
<b>Overall private pension set-up and coverage</b>					
<b>System set-up</b>					
Obligation to join	Quasi-mandatory	Quasi-mandatory	Voluntary	Voluntary	Voluntary
Functional classification	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Personal
Overall OECD classification	Mix of DB and collective DC schemes. Historically DB; more recently increase in collective DC schemes	Mix of DB and collective DC schemes. Historically DB; more recently increase in collective DC schemes	Mix of DB and collective DC schemes. Historically DB; more recently increase in collective DC schemes	DB (participants build up guaranteed benefits, pension payments as stipulated in the contract)	DB (participants build up guaranteed benefits, pension payments as stipulated in the contract)
Funding structure	Pension fund	Pension fund	Pension fund	Insurance contract	Insurance contract
<b>Top-level market data</b>					
Coverage (no. of members)	14.1m members	2.2m members	70k members;	Approximately 12% of market	No information
Total asset value	€26,000 per member; another source suggests >€400 billion in total	€71,000 per member; another source suggests >€150 billion in total	€221,000 per member; another source suggests €18 billion in total		
No. of providers	71 (CEM benchmark: 94)	730 (CEM benchmark: 528)	11 (CEM benchmark: 10)	At least 25 insurance companies offering group pension schemes. In total, there are 30,000 group insurance schemes in place	At least 25
No. of products	—	—	—	—	—
<b>Contributions and benefits</b>					
Contribution source	Employer and employee; typically 3/4 by employer and 1/4 by employee	Employer and employee; typically 3/4 by employer and 1/4 by employee	Contributions by employer (if applicable) and employee	Contributions by employer (if applicable) and employee	Private
Contribution base	Total taxable income	Total taxable income	Total taxable income	Total taxable income	Post- tax income; tax exemption only in the presence of a pension gap. Different conditions apply compared with employer-arranged pensions
Allowed level of contributions	The norm is that pension payments (Pillar I + Pillar II) cannot exceed 70% of income. Constraint on the proportion of income available for building up pension pensions				In terms of tax exemption constrained by 70% of last income. Dependent on the size of the pension gap
Most common level of contributions	Total contribution (employer plus employee) between 10% and 13% of income (eg, 8%+3%)				Contracted between employees and employers

Category	Sector-wide pension funds	Company pension funds	Pension funds for liberal professions	Employer-arranged life insurance products	Banking and life insurance products
Payout method	Life-long pensions paid out by pension fund; pension level determined by pension fund. Lump-sum payment only if the monthly amount is lower than a specified threshold (subject to discretion of board of pension fund)			Life-long pension annuities	Life-long/temporal annuities; pensions stemming from 'banksparen'. To be contracted
Payout conditions	Payout to commence at ages between 55 and 70. Pension levels depend on when payments commence. Some variability in payments can be agreed upon (temporal 20–30% increases/decreases)			As contracted with insurance company: obligation to purchase annuities (or to invest in 'banksparen')	As contracted with insurance company: obligation to purchase annuities (or to invest in 'banksparen')
Fiscal incentives on contributions	Pension contributions are tax-exempt up to a certain percentage of income. Payments to members are subject to income tax	Pension contributions are tax-exempt up to a certain percentage of income. Payments to members are subject to income tax	Pension contributions are tax-exempt up to a certain percentage of income. Payments to members are subject to income tax	Pension contributions are tax-exempt up to a certain percentage of income. Payments to members are subject to income tax.	Pension contributions are tax-exempt provided they are considered to be closing a pension gap. Payment is in the form of a pension that is subject to income tax
Fiscal incentives on benefits payout	–	–	–	–	–
Additional benefits granted	Disability and survivor benefits are commonly granted	Disability and survivor benefits are commonly granted	Disability and survivor benefits are commonly granted	To be negotiated between policyholders and insurers	To be negotiated between policyholders and insurers
<b>Joining and switching</b>					
Joining conditions and disclosure requirements	None	None	None	No information	No information
Switching feasibility and conditions	Possible (and encouraged) since 1994. Employees can stay with same pension fund when switching to employer in the same sector	Possible (and encouraged) since 1994. This takes the form of a 'waardeoverdracht', with the present value of built funds being transferred to the new pension fund. This transfer is not required	Possible (and encouraged) since 1994. This takes the form of a 'waardeoverdracht', with the present value of built funds being transferred to the new pension fund. This transfer is not required	Depends on contract; could be difficult. Joint negotiation may result in better switching options for participants	Depends on contract; could be difficult. Negotiation may result in better switching options for participants
Observed switching patterns	No information	No information	No information	No information	No information
<b>System history</b>					
Legislation	Pension Act 2007; Pensioenakkoord 2011	Pension Act 2007; Pensioenakkoord 2011	Pension Act 2007; Pensioenakkoord 2011	Wet Financieel Toezicht 2007, Pensioenakkoord 2011.	Wet Financieel Toezicht 2007
Important changes in the last 20 years	<p>Shift from 'eindloon' to 'middelloon' (final salary to average salary DB) in response to decrease in asset value due to.com crisis on stock exchanges.</p> <p>More recently, a trend has started from DB to collective DC schemes as a reaction to the recent economic crisis, and resulting very low interest rate. This trend is formalised by the Pensioenakkoord (2011) stipulating an increase in retirement age, indexation of state pensions, capping pension contributions at current levels, and incentivising employers to keep older employees until retirement.</p> <p>September 2012—The Government proposed to change the evaluation of liabilities will have a significant impact on the financial position of Pension Funds. More particularly, liabilities will be calculated using the Ultimate Forward Rate profoundly affecting the ability of pension funds to meet their obligations. There is a widely shared intention to maintain the collectivity of the system while ensuring long-term sustainability.</p> <p>Development from DB to collective DC. According to Aegon, DB accounted for 78% of collective pension schemes in 2010.</p>				<p>Pension annuities or bank saving products, with emphasis on the latter</p> <p>Slow development of PPIs (approximately 40 at present)</p>

Category	Sector-wide pension funds	Company pension funds	Pension funds for liberal professions	Employer-arranged life insurance products	Banking and life insurance products
Treatment changes (eg, age/gender/...)	Gender and age are not taken into account when setting pension or premium levels. The principle of collective actuarial equality was introduced in 2002 for DB, and in 2005 for DC. Employees are advised to pay pension contributions in the event of taking non-paid leave (eg, extension of marital leave)			Gender and age may be relevant factors when determining the pension level. Depends on contract between employer, employee and insurance company	Gender and age are relevant factors when determining the pension level
Future changes/plans	New 'pensioenakkoord' in 2011 shifts risk from employers to employees. Realisation that DB schemes become untenable on the longer terms led to capping of pension contributions, which will impact pensions that can be paid out.				AFM scrutinising 'lijfrentes' following complaints about excessive administration costs
<b>Other top-level questions</b>					
Most representative scheme	–				–
Regulator/supervisory authority	AFM provides guidance for the communication to participants in pension schemes (eg, yearly provision of key information). DNB controls the financial credentials of pension funds, and to some degree performance (eg, costs needed to realise returns).			AFM and DNB	AFM and DNB
Distribution channels					
Contribution dormancy	Unemployment or parental leave. Acceptance decided by board of pension fund	Mostly due to unemployment or parental leave. Board of pension funds may have the final say	Mostly due to unemployment or parental leave. Board of pension funds may have the final say	Mostly due to unemployment or parental leave. Board of pension funds may have the final say	As stipulated in the terms of contract
Empty accounts	Necessary to be working/have worked for the company	Necessary to be working/have worked for the company	Open to people working in a certain profession	Open to individuals allowed to participate in the group scheme	
Any additional information/details					For example, 'banksparen' and 'annuïteiten'
Coverage in OECD GPS (Yes/No)	Yes	Yes	Yes	No	No

Category	Sector-wide pension funds	Company pension funds	Pension funds for liberal professions	Employer-arranged life insurance products	Banking and life insurance products
<b>Risk and regulation</b>					
<b>Overall country risk profile</b>					
Global impacts/ characteristics	Significant reduction in value of invested assets substantially decreased the coverage ratio. A number of small pension funds no longer met the criterion of 105% coverage			Insurance companies fared better while balancing available money and payment obligations	Insurance companies fared better while balancing available money and payment obligations
Impact of the crisis on the pension market					
Country-specific impacts/characteristics	Likely to be limited when compared with other EU countries; sovereign bonds remain low-risk. Very low interest rates may result in decreased returns on investments				
<b>Minimum returns</b>					
Are they imposed?	No	No	No	Contracted returns	Contracted returns
Enforcement mechanism	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
Benchmark	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
<b>Minimum contributions</b>					
Are they imposed?					
If yes, what is the relevant level and base?					
<b>Risk limitation and avoidance</b>					
Mechanisms limiting risk linked to age profile	No link to age. Board of pension funds chooses a risk profile for its overall investments. Members can discuss profile through contacts with Board members.	No link to age. Board of pension funds chooses a risk profile for its overall investments. Members can discuss profile through contacts with Board members.	No link to age. Board of pension funds chooses a risk profile for its overall investments. Members can discuss profile through contacts with Board members.	Risk profile is chosen by the contracting party (board of scheme). Unlikely that participants can choose individual risk profile.	More discretion to determine the risk of investments based on preferences (eg, driven by age)
Mechanisms limiting risk linked to income profile	Not really; sometimes a pension above a certain value (2x median income) is less constrained	Not really; sometimes a pension above a certain value (2x median income) is less constrained	Not really; sometimes a pension above a certain value (2x median income) is less constrained		
Actions available to savers to limit risk exposure	Exposure to risk of portfolio returns since Pensioenakkoord (2011). Risk does not vary with age, which is considered a drawback	Exposure to risk of portfolio returns since Pensioenakkoord (2011). Risk does not vary with age, which is considered a drawback	Exposure to risk of portfolio returns since Pensioenakkoord (2011). Risk does not vary with age, which is considered a drawback		

Category	Sector-wide pension funds	Company pension funds	Pension funds for liberal professions	Employer-arranged life insurance products	Banking and life insurance products
Costs/penalties associated with the above measures	No information	No information	No information	No information	No information
<b>Portfolio allocation</b>					
Legal restrictions	'Prudent person' rule applies	'Prudent person' rule applies	'Prudent person' rule applies	'Prudent person' rule applies	'Prudent person' rule applies
Actual portfolio allocation	Stocks: 29%, fixed interest assets: 52%, housing: 15%, hedge fund: 2%, and private equity: 2%	Stocks: 29%, fixed interest assets: 52%, housing: 15%, hedge fund: 2%, and private equity: 2%	Stocks: 29%, fixed interest assets: 52%, housing: 15%, hedge fund: 2%, and private equity: 2%	No information	No information
Portfolio information and disclosure	Pension funds to inform members about the investment strategy (risks; 'idea') through annual report. Board of pension funds decides on one encompassing investment strategy assuming one risk profile.	Pension funds to inform members about the investment strategy (risks; 'idea') through annual report. Board of pension funds decides on one encompassing investment strategy assuming one risk profile.	Pension funds to inform members about the investment strategy (risks; 'idea') through annual report. Board of pension funds decides on one encompassing investment strategy assuming one risk profile.	Insurance companies have 'duty of care': they should make a real effort to provide consumers with correct and complete information	Insurance companies have 'duty of care': they should make a real effort to provide consumers with correct and complete information
<b>Asset management</b>					
Asset-managing institution					
Financial reporting requirements	Accountability requirements as set by AFM and DNB. AFM concerns the information provided to members of pension funds. DNB assesses the ability of pension funds to meet obligations (FTK).				
<b>Pension protection fund</b>					
Legislation	No	No	No	No	No
Coverage	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
Asset allocation	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
Benchmark for performance	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
<b>Other risk-management controls in place</b>					
IT systems					
Monitoring systems					
Internal audit					
Performance measurements					

Category	Sector-wide pension funds	Company pension funds	Pension funds for liberal professions	Employer-arranged life insurance products	Banking and life insurance products
External controls					
<b>Adequacy</b>					
Any existing definition	No	No	No	No	No
<b>Performance and costs</b>					
<b>Charges/fees</b>					
Contribution-based					
Returns-based					
Plan administration					
Fund management					
Transfer	Transfer at market value	Transfer at market value	Transfer at market value		
Joining					
Trading, settlement, post-trading					
Total	Number of studies on the costs incurred by pension funds: administrative costs, asset management costs, and transactional costs. The general conclusion is that costs of Dutch pension funds are low in comparison to other countries, but also that costs are heterogeneous. Evidence that scale matters: lower costs per member for larger pension funds.				
Any limits on total fees	Though there are no binding rules on the height of costs, the Federation of Dutch Pension Funds is trying to encourage reporting of costs. Variety of pension funds makes that no one-on-one comparisons can be made.				
<b>Performance</b>					
Yield level					
Net returns	No outperformance or performance persistence, indicating that returns on investments by pension funds are mediocre. Evidence of larger pension funds performing better than smaller ones	No outperformance or performance persistence, indicating that returns on investments by pension funds are mediocre. Evidence of larger pension funds performing better than smaller ones	No outperformance or performance persistence, indicating that returns on investments by pension funds are mediocre. Evidence of larger pension funds performing better than smaller ones		

Category	Sector-wide pension funds	Company pension funds	Pension funds for liberal professions	Employer-arranged life insurance products	Banking and life insurance products
Cost-effectiveness	Cost management and cost level low compared with other countries, although there are large differences between pension funds. See Bikker and De Dreu (2006).				
<b>Economies of scale</b>					
Any comments on the current scale of providers	Work by de Dreu et al.; also CEM benchmark. Economies of scale are present, but also wide divergence in costs between pension funds of equal size	Work by de Dreu et al.; also CEM benchmark. Economies of scale are present, but also wide divergence in costs between pension funds of equal size	Work by de Dreu et al.; also CEM benchmark. Economies of scale are present, but also wide divergence in costs between pension funds of equal size		
<b>Participant information and governance and saver behaviour</b>					
<b>Information availability</b>					
Pre-contractual information available to consumers	Employers have to inform their employees about the terms of contracts of all available options as soon as they start working (but there is no obligation to provide advice for which they could be held liable)	Employers have to inform their employees about the terms of contracts of all available options as soon as they start working (but there is no obligation to provide advice for which they could be held liable)	Pension fund to inform customers about the terms of contracts of all available options as soon as they opt in		Subject to requirements set by AFM for the provision of financial services
Contractual information available to consumers	Every year, participants are informed about their contributions, and how much pension has been built up through the UPO system. UPO stands for Uniform Pensioen Overzicht, and concerns the information provided to participants of pension funds on their accumulated pension rights.	Every year, participants are informed about their contributions, and how much pension has been built up through the UPO system. UPO stands for Uniform Pensioen Overzicht, and concerns the information provided to participants of pension funds on their accumulated pension rights	Every year, participants are informed about their contributions, and how much pension has been built up through the UPO system. UPO stands for Uniform Pensioen Overzicht, and concerns the information provided to participants of pension funds on their accumulated pension rights	UPO informs participants about their contributions, and how much pension has been built up	UPO informs participants about their contributions, and how much pension as been built up
<b>Investment advice</b>					

Category	Sector-wide pension funds	Company pension funds	Pension funds for liberal professions	Employer-arranged life insurance products	Banking and life insurance products
Overall description of investment advice system	Advice by pension funds or independent professionals. Employers are not allowed to advise employees on pension matters; they should establish contact between pension funds and employees			Advice by insurance companies subject to supervision by AFM	Advice by insurance companies subject to supervision by AFM
Specific or general	Pension funds are encouraged to provide members more than just an overview; they have a duty of care to help members make responsible, well-founded decisions	Pension funds are encouraged to provide members more than just an overview; they have a duty of care to help members make responsible, well-founded decisions	Pension funds are encouraged to provide members more than just an overview; they have a duty of care to help members make responsible, well-founded decisions		Norms have been established setting out best practice
One-off or ongoing	The 'leidraad' suggests that ongoing advice should be given. In practice, individuals often rely on independent advice purchased in the FS sector	The 'leidraad' suggests that ongoing advice should be given. In practice, individuals often rely on independent advice purchased in the FS sector	The 'leidraad' suggests that ongoing advice should be given. In practice, individuals often rely on independent advice purchased in the FS sector		
Who provides the advice					
<b>Saver representation</b>					
Board of pension schemes	Half of the board appointed by participating employers; the other half are employee representatives	Half of the board appointed by participating employers; the other half are employee representatives (possibly retired members)			
Regulator/supervisory authority					
Elections process for representatives	Typically, board members are appointed through employer and employee organisations	Typically, board members are appointed through employer and employee organisations	Board members appointed through the ranks of participating agents	Supervision by employers/employees	No elections
<b>Saver behaviour</b>					
Savers' response to product performance	There has been more activity in pension funds since consumers began to compare the yields of pension funds				

Source: Oxera research and analysis.

**Table A3.2 Overview of the French private pension system**

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	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
<b>Overall private pension set-up and coverage</b>								
<b>System set-up</b>								
Obligation to join	Voluntary for employer (then mandatory for individuals)	Voluntary	Voluntary for employer (then mandatory for individuals)	Voluntary for employer (then mandatory for individuals)	Voluntary	Voluntary	Voluntary	Voluntary
Functional classification	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Personal	Personal
Overall OECD classification	DB	DC	DC	DC	DC	DC	DC	DC
Funding structure	Via a pension insurance contract and/or book reserve if created before the pension reform of 2010	Via a pension insurance contract	Via a pension insurance contract	Via a pension insurance contract	Via a pension insurance contract	Investment funds 'blocked current accounts' inside the participant firm	Funded via provident institution, mutual or insurance company	Via an insurance contract
<b>Top-level market data</b>								
Coverage (no. of members)		Between 0.10m and 0.15m (2010)	Between 3m and 3.5m (2010)	0.17m (2010)	1.1m (2010)	0.7m (2010)	2.1m (2010)	8.6m (2010)
Total asset value					€20bn	€5bn	€40bn	~€1.4tr
No. of providers								
No. of products	16		44		61		50	
<b>Contributions and benefits</b>								
Contribution source	Employer	Employer and employee	Employer and employee	Employer and employee	Self-employed	Employer and employee	Individuals	Individuals

	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Contribution base	Gross salary	Gross salary	Gross salary or transfer from time-saving account (CET)	Gross salary	Gross salary	Gross annual salary and profit-sharing mechanisms  In addition, the PERCO can be fed through transfers from other saving schemes, such as another PERCO, PEE, PEI or a time-saving account (CET). In the absence of an alternative scheme, the amount corresponding to the holidays left at the end of the year can be used up to a maximum of five days	Net income but with income tax-deductibility of 20%	Net income
Allowed level of contributions	No limits	No limits	No limits, Employee can make additional contributions to the compulsory ones	No limits	Minimum level set when pension taken out. It can be revised every year in a ratio of 1:10	Apart from contributions coming from a time-saving account, the contribution cannot exceed 25% of the annual gross salary. For the employer, the limit is fixed at 16% of the social security annual ceiling	The insurer can set a minimum and a maximum payment	No limits
Most common level of contributions								

	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Payout method	Annuities	Annuities or lump sum	Annuities	Annuities or lump sum for the purchase of a main residence	Annuities	Annuities or lump sum	Annuities or lump sum up to 20%. The total value can be paid out as a lump sum in exceptional circumstances or for the purchase of a main residence	Annuities or lump sum
Payout conditions	Available only upon reaching retirement age  The annuity is only paid if the employee is still working for the company when they retire	Available only when reaching retirement age	Available only when reaching retirement age or in special circumstances	Available only when reaching retirement age	Available only when reaching retirement age	Available only when reaching retirement age	Available only when reaching retirement age	Available upon agreed date
Fiscal incentives on contributions	Total contribution deductible from company tax  Tax of 12% on contributions to an insurance company  Tax increases to 24% for book reserves (only for internal management created before the pension reform of 2010)	Taxed as income	Compulsory contributions of the employee are tax-exempt below 8% of total income or 8x the social security ceiling. Voluntary additional contributions are deductible from the taxable income in the same limits as the PERP	Deductible from the taxable income in the same limits as the PERP	Deductible from taxable commercial and industrial income (BIC) or non-commercial income (BNC) with a limit of 10% of the total income or 8x the social security ceiling (Pass) plus 15% of the income between one and 8x the Pass	Employee' contributions are taxed as income, while optional employer contributions are exempt from income tax, although the employer has to pay the CSG and CRDS	Deductible from taxable income, with a limit of 10% of the income or 8x the social security ceiling of the previous year (in 2012, the ceiling was €36,372)	None

	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Fiscal incentives on benefits payout	<p>Taxable as income after a relief of 10%.</p> <p>A contribution whose level is linked to the level of benefits is due by the employee. It is deductible from taxable income.</p>	Accumulated capital is exempt from income tax; returns are taxable	Taxable as income after a relief of 10%	Taxable as income	Taxable as income	Taxable as income for a portion of the benefits which depends on the retirement age (eg, if the person is under statutory retirement age of 60, they will receive 50%)	Taxable as income	There are three possibilities with different fiscal treatment; total or partial lump sum, annuities, or death payment.

	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Fiscal incentives on benefits payout (cont'd)	The employer also has to pay a contribution of 16% on benefits and an extra 30% on benefits that exceed 8x the Social Security ceiling.							<p><i>Lump-sum:</i> choice between including benefits in the taxable income or doing a one time payment (the rate of such a payment lies between 7.5-35% and decrease with the age of the contract)</p> <p><i>Annuities:</i> included in the taxable income in a proportion which depends on the age of the participant at the time of the first payment (30-70%)</p> <p><i>Death:</i> depends on whether the participant dies before or after 70 years. Before: higher threshold for exemption (€152,500) and taxed 20% above this threshold. After: low threshold (€30,500) and only contribution part taxed at the succession rate</p>
Additional benefits granted								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
<b>Joining and switching</b>								
Joining conditions and disclosure requirements								
Switching feasibility and conditions	Can be transferred to another 'Article 83', Madelin contract or PERP							
Observed switching patterns								
<b>System history</b>								
Legislation	Article 39 of French General Tax Code	Article 82 of French General Tax Code	Article 83 of French General Tax Code	Law of August 21st 2003 on pension reform	Law of August 21st 2003 on pension reform	Law of August 21st 2003 on pension reform	Law of August 21st 2003 on pension reform	Article L132-5

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
I m p o r t a n t  c h a n g e s  i n  t h e  l a s t  2 0  y e a r s								Several taxation changes

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
T r e a t m e n t  c h a n g e s  ( e g ,  a g e / g e n d e r )								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
F u t u r e  c h a n g e s / p l a n s								
Other top-level questions								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
M o s t  r e p r e s e n t a t i v e  s c h e m e			Yes				Yes	

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
R e g u l a t o r / s u p e r v i s o r y  a u t h o r i t y	Autorité de Contrôle Prudentiel (ACP)	Autorité de Contrôle Prudentiel (ACP)	Autorité de Contrôle Prudentiel (ACP)	Autorité de Contrôle Prudentiel (ACP)	Autorité de Contrôle Prudentiel (ACP)			

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
D i s t r i b u t i o n  c h a n n e l s								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
C o n t r i b u t i o n  d o r m a n c y								
E m p t y  a c c o u n t s								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Annual individual information / details	When a company proposes an 'Article 39' scheme to some of its workers, a PERCO or 'Article 39' scheme has to be introduced as well for all employees						<p>Prefon: association responsible for civil service pension. Asset management is given to a panel of large insurance companies</p> <p>Corem: mutual pension fund offering mainly Article L-441 products</p>	

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
C o v e r a g e  i n  O E C D  G P S  ( Y e s / N o )	No	Yes	Yes	Yes	Yes	Yes	Yes	No

**Risk and regulation**

**Overall country risk profile**

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Global impacts / characteristics								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Impact of the crisis on the pension market	Horizon management (asset life-styling) allowed to smooth the impact to some extent							

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Country-specific impacts / characteristics								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
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Yes

Yes for the euro fund; no for the account units

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
E n f o r c e m e n t  m e c h a n i s m								
B e n c h m a r k						Investments in securities cannot yield less than government bonds	The minimum rate of returns or 'Taux Minimum Garanti' cannot be below 60% of government bonds or above 85% of the average of the fund's rate of returns of the last two years	

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
<b>Minimum contributions</b>								
Are they imposed?	Up to the insurance company to fix a minimum	Up to the insurance company to fix a minimum	Up to the insurance company to fix a minimum	Up to the insurance company to fix a minimum	Up to the insurance company to fix a minimum	Up to the insurance company to fix a minimum	Up to the insurance company to fix a minimum	Up to the insurance company to fix a minimum
If yes, what is the relevant level and base?						€60/month		
<b>Risk limitation and avoidance</b>								
Mechanisms limiting risk linked to age profile	Same as Article 83	Same as Article 83	<i>Horizon management: the closer the retirement, the larger the proportion invested in bonds and euro funds for which capital is guaranteed</i>	Same as Article 83	None			
Mechanisms limiting risk linked to income profile								
Actions available to savers to limit risk exposure	The pension contract in a euro fund guarantees the capital invested, as in a life insurance. Moreover, capital gains are preserved periodically The contract in a multi-support fund guarantees only the portion invested by the euro fund, while account units managed by an investment fund are subject to systematic risk. In general, account units are categorised by several risk profiles							
Costs/penalties associated								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
<b>Portfolio allocation</b>								
Legal restrictions						<p>Maximum of 10% investment in any one company</p> <p>At least three collective investment funds with different portfolios</p> <p>Three options are available for the investment of participants' contributions: mutual fund units dedicated to a corporate; diversified mutual fund units; or open-ended investment company with variable capital (SICAV)</p>		
Actual portfolio allocation								
Portfolio information and disclosure								
<b>Asset management</b>								
Asset-managing institution	Insurance company	Insurance company	Insurance company	Insurance company	Insurance company	Employer	Insurance company	Insurance company
Financial reporting requirements								
<b>Pension protection fund</b>								
Legislation	Does not exist	Does not exist	Does not exist	Does not exist	Does not exist	Does not exist	Does not exist	Does not exist
Coverage								
Asset allocation								
Benchmark for performance								
<b>Other risk-management controls in place</b>								
IT systems								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Monitoring systems	Same as Article 83	Same as Article 83	ACP's mission is to ensure sure that insurance companies comply with their obligations at all times	Same as Article 83	Same as Article 83		Same as Article 83	
Internal audit								
Performance measurements								
External controls	Same as Article 83	Same as Article 83	The ACP can investigate an insurance company when external and internal elements raise concerns about the solvability and well-functioning of the company	Same as Article 83	Same as Article 83		Same as Article 83	
<b>Adequacy</b>								
Any existing definition								
<b>Performance and costs</b>								
<b>Charges/fees</b>								
Contribution-based	Between 3% and 6.5%		Between 2% and 6%		Between 0% and 5%		Between 0% and 5%	
Returns-based								
Plan administration								
Fund management	Between 0% and 0.96% for euros fund and 0.7% and 0.96% for account units		Between 0% and 0.96% for euros fund and 0.45% and 1% for account units		Between 0.5% and 1% for euros fund		Between 0.45% and 1% for euros fund	Between 0.5 and 1%
Transfer							Can be included in the pension insurance plan. Modalities of determination and payments have to be set in advance.	
Joining								

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
Trading, settlement, post-trading								
Total								
Any limits on total fees in place								
<b>Performance</b>								
Yield level	In 2011, the yield level ranged between 2.07% and 3.66%, depending on the contract		In 2011, the yield level ranged between 2.17% and 3.47%, depending on the contract		In 2010, the yield level ranged between -2.75% and 3.8%, depending on the contract		In 2010, the yield level ranged between -20.75% and 5%, depending on the contract	Usually around 3% in recent years
Net returns								
Cost-effectiveness								
<b>Economies of scale</b>								
Any comments								
<b>Participant information and governance and saver behaviour</b>								
<b>Information availability</b>								
Pre-contractual information								
Contractual information available to consumers							Information on fees must be provided to the participant every year, together with an estimation of the annuity that will be paid and the conditions of the contract transfer	

Category	Contracts under Article 39	Contracts under Article 82	Contracts under Article 83	PERE (Plan d'épargne retraite d'entreprise)	Madelin Law	PERCO (Plan d'épargne retraite collective)	PERP (Plan d'épargne retraite populaire)	Other individual life insurance products
<b>Investment advice</b>								
Overall description of investment advice system							Most insurance companies offer a personal adviser service, which profiles each individual to direct them towards the best investment product for that individual	
Specific or general							Specific	
One-off or ongoing							Ongoing	
Who provides the advice								
<b>Saver representation</b>								
Board of pension schemes								
Regulator/ supervisory authority								
Elections process for representatives								
<b>Saver behaviour</b>								
Savers' response to product performance								

Source: Oxera research and analysis.

**Table A3.3 Overview of the Swedish private pension system**

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
<b>Overall private pension set-up and coverage</b>						
<b>System set-up</b>						
Obligation to join	Quasi-mandatory (by collective agreement; voluntary for some executives; white collar workers)	Quasi-mandatory (blue collar workers)	Quasi-mandatory (municipality employees)	Quasi-mandatory (state employees)	Mandatory	Voluntary
Functional classification	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Personal	Personal
Overall OECD classification	DC for employees born after 1979, DB for those born before that year	DC	DB or DC	DB and DC combined (increasingly DC)	DC	DC
Funding structure	Book reserve, insurance contract or pension fund	Insurance contract		Insurance contract	Fund-based	Fund-based
<b>Top-level market data</b>						
Coverage (no. of members)	1.3m (2010)	1.8m (2008)		258,000 active, 204,000 retired (2009)		1.5m (2008)
Total assets available			SEK11.8 billion in 2011 (55% traditional, 45% unit-linked)		SEK 393bn (2011)	SEK60.65 billion

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
No. of providers	8 (2012)	11 (2012)	16 (2012)	19 (2012)	Approximately 100	
No. of products					Approximately 770	
<b>Contributions and benefits</b>						
Contribution source	Employer	Employer	Employer	Employer	Individual	Private contribution
Contribution base	Gross salary	Gross salary	Gross salary	Gross salary	Gross salary	Taxed income
Allowed level of contributions	DC: 4.5% of earnings under 7.5 income base amount (IBA); 30% for earnings above DB: differs significantly between individual employees, depending on factors such as age, salary level and amount of accrued rights	4.5% of earnings under 7.5 IBA; 30% for earnings above	4–4.5% up to 30 IBA	Differs significantly between individual employees, depending on factors such as age, salary level and amount of accrued rights, but 2.3% of salary is the contribution towards an old-age pension from the age of 23	2.5%	No restriction
Most common level of contributions	On average 12.5% of pensionable earnings				2.5% (not adjustable)	
Payout method	Life annuity or pension entitlement of at least five years  DB: 10% of final salary up to 7.5 IBA + 65% for 7.5–20 IBA + 32.5% for 20–30 IBA	Life annuity or pension entitlement of at least five years	Life annuity or pension entitlement of at least five years  DB: 55% of pension base for 7.5–20 IBA + 37.5% for 20–30 IBA	Life annuity (limited transformation into shorter entitlement); 0–9.5% up to 7.5 IBA + 32.4–64.85% for 7.5–20 IBA + 30–60% for 20–30 IBA	Life annuity	Programmed withdrawal
Payout conditions	Minimum age 65 (early retirement from 55 years; full entitlement after 30 years, every month less reduces entitlement by 1/360)	Minimum age 65 (early retirement from 55 years; full entitlement after 30 years, every month less reduces entitlement by 1/360)	Minimum age 65 (early retirement from 55 years; full entitlement after 30 years, every month less reduces entitlement by 1/360)	Minimum age 65 (early retirement from 61 years; full entitlement after 30 years, every month less reduces entitlement by 1/360)	Minimum age 65	Minimum age 55, minimum duration of withdrawal five years
Fiscal incentives on contributions	Employer payments for both public pensions and Employer-arranged pensions are tax-deductible to the business	Employer payments for both public pensions and Employer-arranged pensions are tax-deductible to the business	Employer payments for both public pensions and Employer-arranged pensions are tax-deductible to the business	Employer payments for both public pensions and Employer-arranged pensions are tax-deductible to the business	Tax-exempt (but maximum exemption SEK12,000/year since 2008, applying to all)	Tax-exempt (but maximum exemption SEK12,000/year since 2008, applying to all)
Fiscal incentives on benefits payout	None	None	None	None	None	None
Additional benefits granted	Yes	Yes	Yes	Yes	Yes	Yes

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
<b>Joining and switching</b>						
Joining conditions and disclosure requirements	Salaried employees, minimum age 25	Wage earners, minimum age 25	Local government and county council employees from age 21	Central government employees from age 23		
Switching feasibility and conditions	Assets are not transferred when changing employer, while staying a member of the same plan. Pensions may be paid from different sources during retirement	Members may change insurance company once a year even if not changing employer. Assets invested before 2004 do not have to be transferred when changing insurance company and members can have assets with several companies. Pensions may be paid from different sources during retirement	Full portability of rights when a member changes employer but stays in the same category of employment. No portability if employees of the new employer are not covered by the same plan. In this case rights are preserved and indexed until retirement age	Full portability of rights when a member changes employer but stays in the same category of employment. No portability if employees of the new employer are not covered by the same plan. In this case rights are preserved and indexed until retirement age	Ability to switch fund or provider, via the online portal	Switching feasible for a fee
Observed switching patterns						
<b>System history</b>						
Legislation	Established in 1960, reform in 2006	1996 'SAF (the Swedish Employers' Association) and LO (the Swedish Trade Union Confederation) decide to replace the DB STP plan with the DC SAF-LO contractual pension plan	KAP-KL established in 2006 based on SKP founded in 1922 (the Pension Fund of the Swedish Municipal Workers)	Introduced in 2003		Introduced in 1994
Important changes in the last 20 years	Option of withdrawal as pension entitlement and DC scheme introduced in 2007	Employer contributions increased from 2007 to 2012; eligibility raised from age 21 to 25 in 2008; system change in the 1990s (still in roll-out phase)	New plan replaced older plans in 2006			
Treatment changes (eg, age/gender/...)						
Future changes/plans						
<b>Other top-level questions</b>						
Most representative scheme					The government-run default fund (AP7)	

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
Regulator/ supervisory authority	Finansinspektionen; if liabilities are accounted for internally through the establishment of book reserves, the employer must register with the Pension Registration Institute (PRI); pension funds supervised by local authorities	Finansinspektionen	Finansinspektionen	Finansinspektionen	Finansinspektionen	
Distribution channels						
Contribution dormancy						
Empty accounts						
Any additional information/details	Employees have to choose between traditional and unit-linked insurance; at least 50% with traditional insurance					
Coverage in OECD GPS (Yes/No)	Yes	Yes	No	No	Yes	Yes
<b>Risk and regulation</b>						
<b>Overall country risk profile</b>						
Global impacts/ characteristics						
Impact of the crisis						
Country-specific impacts/characteristics						
<b>Minimum returns</b>						
Are they imposed?	Some products with guarantees, otherwise typically unit-linked insurance	Some products with guarantees, otherwise typically unit-linked insurance	AMF policy below	Some products with guarantees, otherwise typically unit-linked insurance	Only for the default, government-run fund	No
Enforcement mechanism			AMF policy below			

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
Benchmark			AMF: at the normal retirement age (65 years) to ensure that future payments of guaranteed pension amount are at least equal to the sum of paid net premiums at that time Fora's intermediation costs are 1.5% in excess of insurance fees		Returns are guaranteed to be as high as the average returns of all other funds	
<b>Minimum contributions</b>						
Are they imposed?	Yes	Yes	Yes	Yes	Not applicable	SEK400 per month
If yes, what is the relevant level and base?	4.5% of the basis <7.5 IBA 30% of the basis > 7.5 IBA (ITP1)	Employer contributions are 4.5% for earnings under 7.5 income base amount (IBA), and 30% for earnings over 7.5 IBA. Members are eligible to contribute from the age of 25	3.5–4.5% of wage (in 2010, 4.5% for everyone)	2.5% of wage		
<b>Risk limitation and avoidance</b>						
Mechanisms limiting risk linked to age profile	No	No	Nordea Pension Portfolio: a lower risk for older customers. Pension portfolio consists of three underlying portfolios that are invested in funds: equities portfolio; diversification portfolio; and value-hedging portfolio. Up to the age of 61 all the capital is invested in the equity portfolio	No (DB percentage depends on age but no link to risk)	No	
Mechanisms limiting risk linked to income profile	No	No	No	No	No	No
Actions available to savers to limit risk exposure	Early redemption is an option on selected products—new legislation is in progress. Lifestyling in place on selected products.	Early redemption is an option on selected products—new legislation is in progress. Lifestyling in place on selected products.	Early redemption is an option on selected products—new legislation is in progress. Lifestyling in place on selected products.	Early redemption is an option on selected products—new legislation is in progress. Lifestyling in place on selected products.	Early redemption is an option on selected products—new legislation is in progress. Lifestyling in place on selected products.	Early redemption is an option on selected products—new legislation is in progress. Lifestyling in place on selected products.

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
Costs/penalties associated with the above measures						
<b>Portfolio allocation</b>						
Legal restrictions	No primary source found. SPP states that its policy is in line with the Insurance Business Act: bonds 30–100%; equity 0–60%; real estate 0–20%; other 0–20%; currency risk 0–30%	No legal restrictions found	No overarching legal restrictions found. Municipality level restrictions ('Linkjoping'): bonds: 50–70%; Swedish equity: 20–40%; foreign equity: 0%–20%	No legal restrictions found	No legal restrictions found	No legal restrictions found
Actual portfolio allocation	30 %bonds; 60 % equity; 10 % real estate	Equity 48%; 45% bonds; 7% real estate			Default fund (AP7) invests 82% in equity, 10% in private equity/hedge funds, and 8% in bonds	
Portfolio information and disclosure					Via the online platform	
<b>Asset management</b>						
Asset-managing institution		Plan assets are managed by the insurance company chosen by the member	Plan assets are managed by the insurance company chosen by the member. The choice is organised by 'Pensionsvalet', an Employer-arranged pension institution, and individuals who do not make choice are placed with KPA, an Employer-arranged pension institution within the local government sector	Individual plan assets are managed by the insurance company chosen by the member. The choice is organised by SPV, an Employer-arranged pension institution, and individuals who do not make a choice are placed with 'Kåpan Pensioner försäkringförening', a mutual society for state employees		Institutions with IPS authorisation (banks, mutual funds, insurances); majority is invested into investment funds
Financial reporting requirements	Insurance companies: annual reports and quarterly solvency statements; none for book reserves; pension funds: annual report	Insurance companies: annual reports and quarterly solvency statements	Insurance companies: annual reports and quarterly solvency statements	Insurance companies: annual reports and quarterly solvency statements	Insurance companies: annual reports and quarterly solvency statements	

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
<b>Pension protection fund</b>						
Legislation	For pension fund and book reserves: Pension Guarantee Mutual Insurance Company (FPG)	Upon insolvency of a sponsoring employer, a guarantee fund administered by Fora pays outstanding contribution.	Upon insolvency of a sponsoring employer, a guarantee fund administered by Fora pays outstanding contributions	No legal requirements	None	Not covered by deposit protection fund
Coverage	The guarantee fund takes over pension liabilities in the case of insufficient assets upon insolvency. FPG is entitled to recover from policyholders or the bankruptcy estate the amount paid					
Asset allocation						
Benchmark for performance	If the creditworthiness is found to be unsatisfactory, FPG may demand collateral for the insolvency guarantee					
<b>Other risk-management controls in place</b>						
IT systems	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)
Monitoring systems	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 4)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 4)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 4)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 4)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 4)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 4)
Internal audit	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 6)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 6)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 6)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 6)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 6)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 6)

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
Performance measurements	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings (chapter 3)
External controls	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings	Regulated in FFFS 2005:1 General Guidelines regarding Governance and Control of Financial Understakings

### Adequacy

Any existing definition	Defined according to the minimum (defined) benefit level
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### Performance and costs

#### Charges/fees

Contribution-based	DC: 1.3% for Collectum (administrative government agency)	For wages earned in 2012 equivalent to 4.5% premium on salary up to 7.5 IBA and 30% of salary in excess of 7.5 IBA. (By 2012, 7.5 IBA = 409 500 SEK)	0.15%		None	Available online for PPM and IPS
Returns-based					None	
Plan administration		Alecta SEK115				
Fund management	Alecta 0.13%; others on average 0.54% (management and administration)	Alecta 0.03%			0.15%	
Transfer		Nordea SEK0	Avanza Bank SEK0			Eg, SEK700
Joining		Nordea SEK80	Avanza Bank SEK0			
Trading, settlement, post-trading						
Total						
Any limits on total fees in place						

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
<b>Performance</b>						
Yield level		2%				Around 3%
Net returns	7.8%	4.9–8.0%	average 2007–11: 5.8%			
Cost-effectiveness						
<b>Economies of scale</b>						
Any comments on the current scale of providers	Not available	Not available	Not available	Not available	Not available	
<b>Participant information and governance and saver behaviour</b>						
<b>Information availability</b>						
Pre-contractual information available to consumers	Alecta sends a benefit statement to members when they join a plan, including information on the estimated age of retirement, disability and survivorship benefits		Consumers may choose between unit-linked or traditional products			
Contractual information available to consumers	Fora must provide members annually with information on the development of assets and fees paid					
<b>Investment advice</b>						
Overall description of investment advice system	Financial education material available on the regulator's website	Financial education material available on the regulator's website	Financial education material available on the regulator's website	Financial education material available on the regulator's website	Financial education material available on the regulator's website	Financial education material available on the regulator's website
Specific or general						
One-off or ongoing						
Who provides the advice						

Category	ITP	SAF-LO	KAP-KL	PA—03, PA—91	Premium pension system (PPM)	Individual pension saving (IPS)
<b>Saver representation</b>						
Board of pension schemes	Alecta's Board of directors consists of representatives of policyholders (ie, sponsoring employers) and beneficiaries (ie, plan members)			The Board of Directors is made up of nine government-appointed members. Renewal procedure every year		
Regulator/supervisory authority						
Elections process for representatives						
<b>Saver representation</b>						
Savers' response to product performance						

Source: Oxera research and analysis.

**Table A3.4 Overview of the UK private pension system**

Category	Employer-arranged salary-related pension plans	Employer-arranged money-purchase pension plans	Group personal and group stakeholder pension plans	Individual pension plans (self-invested, stakeholder and ordinary person plans)
<b>Overall private pension set-up and coverage</b>				
<b>System set-up</b>				
Obligation to join	Voluntary	Voluntary (gradually to become mandatory from October 2012)	Voluntary	Voluntary
Functional classification	Employer-arranged	Employer-arranged	Personal	Personal
Overall OECD classification	DB	DC	DC	DC
Funding structure	Unfunded for majority of public sector; funded for private sector (deficits a key issue)	Funded	Funded	Funded
<b>Top-level market data</b>				
Coverage (no. of members)	7.4m active members (2010)	~0.9m (2010)	~3m	6.0m in 2010, falling (consolidation)
Total asset value				
No. of providers			10-12	Large (especially for SIPPs)
No. of products				
<b>Contributions and benefits</b>				
Contribution source	Employee and employer	Employee and employer	For in the case of group personal plans: employee and employer	Individuals
Contribution base	Gross annual salary	Gross annual salary	Free basis (gross annual salary after auto-enrolment)	Free basis (taxed income)
Allowed level of contributions	Calculated with reference to funding requirement and expected benefits	Unlimited	Unlimited If an employer wants to contract out the stakeholder plan, they must contribute at least 3% of the employee's salary	Unlimited
Most common level of contributions	20.5% (combined employee and employer) (Note: highly dependent on the expected benefits)	NAPF: ~12% total contribution, with 8% from employer and 4% from employee NAO: 9% total contribution		

Category	Employer-arranged salary-related pension plans	Employer-arranged money-purchase pension plans	Group personal and group stakeholder pension plans	Individual pension plans (self-invested, stakeholder and ordinary person plans)
Payout method	Income paid directly as pension (index-linked), potential increase with trustees' consent  For benefits earned between April 6th 1997 and April 6th 2005, the increase on index-linked annuities is limited to 5%. After this period, it is 2.5%	Annuity (level, index-linked or escalating) or lump sum (max. 25%)  Principle is the same as DB plans for the 1997–2005 period but there are no statutory requirements for benefits that are due to be paid out after this period	Annuity (level, index-linked or escalating) or lump sum (max. 25%)  The level of pension increase payable is chosen by the scheme member when setting up the benefits.	Same as group personal pension plan
Payout conditions	No income drawdown possible  Can take out an equivalent of a lump sum		Income drawdown possible with no withdrawal limits if pension income >£20,000, otherwise drawdown capped at equivalent annuity income for the year  Maximum 25% for lump-sum payments  Under the triviality rule, if the value of pension rights is below a certain level, it may be possible to give up the rights in exchange for a cash sum. Certain conditions apply (eg, the payments must not exceed £2,000)	
Fiscal incentives on contributions	Harmonised tax restrictions across all private pension products	Harmonised tax restrictions across all private pension products	Harmonised tax restrictions across all private pension products	Harmonised tax restrictions across all private pension products
Fiscal incentives on benefits payout	Pension is a taxable benefit Investments returns are free of general income and capital gains tax, but not UK equity dividends tax Tax-free lump-sum payments (up to 25%)		Pension is a taxable benefit Investments returns are free of general income and capital gains tax, but not UK equity dividends tax Tax-free lump-sum payments (up to 25%) Under the triviality rule, a quarter of the cash received is tax-free but the remaining is considered as taxable income with the rate corresponding to the receiving year	
Additional benefits granted	Widower's pension (2–4 x gross salary) Spouse/dependant person salary	Widower's pension (2–4 x gross salary) Spouse/dependant person salary Impaired life annuities and enhanced annuities (covering certain medical conditions, smokers or overweight people) are greater than a conventional annuity because the annuity provider expects to pay out over a shorter period of time	Impaired life annuities and enhanced annuities (covering certain medical conditions, smokers or overweight people) are greater than a conventional annuity because the annuity provider expects to pay out over a shorter period of time  Savers in poor health can withdraw pension savings without any taxes (unless the savings are above the lifetime allowance)	Impaired life annuities and enhanced annuities (covering certain medical conditions, smokers or overweight people) are greater than a conventional annuity because the annuity provider expects to pay out over a shorter period of time
<b>Joining and switching</b>				
Joining conditions and disclosure requirements	Being employed	Being employed	Being employed	Being under age 75

Category	Employer-arranged salary-related pension plans	Employer-arranged money-purchase pension plans	Group personal and group stakeholder pension plans	Individual pension plans (self-invested, stakeholder and ordinary person plans)
Switching feasibility and conditions	Feasible to switch across all private pension schemes		Feasible to switch across all private pension schemes Open markets option (OMO) allows the policyholder to have its benefits delivered by another annuity provider. This option enables the policyholder to find a better deal without any constraints	
Observed switching patterns	Switching from DB to DC schemes		Switch observed on average once every 4–5 years per individual	
<b>System history</b>				
Legislation	Pension Acts 1995, 2004, 2008, 2011; Finance Act 2005	Pension Acts 1995, 2004, 2008, 2011; Finance Act 2005	The Welfare Reform and Pensions Act 1999; Pension Acts 1995, 2004, 2008, 2011; Finance Act 2005	Financial Services Act 2000; Finance Act 2005
Important changes in the last 20 years	Indexation changes of DC/DB schemes, shift from DB to DC	Shift from DB to DC	'A-day' April 6th 2005; abolition of Alternatively secured pensions from 2012 onwards	'A-day' April 6th 2006
Treatment changes (eg, age/gender/...)		Age and gender neutrality in Employer-arranged pension access	Gender neutrality on annuity prices (Test Aschat) Age and gender neutrality in Employer-arranged pension access	
Future changes/plans	Auto-enrolment (starts October 2012)			
<b>Other top-level questions</b>				
Most representative scheme				
Regulator/supervisory authority	The Pensions Regulator	The Pensions Regulator	FSA/TPR (for plans with a direct payment arrangement with employer)	FSA
Distribution channels	Employer	Employer	Employer	Independent financial advisers
Contribution dormancy	Deferred benefits in DB schemes; likely to become significant post-auto-enrolment			
Empty accounts			Significant issue for stakeholder pensions (before auto-enrolment, it was necessary for employers to designate one)	
Any additional information/details	Includes cash-balance DB schemes Last DB scheme in FTSE 100 to close in 2013 Typically trust-based	Note difference in trust- and contract-based schemes	Designation of an external beneficiary is possible  Employers must provide the possibility for its employees to contribute to a stakeholder scheme	Includes self-invested personal pensions (SIPPs) Availability of trading platforms as a driver of consolidation
Coverage in OECD GPS (Yes/no)	Yes	Yes	No	No

Category	Employer-arranged salary-related pension plans	Employer-arranged money-purchase pension plans	Group personal and group stakeholder pension plans	Individual pension plans (self-invested, stakeholder and ordinary person plans)
<b>Risk and regulation</b>				
<b>Overall country risk profile</b>				
Global impacts/ characteristics				
Impact of the crisis on the pension market				
Country-specific impacts/characteristics				
<b>Minimum returns</b>				
Are they imposed?				No
Enforcement mechanism				
Benchmark				
<b>Minimum contributions</b>				
Are they imposed?			For selected schemes	For selected schemes
If yes, what is the relevant level and base?			Stakeholder pensions: min £20	Stakeholder pensions: min £20
<b>Risk limitation and avoidance</b>				
Mechanisms limiting risk linked to age profile	Life-styling mandatory in a default fund			
Mechanisms limiting risk linked to income profile				
Actions available to savers to limit risk exposure				
Costs/penalties associated with the above measures				
<b>Portfolio allocation</b>				
Legal restrictions				
Actual portfolio allocation	Publicly available (Purple Book)			
Portfolio information and disclosure				

Category	Employer-arranged salary-related pension plans	Employer-arranged money-purchase pension plans	Group personal and group stakeholder pension plans	Individual pension plans (self-invested, stakeholder and ordinary person plans)
<b>Asset management</b>				
Asset-managing institution	Employer	Life insurance companies, banks, investment organisations	Life insurance companies, banks, investment organisations	Life insurance companies, banks, investment organisations
Financial reporting requirements			The value of policyholder's fund on the last day of the statement year and the amount of any investment gain/loss arising from that year have to be reported each year	
<b>Pension protection fund</b>				
Legislation	The PPF is a statutory fund run by the Board of the PPF, a statutory corporation established under the provisions of the Pensions Act 2004	The PPF is a statutory fund run by the Board of the PPF, a statutory corporation established under the provisions of the Pensions Act 2004.	Financial Services Compensation Scheme	Financial Services Compensation Scheme
Coverage	Any employer which notifies its insolvency to the PPF can benefit from its help after an assessment period. The plan provides full compensation to those at or above normal pension age. Those under normal pension age at the time of insolvency declaration will receive 90% of their pension entitlement, subject to a compensation cap	Any employer which notifies its insolvency to the PPF can benefit from its help after an assessment period. The plan provides full compensation to those at or above normal pension age. Those under normal pension age at the time of insolvency declaration will receive 90% of their pension entitlement, subject to a compensation cap	Business conducted by firms authorised by the FSA	Business conducted by firms authorised by the FSA
Asset allocation	Long-term strategy aim: self-sufficiency by 2030			
Benchmark for performance	Index for PPF compensation changed from RPI to CPI			
<b>Other risk-management controls in place</b>				
IT systems				
Monitoring systems				
Internal audit				
Performance measurements				
External controls		Trust-based schemes must produce an annual report within seven months of the end of the scheme year		
<b>Adequacy</b>				
Any existing definition				

Category	Employer-arranged salary-related pension plans	Employer-arranged money-purchase pension plans	Group personal and group stakeholder pension plans	Individual pension plans (self-invested, stakeholder and ordinary person plans)
<b>Performance and costs</b>				
<b>Charges/fees</b>				
Contribution-based				
Returns-based				
Plan administration				
Fund management			Stakeholder: cannot exceed 1.5% a year during the first ten years and 1% thereafter	Stakeholder: cannot exceed 1.5% a year during the first ten years and 1% thereafter
Transfer			No penalties can be imposed for transferring the benefits to another scheme	No penalties can be imposed for transferring the benefits to another scheme
Joining				
Trading, settlement, post-trading				
Total				
Any limits on total fees in place				
<b>Performance</b>				
Yield level				
Net returns				
Cost-effectiveness				
<b>Economies of scale</b>				
Any comments on the current scale of providers				

Category	Employer-arranged salary-related pension plans	Employer-arranged money-purchase pension plans	Group personal and group stakeholder pension plans	Individual pension plans (self-invested, stakeholder and ordinary person plans)
<b>Participant information and governance and saver behaviour</b>				
<b>Information availability</b>				
Pre-contractual information available to consumers			Names and addresses of the scheme's trustees or managers Membership conditions Contracting-out status Summary of the scheme's investment policy	
Contractual information available to consumers		Annual benefit statement showing the amount of money built up in the contributions paid and an illustration of the pension income that the pensioner might expect in retirement (materialisation of the inflation effect) Effect of tax relief Illustrative estimate of the transfer value of protected rights at the end of the first five years of membership Description of how charges have been applied Notification with different time horizons for any changes made		
<b>Investment advice</b>				
Overall description of investment advice system	TPAS is a non-departmental public body and independent non-profit organisation which provides free information, advice and guidance. It also helps any member of the public who has a problem, complaint or dispute with their Employer-arranged or private pension arrangement. Financial advisers provide the policyholder with a 'Key Features Document', which describes the principal risks and returns of products offered by funds	Same as Employer-arranged DB	TPAS can also provide help and the Key Features Document is available	Personal financial advisers are generally available on demand and at a cost TPAS can also provide help and the Key Features Document is available
Specific or general	Both	Both	Both	Both
One-off or ongoing				
Who provides the advice				
<b>Saver representation</b>				
Board of pension schemes	Trustee boards -30–40% representation from the member base	Trustee boards -30–40% representation from the member base		
Regulator/supervisory authority				
Elections process for representatives				
<b>Saver behaviour</b>				

Category	Employer-arranged salary-related pension plans	Employer-arranged money-purchase pension plans	Group personal and group stakeholder pension plans	Individual pension plans (self-invested, stakeholder and ordinary person plans)
Savers' response to product performance				

Source: Oxera research and analysis.

**Table A3.5 Overview of the German private pension system**

Category	Direktzusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
<b>Overall private pension set-up and coverage</b>								
<b>System set-up</b>								
Obligation to join	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary
Functional classification	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Personal	Personal	Personal
Overall OECD classification	Mostly DB (also DC with min. returns)	DB	Mostly DB	Mostly hybrid DB/DC with min. returns (but also DB)	Mostly hybrid BB/DC with minimum returns	Hybrid DB/DC with minimum benefits	Hybrid DB/DC with minimum benefits	Various DB/DC
Funding structure	Book reserves	Typically an insurance contract	Insurance contract	Funded	Funded	Funded (insurance contract, bank savings plan or investment savings plan)	Funded	Funded (insurance contract)
<b>Top-level market data</b>								
Coverage (no. of members)	2.18m (2008)	0.92m (2008)	2.75m (2008)	6.8m (2010)	0.8m (2010)	15.5m ( January 2012, increasing)	1.28m (2010)	49.77m contracts (2011, includes non-pension life insurance)
Total asset value	€249.2 billion assets (2009) (about €150 billion accruing for current pensioners)	€36.8 billion assets (2009)	€51.5 billion assets (2009)	€113 billion assets (2010)	€25.5 billion assets (2010)	€5bn		€87bn+
No. of providers		c. 5,000		150 in May 2012	30 in May 2012			
No. of products								
<b>Contributions and benefits</b>								
Contribution source	Employer and employee	Employer and employee	Employer and employee	Employer and employee	Employer and employee	Individual or employer (Pensionskasse, Pensionsfonds, and direct insurance can be amended by Riester subsidies)	Individual	Individual
Contribution base	Total taxable income	Total taxable income	Total taxable income (if not combined with Riester)	Total taxable income (if not combined with Riester)	Total taxable income (if not combined with Riester)	Income after social security, but before income tax	Income after social security, but before income tax	Income after taxes

Category	Direktusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
Allowed level of contributions	Determined by collective agreements, but fiscal incentives only up to threshold specified below	Determined by collective agreements, but fiscal incentives only up to threshold specified below	Determined by collective agreements, but fiscal incentives only up to threshold specified below	Determined by collective agreements, but fiscal incentives only up to threshold specified below	Determined by collective agreements, but fiscal incentives only up to threshold specified below	Determined in the terms of contract with provider	Determined in the terms of contract with provider	Determined in the terms of contract with provider, usually not restricted
Most common level of contributions			Up to 4% of income due to fiscal incentives	Up to 4% of income due to fiscal incentives	Up to 4% of income due to fiscal incentives	Up to 4% of income due to fiscal incentives		
Payout method	Life-long annuities or lump sum	Life-long annuities or lump sum	Life-long annuities or lump sum	Life-long annuities or lump sum	Only life-long annuities or according to a payment plan	Life annuity (capitalisation up to 30% is possible) or a programmed withdrawal. Exception made for discharging debt on owner-occupied residential property	Life-long annuities only	Life annuity, programmed withdrawal or lump sum
Payout conditions	Minimum age 62 (since 2012)	Minimum age 62 (since 2012)	Minimum age 62 (since 2012)	Minimum age 62 (since 2012)	Minimum age 62, no lump-sum payments	Minimum age 62 (since 2012); programmed withdrawal at the latest until age of 85; annualisation for remaining rights to benefits	Minimum age 62 (since 2012), no one-off payments or early withdrawal	Depends on terms of contract; usually long durations with high losses if cancelled earlier
Fiscal incentives on contributions	Fully deductible from income taxable by income tax and deductible from income taxable by social security tax up to 4% of social security contribution ceiling (€2,688 on annual basis in 2012) + €1,800 for contracts signed after 2005		Deductible from income taxable by income and social security tax up to 4% of social security contribution ceiling (€2,688 on annual basis in 2012), plus an additional contribution of €1,800 annually can be made that is exempt from income tax			Subsidies from the government: maximum is €2,100 (2008) provided the participant contributes at least 4% of their previous year's income into the plan (otherwise proportionally less)	Contributions are increasingly tax-deductible: starting at 60% in 2005 up to 100% in 2025 (up to €20,000 per year and €40,000 for couples)	None

Category	Direktzusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
Fiscal incentives on benefits payout	None	None	None	None	None	None	None	Reduced tax rate for annuities (only around 15-20% count towards taxable income depending on age) and lump sum (only 50% are taxed) if contract duration min. 12 years and beneficiary min. 60 years of age
Additional benefits granted	Yes	Yes	Yes	Yes	Yes		Only if separately agreed upon	Only if separately agreed upon
<b>Joining and switching</b>								
Joining conditions and disclosure requirements	Employees can join if scheme is offered by the employer	Employees can join if scheme is offered by the employer	Employees can join if scheme is offered by the employer; not admissible for most government workers and owners of partnerships	Employees can join if scheme is offered by the employer	Employees can join if scheme is offered by the employer	Admissible if covered by the social insurance system	No restriction but intended for self-employed	
Switching feasibility and conditions	Facilitated in 2005, but still difficult: rights only continue to exist if employee over 30 and has contributed for a minimum of 5 years, but often leads to dormant accounts	Difficult: new employer has to be (or become) member of the same 'Unterstützungskasse', or it has to be converted into a pension fund	Portability ensured for contracts after 2005 up to certain level of benefits (2012 West €67,200, East €57,600); older contracts can be continued with the former employer or taken over by new employer	Portability ensured for contracts after 2005 up to certain level of benefits (2012 West €67,200, East €57,600)	Portability ensured for contracts after 2005 up to certain level of benefits (2012 West €67,200, East €57,600)	Possible to transfer to new Riester provider (at relatively low cost, to be specified in contract)	Possible, but in most cases acquisition costs have to be borne by the consumer	Transfer between providers is typically not feasible
Observed switching patterns								
<b>System history</b>								
Legislation			Insurance Supervision Act	Insurance Supervision Act	Insurance Supervision Act; Established only in 2002 § 1 Abs. 2 BetrAVG	Retirements Savings Act 2001, Alterseinkuenftegesetz 2005	Alterseinkuenftegesetz 2005	Alterseinkuenftegesetz 2005

Category	Direktzusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
Important changes in the last 20 years	Becoming less prevalent because they tend to lower the company's financial rating (due to change in rating methods in 2003)					Starting in 2005, tax exemption of annuities was reduced from 100 to 50%, further decreasing by 2 percentage points each year until 2020 and 1 percentage point until 2040 (down to 0%).		Preferential tax treatment of lump sums was reduced in 2005, reduction of allowed deduction in the case of early cancellation
Treatment changes (eg. age/gender/...)	No gender discrimination allowed	No gender discrimination allowed	No gender discrimination allowed	No gender discrimination allowed	No gender discrimination allowed	Unisex calculation required for insurance products	Unisex calculation required for insurance products	Unisex calculation required
Future changes								
<b>Other top-level questions</b>								
Most representative scheme								
Regulator/supervisory authority	Not monitored by supervisory authorities	Not monitored by supervisory authorities	Bafin	Bafin	Bafin	Bafin	Bafin	Bafin
Distribution channels						Mostly agents or banks	Mostly agents or banks	Mostly agents, banks and brokers
Contribution dormancy	Mostly due to unemployment or parental leave, sometimes change of employer	Mostly due to unemployment or parental leave	Mostly due to unemployment or parental leave	Mostly due to unemployment or parental leave				
Empty accounts								

Category	Direktusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
Any additional information/details		Employees have no legal claim on support fund, only towards employer	If the employer does not offer an employer-arranged pension scheme, employees may ask for deferred compensation up to 4% of social security contribution ceiling (€2,688 in 2012), which the employer has to transfer into a direct insurance product, Pensionskasse or Pensionsfond	If the employer does not offer an employer-arranged pension scheme, employees may ask for deferred compensation up to 4% of social security contribution ceiling (€2,688 in 2012), which the employer has to transfer into a direct insurance product, Pensionskasse or Pensionsfond  'Pensionskassen' are similar to life insurances, and usually belong to one particular firm, group or industry	If the employer does not offer an employer-arranged pension scheme, employees may ask for deferred compensation up to 4% of social security contribution ceiling (€2,688 in 2012), which the employer has to transfer into a direct insurance product, Pensionskasse or Pensionsfond  'Pensionsfonds' can offer non-insurance products and are not affiliated with only one firm			Life insurance products are often used if tax incentives of other options do not apply (eg, high income)
Coverage in OECD GPS	No	No	No	Yes	No	No	No	No
<b>Risk and regulation</b>								
<b>Overall country risk profile</b>								
Global impacts/ characteristics								
Impact of the crisis on the pension market								
Country-specific impacts/ characteristics								
<b>Minimum returns</b>								

Category	Direktusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
Are they imposed?	The value of the contributions made has to be guaranteed at the beginning of the payout phase	The value of the contributions made has to be guaranteed at the beginning of the payout phase	A long-term actuarial interest rate has to be guaranteed (currently around 2%) when the investment risk is not borne by the policyholder	A long-term actuarial interest rate has to be guaranteed (close to that of life insurance, currently around 2%)	The value of the contributions made has to be guaranteed at the beginning of the payout phase	The value of contributions made plus subsidies has to be guaranteed at the beginning of the payout phase	Depends on the choice of contract; minimum return possible to be agreed upon	A long-term actuarial interest rate has to be guaranteed (currently around 2%) when the investment risk is not borne by the policyholder
Enforcement mechanism								
Benchmark								
<b>Minimum contributions</b>								
Are they imposed?						Yes		No
If yes, what is the relevant level and base?						€60/year (without subsidies)		
<b>Risk limitation and avoidance</b>								
Mechanisms limiting risk linked to age profile								
Mechanisms limiting risk linked to income profile								
Actions available to savers to limit risk exposure			Portfolio re-allocation	Portfolio re-allocation	Portfolio re-allocation	Portfolio re-allocation	Portfolio re-allocation	Portfolio re-allocation
Costs/penalties associated								
<b>Portfolio allocation</b>								
Legal restrictions	No restrictions	No restrictions	Quantitative restrictions with regard to asset allocation when the investment risk is not borne by the policyholder	Quantitative restrictions with regard to asset allocation when the investment risk is not borne by the policyholder	No quantitative restrictions with regard to assets allocation	No additional restrictions (apart from those applying to type of contract, insurance, fund or savings plan)	No additional restrictions (apart from those applying to type of contract, insurance, fund or savings plan)	Quantitative restrictions with regard to asset allocation when the investment risk is not borne by the policyholder

Category	Direktzusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
Actual portfolio allocation			High proportion in low-risk investments when the investment risk is not borne by the policyholder	High proportion in low-risk investments when the investment risk is not borne by the policyholder				High proportion in low-risk investments when the investment risk is not borne by the policyholder
Portfolio information and disclosure			Disclosure to Bafin	Disclosure to Bafin	Disclosure to Bafin			Disclosure to Bafin
<b>Asset management</b>								
Asset-managing institution	Assets are managed by the employer	Assets are managed independently by the 'Unterstützungskasse'	Life insurance company	Assets are managed by the 'Pensionskasse'. The 'Pensionskasse' can also rely on external fund managers; usually, part of the assets is managed by the 'Kasse', and another part by 'Kapitalanlagegesellschaften'	Assets are managed by the 'Pensionsfonds' which is usually sponsored by more than one firm; usually, part of the assets is managed by the 'Kasse', and another part by 'Kapitalanlagegesellschaften'			Life insurance company, or a 'Kapitalanlagegesellschaften'
Financial reporting requirements	Not monitored by BaFin	Not monitored by BaFin						
<b>Pension protection fund</b>								
Legislation	PSVaG	PSVaG	Protektor (see §124 VAG) PSVaG if there are no irrevocable rights to benefits (which normally is the exception)	Protektor (see § 124 VAG) for certain 'Pensionskassen' on a voluntary basis	PSVaG	Protektor (see §124 VAG) for insurance products	Protektor (see §124 VAG) for insurance products	Protektor (see §124 VAG)
Coverage	Financed by employer contributions	Financed by employer contributions	PSVaG is financed by employer contributions Protektor is financed by insurers	'Pensionskassen' can voluntarily join the protection fund for life insurance ('Protektor')	PSVaG is financed by employer contributions	Protection fund 'Protektor' for insurance products; bank guarantee network for bank products	Protection fund 'Protektor' for insurance products; bank guarantee network for bank products	Protektor is financed by insurers

Category	Direktusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
Asset allocation	Protection for 100% of benefits (up to a limit of approx. €8,000 per month) and claims in case of insolvency of the company	Protection for 100% of benefits (up to a limit of approx. €8,000 per month) and claims in case of insolvency of the 'Unterstützungskasse'	Depending on the type of product chosen; full protection for products with guarantees, less for those without		Protection for 100% of benefits (up to a limit of approx. €8,000 per month) and claims in case of insolvency of the employer	Depending on the type of product chosen; full protection for products with guarantees, less for those without	Depending on the type of product chosen; full protection for products with guarantees, less for those without	Depending on the type of product chosen; full protection for products with guarantees, less for those without
Benchmark for performance								
<b>Other risk-management controls in place</b>								
IT systems			Various measures in place for all schemes under BaFin supervision (details not entered).					
Monitoring systems			Various measures in place for all schemes under BaFin supervision (details not entered).					
Internal audit			Various measures in place for all schemes under BaFin supervision (details not entered).					
Performance measurements			Various measures in place for all schemes under BaFin supervision (details not entered).					
External controls			Various measures in place for all schemes under BaFin supervision (details not entered).					
<b>Adequacy</b>								
Any existing definition								
<b>Performance and costs</b>								
<b>Charges/fees</b>								
Contribution-based				Reported as relatively low (tbc)				
Returns-based								
Plan administration	Reported as high (tbc)			Administration costs only 1–2.2% of contributions		Overall around 1.5–3% of total contributions	Overall around 1.5–3% of total contributions	
Fund management						If fund, around 0.5–2% of contributions		
Transfer						Around €50–150		

Category	Direktzusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
Joining						Around 3–6% of total expected contributions are distributed over the first five years of the contract	Around 3–6% of total expected contributions are distributed over the first five years of the contract	
Trading, settlement, post-trading								
Total								
Any limits on total fees in place								
<b>Performance</b>								
Yield level	Difficult owing to availability of different products for each category		Currently around 4% when the investment risk is not borne by the policyholder			Currently around 4% when the investment risk is not borne by the policyholder	Currently around 4% when the investment risk is not borne by the policyholder	Currently around 4% when the investment risk is not borne by the policyholder
Net returns								
Cost-effectiveness								
<b>Economies of scale</b>								
Any comments on the current scale of providers								
<b>Participant information and governance and saver behaviour</b>								

Category	Direktusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
<b>Information availability</b>								
Pre-contractual information available to consumers	Employers have to inform employees as they start working about the terms of contracts of all available options as soon (but there is no obligation to provide advice for which the employer could be held liable)					Failure to provide transparent information no longer leads to fine/ withdrawal of certificate; special requirements depending on type of contract (insurance—high requirements; savings plan—low; fund—high, such as profile of targeted saver)		
Contractual information available to consumers	Employer has to provide information about accumulated capital upon request	Employer has to provide information about accumulated capital upon request	Employer has to provide information about accumulated capital upon request  Insurer has to inform policyholder about forecast benefits on annual basis	Pensionskasse has to inform employees about forecast benefits on annual basis	Pensionsfond has to provide information about forecast benefits on annual basis	Fund has to inform consumer, among others, about accumulated capital, retained partial acquisition and administration cost and returns	No additional information yet (apart from those applying to type of contract, insurance, fund or savings plan), but application of 'Riester' requirements in discussion	Insurer has to inform policyholder about forecast benefits on annual basis
<b>Investment advice</b>								
Overall description of investment advice system	Employer gets advice from bank/broker/agent and then selects options for employees					Given by the providers of insurance/funds/savings plans		Given by insurance agents
Specific or general	Specific for employer, general for employees	Depends on provider (if, for example, direct insurance or specialised insurance broker)	Depends on provider (if, for example, direct insurance or specialised insurance broker)	Specific for employer; general for employees	Specific for employer; general for employees	Mostly specific	Mostly specific	Mostly specific
One-off or ongoing	Mostly one-off	Mostly one-off	Mostly one-off	Mostly one-off	Mostly one-off	Mostly one-off (unless circumstances change considerably)	Mostly one-off (unless circumstances change considerably)	Mostly one-off (unless circumstances change considerably)
Who provides the advice								

Category	Direktusage (book reserves)	Unterstützungskasse (support funds)	Direktversicherung (direct insurance)	Pensionskasse	Pensionsfonds	Riester Pensions	Rürup Pensions (Basisrente)	Kapital- und Rentenversicherung (individual life insurance contracts)
<b>Saver representation</b>								
Board of pension schemes								
Regulator/ supervisory authority								
Elections process for representatives								
<b>Saver behaviour</b>								
Savers' response to product performance								

Source: Oxera research and analysis.

**Table A3.6 Overview of the Austrian private pension system**

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
<b>Overall private pension set-up and coverage</b>							
<b>System set-up</b>							
Obligation to join	Mandatory	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary
Functional classification	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Personal
Overall OECD classification	DC	DB or DC	Usually DB	DC	DB	DC or DB	DC
Funding structure	Funded	Funded	Book reserves	Funded	Funded	Funded	Funded
<b>Top-level market data</b>							
Coverage (no. of members)	5.6m prospective beneficiaries (2010); hence excludes current beneficiaries	About 805,700 (2012)			Reported as very low		1.54m (2010)
Total asset value	€3.6 billion (2010, strongly increasing)	€15.6 billion (2012)				€509.3m assets (2009)	€5.0 billion assets (2009)
No. of providers	10 (2012)	17 (2012)				10 (2009)	27 (2010)
No. of products	n/a						
<b>Contributions and benefits</b>							
Contribution source	Employer and employee	Employer and employee	Employer and employee	Employer and employee	Employer and employee	Employer and employee	Private
Contribution base	Total taxable income	Total taxable income	Total taxable income	Total taxable income	Total taxable income	Total taxable income	Post-tax income
Allowed level of contributions	No limit (but tax exemption up to 1.53% only)	The contributions must be chosen so that the expected benefits do not exceed 80% of current income					

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
Most common level of contributions	1.53% of total taxable income	DC: the contribution rate usually ranges between 1 and 3% of salary below the social security ceiling (€3,750/month) and between 5 and 15% of salary above the ceiling. Level set by employers and unions					Average in 2010: around €700/year
Payout method	Lump-sum or tax-exempt annuity	Tax-exempt annuity; lump-sum payments are allowed if the vested benefit amount at retirement is less than €11,100 (2012; indexed threshold)	Tax-exempt annuity; lump-sum payments are allowed if the vested benefit amount at retirement is less than €11,100 (2012; indexed threshold)	Tax-exempt annuity; lump-sum payments are allowed if the vested benefit amount at retirement is less than €11,100 (2012; indexed threshold)	Tax-exempt annuity; lump-sum payments are allowed if the vested benefit amount at retirement is less than €11,100 (2012; indexed threshold)	Tax-exempt annuity; lump-sum payments are allowed if the vested benefit amount at retirement is less than €11,100 (2012; indexed threshold)	Lump-sum or tax-exempt annuity
Payout conditions	Minimum contribution period 3 years without interruption; lump sum can also be paid out if employee is laid off	Most plans start at an age of 65 for both men and women	Most plans start at an age of 65 for both men and women	Most plans start at an age of 65 for both men and women	Most plans start at an age of 65 for both men and women	Most plans start at an age of 65 for both men and women	Minimum contribution period ten years; earliest starting age for annuities 40 years
Fiscal incentives on contributions	The mandatory contributions are tax-free (additional contributions can be made, but are taxed as income)	Employer contributions: income tax-deductible up to 10.25% (10% plus 0.25% insurance tax) of income provided that the expected benefits do not exceed 80% of current income. Employee contributions (max. as high as employer contributions): are tax-free, and only 25% of the pension accrued by employee contributions is taxed, or contributions from taxed income are topped up with a percentage (4.25% in 2012) up to contributions of €1,000 and pension is tax-free	Allocations to internal reserves are tax-deductible against income and corporation tax if the total benefit target including social security benefits does not exceed 80% of current salary	Contributions up to €300 per year are tax-deductible	Employer contributions up to 10% of salary are tax-deductible for the company	Employer contributions: income tax-deductible up to 10.25% (10% plus 0.25% insurance tax) of income provided that the expected benefits do not exceed 80% of current income. Employee contributions (max. as high as employer contributions): are tax-free, and only 25% of the pension accrued by employee contributions is taxed, or contributions from taxed income are topped up with a percentage (4.25% in 2012) up to contributions of €1,000 and pension is tax-free	Top-up by the government with a certain percentage related to stock market development and up to an increasing threshold (1.53% of the social security contribution ceiling multiplied by 36); tax exemption

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
Fiscal incentives on benefits payout	Annuities are tax-exempt; lump sums are taxed at 6%	See incentives on contributions— incentives on benefits depend on the tax treatment of contributions	None	Taxed as earned income from the moment the total value of benefits paid exceeds the capital value of the pension at retirement	None	Employee contributions (max. as high as employer contributions): are tax-free, and only 25% of the pension accrued by employee contributions is taxed, or contributions from taxed income are topped up with a percentage (4.25% in 2012) up to contributions of €1,000 and pension is tax-free	Tax exemption
Additional benefits granted	Yes	Mostly yes	Mostly yes	Mostly yes	Mostly yes	Mostly yes	Mostly yes
<b>Joining and switching</b>							
Joining conditions and disclosure requirements	Private sector employees as well as self-employed (since 2008)	Firm must have at least 1,000 employees (otherwise multi-firm funds)	Private sector employees	Private sector employees	Private sector employees	Private sector employees	Maximum age 65
Switching feasibility and conditions	Assets are transferred to fund of new employer. (In the case of termination by employer, certain conditions have to apply)	Upon termination of employment before retirement, a vested benefit amount must be calculated equal to at least 95% of the cash value of the accrued rights	Employer change might lead to loss of rights to pension benefits; depends on specific plan and reason for termination of employment	Upon termination of employment before retirement, the insurance policy remains the property of the employee and a vested benefit amount must be calculated equal to the accumulated capital	Upon termination of employment before retirement, a vested benefit amount must be calculated based on the age of the member upon joining the plan, the retirement age in the plan and a legally prescribed technical interest rate		
Observed switching patterns							
<b>System history</b>							
Legislation	BMVG in 2002, mandatory for all contracts concluded after January 1st 2003	Established in 1990 in the Pension Funds Act and Company Pensions Act	Company Pensions Act	Company Pensions Act	Company Pensions Act	Established in 2005 in the Company Pensions Act	Established in 2003 in § 108g of Einkommensteuergesetz (EStG)

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
Important changes in the last 20 years	Retirement age up to 65 for men, 60 for women; the retirement age for women will gradually adjusted to equalise that of men in 2033; unisex tariffs						
Treatment changes (eg, age/gender/...)							
Future changes/plans	Discussion to increase contributions up to 2.5%						
<b>Other top-level questions</b>							
Most representative scheme							
Regulator/supervisory authority	FMA	FMA	Federal Ministry of Finance	FMA	Not regulated by 'Versicherungsaufsichtsgesetz'	FMA	FMA
Distribution channels							
Contribution dormancy							
Empty accounts							
Any additional information/details	Conventionally not a pension product, but can be converted into annuity at retirement						
Coverage in OECD Global Pension Statistics (Yes/No)	No	Yes	No	No	No	No	No
<b>Risk and regulation</b>							
<b>Overall country risk profile</b>							
Global impacts/characteristics							
Impact of the crisis	Lost about 13% of value						

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
Country-specific impacts							
<b>Minimum returns</b>							
Are they imposed?	Yes	Yes, but can be waived by union				Yes	Yes
Enforcement mechanism		If actual returns are too low, difference has to be compensated in the following year with own funds					
Benchmark	The benefits guaranteed at the beginning of the payout phase must not be lower than the total contributions	Half of the return on the secondary market over the past five years minus 0.75%				Set by the FMA, currently around 2%	The benefits guaranteed at the beginning of the payout phase must not be lower than the total contributions
<b>Minimum contributions</b>							
Are they imposed?	Yes						
If yes, what is the relevant level and base?	1.53% of salary						
<b>Risk limitation and avoidance</b>							
Mechanisms limiting risk linked to age profile							Minimum equity share 30% for under 45 year- olds; 25% for 45—55; 15% for those aged over 55
Mechanisms limiting risk linked to income profile							
Actions available to savers to limit risk exposure							
Costs/penalties associated with the above measures							

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
<b>Portfolio allocation</b>							
Legal restrictions		FMA regulation on Special Investment Provisions for Pension Funds	At least 50% of a company's book reserves must be secured by government bonds (or reinsurance has to be purchased)	Subject to the same restrictions as life insurance	Restricted analogously to life insurance	Restricted analogously to life insurance	Minimum equity share 30% for under 45 year- olds; 25% for 45—55; 15% for those aged over 55
Actual portfolio allocation				Similar to that of life insurance		Similar to that of life insurance	For many funds, the equity share was down to 0%
Portfolio information and disclosure							Problematic: consumer representatives complain that companies do not disclose allocation
<b>Asset management</b>							
Asset-managing institution	Assets of 'Mitarbeitervorsorge- kassen'; are managed by a depository bank			Assets managed by the life insurance company		Assets managed by the life insurance company	
Financial reporting requirements							
<b>Pension protection fund</b>							
Legislation	FMA	No	No	No	No	No	No
Coverage	Deposit protection scheme up to €20,000 per person (FMA)		Book reserves become part of insolvency estates; right to benefits is not ensured (but requirement that 50% be externally secured)				
Asset allocation	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benchmark for performance	No benchmark	No benchmark	No benchmark	No benchmark	No benchmark	No benchmark	No benchmark
<b>Other risk-management controls in place</b>							
IT systems							
Monitoring systems							

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
Internal audit							
Performance measurements							
External controls							
<b>Adequacy</b>							
Any existing definition of adequacy of retirement benefits		Contributions for benefits exceeding 80% of current income are not tax-incentivised					
<b>Performance and costs</b>							
<b>Charges/fees</b>							
Contribution-based	1–3.5%						
Returns-based							
Plan administration	Legal maximum of 0.8%	Between 0.1% and 0.3%	No regulatory requirements	No regulatory requirements	No regulatory requirements	No regulatory requirements	Administration and management 1.5–2%
Fund management							
Transfer	Max. 1.5% of transferred assets, max. €500						
Joining							Approximately 3%
Trading, settlement, post-trading							
Total							
Any limits on total fees in place							
<b>Performance</b>							
Yield level							
Net returns	Avg 2.58% in 2010						
Cost-effectiveness							

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
<b>Economies of scale</b>							
Any comments on the current scale of providers							
<b>Participant information and governance and saver behaviour</b>							
<b>Information availability</b>							
Pre-contractual information available to consumers	The contract with employer has to include information about portfolio allocation, administration costs and, if applicable, minimum returns						Information required by FMA (eg, transparent costs and sample calculation for 0% return)
Contractual information available to consumers	Consumers are informed annually about their rights to benefits	Contract has to include: benefit provisions, employer and employee contribution rates, investment policy framework, information obligations for the sponsoring employers, administrative charges. Employees receive annual information on their accrued rights from the pension fund	The company work council has information and control rights	Employees may request yearly information on their accrued rights from the insurance company		Insurer has to inform consumers annually about contributions made by employer, accumulated capital, administration costs borne by consumer	
<b>Investment advice</b>							
Overall description of investment advice system	Employer (and work council, if applicable) choose provider	Employer chooses option to provide to employees	Employer chooses option to provide to employees	Employer chooses option to provide to employees	Employer chooses option to provide to employees	Employer chooses option to provide to employees	Advice by brokers or agents
Specific or general	Mostly specific to employer	Specific to employer	Specific to employer	Specific to employer	Specific to employer	Specific to employer	Specific to consumer
One-off or ongoing	One-off	One-off	One-off	One-off	One-off	One-off	Typically one-off
Advice provider							

Category	Abfertigung Neu (severance pay)	Pensionskassen (pension funds)	Direktzusagen (direct commitments/book reserves)	Direktversicherung (direct insurance)	Unterstützungskasse (support funds)	Betriebliche Kollektivversicherung (group insurance)	Prämienbegünstigte Zusatzversicherung (PZV)
<b>Saver representation</b>							
Board of pension schemes		Must have a supervisory board consisting of at least 5 members for single- employer funds and 10–22 members for multi-employer funds. Shareholder representatives must outnumber fund representatives by at least 1 (single employer) or 2 (multi- employer)					
Regulator/ supervisory authority	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Elections process for representatives	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Saver representation</b>							
Savers' response to product performance							

Source: Oxera research and analysis.

**Table A3.7 Overview of the Italian private pension system**

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
<b>Overall private pension set-up and coverage</b>						
<b>System set-up</b>						
Obligation to join	Voluntary (opt-out)	Voluntary (opt-out)	Voluntary (opt-out)	Voluntary (opt-out)	Voluntary	Voluntary
Functional classification	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Private	Private
Overall OECD classification	DC/DB (most DB converted into DC after 1993 legislation)	DB	DC	DC	DC	Life insurance (DC)
Funding structure	Pension fund	Book reserves	Pension fund	Pension fund	Pension fund	Insurance contract
<b>Top-level market data</b>						
Coverage (no. of members)	646,684	18,273	1,994,280	881,311	223,768	1,960,559
Total asset value	€41,290m	€2,610m	€ 25,272m			€77,192m
No. of providers	237	126	38			
No. of products						
<b>Contributions and benefits</b>						
Contribution source			Employer, employee and severance pay (TFR)	Employer, employee and severance pay (TFR)	Employee and severance pay (TFR)	Individual and severance pay (TFR)
Contribution base	See 'contractual pension funds'	See 'contractual pension funds'	For self-employed, contributions are computed as a percentage of their profits or as a fixed amount. For employees, contributions are computed as a fixed sum, a percentage of their severance pay (TFR), or other elements of their remuneration	See 'contractual pension funds'	See 'contractual pension funds'	See 'contractual pension funds'

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
Allowed level of contributions	No upper or lower limit for the worker. (If, however, the employee does not pay any contributions, the employer is exempted from its duty to contribute)	No upper or lower limit for the worker. (If, however, the employee does not pay any contributions, the employer is exempted from its duty to contribute)	No upper or lower limit for the worker. (If, however, the employee does not pay any contributions, the employer is exempted from its duty to contribute), unless established by collective agreements	No upper or lower limit for the worker. (If, however, the employee does not pay any contributions, the employer is exempted from its duty to contribute)	No upper or lower limit for the worker	No upper or lower limit for the worker
Most common level of contributions			Determined by collective agreement. In general, if opt-out option is not exercised, the severance pay (6.9% of the annual retribution) is paid into this fund.  2011 average contribution was 2320€			
Payout method	Lump sum (up to 50% of the accumulated capital) or annuity. The 50% cap does not apply to those cases where 70% of the total accumulated capital does not yield an annuity higher than the minimal social benefit payment (or cheque) and to those members who joined before 1992.					
Payout conditions	Right accrues at retirement age (minimum age 65 for men, 60 for women), with the possibility of continuing contributions. Minimum contribution period 5 years. Early withdrawals possible at any time up to a maximum of 75% of individual account to cope with serious health conditions; after 8+ years membership, up to 75% for buying/repairing first house for themselves or children; up to 30% for any other reason; in case of disability (down to less than 1/3 of full working capability) or unemployment for 4 continuous years, early withdrawal of up to 100%, provided that less than 5 years are left to retirement age					
Fiscal incentives on contributions	Contributions (whether paid by the employer or by the employee) are tax-deductible for the employee up to €5,164/year (excluding TFR), and tax-deductible with no limit for the employer					
Fiscal incentives on benefits payout	Net investment income taxed at 11%, benefits at 15% decreasing by 0.3 percentage points for each year of participation after 15 (max. reduction 6%), revaluation of the rent at 12.5%					
Additional benefits granted	Upon death of beneficiary, pension is given to surviving relatives only if previously agreed. Disability gives additional early-withdrawal options (see above)					
<b>Joining and switching</b>						
Joining conditions and disclosure requirements	Closed	Closed	Only open to employees or self-employed fulfilling the conditions set in the collective agreements	No restrictions on membership	No restrictions on membership	No restrictions on membership

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
Switching feasibility and conditions	<p>Employees may transfer their individual accounts, and their own contributions, to another pension plan at any time after two years of membership. Collective agreements set the conditions under which employer contributions may also be directed to the new pension plan</p> <p>Upon changing employers, and if the membership conditions are no longer met, employees may withdraw their individual accounts before the two-year deadline. In this case benefits are subject to unfavourable tax treatment</p> <p>Pension funds must execute the requested transfer within six months of the application date. The costs applied must not limit the right of transferability of the individual account</p> <p>Contributions by the employer can also be transferred</p>					
Observed switching patterns						
<b>System history</b>						
Legislation	Legislative Decree 124/1993 and Legislative Decree 252/2005	Legislative Decree 124/1993 and Legislative Decree 252/2005	Legislative Decree 124/1993 and Legislative Decree 252/2005	Legislative Decree 124/1993 and Legislative Decree 252/2005	Legislative Decree 124/1993 and Legislative Decree 252/2005	Legislative Decree 47 in 2000, Legislative Decree 124/1993 and Legislative Decree 252/2005
Important changes in the last 20 years	Since 1992, this type of pension fund can no longer be created and the existing ones cannot expand their membership	Since 1992, this type of pension funds can no longer be created and the existing ones cannot expand their membership	<p>Since 2007, employees have been able to choose whether they want their severance pay (TFR) to be transferred into a pension plan. If not, it remains with the firm (if there are 50 or fewer employees) or goes to INPS, the National Institute for Social Security (if there are more than 50 employees)</p> <p>A profound reform in 1992 was also undertaken, with the objective of transforming the system from a predominantly DB to a predominantly DC system</p>		Introduced in 2000	
Treatment changes (eg, age/gender/...)	No gender discrimination allowed					
Future changes/plans	See 'contractual pension funds'	See 'contractual pension funds'	Revision of rules regarding investment restrictions is currently in progress (it has been dormant for some time)	See 'contractual pension funds'	See 'contractual pension funds'	See 'contractual pension funds'

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
<b>Other top-level questions</b>						
Most representative scheme						
Regulator/ supervisory authority	COVIP	COVIP	COVIP	COVIP	COVIP	COVIP and ISVAP
Distribution channels	Offered by employers (in the past)	Offered by employers (in the past)	Offered by employers	Offered by employers (marketed by the sponsor)	Offered by employers (marketed by the sponsor)	Offered by insurance companies
Contribution dormancy						
Empty accounts						
Any additional information/details	Closed and gradually disappearing	Closed and gradually disappearing				
Coverage in OECD GPS (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes
<b>Risk and regulation</b>						
<b>Overall country risk profile</b>						
Global impacts/ characteristics	Italy's pension problem hinges on an ageing population and a low birth rate. According to the European Commission's 2009 Ageing Report, pension payments cost the government 14% of gross domestic product in 2007, the highest rate in the EU The percentage of the population of working age is projected to peak in 2012, while the overall population will start declining in 2038. In the period from 2008 to 2060, Italian men and women are projected to enjoy the second-longest life expectancy in Europe after France					
Impact of the crisis on the pension market	20% of Italians had to suspend contributions in 2011 as a result of the tough economic conditions dictated by the global financial crisis					
Country-specific impacts/characteristics	The pressure exerted by financial markets at the end of 2011 (which led to the resignation of Prime Minister Berlusconi) paved the way to the approval of an austerity package, one of the four key pillars of which is reform of the public pension system (which includes a complete move to a DC mechanism, as well as higher retirement ages). This reform is expected to foster the development of private pension systems.					
<b>Minimum returns</b>						
Are they imposed?	No minimum return is imposed by the law. Pension funds can offer a minimum return (usually the benchmark used is the legal revaluation rate that has to be applied to severance pay) A minimum return has to be guaranteed only when the employee's severance pay is transferred to a pension plan as a result of the opt-out option not being exercised. In this case, the employee's contribution (ie, its severance pay) should give them a return that is at least equal to the legal revaluation rate of severance pay					
Enforcement mechanism						

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
Benchmark			Revaluation rate of severance pay (TFRs)			
<b>Minimum contributions</b>						
Are they imposed?	No	No	No	No	No	No
If yes, what is the relevant level and base?						
<b>Risk limitation and avoidance</b>						
Mechanisms limiting risk linked to age profile	No restrictions based on age are mandated by the existing legislation. However, multi-sector funds offer schemes tailored to employee profiles. In particular, life-cycle schemes are being offered, although these are still a relatively small phenomenon (as at 2010, less than 20% of funds offered such products).					
Mechanisms limiting risk linked to income profile	See 'contractual pension funds'	See 'contractual pension funds'	No restrictions based on income are mandated by the existing legislation	See 'contractual pension funds'	See 'contractual pension funds'	See 'contractual pension funds'
Actions available to savers to limit risk exposure	Existence of multi-sector funds offering schemes tailored to employee profiles	Existence of multi-sector funds offering schemes tailored to employee profiles	Existence of multi-sector funds offering schemes tailored to employee profiles	Existence of multi-sector funds offering schemes tailored to employee profiles	Existence of multi-sector funds offering schemes tailored to employee profiles	Existence of multi-sector funds offering schemes tailored to employee profiles
Costs/penalties associated with the above measures	The existing legislation allows participants in multi-sector funds to contribute to multiple schemes offered by the same provider. However, it is up to the fund to decide whether to allow the holding of multiple positions. If this possibility is not given, costs might be incurred in switching from one scheme to another (within the same multi-sector fund) during an employee's working life					

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
<b>Portfolio allocation</b>						
Legal restrictions	These are the only funds that can invest directly in closed-end funds	These are the only funds that can invest directly in closed-end funds	<p>Besides an overriding principle that pension fund assets must be soundly and prudently managed, there are other quantitative restrictions:</p> <ul style="list-style-type: none"> <li>- closed-end (securities and real estate) investment funds are permitted up to 20% of the pension funds assets and 25% of the total net asset value of the closed-end fund;</li> <li>- cash is allowed up to 20% of the pension fund's assets;</li> <li>- direct investments in real estate are not permitted;</li> <li>- borrowing, lending and short-selling are prohibited;</li> <li>- derivative contracts are allowed only if the financial leverage is not more than 1;</li> <li>- investment securities issued by non-OECD residents are allowed up to 5% of the fund's assets only if they are traded on regulated markets of EU member countries, the USA, Canada and Japan;</li> <li>- currency matching is required for a minimum of one-third of the pension fund's assets;</li> <li>- investments in securities issued by a single issuer or connected group of companies are allowed only up to 15% of the pension fund's assets;</li> <li>- for single-employer funds, investments in securities issued by the sponsoring employer must be no more than 5% of the pension fund's assets (10% in the case of a group);</li> <li>- for multi-employer funds, investment in securities issued by the sponsoring employers must be no more than 20% of the pension fund's assets (30% in the case of industry-wide pension funds);</li> <li>- investments in securities issued by OECD countries or residents not traded on regulated markets are allowed up to 50% of the pension fund's assets (a maximum of 10% is allowed for equities);</li> <li>- pension funds may not hold more than 5% of the nominal value of all voting shares of a listed company and no more than 10% of a non-listed company.</li> <li>- assets must be kept by a custodian.</li> </ul>			
Actual portfolio allocation	<p>As at 2010, the asset allocation was (MEFOP Bulletin NO. 41):</p> <ul style="list-style-type: none"> <li>- liquid assets: 7.8%</li> <li>- bonds: 45.7%</li> <li>- equities: 6.8%</li> <li>- investment funds: 18.9%</li> <li>- real estate: 17.1%</li> <li>- other assets and liabilities: 3.7%</li> </ul>	<p>As at 2010, the asset allocation was (MEFOP Bulletin NO. 41):</p> <ul style="list-style-type: none"> <li>- liquid assets: 7.8%</li> <li>- bonds: 45.7%</li> <li>- equities: 6.8%</li> <li>- investment funds: 18.9%</li> <li>- real estate: 17.1%</li> <li>- other assets and liabilities: 3.7%</li> </ul>	<p>As at 2010, the asset allocation was (MEFOP Bulletin NO. 41):</p> <ul style="list-style-type: none"> <li>- liquid assets: 4.4%</li> <li>- bonds: 69.5%</li> <li>- equities: 17.4%</li> <li>- investment funds: 7.7%</li> <li>- real estate: 0%</li> <li>- other assets and liabilities: 1.0%</li> </ul>	<p>As at 2010, the asset allocation was (MEFOP Bulletin NO. 41):</p> <ul style="list-style-type: none"> <li>- liquid assets: 5.2%</li> <li>- bonds: 47.9%</li> <li>- equities: 23.7%</li> <li>- investment funds: 22.4%</li> <li>- real estate: 0%</li> <li>- other assets and liabilities: 0.8%</li> </ul>	<p>As at 2010, the asset allocation was (MEFOP Bulletin NO. 41):</p> <ul style="list-style-type: none"> <li>- liquid assets: 5.2%</li> <li>- bonds: 47.9%</li> <li>- equities: 23.7%</li> <li>- investment funds: 22.4%</li> <li>- real estate: 0%</li> <li>- other assets and liabilities: 0.8%</li> </ul>	<p>As at 2010, the asset allocation was (MEFOP Bulletin NO. 41):</p> <ul style="list-style-type: none"> <li>- liquid assets: 6.5%</li> <li>- bonds: 67.8%</li> <li>- equities: 14.7%</li> <li>- investment funds: 10.3%</li> <li>- real estate: 0%</li> <li>- other assets and liabilities: 0.7%</li> </ul>
Portfolio information and disclosure	Supervisory and statistical reports have to be submitted to COVIP on a quarterly basis, including information on asset allocation and securities and derivatives transactions.					

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
<b>Asset management</b>						
Asset-managing institution			There must be legal separation between the pension fund and the sponsoring employers. Also, the management of the contributions has to be delegated to specialist financial institutions	Financial institutions offer these plans, but there must still be accounting separation between the assets of the sponsor and those of the sponsored pension fund	Financial institutions offer these plans, but there must still be accounting separation between the assets of the sponsor and those of the sponsored pension fund	Financial institutions offer these plans, but there must still be accounting separation between the assets of the sponsor and those of the sponsored pension fund
Financial reporting requirements	Pension funds must submit to the COVIP the following information: - annual accounts and annual reports (within 30 days from their approval and within four months from the end of the reference year), annually; - audit report, annually; - a 'Nota informativa', providing comprehensive information on the pension fund investment policy and governance and on members' rights, if changed; - supervisory and statistical reports on members and their characteristics, contributions and benefits, net asset value, fees, asset allocation, securities and derivatives transactions, quarterly					
<b>Pension protection fund</b>						
Legislation	Law Decree 103/91 (Art. 82) and Legislative Decree 80/92 (Art. 5)	Law Decree 103/91 (Art. 82) and Legislative Decree 80/92 (Art. 5)	Law Decree 103/91 (Art. 82) and Legislative Decree 80/92 (Art. 5)	Law Decree 103/91 (Art. 82) and Legislative Decree 80/92 (Art. 5)	Law Decree 103/91 (Art. 82) and Legislative Decree 80/92 (Art. 5)	Law Decree 103/91 (Art. 82) and Legislative Decree 80/92 (Art. 5)
Coverage	There is no insurance mechanism similar to that of bank deposits. However, companies have to pay a 'solidarity contribution' which is used to compensate employees in the event that their employer has not been paying its portion of the contributions					
Asset allocation						
Benchmark for performance						
<b>Other risk-management controls in place</b>						
IT systems	COVIP mandates the establishment of adequate internal risk management systems	COVIP mandates the establishment of adequate internal risk management systems	COVIP mandates the establishment of adequate internal risk management systems	COVIP mandates the establishment of adequate internal risk management systems	COVIP mandates the establishment of adequate internal risk management systems.	Regolamento 20/2008, issued by ISVAP, describes in detail the risk management system insurance companies have to put in place (with information on IT systems, external controls, internal audits, performance measurements and internal audits)
Monitoring systems						

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
Internal audit						
Performance measurements						
External controls						
<b>Adequacy</b>						
Any existing definition						
<b>Performance and costs</b>						
<b>Charges/fees</b>						
Contribution-based			As at 2009, COVIP estimated total expenses to be 1.00% of contributions			
Returns-based						
Plan administration			0.17% of overall value of position (COVIP, 2011)			
Fund management						
Transfer						
Joining						
Trading, settlement, post-trading						
Total			0.31% of overall value of position (COVIP, 2011)			
Any limits on total fees in place						
<b>Performance</b>						
Yield level						
Net returns			0.1% (COVIP, 2011)	-2.4% (COVIP, 2011)	-2.4% (COVIP, 2011)	

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
Cost-effectiveness			Each fund has to compute a standard Synthetic Cost Indicator for all products (the percentage of annual costs to the total position), facilitating comparisons for consumers. As at 2011, the value of this indicator was 0.2% (for a 35-year contribution period) for contractual pension funds (COVIP, 2011)	Each fund has to compute a standard Synthetic Cost Indicator for all products (the percentage of annual costs to the total position), facilitating comparisons for consumers. As at 2011, the value of this indicator was 1.1% (for a 35-year contribution period) for open pension funds (COVIP, 2011)	Each fund has to compute a standard Synthetic Cost Indicator for all products (the percentage of annual costs to the total position), facilitating comparisons for consumers. As at 2011, the value of this indicator was 1.1% (for a 35-year contribution period) for open pension funds (COVIP, 2011)	Each fund has to compute a standard Synthetic Cost Indicator for all products (the percentage of annual costs to the total position), facilitating comparisons for consumers. As at 2011, the value of this indicator was 1.5% (for a 35-year contribution period) for open pension funds (COVIP, 2011)
<b>Economies of scale</b>						
Any comments on the current scale of providers	In 2008 MEFOP estimated significant scale economies, noting that consolidation of 10 small funds with €100million each would reduce costs in the order of magnitude of €1.2 billion (ie, an additional return on contributions of 5%)					
<b>Participant information and governance and saver behaviour</b>						
<b>Information availability</b>						
Pre-contractual information available to consumers	A note with the key characteristics of the pension scheme and of the participation conditions (eg, contributions, proposed investments, costs, past returns); an example calculation of the pensions that will be received under the chosen profile of contributions (under certain assumptions on contributions and returns); the Statute of the Preexisting pension Fund	A note with the key characteristics of the pension scheme and of the participation conditions (eg, contributions, proposed investments, costs, past returns); an example calculation of the pensions that will be received under the chosen profile of contributions (under certain assumptions on contributions and returns); the Statute of the Preexisting pension Fund	A note with the key characteristics of the pension scheme and of the participation conditions (eg, contributions, proposed investments, costs, past returns); an example calculation of the pensions that will be received under the chosen profile of contributions (under certain assumptions on contributions and returns); the Statute of the Contractual pension Fund	A note with the key characteristics of the pension scheme and of the participation conditions (eg, contributions, proposed investments, costs, past returns); an example calculation of the pensions that will be received under the chosen profile of contributions (under certain assumptions on contributions and returns); the Regulations of the scheme	A note with the key characteristics of the pension scheme and of the participation conditions (eg, contributions, proposed investments, costs, past returns); an example calculation of the pensions that will be received under the chosen profile of contributions (under certain assumptions on contributions and returns); the Regulations of the scheme	A note with the key characteristics of the pension scheme and of the participation conditions (eg, contributions, proposed investments, costs, past returns); an example calculation of the pensions that will be received under the chosen profile of contributions (under certain assumptions on contributions and returns); the Regulations of the scheme and the general contractual terms of the product
Contractual information available to consumers	General information on the fund and individual accounts plus projection of annuity on individual basis; as well as an annual communication outlining the performance of the fund and updating the calculation of the annuity					

Category	Fondi pensione preesistenti autonomi (pre-existing autonomous pension funds)	Fondi pensione preesistenti non autonomi (pre-existing non-autonomous pension funds)	Fondi pensione negoziali (contractual pension funds)	Fondi pensione aperti—adesione collettiva (group open pension funds)	Fondi pensione aperti—adesione individuale (individual open pension funds)	PIPs (individual pension plans provided through life insurance contracts)
<b>Investment advice</b>						
Overall description of investment advice system	Independent financial consultancies exist to assist employees in choosing their pension products (for a charge). Otherwise, fund sponsors seem to assist their members in the selection of a suitable pension fund					
Specific or general						
One-off or ongoing						
Who provides the advice						
<b>Saver representation</b>						
Board of pension schemes			Equal representation of workers and employees in governing board	Surveillance Board appointed by the sponsors of the fund. When the number of savers is greater than 500, the Board has to be complemented by members appointed by employers and by members appointed by employees on a parity basis	Surveillance Board appointed by the sponsors of the fund. When the number of savers is greater than 500, the Board has to be complemented by members appointed by employers and by members appointed by employees on a parity basis	
Regulator/ supervisory authority						
Elections process for representatives						
<b>Saver representation</b>						
Savers' response to product performance	Increase in the number of early withdrawals	Increase in the number of early withdrawals	Increase in the number of early withdrawals	Increase in the number of early withdrawals	Increase in the number of early withdrawals	

Source: Oxera research and analysis.

**Table A3.8 Overview of the Polish private pension system**

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
<b>Overall private pension set-up and coverage</b>				
<b>System set-up</b>				
Obligation to join	Mandatory for individuals born after December 31st 1968  Individuals may belong to only one fund  Mandatory for self-employed  When system introduced, people born between January 1st 1949 and December 31st 1968 could choose to join (one-off, irreversible decision)  People born before January 1st 1949 not eligible	Voluntary	Voluntary	Voluntary
Functional classification	Personal	Employer-arranged	Personal	Personal
Overall OECD classification	DC	DC	DC, individual accounts	DC, individual accounts
Funding structure	Pension fund	Pension fund	Pension fund	Pension fund
<b>Top-level market data</b>				
Coverage (no. of members)	15,735,064 (16,320,437 members' accounts)	342,489 members as at Dec 2010 (of which 291,188 active participants)  ~2% (2006, OECD)  December 2007: ~312,000 members	As at Dec 2011: 814,449 IKE	New—data not yet available
Total asset value	Net assets as at Jun 2012: PLN 241bn  Total assets as at Dec 2010: PLN 223bn	The accumulated value of contributions transferred within PPE up to Dec 2010 was PLN 5.3bn	PLN 2.8bn in 2011 (KNF)	New—data not yet available
No. of providers	14	1,148 employers providing PPE as at Dec 2010  27 managing entities as at Dec 2010, together managing 1,113 PPE funds (5 pension funds, 14 investment funds and 8 insurance companies)	41 providers: - 12 insurance companies (out of 28) - 15 investment funds (out of 50) - 6 brokers (out of 51 brokers + 14 banks with brokerage activities) - 8 commercial banks	Can be provided by investment funds, brokerage firms, life insurance companies, banks voluntary funds created by PTEs
No. of products				

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
<b>Contributions and benefits</b>				
Contribution source	Employee (Employer contribution collected together, but paid into the public notional DC plan)	Employer (employee contributions also possible)	Individual	Individual
Contribution base	Total gross salary/taxable income	Total taxable salary for base contributions  Employees can make extra contributions out of post-tax income	Post-tax income	Total gross salary
Allowed level of contributions	2.3% of the total gross salary/taxable income  Lower level of contributions for the self-employed  Annual contributions can be levied only on salaries up to 30x the average Polish monthly salary	Limits on both employer and employee contributions  Basic contribution paid by employer must not exceed 7% of employee's salary  Sum of employer and employee contributions in a year must not exceed 150% of the national average salary	Limit set each year by Minister for Labour and Social Policy at 3x the average estimated monthly salary for the economy for the year	4% of previous year's basis for pension contributions (ie, for most people 4% of their gross income in the previous year)  For very low-income individuals, limit is increased to 4% of the national minimum salary for the previous year  Absolute maximum set at 4% of 30x national average salary, so ~PLN 4,030 in 2011
Most common level of contributions	PLN 132 in 2010 per month		Average of PLN 1,982 in 2011 by type of provider: - broker: PLN 8,004 - bank: PLN 2,928 - investment fund: PLN 1,811 - insurance company: PLN 1,526	
Payout method	Annuities	Either lump sum or in instalments  Annuity not available (unless sum then invested in life insurance)	Either lump sum or in instalments over at least 10 years (instalment tax preferred if system remains progressive)	Either lump sum or in instalments over at least 10 years (instalment tax preferred if system remains progressive)
Payout conditions	Only paid out upon reaching retirement age	Only paid out upon reaching retirement age (either 60 years after submitting an application, 55 years after submitting an application if a person has reached pension entitlement, or 70 years without an application if the worker is no longer with the company)	60 years of age provided that member has paid into fund for min. of 5 calendar years/more than half of contributions made 5 years before payout (55 years if member has reached pension eligibility)  Can be withdrawn early, but capital gains tax due on proportion being withdrawn	65 years of age provided that member has paid into fund for min. of 5 calendar years  Can be withdrawn early, but this is treated as extra income and income tax is paid

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
Fiscal incentives on contributions		Employer contributions exempt from the social security levy up to a ceiling of 7% of an employee's salary. The employer can class the expenditure associated with running PPE as a cost, leading to lower income tax  Employee contributions based on post-tax earnings, liable to income taxation	Employee contributions based on post-tax earnings, but investment income is exempt from capital gains tax	Employee contributions based on pre-tax earnings
Fiscal incentives on benefits payout		Investment income and benefits are tax-exempt  If the scheme member dies, inheritance tax is not paid on the sum	Investment income and benefits are exempt from capital gains tax (provided an individual has only one IKE)  In the case of death, tax is not paid on the lump sum	Tax must be paid on the benefits (treated as extra income)  In the case of death, the sum is considered as extra income of the beneficiary for tax purposes
Additional benefits granted				
<b>Joining and switching</b>				
Joining conditions and disclosure requirements	If an individual does not choose a specific OFE, they are randomly allocated to a qualifying fund (less than 10% share of asset-weighted market, and above average rate of return for last 36 months)	Requirements include: - employer has a PPE scheme - below age of 70 - employee has not previously opted out of employer's PPE programme - employer can set minimum period of employment for eligibility	Any person aged 16 and above  Can have IKE when member of IKZE/PPE	Any person aged 16 and above  Can have IKE when member of IKE/PPE
Switching feasibility and conditions	Can switch fund provider once a quarter (last working day of Feb, May, Aug, Nov)  No switching fee since May 1st 2011 (prior to that, fees of PLN 0–160 according to membership period)	Cannot transfer to OFE, but can to IKE  Can only transfer funds if employee no longer works for PPE provider or if employer stops providing PPE	Can switch to another IKE, IKZE or PPE  Possible fee if the member has been with an IKE for <12months	Can switch to another IKE, IKZE or PPE  Possible fee if the member has with an IKE for <12months
Observed switching patterns	~4% of OFE members have changed fund  Average monthly change rate of number of OFE members is ~0.3%	Cannot switch unless employer stops providing PPE/employee leaves		

## System history

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
Legislation	The Organisation and Operation of Pension Funds Act of August 28th 1997 (as subsequently amended) PPE and OFE introduced in 1999	PPE and OFE introduced in 1999 Issues with PPE (lack of popularity, problems of transferring funds between PPEs, or withdrawing when a new employer had not established a PPE) prompted the government to propose the IKE  PPE reform? In 2004: The Employee Pension Programmes Act of April 20th 2004	IKE introduced in September 2004: The Individual Pension Accounts Act of April 20th 2004	Introduced on January 1st 2012 (Act of March 25th 2011)
Important changes in the last 20 years	On May 1st 2011 the monthly contribution decreased from 7.3% of income to 2.3%. This is due to increase gradually until it reaches 3.5% in 2017 On January 1st 2010 max. fee on contributions capped at 3.5% Since May 1st 2011, no fee levied when changing funds (previously, PLN 0–160 depending on membership length)	The max. proportion of shares in the portfolio is set to rise from 42.5% in 2011 to 90% in 2034	Changes in 2008 to try to raise popularity of IKE: - ability to take out IKE in instalments (phased withdrawal) - partial withdrawal of funds possible in unforeseen circumstances - raised limit of contributions	
Treatment changes (eg, age/gender/...)				
Future changes/plans				
<b>Other top-level questions</b>				
Most representative scheme				
Regulator/ supervisory authority	Komisja Nadzoru Finansowego	Komisja Nadzoru Finansowego According to KNF, this is the most closely monitored pension product available	Komisja Nadzoru Finansowego	Komisja Nadzoru Finansowego
Distribution channels	Agent	Agent	Agent	Agent
Contribution dormancy				
Empty accounts				

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
Any additional information/details		Employers restricted in plan design, must be offered to 50%+ of employees  All managed funds must be based in Poland  Within the Polish system, referred to as part of Pillar III (Pillar II spans only the mandatory plan)		
Coverage in OECD GPS (Yes/No)	Yes	Yes	No	No
<b>Risk and regulation</b>				
<b>Overall country risk profile</b>				
Global impacts/ characteristics				
Impact of the crisis on the pension market				
Country-specific impacts/characteristics				
<b>Minimum returns</b>				
Are they imposed?	Yes (Art. 175 of the 1997 Organisation and Operation of Pension Funds Act); KNF publishes minimum rate of return for previous 36 months to March and September is	No guarantees provided	No guarantees provided	No guarantees provided
Enforcement mechanism	A fund achieving a lower rate than the minimum must cover the shortfall using: reserves, the 'Fundusz Gwarancyjny' (the guarantee fund) and own funds. If shareholders cannot cover the shortfall, the fund goes into liquidation, and the 'Fundusz Gwarancyjny' covers the rest. If it is unable to, the state Treasury provides a guarantee			
Benchmark	Minimum rate of return is the smaller of 50% of weighted average weight of return for all open funds or 4 percentage points from this weighted average figure  The minimum rate of return for 36 months to March 2012 was 15.814%			

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
<b>Minimum contributions</b>				
Are they imposed?	Yes	No, employer free to choose level of contributions	No	No
If yes, what is the relevant level and base?	<p>2.3% of income (lowered from 7.3% on May 1st 2011) up to limit of 30x the average national salary. This is set to rise gradually to 3.5% by 2017</p> <p>The remainder of the total 19.52% pensions contribution goes to Pillar I</p>			
<b>Risk limitation and avoidance</b>				
Mechanisms limiting risk linked to age profile			Depends on fund Individual funds' recommended investment split varies for different age groups	
Mechanisms limiting risk linked to income profile				
Actions available to savers to limit risk exposure				
Costs/penalties associated with the above measures				
<b>Portfolio allocation</b>				
Legal restrictions	The max. proportion of shares in the portfolio is set to rise from 42.5% in 2011 to 90% in 2034			
Actual portfolio allocation	Default product and portfolio specified in the statute		Statutes set quantitative limits on investments	
Portfolio information and disclosure	Specified in legal regulations, statutes and agreements		Set by individual contracts	
<b>Asset management</b>				
Asset-managing institution	Assets owned by the members; PTE is separate	<p>Varies (investment funds, life insurance companies, employee pension funds, foreign management companies)</p> <p>Only one PPE per company</p> <p>One management company can manage more than one PPE</p>	Administered by investment funds, brokers, insurance companies and banks	Administered by investment funds, brokers, insurance companies and banks

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
Financial reporting requirements				
<b>Pension protection fund</b>				
Legislation				
Coverage	<p>PTEs pay capital into the 'Fundusz Gwarancyjny', which is split into:</p> <ol style="list-style-type: none"> <li>1. a core part, managed by Krajowy Depozyt Papierów Wartościowych S.A.</li> <li>2. an additional part formed by the OFE</li> </ol> <p>Funds are used in the case of a capital shortfall at an OFE, when the fund's reserves cannot cover the shortfall, and in the case of failure/improper performance of duties by a fund where the company is not liable for damage/when the payout cannot be made from bankruptcy receipts</p>	tbc	<p>Different protection depending on which type of institution IKE is with:</p> <ul style="list-style-type: none"> <li>- banks: 'Bankowy Fundusz Gwarancyjny' guarantees 100% of funds up to €50,000</li> <li>- broker: 100% of €3,000, then 90% of rest up to €15,000</li> <li>- investment fund: funds transferred to another fund</li> <li>- insurance firms: 'Ubezpieczeniowy Fundusz Gwarancyjny' guarantees 50% of funds up to €30,000</li> </ul>	tbc
Asset allocation	PTEs make payments of 0.01% of assets; total value of fund must not exceed 0.1% of the value of the assets of all open funds			
Benchmark for performance				
<b>Other risk-management controls in place</b>				
IT systems				
Monitoring systems				
Internal audit				
Performance measurements				
External controls				
<b>Adequacy</b>				
Any existing definition	<p>Minimum pension guarantee: a proportion of the average gross wage in the quarter preceding retirement</p> <p>For a person on an average national wage, the sum of Pillars 1 and 2 is estimated to provide a replacement rate of 43.2% for women and 59.0% for men</p>			

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
<b>Performance and costs</b>				
<b>Charges/fees</b>				
Contribution-based	Max. 3.5% contribution (charges range between 3.4% and 3.5%)	No fees on contributions	Stated in individual contracts; no caps or regulations	No fee for Millennium Bank
Returns-based				
Plan administration				
Fund management	<p>Management fee—fixed: regressive, cannot exceed 0.045% of monthly contributions, and capped annually at 0.54%</p> <p>Management fee—variable: depends on returns generated by the fund, cannot exceed 0.005% of net assets per month</p> <p>Management fee charged in proportion to investment returns—pension fund management company with highest returns can charge full variable fee; one with lowest return may not charge the variable component</p>	No limit on management fees - vary widely		
Transfer	No transfer fee since May 1st 2011		Transfer fee possible within 12 months of joining	
Joining				
Trading, settlement, post-trading				
Total				
Any limits on total fees in place				
<b>Performance</b>				
Yield level				
Net returns	Weighted average rate of return for 12 months to March 2012 was -1.012%			
Cost-effectiveness				

Category	Open pension fund (Otwarty Fundusz Emerytalny, OFE)	Employee pension fund (Pracowniczy P.E., PPE)	IKE (Indywidualne Konto Emerytalne)	IKZE (Indywidualne Konto Zabezpieczenia Emer.)
<b>Economies of scale</b>				
Any comments on the current scale of providers				
<b>Participant information and governance and saver behaviour</b>				
<b>Information availability</b>				
Pre-contractual information available to consumers	Comprehensive manuals published by KNF			
Contractual information available to consumers				
<b>Investment advice</b>				
Overall description of investment advice system	Agent should inform potential new member about membership conditions (fees), investment strategy and ownership structure of the fund			
Specific or general				
One-off or ongoing				
Who provides the advice	KNF			
<b>Saver representation</b>				
Board of pension schemes				
Regulator/ supervisory authority				
Elections process for representatives				
<b>Saver behaviour</b>				
Savers' response to product performance				

Source: Oxera research and analysis.

**Table A3.9 Overview of the Slovakian private pension system**

Category	Pension Asset Management Companies (PAMC)	Supplementary Pension Asset Management Company (SPAMC)
<b>Overall private pension set-up and coverage</b>		
<b>System set-up</b>		
Obligation to join	Quasi-mandatory (potential substitute for part of Pillar I)	Voluntary
Functional classification	Employer-arranged	Personal
Overall OECD classification	DC	DC
Funding structure	Pension fund	Pension fund
<b>Top-level market data</b>		
Coverage <i>(no. of members)</i>	1.44m (June 2012)	Around 862k (December 2011)
Total asset value	€4.6 billion (end 2011), more than €5 billion in June 2012	€1.2bn (December 2011)
<i>No. of providers</i>	6 (2012)	5 (2012)
<i>No. of products</i>	24 (4 funds by each provider)	
<b>Contributions and benefits</b>		
Contribution source	Employer & employee	Individual
Contribution base	Total taxable income	Total taxable income
Allowed level of contributions	Employer: 4% of income (from September 1st 2012) Employee: 2% of income (tax deductible) + unlimited amount (after tax)	
Most common level of contributions	As above	
Payout method	Programmed withdrawal with life annuity (with life annuity at minimum 60% of 'subsistence minimum') or life annuity	Annuity or lump sum
Payout conditions	Retirement age (currently increasing to 62) and minimum contribution period of 10 years (before reform 2010: 15 years)  Early retirement if also early social security benefits and savings sufficient for a life-long pension of 60% of adult 'subsistence minimum'	Stipulated retirement age (min. 55 years), minimum contribution period of 10 years. Termination settlement of at least 80% of total personal account if conditions not fulfilled
Fiscal incentives on contributions	Tax-exempt	Preferential tax treatment abolished in 2010; before that employee contributions tax-exempt up to €400/year; employer contribution tax-exempt up to 6% of total taxable income
Fiscal incentives on benefits payout	Tax-exempt	Taxed at 19% (both lump sum and pension)

Category	Pension Asset Management Companies (PAMC)	Supplementary Pension Asset Management Company (SPAMC)
Additional benefits granted		
<b>Joining and switching</b>		
Joining conditions and disclosure requirements	<p>Mandatory for employees starting work after 2005; voluntary for those starting work before 2005 and self-employed. Since 2008, new employees had six months to decide whether to join Pillar I or II.</p> <p>Since 2011, contribution to Pillar II has been by default, but employees can opt out within first two years; employees have been able to split between guaranteed and stock fund.</p> <p>Effective January 1st 2013, voluntary for new employees. The limit for decision to join is the age of 35 years. After this age, nobody can join the II Pillar.</p>	Minimum age 18
Switching feasibility and conditions	Provider change free of charge after one year (otherwise €16)	
Observed switching patterns	Increasing switching over time, more detail in received data	
<b>System history</b>		
Legislation	Established only in 2005 (Old-age Pension Savings Act)	Established only in 2005 (Old-age Pension Savings Act)
Important changes in the last 20 years	<p>Phase-in period Jan 2005–Jun 2006 when employees could decide to switch to the new system</p> <p>Minimum contribution period changes from 10 to 15 (2008) and back to 10 years (2010)</p> <p>Introduction of a voluntary decision between substitution of a part of Pillar I for Pillar II</p> <p>Minimum 0% return (2009)</p> <p>Overall more than 20 changes since 2004</p>	Previous supplementary insurance funds had to be converted so as to comply with the new regulations
Treatment changes (eg, age/gender/...)		
Future changes/plans	Many changes discussed at present— eg, cut contribution to Pillar II to 4% and allow for voluntary additional contribution of 2%	
<b>Other top-level questions</b>		
Most representative scheme		
Regulator/ supervisory authority	National Bank of Slovakia	National Bank of Slovakia
Distribution channels		
Contribution dormancy		

Category	Pension Asset Management Companies (PAMC)	Supplementary Pension Asset Management Company (SPAMC)
Empty accounts		
Any additional information/details		
Coverage in OECD GPS (Yes/No)	Yes	Yes
<b>Risk and regulation</b>		
<b>Overall country risk profile</b>		
Global impacts/ characteristics		
Impact of the crisis on the pension market	Temporary re-opening of Pillar I in 2008 and in 2009 due to financial distress of PAMCs; negative returns for stock and mixed funds from January 2008 to March 2009 (-6.43% and -4.1%; +4.8% for bonds)	Fall in coverage during 2009 from 860,000 savers (32% of the economically active) to 780,000 savers (29%) Fee-adjusted return for 2008 between -20% and +3%
Country-specific impacts		
<b>Minimum returns</b>		
Are they imposed?	Yes until January 2013, whereupon each provider must offer both guaranteed and non-guaranteed funds.	Yes
Enforcement mechanism	If no sufficient capital to compensate for breach, National Bank of Slovakia will withdraw licence from the PAMC and put the funds into receivership	
Benchmark	<p>No benchmarks will be required after January 2013. Prior to this, at least sum of contributions has to be preserved (since 2009; since 2011 this applies to bond funds only)</p> <p>Conservative/bond funds: <math>\geq 90\%</math> of the market average for bond fund/ <math>\pm 1</math> percentage point of the average</p> <p>Balanced/mixed funds: <math>\geq 70\%</math> of the market average for the mixed fund/<math>\pm 2</math> percentage points of the average</p> <p>Growth/stock funds: <math>\geq 50\%</math> of the market average for the stock fund/<math>\pm 3</math> percentage points of the average</p> <p>No negative return admissible (otherwise fund has to use its own funds for compensation)</p>	
<b>Minimum contributions</b>		
Are they imposed?	No	No
If yes, what is the relevant level and base?		

Category	Pension Asset Management Companies (PAMC)	Supplementary Pension Asset Management Company (SPAMC)
<b>Risk limitation and avoidance</b>		
Mechanisms limiting risk linked to age profile	New provisions require 50+-year olds to switch assets from risky to conservative funds at a minimum rate of 10% of assets annually. Previously, if savers were: >55 years old: only bond fund permissible; between 47 and 55: only bond and mixed fund permissible	
Mechanisms limiting risk linked to income profile	None	
Actions available to savers to limit risk exposure	Ability to switch funds on a daily basis	
Costs/penalties associated		
<b>Portfolio allocation</b>		
Legal restrictions	Previously, a minimum investment in Slovak assets of 30%, now details are dependent on fund.  Each PAMC has to provide a growth (stock), balanced (mixed) and conservative (bond) and indexed fund  Growth: ≤80% in equity-based instruments, balanced: ≥50% in bond and monetary instruments, ≤50% in equity-based instruments, conservative: 100% in bond and monetary instruments	
Actual portfolio allocation	Funds no longer invest in stocks, more detail in received data	
Portfolio information and disclosure		
<b>Asset management</b>		
Asset-managing institution	PAMC	SPAMC
Financial reporting requirements	Daily reporting of transactions with assets and portfolio composition to National Bank of Slovakia.  Regular quarterly reports on the structure of portfolio and financial position of pension funds.  Semi-annual and annual financial reporting to NBS as well as to the public.	
<b>Pension protection fund</b>		
Legislation		
Coverage	The Social Insurance Company (thus the state) has full liability for a damage caused by a decision, procedure or other action of PAMC and a depository being contrary to the law and resulting in a damage of a property of saver in a pension fund.	
Asset allocation		

Category	Pension Asset Management Companies (PAMC)	Supplementary Pension Asset Management Company (SPAMC)
Benchmark for performance		
<b>Other risk-management controls in place</b>		
IT systems	Centralized reporting system with National Bank of Slovakia	
Monitoring systems	Daily reporting of transactions confirmed by the depositary bank	
Internal audit	Every PAMC has to have an internal auditor and audit system	
Performance measurements	none	
External controls	National Bank of Slovakia, audit company, depositary bank	
<b>Adequacy</b>		
Any existing definition	none	
<b>Performance and costs</b>		
<b>Charges/fees</b>		
Contribution-based	Max. 1% of monthly contributions	
Returns-based	Since July 2009, up to 5.6% of returns on a 6-month basis, but not for indexed fund Max 10% of returns (High-Water Mark) starting January 1st 2013 for all pension funds	Since 2010, 10% of returns up to 20% in 2020
Plan administration		
Fund management	Max. 0.025% of monthly assets for every administered fund (0.065% before 2010)	Max. 2% of average net value of assets in each year, decreasing to 1.98% until 2019
Transfer	€16 if changed within one year after joining, otherwise free	Within first three years, up to 5% of balance of account, after three years free of charge (1% until 2010)
Joining	0	
Trading, settlement, post-trading	Fully charged to the pension fund (since April 1 <sup>st</sup> 2012)	
Total		
Any limits on total fees in place	none	
<b>Performance</b>		
Yield level	Weighted average 1.4—1.5% (2011, nominal); real yields negative due to inflation at approximately 3%	Contributory funds: -2.8% (2011, nominal) Payout funds: 0.5% (2011, nominal)
Net returns		

Category	Pension Asset Management Companies (PAMC)	Supplementary Pension Asset Management Company (SPAMC)
Cost-effectiveness		
<b>Economies of scale</b>		
Any comments on the current scale of providers		
<b>Participant information and governance and saver behaviour</b>		
<b>Information availability</b>		
Pre-contractual information available to consumers	The prospectus shall contain the information necessary to enable savers to make an informed assessment of the opportunities offered by the investment and of the risks attached to such an investment. The prospectus shall also contain a clear and, for ordinary savers, easily understandable explanation of the pension fund's risk profile. The prospectus must not contain false or misleading information.	An information prospectus must contain information necessary for participants and benefit beneficiaries to be able to make a correct assessment of the investment option offered and of the risks connected with such investment. An information prospectus must also contain an explanation that is clear and easily comprehensible for participants and benefit beneficiaries of the risk profile of a supplementary pension fund. An information prospectus may not contain untruthful or misleading information.
Contractual information available to consumers	Access to online information with personal account status and movements on a daily basis, written notification at least once a year	Annual information about accounts; information about asset performance has to be published on the website
<b>Investment advice</b>		
Overall description of investment advice system	none	
Specific or general		
One-off or ongoing		
Who provides the advice		
<b>Saver representation</b>		
Board of pension schemes	none	
Regulator/ supervisory authority	none	
Elections process for representatives	none	
<b>Saver representation</b>		
Savers' response to product performance		

Source: Oxera research and analysis.

**Table A3.10 Overview of the Estonian private pension system**

Category	Funded pension	Supplementary funded pension—pension fund	Supplementary funded pension—insurance contract
<b>Overall private pension set-up and coverage</b>			
<b>System set-up</b>			
Obligation to join	Compulsory for people born in 1983 or later	Voluntary	Voluntary
Functional classification	Employer-arranged	Personal (with optional employer contribution)	Personal (with optional employer contribution)
Overall OECD classification	DC	DC	DC
Funding structure	Pension funds	Funded—Pension funds	Funded—Insurance contract
<b>Top-level market data</b>			
Coverage (no. of members)	635k	120k (total supplementary pensions)	120k (total supplementary pensions)
Total asset value	€1.3bn (June 2012)	€88m (June 2012)	€180m (2012)
No. of providers	6	6	5
No. of products	23	13	n/a
<b>Contributions and benefits</b>			
Contribution source	Employee and employer	Employee and employer (optional)	Employee and employer (optional)
Contribution base	Gross salary	Free basis (net salary)	Free basis (net salary)
Allowed level of contributions	Level is fixed at 2% (individual) + 4% (from social insurance contributions made by the employer)	No limits	No limits
Most common level of contributions	2+4%	3% total income	3% total income
Payout method	<i>If the amount accumulated is more than 10x the National Pension:</i> if it is more than 50x the National Pension, benefits must be paid by an insurance company; if it is between 10x and 50x the National Pension, benefits can be paid by either a pension fund or an insurance company <i>If the amount accumulated is less than 10x the National Pension:</i> benefits can be withdrawn as a lump sum	Annuity or lump sum. Possible to withdraw lump-sum before retirement age if the participant renounces their tax advantage. For benefits to be paid regularly, the participant has to enter into a contract agreement with an insurance company	Annuity or lump sum. Possible to withdraw lump-sum before retirement age if the participant renounces their tax advantage. For benefits to be paid regularly, the participant has to enter into a contract agreement with an insurance company

Category	Funded pension	Supplementary funded pension—pension fund	Supplementary funded pension—insurance contract
Payout conditions	Being retired	Being retired or permanently disabled	Being retired or permanently disabled
Fiscal incentives on contributions	State contributes 4% in the form of a relief on social tax (but at a cost of a decrease in Pillar I)	The Estonian Tax and Customs Board refunds the participant 21% from the contributions made during the calendar year (with a ceiling of 15% of gross income). Employer contributions are exempt of tax income. The limit is that the sum of the employee and employer contribution cannot exceed 15% of total income tax due for a year, or €6,000	
Fiscal incentives on benefits payout	Benefits are tax-free up to a max. of €2,304/year (I and II pillar together)	There are three possible levels of tax: 0%, 10% or 21%: 0%: benefits that are paid out as annuity by an insurance company after retirement age 10%: payments made - at longer intervals than a quarter - by a pension fund if first contribution is older than five years or lump sum after retirement age 21%: lump sum paid before retirement age or if the first contribution is older than five years. Annuity paid out by a pension fund for which the first contribution is within the past five years	
Additional benefits granted	For childcare, the state pays: Until 2013—1% of parental benefit (1.5 years) From 2013—4% of national average wage (3 years)  Also serves as a survivor's pension as the accumulated assets can be inherited	Serves as a survivor's pension as the accumulated assets can be inherited	
<b>Joining and switching</b>			
Joining conditions and disclosure requirements	Only new entrants to the labour market can join employer-arranged pensions.	Not regulated	Not regulated
Switching feasibility and conditions	Until August 2011 it was possible to switch from a pension fund or investment choice only once a year. The switching request had to be introduced before October while the switching was done in January of the following year.  Currently savers can switch funds 3 times a year; there are no restrictions on starting contributions to a new pension fund.	Until 2011, consumers could transfer only some of their units to another voluntary pension fund. Conditions could be imposed on the minimum: - amount of units that have to be transferred (no more than 1,000) - period between two transfers (no more than two years)  All of the above prohibited from 2011 onwards	
Observed switching patterns	11% (2010) changed pension fund within same provider 6% (2010) started contributions to a new fund	n/a	n/a
<b>System history</b>			
Legislation	The Funded Pensions Act (ELLC, January 2008)	The Funded Pensions Act (ELLC, January 2008)	The Funded Pensions Act (ELLC, January 2008)
Important changes in the last 20 years		The Act on Amendments to the Investment Funds Act and other associated Acts (January 2012)	
Treatment changes (eg, age/gender/...)			

Category	Funded pension	Supplementary funded pension—pension fund	Supplementary funded pension—insurance contract
Future changes/plans			
<b>Other top-level questions</b>			
Most representative scheme			
Regulator/supervisory authority	Financial supervision authority	Financial supervision authority	
Distribution channels	Pension fund application forms available on the Internet or in banks	Pension fund application forms available on the Internet, in banks and via life insurance companies in banks	
Contribution dormancy	n/a		
Empty accounts			
Any additional information			
Coverage in OECD GPS (Yes/No)	Yes	No	No
<b>Risk and regulation</b>			
<b>Overall country risk profile</b>			
Global impacts/characteristics			
Impact of the crisis on the pension market	Lost €200m in the crisis (investment return in 2008 was approximately -24%)	Investment return in 2008 was approximately -40%	
Country-specific impacts/characteristics			
<b>Minimum returns</b>			
Are they imposed?	No	No	No
Enforcement mechanism	n/a	n/a	n/a
Benchmark	n/a	n/a	n/a

Category	Funded pension	Supplementary funded pension—pension fund	Supplementary funded pension—insurance contract
<b>Minimum contributions</b>			
Are they imposed?	No	No	No
If yes, what is the relevant level and base?	n/a	n/a	n/a
<b>Risk limitation and avoidance</b>			
Mechanisms limiting risk linked to age profile	No	No	No
Mechanisms limiting risk linked to income profile	No	No	No
Actions available to savers to limit risk exposure	Participants can choose between four levels of risk investment: conservative, balanced, progressive, aggressive	Up to the provider	Up to the provider
Costs/penalties associated with the above measures	n/a	n/a	n/a
<b>Portfolio allocation</b>			
Legal restrictions	Maximum 75% in equities, 40% in real estate, 10% in unlisted bonds, 10% in loans  Conservative funds can have 0% equity, balanced—25%, growth—50% and aggressive—full 75%  Each fund manager must provide a conservative fund (default option). This option is a fixed income fund	Maximum 70% in real estate, 10% in loans; otherwise no restrictions	
Actual portfolio allocation	4% equities, 27% equity funds, 28% other investment funds, 28% bonds, 9% cash, 4% other (June 2012)	65% equity funds, 16% investment funds, 7% bonds, 8% cash, 4% other (June 2012)	n/a
Portfolio information and disclosure	From 2012, detailed investment reports must be published monthly	Annual and bi-annual reports	Annual and bi-annual reports
<b>Asset management</b>			
Asset-managing institution	Fund management companies with shareholding structure	Pension fund management companies	Life insurance companies
Financial reporting requirements	Twice a year	Twice a year	Twice a year

Category	Funded pension	Supplementary funded pension—pension fund	Supplementary funded pension—insurance contract
<b>Pension protection fund</b>			
Legislation	Guarantee Fund Act 2002	None	None
Coverage	Collection phase: Unit-holders of mandatory pension funds. It is funded via single and quarterly contributions from (but not only) management companies of mandatory pension funds	n/a	n/a
Asset allocation	The Fund may invest only in: - bonds & debt listed on a Member State's stock exchange with an assigned investment grade rating - deposits in a credit institution with an investment rating registered in a MS - treasury bonds of a Member State or other state with an investment rating - investment fund with assets in the above	n/a	n/a
Benchmark for performance	None	n/a	n/a
<b>Other risk-management controls in place</b>			
IT systems			
Monitoring systems			
Internal audit	Requirements for internal audit are in place		
Performance measurements	Only internal measures	Only internal measures	Only internal measures
External controls	The financial supervision authority is responsible for licensing all providers in the private pension system and supervising all types of funds	The financial supervision authority is responsible for licensing all providers in the private pension system and supervising all types of funds	
<b>Adequacy</b>			
Any existing definition			
<b>Performance and costs</b>			
<b>Charges/fees</b>			
Contribution-based	Prohibited from 2011	Allowed, no limits	Allowed, no limits
Returns-based	Prohibited	Prohibited	Prohibited
Plan administration	Prohibited	Prohibited	Prohibited

Category	Funded pension	Supplementary funded pension—pension fund	Supplementary funded pension—insurance contract
Fund management	Maximum 2% of total assets, 1.2% for funds with no equity investment Management fee must decrease by 10% after every €100m of assets	Not regulated	Not regulated
Transfer	Redemption fees should be payable at a maximum of 1% of total assets (excluding people within 5 years of retirement)	Not regulated	Not regulated
Joining	Application fee is allowed	Not regulated	Not regulated
Trading, settlement, post-trading	Included in the total charges	Not regulated	Not regulated
Total	n/a	Maximum 3% of net asset value	Maximum 3% of net asset value
Any limits on total fees in place	n/a	n/a	n/a

### Performance

Yield level

Net returns

Cost-effectiveness

### Economies of scale

Any comments on the current scale of providers

## Participant information and governance and saver behaviour

### Information availability

Pre-contractual information available to consumers

Contractual information available to consumers

The pension account is a pool of all the data related to the state of an employee's pension. An account statement is available at any time on demand, although it does not provide any evaluation of the pension benefits that will be granted at the date of retirement. Extra information is made available in the Estonian Central Register of Securities. There are also centres where the same information can be obtained in paper form

Same as the compulsory-funded pension

Category	Funded pension	Supplementary funded pension—pension fund	Supplementary funded pension—insurance contract
<b>Investment advice</b>			
Overall description of investment advice system	Information concerning financial risk is principally available on the Internet via account managers or insurance companies. The financial supervision authority has also created its website with some financial information (www.minuraha). Finally, financial education has been added to the curriculum of most secondary schools	Same as the compulsory-funded pension	
Specific or general	General	General	
One-off or ongoing			
Who provides the advice			
<b>Saver representation</b>			
Board of pension schemes	No representation requirements by the law. Governance requirements are those of investment management companies		
Regulator/ supervisory authority			
Elections process for representatives			
<b>Saver behaviour</b>			
Savers' response to product performance			

Source: Oxera research and analysis.

**Table A3.11 Overview of the Romanian private pension system**

Category	Privately managed compulsory component	Privately managed optional component
<b>Overall private pension set-up and coverage</b>		
<b>System set-up</b>		
Obligation to join ( <i>mandatory, voluntary, opt-out, opt-in, etc</i> )	Mandatory for employees born after December 31st 1972	Voluntary
Functional classification ( <i>Employer-arranged or personal</i> )	Personal	Personal
Overall OECD classification ( <i>DC or DB</i> )	DC	DC
Funding structure	Funded	Funded
<b>Top-level market data</b>		
Coverage ( <i>no. of members</i> )	5,186,370 participants (80% of employees)	221,000 participants
Total asset value	€1.7 billion	€110m
<i>No. of providers</i>	14	13
<i>No. of products</i>	n/a	n/a
<b>Contributions and benefits</b>		
Contribution source	Employee, employer or both (employer contributions are optional)	Employee, employer or both (employer contributions are optional)
Contribution base	Gross salary (contributions are collected via the income tax system by the National Pensions and Social Insurance Authority)	Free basis (contributions are collected by the employer)
Allowed level of contributions	2% in 2009 and a plan to increase contributions by 0.5% each year, up to a maximum of 6% Increase from 3% to 3.5% in March 2012	Up to the equivalent of 15% of gross salary
Most common level of contributions	n/a	n/a
Payout method	Annuity compulsory in some cases (legislation to be enacted)	
Payout conditions	Being retired or permanently disabled	Being retired or permanently disabled
Fiscal incentives on contributions	Deductible and subject to social security relief	Tax-deductibility up to €400 per annum for both employer and employee

<b>Category</b>	<b>Privately managed compulsory component</b>	<b>Privately managed optional component</b>
Fiscal incentives on benefits payout	Tax-free up to an amount of 1,000 lei per month	Tax-free up to an amount of 1,000 lei per month
Additional benefits granted (disability/survivor, etc)		
<b>Joining and switching</b>		
Joining conditions and disclosure requirements	To be under 45 years of age	To have at least 90 months remaining before turning 60
Switching feasibility and conditions	Free to transfer money between funds	Free to transfer money between funds
Observed switching patterns	Insignificant	n/a
<b>System history</b>		
Legislation	Law 411/2004 regarding private pension funds, amended by Law 23/2007	Law 204/2006 regarding the optional pensions
Important changes in the last 20 years	Scheme started in 2008	Scheme started in 2008
Treatment changes (eg, age/gender/income)	No notable changes	No notable changes
Future changes/plans	Progressive increase of contribution rate	Tax-deductibility on contributions expected to increase over time, potentially up to €1,000 in five years
<b>Other top-level questions</b>		
Most representative scheme	ING	ING
Regulator/ supervisory authority	Comisa de supraveghere a sistemului de pensii private (CSSPP)	Comisa de supraveghere a sistemului de pensii private (CSSPP)
Distribution channels	n/a	Agents and brokers
Importance of contribution dormancy	Increasing issue since May 2008, currently affects between 35% and 40% of total participants	n/a
Importance of, and reasons for, empty accounts	At end June 2012, there were 234,000 empty accounts. Empty accounts are allowed to be erased after three years of inactivity	n/a
Any additional information/details		

Category	Privately managed compulsory component	Privately managed optional component
Coverage in OECD Global Pension Statistics (Yes/No)	No	No
<b>Risk and regulation</b>		
<b>Overall country risk profile</b>		
Global impacts/ characteristics		
Impact of the crisis on the pension market	Returns affected—the market is still in the accumulation phase	
Country-specific impacts/characteristics	Foreign investment represented only 15% of private pension fund assets More than 60% of the total portfolio is invested in government securities Diversified portfolio that includes short-term bank deposits and medium-term, fixed-income instruments	
<b>Minimum returns</b>		
Are they imposed?	Yes	Yes
Enforcement mechanism		
Benchmark	Minimum return takes two forms: an absolute guarantee of performance (at least 0% return over the period of accumulation); and a relative one (minimum yield is calculated periodically based on the average market performance)	
<b>Minimum contributions</b>		
Are they imposed?	No	Can be imposed by the fund
If yes, what is the relevant level and base?	n/a	Absolute amount
<b>Risk limitation and avoidance</b>		
Are there any mechanisms limiting risk linked to age profile?	No	No
Are there any mechanisms limiting risk linked to income profile?	No	No
Actions available to savers to limit risk exposure	Policyholder can choose between three investments options: low-risk (10–30% in risky assets), balanced (30–50% maximum), or aggressive (more than 50%)	
Costs/penalties associated with the above measures	Choosing a risky investment option increases trading costs	Choosing a risky investment option increases trading costs
<b>Portfolio allocation</b>		
Legal restrictions	Investments in infrastructure projects limited to 10%	Investments in infrastructure projects limited to 10%
Actual portfolio allocation	Granular information at fund level	Granular information at fund level
Portfolio information and disclosure	Detailed information about portfolio allocation is publicly available	Detailed information about portfolio allocation is publicly available

Category	Privately managed compulsory component	Privately managed optional component
<b>Asset management</b>		
Asset-managing institution	Administrators of privately administrated pension funds of Pillar II	Administrators of privately administrated pension funds of Pillar III
Financial reporting requirements	Performance has to be reported to the CSSPP for minimum returns assessment. More generally, financial results are made available to the public	
<b>Pension protection fund</b>		
Legislation	Guarantee fund (law passed in H2 2011)	Guarantee fund (law passed in H2 2011)
Coverage	All participants in the event of administrators not being able to fulfil their obligations  The Guarantee fund is funded by a contribution from administrators, of 1% of the capital needed at the creation of the fund and a variable amount that is established with each manager and based on several factors (eg, size, obligations, risk)	
Asset allocation	n/a	n/a
Benchmark for performance	No benchmark	No benchmark
<b>Other risk-management controls in place</b>		
IT systems		
Monitoring systems	Internal risk management required	Internal risk management required
Internal audit	Required	Required
Performance measurements		
External controls	Funds are required to have assets of €4m to start to operate and to form actuarial reserves  Unit price checking  External custody	
<b>Adequacy</b>		
Any existing definition of adequacy of retirement benefits	Accumulated contributions, less applicable charges, are guaranteed at the date of exit from the fund	
<b>Performance and costs</b>		
<b>Charges/fees</b>		
Contribution-based	Max. 2.5% of contributions	Max. 2.5% of contributions
Returns-based	None	None
Plan administration	None	None

<b>Category</b>	<b>Privately managed compulsory component</b>	<b>Privately managed optional component</b>
Fund management	Max. 0.05% of assets per month	Max. 0.05% of assets per month
Transfer	5% of account value for the first two years following the transfer	5% of account value for the first two years following the transfer
Joining		
Trading, settlement, post-trading	Variable (range from 4,230 lei per annum to 89,500 lei per annum)	Variable (range from 4,300 lei per annum to 27,000 lei per annum)
Total (if breakdown not available)		
Any limits on total fees in place	Maximum 1% of assets under management	Maximum 1% of assets under management
<b>Performance</b>		
Yield level	Weighted rate of return of all funds in a category (Nov 2011) High risk: 8.8% Medium risk: 8.8% Low risk: tbc	Weighted rate of return of all funds in a category (Nov 2011) High risk: 5% Medium risk: 6.7% Low risk: 6.7%
Net returns		
Cost-effectiveness		
<b>Economies of scale</b>		
Any comments on the current scale of providers	No studies available	No studies available
<b>Participant information and governance and saver behaviour</b>		
<b>Information availability</b>		
Pre-contractual information available to consumers	Consumer guide available on the regulator's website (as well as a channel for further information and complaints) Prospectus given before signing the contract	
Contractual information available to consumers	No contractual information available	No contractual information available
<b>Investment advice</b>		
Overall description of investment advice system	No advice is given, but financial education material is available on the regulator's website	
Specific or general	Not applicable	Not applicable
One-off or ongoing	Not applicable	Not applicable
Advice provider	Not applicable	Not applicable

Category	Privately managed compulsory component	Privately managed optional component
<b>Saver representation</b>		
Board of pension schemes	Manager of the fund participates in the fund themselves	Manager of the fund participates in the fund themselves
Regulator/ supervisory authority	n/a	n/a
Elections process for representatives	n/a	n/a

<b>Saver behaviour</b>		
Savers' response to product performance		

Source: Oxera research and analysis.

**Table A3.12 Overview of the Hungarian private pension system**

Category	(Former) Employer-arranged pension	Personal pension
<b>Overall private pension set-up and coverage</b>		
<b>System set-up</b>		
Obligation to join	Voluntary (until November 3rd 2011, mandatory for employees starting employment after 1998)	Voluntary
Functional classification	Formerly Employer-arranged, since 2011 reform only personal	Personal
Overall OECD classification	DC	DC
Funding structure	Pension fund	Pension fund
<b>Top-level market data</b>		
Coverage (no. of members)	75k (June 30th 2012)	1,234k (June 30th 2012)
Total asset value	HUF 187 billion	HUF 850 billion
No. of providers	11 (decreasing)	53 (decreasing)
No. of products		
<b>Contributions and benefits</b>		
Contribution source	Individual (until 2011 reform, also employer)	Individual (and employer, if used as additional benefit)
Contribution base	Gross salary until 2011 reform, currently post-tax income	Free basis (net salary)
Allowed level of contributions	10% until 2011 reform, currently limits specified by the individual pension funds	No limit
Most common level of contributions	1.000 HUF (monthly)	
Payout method	Annuity	Annuity (at retirement) or option to take out in lump sum after at least 10 years of accumulation (99% of people take out lump sum)
Payout conditions	Reaching the pension age (or going on state disability pension)	Pre-2008: after 10 years only the yield is tax-free, but after each additional year 10% of capital becomes tax-free as well. That is, after 20 years, both capital and yield can be drawn out in a tax-free lump sum  Post-2008: fully tax-free payout feasibly only 20 years after the contribution is made
Fiscal incentives on contributions		Tax credit of 20% of contributions, with an annual limit of HUF 100,000 (in some special cases)

Category	(Former) Employer-arranged pension	Personal pension
Fiscal incentives on benefits payout	Tax-exempt	Tax-exempt
Additional benefits granted		
<b>Joining and switching</b>		
Joining conditions and disclosure requirements		
Switching feasibility and conditions	No switching allowed within the first 6 months of membership. Between 6 months and two years, switching is allowed for a fee of 0.1% of total savings value. (If the fund's justified associated costs are higher, the fee can be up to HUF 5,000. If membership is more than two years, the switching fee is 0.1% of total savings value (uncapped)	
Observed switching patterns	Historical switching not relevant because of systemic change in 2011	Minimal: 0.2% on average 2009–11
<b>System history</b>		
Legislation	Reform in 1998	Reform in 1993
Important changes in the last 20 years	In 2011/12 the assets were essentially transferred to the state (members who chose to stay in the system lost eligibility for 25% of their state pensions for the duration of contributions to Pillar II). For the members still in the system, contributions were diverted to the state budget for 2010–11	
Treatment changes (eg, age/gender/...)		
Future changes/plans		
<b>Other top-level questions</b>		
Most representative scheme		
Regulator/ supervisory authority	PSZAF	PSZAF
Distribution channels		
Contribution dormancy		
Empty accounts		
Any additional information		

Category	(Former) Employer-arranged pension	Personal pension
Coverage in OECD GPS (Yes/No)		
<b>Risk and regulation</b>		
<b>Overall country risk profile</b>		
Global impacts/ characteristics		
Impact of the crisis	A 12% fall in the simple average nominal yield	A 12% fall in the simple average nominal yield
Country-specific impacts/characteristics	Transfer of the assets to improve the state budget	
<b>Minimum returns</b>		
Are they imposed?	Yes	No
Enforcement mechanism	Difference paid from the Funds' Guarantee Fund; the guarantee is forgone if the member switched funds or portfolios with less than five years' worth of contributions	n/a
Benchmark	Matching inflation	n/a
<b>Minimum contributions</b>		
Are they imposed?	No	No
If yes, what is the relevant level and base?		
<b>Risk limitation and avoidance</b>		
Mechanisms limiting risk linked to age profile	Default portfolios depending on years of accumulation remaining: >15 years remaining: growth 5–15 years: balanced <5 years: classic Savers can choose portfolios other than default, but cannot choose growth in last five years prior to retirement	One or more portfolios, depending on the license from PSZAF
Mechanisms limiting risk linked to income profile		
Actions available to savers to limit risk exposure		

Category	(Former) Employer-arranged pension	Personal pension
Costs/penalties associated with the above measures	Switching between portfolios costs max. HUF 2,000	
<b>Portfolio allocation</b>		
Legal restrictions	Classic portfolio: max. 10% shares, no derivatives or real estate investments, rest bonds Balanced: max. 10% real estate investments, max. 3% venture capital funds (max. 2% in one), 10–40% shares, no derivatives, rest bonds Growth: max. 20% real estate, max. 5% venture capital funds, max. 5% derivatives, min 40% shares, rest bonds	Except government bonds one issuer cannot have a share of >10% of the fund's portfolio. The fund can have a max. of 10% of the total securities of one issuer
Actual portfolio allocation	Cash 4%, bonds 50%, shares 12%, investment funds 33%, other 1%	Cash 4%, bonds 66%, shares 5%, investment fund 22%, other 3%
Portfolio information and disclosure		
<b>Asset management</b>		
Asset-managing institution		
Financial reporting requirements		
<b>Pension protection fund</b>		
Legislation	<i>(Based on 2009 data)</i> Mandatory membership of all funds State guarantee Membership fee: 0.35% of contributions (max. 0.4%) set by the Guarantee Fund Assets 0.1–1.5% of total assets of funds— in reality, 0.31–0.37% (enough to cover pensions for 12,000 members)	
Coverage	All funds, 100% cover	No
Asset allocation	Almost only government bonds (>99%)	
Benchmark for performance		
<b>Other risk-management controls in place</b>		
IT systems		
Monitoring systems		
Internal audit		
Performance measurements		
External controls		

Category	(Former) Employer-arranged pension	Personal pension
<b>Adequacy</b>		
Any existing definition		
<b>Performance and costs</b>		
<b>Charges/fees</b>		
Contribution-based	0.9% (before 2011: 4.5%)	Max 10% if annual contributions under 10k HUF Max 6% if annual contributions over 10k HUF
Returns-based		No
Plan administration		No
Fund management	0.2% (before 2011: 0.9%)	0.8%
Transfer		No
Joining		A fixed amount (varies by fund) from first contribution is taken as a fee
Trading, settlement, post-trading		
Total		
Any limits on total fees in place		
<b>Performance</b>		
Yield level	10-year average yield: classic: 7.1%, balanced: 7.4%, growth: 7.6% 2010 yields: classic: 5.8%, balanced: 7.7%, growth: 9.2%	10-year average yield: 7.4% 2010 yields: 8.0%
Net returns	10-yr inflation: 5.6% 2010 inflation: 4.9%	10-yr inflation: 5.6% 2010 inflation: 4.9%
Cost-effectiveness		
<b>Economies of scale</b>		
Any comments on the current scale of providers		

Category	(Former) Employer-arranged pension	Personal pension
<b>Participant information and governance and saver behaviour</b>		
<b>Information availability</b>		
Pre-contractual information available to consumers		Fees, historical yields
Contractual information available to consumers		
<b>Investment advice</b>		
Overall description of investment advice system		
Specific or general		General: trade-offs between portfolios if there is more than one
One-off or ongoing		
Advice provider		Funds provide general advice
<b>Saver representation</b>		
Board of pension schemes		
Regulator/ supervisory authority		
Elections process for reps.		
<b>Saver representation</b>		
Savers' response to product performance		

Source: Oxera research and analysis.

**Table A3.13a Overview of the Spanish private pension system—employer-arranged schemes**

Category	Fondos de pensiones: planes de empleo (pension funds: Employer-arranged plans)	Seguros colectivos sobre la vida (group life insurance contracts)	Plan de Previsión Social Empresarial (collective pension insurance plan)	Fondos de pensiones internos (non-autonomous funds)	Entidades de prevision social or mutualidades de prevision social (mutual pension provident entities)
<b>Overall private pension set-up and coverage</b>					
<b>System set-up</b>					
Obligation to join	Voluntary (auto-enrolment, opt-out if agreed on by union and employer)	Voluntary	Voluntary	Voluntary	Voluntary (only available in the Basque Country)
Functional classification	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged	Employer-arranged
Overall OECD classification	DC (mainly), also DB and hybrid	DB	DB	DC	DC
Funding structure	Funded	Insurance contract	Insurance contract	Book reserve	Funded
<b>Top-level market data</b>					
Coverage (no. of members)	2.158m (3/12) (DB 2%, DC 66%, mixed 32%)	906.619 employees in 19974 firms (2011)	24.512 (2011)	Around 270.000 employees in financial sector (2009, declining)	2.52m (2010)
Total asset value	€32.1 billion (1.1 DB, 8.7 DC, 20.6 mixed)	€28.271bn (2011) (of which about 75% are pensions-related)	Mathematical prov: €94.6m		€31.064 billion (2010)
No. of providers	95	87	16		
No. of products					
<b>Contributions and benefits</b>					
Contribution source	Employer and employee	Employer and employee	Employer and employee	Employer	Employer and employee
Contribution base	Salary	Salary			
Allowed level of contributions	Up to €10.000; €12.500 for 50+ years of age				
Most common level of contributions	For DC: employer 5–6%, employee 3–4%				
Payout method	Lump sum, annuity or combination	Lump sum, annuity or combination	Lump sum, annuity or combination	Lump sum, annuity or combination	Lump sum, annuity or combination

Category	Fondos de pensiones: planes de empleo (pension funds: Employer-arranged plans)	Seguros colectivos sobre la vida (group life insurance contracts)	Plan de Previsión Social Empresarial (collective pension insurance plan)	Fondos de pensiones internos (non-autonomous funds)	Entidades de prevision social or mutualidades de prevision social (mutual pension provident entities)
Payout conditions	Minimum age 65 (early retirement is possible under Pillar I conditions)	Minimum age 65 (early retirement is possible under Pillar I conditions)	Minimum age 65 (early retirement is possible under Pillar I conditions)	Minimum age 65 (early retirement is possible under Pillar I conditions)	Minimum age 65 (early retirement is possible under Pillar I conditions)
Fiscal incentives on contributions	Employer contributions tax-deductible up to €10,000/year or 30% of income (€12,500 (50%) for 50+ years of age)	Two options (related to benefit taxation): a) employer contributions tax-deductible and employee contributions tax-neutral; b) both taxed as normal income	Employer contributions tax-deductible up to €10,000/year or 30% of income (€12,500 (50%) for 50+ years of age)	Employer contributions tax-deductible up to €10,000/year or 30% of income (€12,500 (50%) for 50+ years of age)	Employer contributions tax-deductible up to €10,000/year or 30% of income (€12,500 (50%) for 50+ years of age)
Fiscal incentives on benefits payout	None (40% deduction before 2007)	Two options (related to contribution taxation): a) fully taxable; b) portion of pension that exceeds sum of contribution is taxed	None	None	None
Additional benefits granted	Yes	Yes	Yes	Yes	Yes
<b>Joining and switching</b>					
Joining conditions and disclosure requirements	Set up by the employer (also for government workers); already two years working for the company	Set up by the employer	Private sector employees	Only for employees of the financial sector	Private sector employees
Switching feasibility and conditions	Possible when employee changes jobs and under terms specified in contract (even switching between open Pill II and III products is feasible)		Possible when employer changes and under terms specified in contract	Rights are lost when employment ends before retirement	Possible when employer changes and under terms specified in contract
Observed switching patterns					
<b>System history</b>					
Legislation	Pension Fund Law 1/2002, Royal Decree 304/2004, 35/2006, 439/2001, 1684/2007, RD1299/2009	Royal Decree 1588/1999	35/2006, came into force at the beginning of 2008	Mostly abolished in 2002, only admissible in financial sector	
Important changes in the last 20 years	Favourable tax treatment of lump sums was abolished in 2007 (before that, majority taken out as lump sum)				Established in late 1980s, 300,000 plan members in 1989 rising to 1,800,000 in 1995

Category	Fondos de pensiones: planes de empleo (pension funds: Employer-arranged plans)	Seguros colectivos sobre la vida (group life insurance contracts)	Plan de Previsión Social Empresarial (collective pension insurance plan)	Fondos de pensiones internos (non-autonomous funds)	Entidades de prevision social or mutualidades de prevision social (mutual pension provident entities)
Treatment changes (eg, age/gender/...)	Minimum age will increase to 67 in 2027 (applying to all schemes with minimum age 65)				
Future changes/plans					
<b>Other top-level questions</b>					
Most representative scheme					
Regulator/ supervisory authority	'Dirección General de Seguros y Planes de Pensiones' (DGSFP)	'Dirección General de Seguros y Planes de Pensiones' (DGSFP)	'Dirección General de Seguros y Planes de Pensiones' (DGSFP)	Spanish National Bank	Supervised by regional authorities (Vasque Authority)
Distribution channels	Banking predominant, then agents	Banking and agents predominant	Banking and agents predominant		
Contribution dormancy	Considerable during crisis— up to 40% dormant accounts in 2007				
Empty accounts					
Any additional information/details		About 25% of the contributions are made to contracts do not cover pensions, but are pure risk life insurance products	Very similar to Employer-arranged plans (set up by employer, same fiscal treatment etc), but less administration required for smaller companies		Most prevalent in the Basque region. Subject to specific regulation, some are supervised at the regional level. It includes mutual funds for regional government workers, industrial and airlines' industry-wide schemes, co-operatives, the police force, and the central bank
Coverage in OECD GPS (Yes/No)	Yes	Yes	Yes	Yes	Yes
<b>Risk and regulation</b>					
<b>Overall country risk profile</b>					
Global impacts/ characteristics					
Impact of the crisis on the pension market	Number of pension plan members increased less in 2009				
Country-specific impacts/characteristics					

Category	Fondos de pensiones: planes de empleo (pension funds: Employer-arranged plans)	Seguros colectivos sobre la vida (group life insurance contracts)	Plan de Previsión Social Empresarial (collective pension insurance plan)	Fondos de pensiones internos (non-autonomous funds)	Entidades de prevision social or mutualidades de prevision social (mutual pension provident entities)
<b>Minimum returns</b>					
Are they imposed?	Not by law	No	Yes		
Enforcement mechanism					
Benchmark	Fixed by each plan		Actuarial interest rate set by DGSFP		
<b>Minimum contributions</b>					
Are they imposed?	Fixed by each plan				
If yes, what is the relevant level and base?					
<b>Risk limitation and avoidance</b>					
Mechanisms limiting risk linked to age profile	Life-styling				
Mechanisms limiting risk linked to income profile					
Actions available to savers to limit risk exposure					
Costs/penalties associated with the above measures					
<b>Portfolio allocation</b>					
Legal restrictions	Minimum of 70% in low-risk assets (certain financial securities traded in regulated markets, derivatives traded in organised markets, banking deposits, credits with mortgage guarantee, properties and real estate investment funds) (Art. 69 to 77 of RD 304/2004)	Exist, but less restrictive than for planes de empleo			Maximum of 30% in properties, credits with mortgage guarantee, rights in immovable property, real estate investment funds and companies with the exclusive object of holding and managing properties and whose securities are not allowed to be traded in regulated markets, and other caps on shares in similar assets
Actual portfolio allocation					

Category	Fondos de pensiones: planes de empleo (pension funds: Employer-arranged plans)	Seguros colectivos sobre la vida (group life insurance contracts)	Plan de Previsión Social Empresarial (collective pension insurance plan)	Fondos de pensiones internos (non-autonomous funds)	Entidades de prevision social or mutualidades de prevision social (mutual pension provident entities)
Portfolio information and disclosure	Annual accounts are public on the regulator's website. Art. 34 RD304/2004: information to members: information about performance, portfolio allocation				
<b>Asset management</b>					
Asset-managing institution	Pension fund (closed—managing funds of only one or few plans; open—different plans can invest)	Insurance company	Insurance company	Pension fund	Pension fund
Financial reporting requirements	Companies are required to send their quarterly and annual reports to, and can be inspected by, DGSFP.  They have to send annual accounts and auditor's report to DGSFP	Companies are required to send their quarterly and annual reports to, and can be inspected by, DGSFP.  They have to send annual accounts and auditor's report to DGSFP	Companies are required to send their quarterly and annual reports to, and can be inspected by, DGSFP.  They have to send annual accounts and auditor's report to DGSFP	Companies are required to send their quarterly and annual reports to, and can be inspected by, DGSFP	
<b>Pension protection fund</b>					
Legislation	None	None	None	None	None
Coverage					
Asset allocation					
Benchmark for performance					
<b>Other risk-management controls in place</b>					
IT systems					
Monitoring systems					
Internal audit					
Performance measurements					
External controls					
<b>Adequacy</b>					
Any existing definition					

Category	Fondos de pensiones: planes de empleo (pension funds: Employer-arranged plans)	Seguros colectivos sobre la vida (group life insurance contracts)	Plan de Previsión Social Empresarial (collective pension insurance plan)	Fondos de pensiones internos (non-autonomous funds)	Entidades de prevision social or mutualidades de prevision social (mutual pension provident entities)
<b>Performance and costs</b>					
<b>Charges/fees</b>					
Contribution-based	None				
Returns-based	None				
Plan administration					
Fund management	0.21 % mana geme nt and 0.03 % depo sit com missi on				
Transfer	No additional costs				
Joining					Reported as relatively high (set up by employer) and vary considerably across providers (tbc)
Trading, settlement, post-trading					
Total					
Any limits on total fees in place	Depository institution may charge up to 0.5% of fund value for administration, max. 2% of fund value and returns for management				

Category	Fondos de pensiones: planes de empleo (pension funds: Employer-arranged plans)	Seguros colectivos sobre la vida (group life insurance contracts)	Plan de Previsión Social Empresarial (collective pension insurance plan)	Fondos de pensiones internos (non-autonomous funds)	Entidades de prevision social or mutualidades de prevision social (mutual pension provident entities)
<b>Performance</b>					
Yield level	Information on regulator's website				
Net returns	Information available on regulator's website				
Cost-effectiveness					
<b>Economies of scale</b>					
Any comments on the current scale of providers					
<b>Participant information and governance and saver behaviour</b>					
<b>Information availability</b>					
Pre-contractual information available to consumers	Information about investment policy, calculation methods used, and other information	Information about investment policy, calculation methods used, and other information			
Contractual information available to consumers	Annual information about details of contributions made, guaranteed benefits; semi-annual information about current value, portfolio allocation and results as well as changes in investment policies	Annual information about details of contributions made, guaranteed benefits; semi-annual information about current value, portfolio allocation and results as well as changes in investment policies	Annual information about details of contributions made, guaranteed benefits; semi-annual information about current value, portfolio allocation and results as well as changes in investment policies		
<b>Investment advice</b>					
Overall description of investment advice system					
Specific or general					
One-off or ongoing					
Who provides the advice					
<b>Saver representation</b>					
Board of pension schemes	Control committee composed of at least 50% representatives of plan members	No control committee required	Control committee composed of at least 50% representatives of plan members	Control committee composed of at least 50% representatives of plan members	Control committee composed of at least 50% representatives of plan members

Category	Fondos de pensiones: planes de empleo (pension funds: Employer-arranged plans)	Seguros colectivos sobre la vida (group life insurance contracts)	Plan de Previsión Social Empresarial (collective pension insurance plan)	Fondos de pensiones internos (non-autonomous funds)	Entidades de prevision social or mutualidades de prevision social (mutual pension provident entities)
Regulator/ supervisory authority					
Elections process for representatives					
<b>Saver behaviour</b>					
Savers' response to product performance	Percentage of annual contributions below €300 rose from 57% to 70% in 2006–10				

Source: Oxera research and analysis.

**Table A3.13b Overview of the Spanish private pension system—personal schemes**

Category	Entidades/mutualidades de prevision social or (mutual pension provident entities)	Planes asociados (associated plans)	Planes individuales (personal plans)	Planes de prevision asegurados (PPA)
<b>Overall private pension set-up and coverage</b>				
<b>System set-up</b>				
Obligation to join	Voluntary (only available in the Basque Country)	Voluntary	Voluntary	Voluntary
Functional classification	Private	Private	Private	Private
Overall OECD classification	DC	DC	DC	DC
Funding structure	Funded	Funded	Funded	Insurance contract
<b>Top-level market data</b>				
Coverage (no. of members)	2.52m (2010)	73,320 (2010)	8.32m (March 2012)	823.834 (2011)
Total asset value	€31.064 billion (2010)	€840m (March 2012)	€51.7 billion (March 2012, decreasing considerably due to current financial crisis)	€9.603 billion (March 2012)
No. of providers				68
No. of products	403 (2010)	403 (2010)	1,360 (March 2012)	174

Category	Entidades/mutualidades de prevision social or (mutual pension provident entities)	Planes asociados (associated plans)	Planes individuales (personal plans)	Planes de prevision asegurados (PPA)
<b>Contributions and benefits</b>				
Contribution source	Individual (members of the mutual)	Individual and association	Individual	Individual
Contribution base	Post-tax income	Post-tax income	Post-tax income	Post-tax income
Allowed level of contributions		Maximum limit €10.000 €12.500€ if 50+ years of age	Maximum limit €10.000 €12.500€ if 50+ years of age	
Most common level of contributions			No more than €8,000 per year and €240,000 must be contributed	65.6% contribute less than €900 per year (45.8% less than €300)
Payout method	Lump sum, annuity or combination	Lump sum, annuity or combination	Lump sum, annuity or combination	
Payout conditions		Minimum age 65 (early retirement is possible under Pillar I conditions)	Minimum age 65 (early retirement is possible under Pillar I conditions)	Minimum age 65 (early retirement is possible under Pillar I conditions)
Fiscal incentives on contributions	Contributions tax-deductible up to €10,000/year (€12,500 for 50+ years of age), across all private pension products.			
Fiscal incentives on benefits payout	None	None	None	None
Additional benefits granted	Yes	Yes	Yes	Yes
<b>Joining and switching</b>				
Joining conditions and disclosure requirements		Member of a specific union, association or syndicate	Anyone	Anyone
Switching feasibility and conditions		Possible at any time	Possible at any time	Possible at any time
Observed switching patterns				
<b>System history</b>				
Legislation		Legislative Royal Decree 1/2002	Legislative Royal Decree 1/2002	35/2006, Resolution of October 20th 2008
Important changes in the last 20 years				
Treatment changes (eg, age/gender/...)	No gender discrimination allowed	Gender discrimination in mortality tables allowed	Gender discrimination in mortality tables allowed	No gender discrimination allowed
Future changes/plans				
<b>Other top-level questions</b>				

Category	Entidades/mutualidades de prevision social or (mutual pension provident entities)	Planes asociados (associated plans)	Planes individuales (personal plans)	Planes de prevision asegurados (PPA)
Most representative scheme				
Regulator/ supervisory authority	Supervised by regional authorities	'Dirección General de Seguros y Planes de Pensiones' (DGSFP)	'Dirección General de Seguros y Planes de Pensiones' (DGSFP)	'Dirección General de Seguros y Planes de Pensiones' (DGSFP)
Distribution channels		Banking predominant, then agents	Banking predominant, then agents	Insurance agents
Contribution dormancy				
Empty accounts				
Any additional information/details	Most prevalent in the Basque region. Subject to specific regulation, some are supervised at the regional level		10 largest pension funds of the individual system and of the employment system accumulated in 2008 21% and 54% of assets respectively	
Coverage in OECD GPS (Yes/No)	Yes	Yes	Yes	No

Category	Entidades/mutualidades de prevision social or (mutual pension provident entities)	Planes asociados (associated plans)	Planes individuales (personal plans)	Planes de prevision asegurados (PPA)
<b>Risk and regulation</b>				
<b>Overall country risk profile</b>				
Global impacts/ characteristics				
Impact of the crisis on the pension market			Number of pension plans decreased in 2009, variable-interest funds lost around 40% of value in 2008	
Country-specific impacts				
<b>Minimum returns</b>				
Are they imposed?		No	No	Yes
Enforcement mechanism				
Benchmark				
<b>Minimum contributions</b>				
Are they imposed?		No	No	

Category	Entidades/mutualidades de prevision social or (mutual pension provident entities)	Planes asociados (associated plans)	Planes individuales (personal plans)	Planes de prevision asegurados (PPA)
If yes, what is the relevant level and base?				
<b>Risk limitation and avoidance</b>				
Mechanisms limiting risk linked to age profile				
Mechanisms limiting risk linked to income profile				
Actions available to savers to limit risk exposure			Choose low-risk plan ('renta fija')	
Costs/penalties associated with the above measures				
<b>Portfolio allocation</b>				
Legal restrictions		Art.69 to 77 of RD 304/2004 Order 407/2008	Different plans: fixed rent ('renta fija'), variable rent ('renta variable'), or with third-party guarantee, indicating the share of assets in investments with fixed returns (more than 70% for fixed, less than 25% for variable, and mixed forms exist)  Art.69 to 77 of RD 304/2004, Order 407/2008	Art. 50 to 53 of RD 2486/1998
Actual portfolio allocation				
Portfolio information and disclosure		Annual accounts are public on the regulator´s website. Art. 34 RD304/2004: information to members:information about performance, portfolio allocation	Annual accounts are public on the regulator´s website. Art. 34 RD304/2004: information to members:information about performance, portfolio allocation	
<b>Asset management</b>				
Asset-managing institution	Pension fund	Pension fund	Pension fund	Insurance companies
Financial reporting requirements		Companies are required to send their quarterly and annual reports to, and can be inspected by, DGSFP	Companies are required to send their quarterly and annual reports to, and can be inspected by, DGSFP	Companies are required to send their quarterly and annual reports to, and can be inspected by, DGSFP
<b>Pension protection fund</b>				
Legislation	None	None	None	None
Coverage				

Category	Entidades/mutualidades de prevision social or (mutual pension provident entities)	Planes asociados (associated plans)	Planes individuales (personal plans)	Planes de prevision asegurados (PPA)
Asset allocation				
Benchmark for performance				
<b>Other risk-management controls in place</b>				
IT systems				
Monitoring systems				
Internal audit				
Performance measurements				
External controls				
<b>Adequacy</b>				
Any existing definition				
<b>Performance and costs</b>				
<b>Charges/fees</b>				
Contribution-based		None	None	
Returns-based		None	None	
Plan administration				
Fund management		Max. 2% of fund value on account management; In addition, up to 0.5% for deposit commission	Max. 2% of fund value; observed 2011 average 1.52% In addition, average 0.2% deposit commission, up to a maximum limit of 0.5%	
Transfer		No additional cost	No additional cost	
Joining				
Trading, settlement, post-trading				
Total		Information on regulator's website	Information on regulator's website	
Any limits on total fees in place	Depository institution may charge up to 0.5% of fund value for administration, max. 2% of fund value and returns for management			

Category	Entidades/mutualidades de prevision social or (mutual pension provident entities)	Planes asociados (associated plans)	Planes individuales (personal plans)	Planes de prevision asegurados (PPA)
<b>Performance</b>				
Yield level				
Net returns		Information on regulator's website	Information on regulator's website	
Cost-effectiveness				
<b>Economies of scale</b>				
Any comments on the current scale of providers				
<b>Participant information and governance and saver behaviour</b>				
<b>Information availability</b>				
Pre-contractual information available to consumers		Information about investment principles and other characteristics of the plan	Information about investment principles and other characteristics of the plan	
Contractual information available to consumers		Annual information about details of contributions made, guaranteed benefits; biannual information about current value, portfolio allocation and results, as well as changes in investment policies.  Some quarterly information also available.	Annual information about details of contributions made, guaranteed benefits; biannual information about current value, portfolio allocation and results, as well as changes in investment policies  Some quarterly information also available.	
<b>Investment advice</b>				
Overall description of investment advice system				
Specific or general				
One-off or ongoing				
Who provides the advice				
<b>Saver representation</b>				
Board of pension schemes		Control committee to represent plan members' interests and ensure compliance	Have to nominate Ombudsman who receives claims from plan members	Have to nominate Ombudsman who receives claims from plan members
Regulator/ supervisory authority				
Elections process for representatives				
<b>Saver behaviour</b>				

Category	Entidades/mutualidades de prevision social or (mutual pension provident entities)	Planes asociados (associated plans)	Planes individuales (personal plans)	Planes de prevision asegurados (PPA)
Savers' response to product performance				

Source: Oxera research and analysis.

**Table A3.14 Overview of the Greek private pension system**

Category	Employer-arranged insurance funds (Tameia Epagglematikis Asfalisis)	Private group pension plan (Idiotiki Omadiki Asfalisi)	Private personal pension plan (Idiotiki Atomiki Asfalisi)
<b>Overall private pension set-up and coverage</b>			
<b>System set-up</b>			
Obligation to join	Voluntary	Voluntary	Voluntary
Functional classification	Employer-arranged	Employer-arranged	Personal
Overall OECD classification	DC	DC	DC majority (some DB personal plans)
Funding structure	Funded—insurance contract	Funded—pension fund	Funded—pension fund
<b>Top-level market data</b>			
Coverage (no. of members)	Approx. 15,000		5–12% of pension market
Total asset value	Approximately €60m	Mutual funds at least €50m (2012)	
No. of providers	6 + a number of public providers are in the process of becoming employer-arranged funds	Several	Several
No. of products	2 to 3 per scheme	Several	Several
<b>Contributions and benefits</b>			
Contribution source	Employer and/or employee	Employer (mandatory) and employee (optional)	Individual
Contribution base	Gross income	Gross income	Free basis (net income)
Allowed level of contributions	Varies by fund. Most common limit is €6,000/year or 20% gross	No limit	No limit
Most common level of contributions			
Payout method	Usually lump-sum payment upon retirement; less common a pension annuity	Lump-sum payments upon retirement (or change workplace), or (less commonly) pension annuity	Lump-sum payments upon retirement or pension annuity
Payout conditions	Legal retirement age subject to a number of years as a contributor. Reduced lump-sum payments are possible at younger ages	The end of the programme is chosen by the employer. A payout can also be made if the employee changes workplace	The end of the programme is chosen by employee. For tax reasons, the duration of the programmes is 10years+
Fiscal incentives on contributions	Under Law 4024/2011, contributions are 10% tax-deductible (up to €1,200 for single and €2,400 for couples)	Under Law 4024/2011, contributions are 10% tax-deductible (up to €1,200 for single and €2,400 for couples)	Under Law 4024/2011, contributions are 10% tax-deductible (up to €1,200 for single and €2,400 for couples)

Category	Employer-arranged insurance funds (Tameia Epagglematikis Asfalisi)	Private group pension plan (Idiotiki Omadiki Asfalisi)	Private personal pension plan (Idiotiki Atomiki Asfalisi)
Fiscal incentives on benefits payout	No	No	No
Additional benefits granted	Most offer disability and survivor lump-sum payments; level specified in the contract	Yes	Yes
<b>Joining and switching</b>			
Joining conditions and disclosure requirements	Only employees of specific professions can join their respective fund	Employers of specific categories (employees of a sector, a company, etc)	Anybody
Switching feasibility and conditions	Existing personal contribution can be transferred to other pension funds or withdrawn	Existing personal contribution can be transferred to other pension funds or withdrawn	Existing personal contribution can be transferred to other pension funds or withdrawn
Observed switching patterns			
<b>System history</b>			
Legislation	Established by Law 3029/2002, amended by 3385/2005, 3846/2010, 3896/2010.	Treated as financial products	Treated as financial products
Important changes in the last 20 years	Law 3385/2005 sets limits on the portfolio allocation. Law 4024/2011 sets the amount of tax benefits of contributions	Law 4024/2011 sets the amount of tax benefits of contributions	Law 4024/2011 sets the amount of tax benefits of contributions
Treatment changes (eg, age/gender/...)	None, by law	None, by law	None, by law
Future changes/plans	All supplementary (auxiliary) public funds that opt not to be merged will become employer-arranged funds.		
<b>Other top-level questions</b>			
Most representative scheme	Employer-arranged Insurance Fund of the Hellenic Post	Unit-linked mutual funds, capital protection, guarantee return plans	Unit-linked mutual funds, capital protection, guarantee return plans
Regulator/ supervisory authority	National Actuarial Authority of Greece and General Secretariat of Social Security (Ministry of Employment, Social Protection and Welfare)	Bank of Greece	Bank of Greece
Distribution channels	Directly or through employer	Directly/through work	Directly
Contribution dormancy			
Empty accounts			
Any additional information/details			

Category	Employer-arranged insurance funds (Tameia Epagglematikis Asfalis)	Private group pension plan (Idiotiki Omadiki Asfalis)	Private personal pension plan (Idiotiki Atomiki Asfalis)
Coverage in OECD GPS (Yes/No)	Yes	Yes	Yes
<b>Risk and regulation</b>			
<b>Overall country risk profile</b>			
Global impacts/ characteristics	Market and sovereign risk	Market and sovereign risk	Market and sovereign risk
Impact of the crisis on the pension market	Optional payments have been reduced	Market and sovereign risk for DC; the provider bears the risk for guarantee plans	Market and sovereign risk for DC; the provider bears the risk for guarantee plans
Country-specific impacts/characteristics	Funds that owned Greek bonds have had to write off a large percentage of the value of their holdings of Greek bonds (PSI)	Funds that owned Greek bonds have had to write off a large percentage of the value of their holdings of Greek bonds (PSI)	Funds that owned Greek bonds have had to write off a large percentage of the value of their holdings of Greek bonds (PSI)
<b>Minimum returns</b>			
Are they imposed?	No	From 0% up to 3.35%. For mutual funds, there is no minimum return	From 0% up to 3.35%. For mutual funds, there is no minimum return
Enforcement mechanism	No	No	No
Benchmark	No	For mutual funds only	For mutual funds only
<b>Minimum contributions</b>			
Are they imposed?	Yes (by the fund)	No	No
If yes, what is the relevant level and base?	Minimum employer contribution is imposed. Employees can opt in. Minimum level varies by scheme.	Depends on scheme	Depends on scheme
<b>Risk limitation and avoidance</b>			
Mechanisms limiting risk linked to age profile			
Mechanisms limiting risk linked to income profile			
Actions available to savers to limit risk exposure			
Costs/penalties associated			

Category	Employer-arranged insurance funds (Tameia Epagglematikis Asfalisis)	Private group pension plan (Idiotiki Omadiki Asfalisi)	Private personal pension plan (Idiotiki Atomiki Asfalisi)
<b>Portfolio allocation</b>			
Legal restrictions	Yes. Max. 70% in bonds and stocks; max. 30% in assets other than euros and max. 5% in financial products/derivatives (Law 3385/2005)	None/depends on employer's choice	None/depends on employee's personal choice
Actual portfolio allocation	Depends on fund	Depends on fund/scheme	Depends on fund/scheme
Portfolio information and disclosure	Yes, by law.	Yes, by law.	Yes, by law.
<b>Asset management</b>			
Asset-managing institution	Depends on fund	Depends on fund/scheme	Depends on fund/scheme
Financial reporting requirements	By law		
<b>Pension protection fund</b>			
Legislation			
Coverage			
Asset allocation			
Benchmark for performance			
<b>Other risk-management controls in place</b>			
IT systems		Provider policy (not known)	Provider policy (not known)
Monitoring systems		By law and internal procedures	By law and internal procedures
Internal audit	Yes	By law	By law
Performance measurements			
External controls		Accounting	Accounting
<b>Adequacy</b>			
Any existing definition			
<b>Performance and costs</b>			
<b>Charges/fees</b>			
Contribution-based		Depend on the programme type	Depend on the programme type

<b>Category</b>	<b>Employer-arranged insurance funds (Tameia Epagglematikis Asfalisi)</b>	<b>Private group pension plan (Idiotiki Omadiki Asfalisi)</b>	<b>Private personal pension plan (Idiotiki Atomiki Asfalisi)</b>
Returns-based		Depend on the programme type	Depend on the programme type
Plan administration		Depend on the programme type	Depend on the programme type
Fund management		Depend on the programme type	Depend on the programme type
Transfer	Free		
Joining	Joining or annual fee or free		
Trading, settlement, post-trading			
Total			
Any limits on total fees in place			
<b>Performance</b>			
Yield level			
Net returns			
Cost-effectiveness			
<b>Economies of scale</b>			
Any comments on the current scale of providers			
<b>Participant information and governance and saver behaviour</b>			
<b>Information availability</b>			
Pre-contractual information available to consumers	Terms & conditions and financial statements are publicly available		
Contractual information available to consumers			
<b>Investment advice</b>			
Overall description of investment advice system	All Employer-arranged funds are managed to minimise risks while maintaining some returns	Private insurance company, asset management company, bank or the pension fund	Private insurance company, asset management company, bank or the pension fund
Specific or general		Specific or none for tailor-made programmes	Specific or none for tailor-made programmes
One-off or ongoing		One-off and ongoing	One-off and ongoing
Who provides the advice		Private insurance company, asset management company or bank	Private insurance company, asset management company or bank

<b>Category</b>	<b>Employer-arranged insurance funds (Tameia Epagglematikis Asfalisis)</b>	<b>Private group pension plan (Idiotiki Omadiki Asfalisi)</b>	<b>Private personal pension plan (Idiotiki Atomiki Asfalisi)</b>
<b>Saver representation</b>			
Board of pension schemes	Yes		No
Regulator/ supervisory authority	No		
Elections process for representatives	Yes		No
<b>Saver behaviour</b>			
Savers' response to product performance			

Source: Oxera research and analysis.



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