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MANAGING AND SUPERVISING RISKS IN DEFINED CONTRIBUTION PENSION SYSTEMS

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ABSTRACT

Managing and Supervising Risks in Defined Contribution Pension Systems

Defined contribution (DC) plans are playing a larger role in pension systems around the world. Pension supervisory authorities are consequently asking if their oversight approaches need to adapt to this development – given that the risks within DC systems are born by the plan members themselves?

This paper highlights the key challenges for DC supervisors, outlining the different mechanisms which can be used to control risks within DC systems, and how the use of these mechanisms informs the supervisory approach. Case studies of IOPS members overseeing DC systems are also provided.

Keywords: defined contribution pensions, supervision, risk-management

JEL codes: G23, G32

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[1] This Working Paper was prepared by Mr. John Ashcroft, an independent consultant to the IOPS, and Ms. Fiona Stewart of the IOPS Secretariat and of the Private Pensions Unit of the OECD's Financial Affairs Division.

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MANAGING AND SUPERVISING RISKS IN DC PENSION SYSTEMS

I. Introduction

1. Defined contribution (DC) pensions are plans under which the contributions into the fund are pre-determined but the benefit is not. Contributions are made by individual members and/or by sponsoring employers (in the case of occupational DC funds), and invested to accumulate a balance at the time of retirement which is then withdrawn or used to buy a retirement product (such as an annuity).

2. The term "DC" applies to a wide range of plans worldwide, ranging from 'pure DC' where member benefits derive totally from contributions plus investment returns, to schemes where some minimum level of benefit is guaranteed.[2] There is, in addition, considerable variation in DC systems across the world, depending in particular on whether or not they are intended to be a major source of retirement income (i.e. their interaction with the public pension system), the extent to which participation is mandatory, and the extent of consumer choice and market competition within the system.

3. The supervision of these DC pension plans is increasing in importance for several reasons. First, as longevity has pushed up the costs to governments and employers of providing pensions, public pay-as-you-go (PAYG) pensions and occupational defined benefit (DB) arrangements are being increasingly supplemented or replaced with DC style pensions.[3]

4. In addition, the issue of how to manage risk and supervise DC pensions has also being given a heightened profile by the 2008/2009 financial crisis, which had a dramatic impact on some DC systems which experienced investment losses as large as 20-30% (the largest declines coming from portfolios with high equity exposures). A collapse in the value of pension savings is of greatest concern for workers close to retirement, as well as those already in the pay-out phase that have not shifted to conservative portfolios or bought life annuities. However, declines of such magnitude had an impact on confidence in DC systems in general.

5. Many DC systems are still fairly new[4] and in many countries few individuals have retired under predominantly DC arrangements. However, DC supervision becomes more important as these systems develop and mature, and supervisory authorities are consequently asking whether and how their supervisory approach needs to adapt to the introduction of these plans? As pension supervisory authorities are increasingly adopting a risk-based approach to supervision, the question also arises as to how such techniques should apply to DC pensions? Given the risks within DC plans lie with different parties than with DB plans (i.e. risks to employers are replaced by risks to members), supervisors are asking whether different supervisory techniques are required? Furthermore, do different types of DC system require different types of supervisory oversight?

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[2] These plans are covered by defined benefit regulation in some countries.

[3] This is even the case in traditional bastions of DB provisions such as the Netherlands, where hybrid plans, such as collective DC, are becoming more common.

[4] Australia and Chile are two exceptions and therefore particularly interesting case studies to examine.

6. Most pensions literature has historically focused on DB plans, leaving a gap to be filled. This paper therefore attempts to set out some of the different issues that confront pension supervisors overseeing DC-based pension systems. The core of DC pension supervision is that risks within these systems lie with individuals. The paper therefore outlines different mechanisms for protecting individuals and alleviating these risks, as well as discussing how the different control mechanisms used affect the supervisory approach. Finally, detailed case studies of a range of IOPS member authorities overseeing DC pension systems are provided.

7. While the paper refers to IOPS and OECD principles and guidelines where appropriate, it is intended to be descriptive rather than normative, and hence to complement guidance on good practice to be found in other relevant IOPS publications.

II. What is different about DC pension systems?

8. The main difference between DC and other forms of pension arrangement is that individual members generally bear the risks which are inherent in the plan.[5] These inherent risks include investment risk, operational failures etc. Such risks are also present in DB pension plans, but with DB or insured products, there is another party (such as the plan sponsor or provider) to make up 'under funding' caused by investment losses or increased longevity, or to absorb fees and charges or costs from administrative mistakes. With DC plans, these factors all impact the 'bottom line' of the accumulated account from which the individual member must fund his or her retirement– which adds up to the fundamental risk in a DC system, which is that individuals retire without an adequate, secure pension income.[6]

9. With DB plans, the focus of the supervisor is on making sure that the plan sponsor funds the plan sufficiently to ensure that the promised benefit will be provided. Investment risk, longevity risk, inflation etc. are all considered within the assessment of the solvency of the fund or plan. The supervisory approach will consequently focus on funding and solvency issues, looking at assumptions and often stress testing to assess whether benefits promises are likely to be met even under adverse circumstances. With DC systems the focus has to be on processes rather than outcomes as benefits are not guaranteed. The role of the supervisor is to ensure that the pension fund is managed in a secure way, as if the members themselves were undertaking the task. The focus of the supervisor should be on risks which impact on the members of the fund themselves and could involve them losing money. As it is the member that bears the risk it is the member outcomes that pension supervisory are seeking to protect and the focus in looking at risks is to reach these optimal member outcomes. These optimal outcomes would include appropriate contribution decisions, effective administration, appropriate investment decisions, security of assets, appropriate decumulation decisions and value for money.

10. Members experience further risk exposure in DC systems where they are obliged to take a range of decisions. These may include:

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[5] It should be noted that, as described above, there are different types of DC plan and it is only in the purest form of DC that all risks are born by the plan members. For example, where an investment guarantee is provided (by the plan provider, an insurance company, or indeed the government) some of the investment risk is shared. Likewise, with occupational DC funds, some of the administrative costs and risk may be borne by the sponsoring employer.

[6] In the case of DB or insured product, where the sponsor bears these risks, there is the possibility of insolvency that might end up affecting individual members' rights, where to the extent that DC risks are borne directly by the member there is no solvency risk. There is some solvency risk where the sponsor covers administrative costs or provides a guarantee, but commonly this is much less significant than for DB. The actions taken by supervisors to address this residual solvency risk are similar to those taken in relation to DB solvency risks and are not covered by this paper.

- *how much to contribute;*
- *which plan to join / provider to use;*
- *how to invest their assets;*
- *what product to purchase at retirement.*

11. Numerous studies show that these are not decisions that most member are well equipped or disposed to take – even if the supervisory regime ensures that they are given sufficient information for this purpose.[7] Impavido et al (2009) argue that the limited capacity of individuals to choose what is best for them stems from "*a combination of lack of financial education, bounded rationality and use of simplistic 'rules of thumb' in the decision-making process*."

DC Governance Problems

Even where decisions are taken not directly by but *on behalf of* members - by sponsoring employers/trustees etc. (as may be the case with occupational DC pension plans) acting in a fiduciary capacity - many of the issues and the supervisory focus are still fundamentally different from DB.

DC systems that are structured so that individuals bear the risk but other parties take the decisions (e.g. plan sponsors choosing providers or investment options), pose particular challenges for pension supervisory authorities.

Where some form of collective fiduciary body does exist (as with most occupational DC pension plans), and makes decisions on behalf of DC members and beneficiaries, the supervisor can focus much more on making sure that those taking the decisions are truly acting on behalf of the members (as discussed below) and that they are suitably knowledgeable to make these decisions (which can be a challenge for 'lay trustees' on the board of non-profit pension plans or foundations).

Where no such oversight body exists a 'governance vacuum' can arise. Various means have been tried to fill this governance gap (e.g. introducing 'safe-harbour' rules to encourage proactive decision making on behalf of members, requiring third-parties such as auditors to act as 'whistle-blowers', or introducing representational governance through bodies such as management committees). Supervisors themselves may play a more active role in such circumstance (e.g. monitoring and restricting investments).

This issue is not discussed further in this paper but is examined in detail in (Stewart, Yermo 2008), (Byrne et al 2007).

12. This element of member choice consequently introduces market competition into DC pension systems – the degree of competition varying with the amount of member choice. The significant role which competition plays in some DC systems contrasts with DB systems where the role of the market may be more limited.[8] There is some potential therefore for DC pension funds (in theory at least) to be disciplined by the market, which should direct participants and assets to better managed pension schemes and arrangements.

[7] See (OECD 2008a). Further information available via the OECD's project on financial education www.financial-education.org

[8] Given, in DB plans, employees have limited freedom of choice, though sponsors and trustees are able to select providers. Competition is also less significant where pension funds or plans are not commercial operations and do not have listed equity or debt (i.e. instruments though which market discipline acts).

13. The problem, as discussed by Impavido et al (2009), is that the limited capacity of individuals to choose what is best for them means that competition and markets rarely work effectively within pension systems – leaving too much power in the hands of pension providers. The problem is only exaggerated where pension providers are commercial financial institutions.[9] Conflicts of interest can therefore exist between the fiduciary duty to act in the interest of the pension fund members and beneficiaries and making profits for shareholders.

14. This risk can take on (at least) three forms: a commercial manager has other potential motivations than the well-being of members and beneficiaries and hence may take decisions not in their best interests (e.g. cross selling different products to plan members or charging high fees); where commercial or non-profit managers are not managing their own funds and do not bear any risk themselves, they may lack incentives to apply sufficient time, energy and thought to deliver the best outcomes; where a not-for-profit manager (e.g. trustee) may not have the acknowledged expertise to prevent commercially motivated suppliers/ advisors persuading them to act in ways that are not in the members' and beneficiaries' best interests.

15. When left unchecked, this excessive power can result in the following:

- unduly high charges (including from excessive trading);
- biased choice of service providers (e.g. from the same group) or investment products:
  - hidden commissions
  - insider trading
  - (which can all lead to) poor investment performance
- exposure to too much investment risk

16. Given the limitations of the market as a risk control mechanism, the role which competition plays in DC pension systems varies. Systems which require higher levels of protection (i.e. mandatory systems)[10] often employ a type of managed competition with a limited number of players and strictly controlled investment products etc. (see following discussion).

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[9] 'Not-for-profit' funds can also be manipulated by commercial providers/advisers (due to skills gap). DB funds may also use commercial providers, and therefore face conflict issues as well, but any resulting higher costs or poor investment performance would be borne by the plan sponsor. Specific DB conflict issues arising from different objectives of the plan sponsor (i.e. to minimize contributions) and plan members and beneficiaries (i.e. to achieve as well funded a plan as possible) are not addressed in this paper.

[10] A higher level of protection is normally found in mandatory DC systems, which have a mass membership (which constrains individual involvement, and implies lower average levels of financial education etc.), and are designed to deliver substantive rather than top-up pensions. As mandatory private pensions are effectively or explicitly part of social security means that there is a large public policy (and media) impact if something goes wrong, along with an explicit and an implicit fiscal liability for the government. Market discipline may be considered to be insufficient on its own, and strong safeguards with intensive supervision are therefore required, for member and state interests.

III. What mechanisms can be used to control risks in DC pension systems?

17. This paper categorizes the main risks which are particularly important within DC pension systems (given they directly impact on the accumulated pension savings and therefore amount of pension benefit) as follows:[11]

- Investment risk
- High costs
- Operating risks (including administering individual accounts and out-sourcing)
- Managing transition from accumulation to decumulation

18. Funding risk – the major concern for DB pensions - can be a serious concern in some DC systems which provide guarantees, but is not discussed in detail in this report.

Funding Risks in DC Plans

Funding risk can impact DC plans in three ways:

- where pension schemes provide absolute or relative guarantees of performance, the pension providers need to have sufficient capital to honour these promises regardless of economic circumstances;
- where the pension scheme also provide life annuities, life assurance or medical insurance this part of the fund needs to be insured which may introduce funding risk, especially where the fund insures itself;
- pension providers are also expected to be capitalised sufficiently to meet costs that are not chargeable to the members, for instance arising from operational failures on their part (Commercial providers are unlikely to be able to call on sponsoring employers to bail them out and hence this is particularly relevant to them. Not for profit providers may be able to call on the sponsor, but there is the risk that the sponsor may not be in position to provide funding).

The first concern is regulated using similar approaches to DB schemes and is of not considered further in this paper. Where DB-style regulation is adopted, funding requirements may also cover the full range of risks.

Otherwise, in many countries pension schemes are required to be supported by free capital, which the supervisor checks as part of the licensing procedure (along with the provider's business plan) and thereafter through routine inspections (for instance providers of mandatory pensions in Slovakia must have a capitalisation of at least €10 million – they tend to be subsidiaries of large financial institutions).

19. A range of mechanisms is used by IOPS members to control these risks – as summarized in Table 1 below. These mechanisms will be discussed in detail in the following sections.

[11] The amount of contributions paid into DC pension plans is also key, but is not considered in detail in this paper (see (OECD 2010 – forthcoming)).

Table 1: Risks and Control Mechanisms in DC Pension Systems

Individual Risk	Potential Control Mechanisms	Details
Investment Risk	• Transparency and Education • Pension funds' Internal Risk-management systems • Quantitative Investment Limits • Product Design (life-cycle funds) • Guarantees • VaR • Replacement Rate Targets	Disclosure Requirements • OECD requirements • Format of documents (Chile, Italy, Mexico and Slovakia) • Standardised between types of plan (Italy) • Covering risk as well as return (Hong Kong) • Measures of volatility (Bulgaria, Israel, Italy and Turkey) • In some cases, require prior supervisory approval (Bulgaria, Hong Kong and Slovakia) Supervisor Provides Information • Check disclosure ex post (Ireland, Turkey) • Provide information on their own websites (Chile, Hong Kong) • Require providers to ensure members properly informed about choices (Netherlands) Financial Education • Prudent person rule • Investment strategy • Benchmarking returns
Costs	• Comparison	

	• Not unreasonable tests etc. • Fee caps • Control mechanisms	• Low cost default allocation • Limiting switching • Centralized collection / administration • Centralized fund management
Operational Risk	• Require specific risk management structure (e.g. internal control unit or risk manager) • Thematic reviews / inspections • Publish quality of service comparisons • Register and /or inspect service providers • Litigate for non-payment of contributions	
Decumulation Risk	• Compulsory annuitization • Promote deferred annuities (products linking accumulation and decumulation phases) • Allow flexibility in timing and choice of annuity product • Central quotation systems to compare products and pricing	

1. Transparency and Education Mechanisms

20. The first way to try to manage risks within DC pension systems is through increasing member understanding. If the main issue behind the problems with DC systems is that individuals lack the knowledge and engagement to manage the risks to which they exposed, then the first way to try and alleviate this risk is through providing them with the necessary information and assistance to manage these risks themselves. This can be done in a number of ways – outlined as follows.

Information Provision

21. One way this can be done is by imposing information disclosure requirements on pension funds, which pension supervisors then check are being delivered appropriately.

22. The OECD *Guidelines for the Protection of Rights of Members and Beneficiaries in Occupational Pension Plans* (OECD 2003) lay out detailed requirements on information disclosure. The guidelines highlight that the following should be provided to members and beneficiaries of DC plans required to monitor their own investments:

- *adequate information upon which each plan member can base educated investment decisions*
- *nature of the financial instruments available, (including investment performance and risk)*
- *standardized, compatible and complete information regarding investment choices (including charges, fees and expenses, portfolio composition, investment performance data)*

23. It is not just what information is provided to members and beneficiaries which is important, but also how it is provided. The International Association of Insurance Supervisors (IAIS) recommends (IAIS 2006) that information should be:

- *Relevant to decisions taken by market participant*
- *Timely so as to be available and up-to-date at the time those decisions are made*
- *Accessible without undue expense or delay by the market participants*
- *Comprehensive and meaningful so as to enable market participants to form a well-rounded view of the insurer*
- *Reliable as a basis on which to make decisions*
- *Comparable between different providers*
- *Consistent over time so as to enable relevant trends to be discerned.*

24. Pension supervisory authorities commonly recognise that they have an important role to play in overseeing the provision of this information – not least in checking its accuracy. Authorities need to consider what emphasis to give to which elements of information provision, and how to supervise information provision so as to meet supervisory goals. It is common for stronger rules to apply to ‘retail’

disclosure and advice than to information provided between financial services institutions and supervisors may have a role in enforcing these rules.[12]

25. Supervisory authorities can oversee how information is provided by pension plans, laying down - sometimes strict – requirements for what and how information is released. This can be done in a wide variety of ways: [13]

- In some countries (e.g. Chile, Italy, Mexico and Slovakia) the supervisory authority prescribes the precise format of documents.

- Supervisory authorities often specify how funds are to report, for instance reporting returns net of charges, the frequency of reporting and the use of user-friendly format. For example, the Nigerian supervisor requires periodic public reporting of rates of return calculated according to a specified formula based on audited figures and alongside comparative figures from the best and worst performing of the other (10) pension schemes.[14] In Italy, a standardised form of disclosure is expected of all schemes regardless of whether employer-sponsored or insurer provided.

- A few supervisory authorities require disclosure to cover risk as well as return. For instance the Hong Kong authority requires disclosure (at least half-yearly) of a standardized measure of risk[15] as well as standardised performance.

- Similarly, supervisory authorities can require disclosure of measures of volatility (e.g. Bulgaria, Israel, Italy and Turkey), or, as in the case of Mexico and Israel, require disclosure of value at risk measure.

- The supervisory authority can, as in Israel, ensure that each scheme's risk manager reports annually on the risks to members and the scheme.

- In some countries, such as Bulgaria, Hong Kong and Slovakia, the supervisory authority approves key documents prior to publication.

- Some supervisory authorities check the compliance of scheme disclosure to members and beneficiaries (after the event). In Turkey this involves some detailed checking of disclosures against underlying records, while the Irish supervisory authority requires a sample of schemes to send in the information they make available to members for checking against legislative requirements

26. Transparency and comparison of costs is also a particular focus of many supervisors, and indeed many of the examples given above also involve disclosure of costs in a standardized format, either separately or through requiring disclosure of net returns (the later section on costs provides more details).

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[12] Of particular relevance in the EU are the European Commission's proposals for a harmonised regulatory regime for Packaged Retail Investment Products (PRIPs).

[13] IOPS Working Paper No. 5, *'Information to Members of DC Pension Plans: Conceptual Framework and International Trends'* (IOPS 2008e) provides further examples of how such information is provided in practice.

[14] This incidentally means that all schemes must have the same year-end.

[15] 3 year standard deviation calculation.

27. In addition, supervisory authorities can act as information sources themselves, providing standardized, comparative data on individual providers and the market as a whole (as is done, for example in Chile and Hong Kong). This can avoid the problems that can arise where each pension scheme emphasizes the information that puts it in the best light (for instance by judicious choice of measures every scheme can appear to be the best: one discloses that it is the best this month, another the best this year, and another the best for the last 3 months etc). However, supervisory authorities have to be aware that prescribing what comparative information is to be disclosed can influence the nature of competition between providers, as this may well become oriented to the criteria they have set. In such cases, if supervisory authorities choose inappropriate performance measures (particularly if these are excessively short term) individuals may end up selecting their pension provider on inappropriate criteria, for instance short term performance numbers.

28. Alternatively, supervisory authorities may take a role in helping to ensure that individuals understand the information which is provided to them. For example, the Dutch conduct of business supervisor[16] takes a possibly unique approach in enforcing legislation that requires DC providers to demonstrate that they have ensured, so far as possible, that each member's choices (where the default fund is not selected) are informed by their personal and financial circumstances and risk appetite. The Dutch provider (usually an insurer) must advise the employee, taking into account his financial goal, financial position, risk appetite, knowledge of and experience with investments.[17]

29. During the financial and economic crisis of 2008/2009, many pension supervisory authorities stepped up their communications role (see IOPS (2009b). Awareness campaigns stressed the long-term nature of pension savings and the dangers of reacting to short-term volatility via switching of funds – towards conservative funds– or withdrawals in voluntary schemes (including potential charges).

30. More generally, supervisory authorities may seek to raise the general level of financial education in the community, often in partnership with other agencies, on the assumption that better general understanding should result in better informed pension plan members and choices (see OECD 2008).[18] Such efforts may be combined with a desire to increase participation in pension saving where this is not mandatory. For example:

- The Hong Kong supervisory authority publishes clearly written information for members on its website to help them understand their retirement needs, make fund choices and access and understand other information directly related to their mandatory provident fund investment.

- The Chilean supervisory authority has received a specific budget for financial education activities. It has already re-named the different funds in the multi-fund model to give a clear indication as to whether they are growth, balanced or conservative, in an attempt to help members understand their options.

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[16] Netherlands Authority for the Financial Markets - AFM

[17] Ideally the provider agrees to arrange the investments under the life cycle so that the employee is likely to receive a stated preferred amount of income. In other words, the provider should base its advice on the amount of income the employee wishes to receive or the extent to which he is willing to accept a reduced likelihood of the preferred income being achieved in order to be able to take more risks for an even higher return. The interaction between the provider and the employee should therefore not focus on the investments or allocation of premiums over asset classes but much more of the preferred level of pension income and the preferred certainty of that income being achieved. Only if the provider has done all this can it avoid fiduciary responsibility for under-performance of non-default funds.

[18] Further information on the OECD's financial education work can be found on www.finanical-education.org

- The Irish supervisory authority (Pension Board) has undertaken road-shows and advertising campaigns to help the public understand their pension choices and hence increase pension saving.[19]

31. It should be noted that using transparency and education to alleviate the problem of a lack of understanding on the part of individual DC plan members is not a 'quick fix' but needs to be treated as a long-term policy on the part of supervisory authorities.

2. Other Control Mechanisms

32. However, these tools of transparency and education alone are rarely enough – even when used over the long-term - to ensure a well functioning pension market. Given individuals' lack of knowledge and understanding (including a great deal of apathy when it comes to making pension related choices), the complexity of pension products and market failure issues (such as asymmetry of information), competition within pension markets does not always operate successfully. Therefore supervisors overseeing DC pensions will normally combine them with the other control mechanisms.

33. This section of the paper will now examine the different control mechanisms which IOPS members use to control the main risks outlined above (paragraph 17).

a. Investment Risk

34. The most important risk borne by individual members of DC funds is investment risk - especially if no form of guarantee is given by the pension provider - and hence this risk is a major focus for most supervisory authorities. The rate of return is the primary determinant of the balance which their fund will accumulate, and which individuals will subsequently use to fund their retirement. If this return is too low (or indeed negative) individuals may end up retiring with too small a balance to fund an adequate income.

35. As discussed, this becomes even more of a challenge when individual choice is introduced into DC systems. As Impavido et al (2009) point out: "*There is ample evidence that, even in normal times, individuals generally lack the necessary skills to monitor portfolio management and, therefore tend to make an uneducated selection of portfolios during their lifecycle*."

36. Low returns may arise from several problems:

- *Excessive risk taking* (so that returns, for a given level of risk, are not maximised);
- *Excessive risk aversion* (particularly where default options offering 'safe' or guaranteed returns are chosen by many individuals, despite the fact that these may not deliver an adequate level of retirement income given the amounts of contributions made);
- *Inefficient processes* (i.e. sub-optimal returns for a given level of risk);
- *Insufficient attention to liquidity* (see box);
- *Market falls close to retirement* (a special case of liquidity risk)

[19] Information on the Irish campaign can be found on http://www.pensionsboard.ie/index.asp?locID=134&docID=-1 For information on national awareness and education campaigns in other countries see (IOPS 2008f).

Liquidity Risk in DC Plans

Liquidity risk is another aspect of investment risk relevant to some DC pension plans – i.e. the risk that investments could prove insufficiently liquid to meet requirements which the plan has to pay out balances or benefits to members without incurring avoidable losses. This can be a particular issue for DC funds as members commonly take out their benefits in one lump sum, sometimes with considerable flexibility regarding timing.

It should not be a significant issue where funds hold assets which are tradable in deep, liquid markets. Indeed this is a requirement in many countries, which prohibit investment in illiquid instruments or place quantitative restrictions on the percentage of portfolios which can be invested in unlisted, 'alternative' investments (see (OECD 2008b), (Stewart 2007), and (IOPS 2008c)).

Where, however, funds have substantial freedom to invest in illiquid asset classes, or assets that prove to be illiquid during a financial crisis (e.g. commercial property), there is a potential risk that funds may sustain serious losses in meeting their obligations.

Supervisory authorities can therefore look for appropriate risk management processes to address this risk. For example, the Australian authority in particular made this a priority during on-site inspections during the financial crisis of 2008/2009.

37. Yet supervising DC investment risk is not an easy task. With DB pension funds, supervisors primarily focus on investment risk via underfunding levels and mismatches between assets and liabilities. However, within DC funds investment risk is harder to measure as probability distributions need to be considered, not the probability of achieving a specified outcome (unless such an outcome is targeted, which is rarely the case and difficult to measure for DC plans). The process is further complicated where members are offered fund choice. In this case, supervisors need to choose whether to focus just on the default fund, leaving members in other funds to manage their own risks on the basis of well-regulated information, or to focus on all funds by restricting choice or ensuring members are well advised. Indeed in some English speaking countries the existence of member choice of funds is used to justify a hands-off approach even to the default fund, especially if such a fund is not mandatory.

38. With DC plans, while supervisors may be able to enforce outcomes to some extent- if guarantees are offered, or the level of tolerable risk is explicitly specified- the focus is more commonly on how pension funds are managing investment and other risks – i.e. inputs and systems are what matter. Four approaches are evident worldwide:

- Ensuring that market discipline enables informed participant choice and hence effective competition between pension plans and funds, so as to incentivise good investment practice, covered above under member understanding;

- Encouraging plans to follow best practice in their management processes and risk management relating to investment, so that plan fiduciaries or managers take properly informed decisions that optimize risk and return within fund portfolios;

- Controlling the amount of risk in the fund by enforcing quantitative limits set by regulation, supervisory guidelines or fund rules regarding the composition of the fund portfolio; or

- Controlling the members' exposure to risk by mandating and enforcing specified types of product design.

39. These approaches are not mutually exclusive, and most supervisory authorities have some role in relation to each, albeit that they tend to place greater emphasis on some rather than others. Hence, many

countries require pension funds to prepare a formal statement of investment principles and may check that these principles are followed, even where there are minimal regulatory or supervisory restrictions on portfolio composition. Most countries also place some quantitative restrictions on fund portfolios, most notably in relation to investment in the sponsoring entity, but also to secure diversification of risk, even where no restrictions are placed on asset types. Supervisors commonly seek to enable the benefits of effective competition, where this is feasible, even though they may also place emphasis on quantitative limits or good investment or risk management practice.

40. This (investment risk) section of the paper, considers in turn the supervision of:

- risk management systems (including investment strategy)
- quantitative limits
- product design (life-cycle funds)
- risk limits (VaR)
- guarantees
- income target rates

Risk management systems

41. A fundamental way of controlling investment risk is to require certain risk management systems to be in place within pension funds themselves.[20] Given the emphasis on processes rather than outcomes, the oversight of the pension funds risk management systems becomes more important when supervising DC pension systems.

42. Such risk-management systems have also become more important as pension legislation in many countries has been deregulated in recent years, with the prudent person rule consequently becoming a fundamental principle underlying the regulation and supervision of pension plan investments. According to this rule, supervisors assess whether the investment approach undertaken by the fund is that of a prudent person (or in some countries a prudent expert) investing the funds on behalf of another person. The *OECD Guidelines on Pension Fund Asset Management* (OECD 2006) highlight that the prudent person standard focuses on behaviour and process rather than on outcomes, "*seeking to assure that those responsible for managing pension fund assets do so in a professional manner with the sole aim of benefiting the pension fund and its members*." A focus on process can potentially cover investment efficiency as well as the riskiness of asset allocation.

43. Some countries specify requirements for the prudent person rule more closely than other. For example, in Ireland there is a requirement that default fund asset allocations (for PRSAs[21]) should be actuarially certified as prudent, which has effectively mandated life-cycle funds. South Africa requires a

[20] For details see IOPS Working Paper No. 11 (IOPS 2009) and related good practices on risk-management (IOPS 2010 - forthcoming).

[21] Personal Retirement Savings Accounts are tax incentivized, voluntary, personal pension arrangements.

triennial actuarial certification of DC schemes (even where they do not have actuarial liabilities) copied to the regulator to check compliance. [22]

44. The OECD guidelines (OECD 2006) highlight that *"because of its procedural focus, the prudent person standard places significant emphasis on the ability of pension fund governing bodies to hire qualified assistance and establish appropriate internal controls and procedures to effectively implement and monitor the investment management process."* The risk-management systems which pension funds are required to operate can be laid out in detail by pension supervisors, or the authority can provide guidance on what type of risk management system it would expect to see, leaving the details of the implementation to the pension fund itself.[23] As well as being subject to regulatory compliance inspections, compliance is also (in Australia at least) promoted by specifying that trustees only have a safe-harbour against litigation if they have met the investment standards.

45. In addition to general requirements (regarding management oversight, control systems, internal reporting and audit requirements), such risk management systems usually contain specific measures for handling investment risk. [24] Central to this is the requirement for a comprehensive investment policy. Indeed, the OECD guidelines (OECD 2006) also stress that "*the establishment and use of a comprehensive investment policy is considered a crucial aspect of satisfying the prudent person standard*".

46. It is common in many countries for pension funds to be required to prepare a statement of investment principles (e.g. this is a requirement of the European Union's IORP Directive). [25] Compliance with these statements can be checked as part of any on-site inspection regime, but Kenya, at least, requires the statement to be copied to the supervisor every five years, while in Jamaica the supervisor must approve the document.

47. The OECD standards (OECD 2006) provide detailed guidance on what a comprehensive investment strategy should contain, including the following elements:

- Investment objectives
- Asset allocation
- Diversification
- Liquidity need

[22] Where South African DC schemes have actuarial liabilities, for instance because they pay a pension from the accumulated balances, the requirement is for actuarial valuation. In practice, where a DC smoothes investment returns it has in any case to prepare a triennial valuation. The actuarial certification is expected to cover whether in the actuary's opinion: the assets and liabilities are adequately matched – which is effectively a requirement for some form of life-cycling; the assets are suitable considering the liabilities of the fund; if the rate of investment return credited to member's individual account is smoothed, he is satisfied that the rate does not endanger the financial soundness of the fund and that the rate is reasonable in relation to the gross investment return earned by the fund.

[23] Details of such guidance notes can be found in (IOPS 2009).

[24] The guidance issued by the Australian regulator, APRA, provides a good example (see APRA 2006). The Superannuation Circular No. II.D.1 "Managing Investments and Investment Choice" runs to 21 pages and is a mix of operating standards that must be followed and good practice guidance, breaches of which would be raised during regulatory inspections.

[25] European Directive 2003/41/EC (IORP Directive) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0041:EN:HTML

- Valuation methodology
- Use and monitoring of derivatives
- Asset Liability Matching targets (where appropriate)
- Performance measurement, monitoring and benchmarking
- Control procedures, including risk tolerances / risk monitoring procedures
- Reporting format and frequency

48. The guidelines stress that the investment strategy should be consistent with legal provisions (prudent person and quantitative limits) and the objectives of the fund (i.e. with the characteristics of the liabilities, maturity of obligations, liquidity needs, risk tolerance etc,), at a minimum identifying strategic asset allocations (i.e. the long-term asset mix over the main investment categories), the performance objectives (and how these will be monitored and modified), any broad decisions regarding tactical asset allocation, security selection and trade execution. The guidelines state that the use of internal or external investment managers should also be addressed (with an investment management agreement required for the latter), and the costs of such services monitored. In particular the guidelines note that the investment policy for pension programmes in which members make investment choices should ensure that an appropriate array of investment options, including a default option, are provided for members and that members have access to the information necessary to make investment decisions, and the investment policy should classify the investment options according to the investment risk that members bear.

49. While regulatory checking of compliance with risk management and investment guidelines, tend to be process-oriented, the extensive information that some supervisors gather on investment allocations and returns may also be used. Supervisory oversight could also be informed by benchmarking of funds against each other to provide indications as to which are outliers or appear to be under-performing- though there is limited evidence of this in practice. For example:

- The supervisory authority in Poland goes one step further in this regard. The supervisor awards the best performing scheme each year (net of fees) with the custom from all new members to the (mandatory) system who have not made a choice.[26] A similar performance based allocation has been applied in Mexico since 2008 (default allocation to the pension manager which gives the highest 36-month net return).

- In Chile, the regulator expects net investment returns to fall within a specified band around the average return for the five plans.[27]

- In Australia, the supervisor refers to plan investment allocations when checking for effective management of liquidity risk.

[26] This would appear to reward a focus on reward more than risk avoidance, and interestingly Poland is nearly the only Eastern European country where investment in riskier asset classes is as high as the quantified limits allow.

[27] This discourages risk-taking substantially greater than average. In reality (and probably inevitably) ‘herding’ behaviours have become evident.

- In Israel the supervisor has developed (with relevant academics) indices of the riskiness of DC investments These indices, which the supervisor publishes on its website, are also intended to act as an evaluatory device for plan risk managers and as a tool for the supervisor to help assess investment governance during its inspections.

Quantitative investment limits[28]

50. Despite the general global move towards deregulation and the use of the prudent person rule, quantitative investment limits of one type or another are still applied to pension funds in many jurisdictions. Indeed, the OECD guidelines (OECD 2006) outline how such limits should be used and can be combined with the prudent person rule as the two are not mutually exclusive.[29] Investment limits by themselves do not ensure that an investment is 'prudent'. Therefore in most countries quantitative limits and the prudent person rule are combined and indeed should not be seen as incompatible – an either/ or choice. Supervisors overseeing DC funds still have to consider whether the investment approach is appropriate, even where more quantitative restrictions are put in place.

51. In most countries there are limits on investment in the sponsoring employer and restrictions on the use that can be made of illiquid asset classes such as derivatives.[30] Limits on the allocation to specified asset classes (which are near universal in Eastern Europe and Latin America, but also found in Nigeria and Kenya)[31] are set out in primary legislation or binding rules issued by the regulator. They can cover the holdings of different asset classes (e.g. equities) of assets not traded in liquid financial markets or issued abroad, along with limits on holdings placed with a single issuer to ensure diversification.

52. Many supervisory authorities consequently have an important role in enforcing a quantitative approach to controlling investment risk within DC pension plans, by checking that asset allocations do not breach quantified limits on various asset classes or restrictions on the proportion of assets that may be held with a single issuer (to avoid risk concentration).

53. It is relatively easy to supervise compliance with quantified limits by monitoring regular reports from the plans, which in most of these countries are few in number (e.g. five in Chile) and to obtain rectification by an enforcement procedure. In reality most plans in these countries allocate assets well within most of the quantified limits. It is more difficult in countries overseeing hundreds, if not thousands, or funds, and in these countries reliance on the prudent person is more common.

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[28] For details of quantitative regulation see (OECD 2010)

[29] The guidelines state that "*portfolio limits can serve to establish important boundaries that prevent or inhibit inappropriate or extreme investment management decisions, but they alone cannot effectively regulate the manner in which pension fund asset management decisions are made within those boundaries, and, in fact, are silent with respect to activity that is "within bounds." Therefore, jurisdictions that rely solely on a series of quantitative portfolio limits to regulate pension fund asset management should consider establishing a prudent person standard to work in tandem with portfolio limits. In this regard, countries that rely primarily on portfolio limits should, at a minimum, also set forth prudent person standards for pension fund governing bodies*."

[30] For instance, there is a 5% limit within the EU on investment in the sponsoring employer, and in the UK and Ireland a prohibition on using derivatives for purposes other than risk management. Investment in non-cash instruments that are not traded on public markets is prohibited for PRSA default funds in Ireland. In Hong Kong, MPF funds may, within limits, engage in hedging through certain financial derivatives.

[31] The Kenyan limit on equities of 70% is much higher than in countries with mandatory pension systems, but they limit alternative asset classes to 5%.

Product design

54. Quantitative investment limits can be better targeted by specifying design features of the funds between which individual plan members can choose. One approach is to mandate that where plans offer fund choice they must offer, say, five funds with specified asset allocations or risk criteria, ranging from high equity content to highly conservative. This is the multi-fund model found in Latin America (e.g. Chile) and Eastern Europe (e.g. Hungary and Slovakia). Members can choose between funds, but are not allowed to belong to the riskier funds beyond specified ages (the younger the member the riskier the permitted allocation). This approach effectively results in a form of life-cycle investment. In addition, Israel and some Eastern European countries are planning to make life-cycling a legislative requirement (for the default fund at least).[32]

55. In practice, life-cycle funds can take very different forms in different countries –levels of high vs. low risk assets differing widely and switches in portfolio composition taking place at different points within individuals' careers. For example, high risk funds in Chile can invest up to 80% in equities, where as in Mexico the limit is only 30%. [33]

Table 2: Equity investment limits by type of fund option in selected countries[1]

	Option 1	Option 2	Option 3	Option 4	Option 5
Chile[2]	40%-80%	25%-60%	15%-40%	5%-20%	0-5%
Mexico	30%	25%	20%	15%	0%
Hungary	100%	40%	10%		
Slovak republic	80%	50%	0%		
Estonia	50%	25%	0%		

Source: OECD

Notes: (1) Selected countries have mandatory 'pure' DC systems (2) In Chile, equity investments in each fund option are subject to both a floor and a ceiling.

56. The USA has developed an approach to product design intended to limit member exposure to investment risk based on fiduciary fear of litigation. Legislation[34] provides that employers who default members into a default fund, only have 'safe-harbour' from subsequent litigation for breach of fiduciary duty should the investments under-perform if they use one of three types of fund, invested in a diversified portfolio of assets that are liquid or traded on regulated markets, target retirement date,[35] target balanced asset allocation or a managed fund.[36]

57. The approach of exploiting fiduciary desire for safe-harbour contrasts with the Dutch approach of explicitly stating that DC providers cannot avoid fiduciary liability for default funds at all. They are required to design these funds so as to implement the Dutch interpretation of the prudent person principle

[32] Such funds are also offered on a non-mandatory basis in other countries, for example in the USA where they are often the default choice within occupational pension plans.

[33] The OECD has done further work modelling the impact of different life-cycle funds – see (OECD 2010 forthcoming).

[34] Pension Protection Act 2006

[35] In a US style target retirement date fund each retirement date (e.g. members retiring in 2015) has its own fund which can be managed to re-balance the portfolio to assets matching the pay-out at retirement.

[36] It should be noted that in some circumstances a scheme can use auto-enrolment only where the default fund complies with the legislation.

which requires funds to protect members from risk throughout the life-cycle, with a move to liquid investments near retirement, along (probably) with an ALM-study to find out the (un)certainty/ likelihood of the targeted capital actually being achieved. The approach is unlikely to work without explicit direction from the supervisor as to the meaning of prudence, which ALM has also given. It is notable that the Australian supervisor has also stated that fiduciary responsibility cannot be avoided, but in the absence of a specific definition of prudence, life-cycle funds are rare and there is a heavy weighting towards equities.[37]

Value at Risk

58. Rather than controlling investment risk via restrictions on the type of instruments a fund can invest in, some supervisory authorities are trying to control risk exposure – notably the Mexican supervisor CONSAR with their use of Value at Risk (VaR). VaR is defined as the maximum loss in a portfolio with a given probability or confidence interval (typically 5%) and over a given planning horizon. VaR can provide the fund manager and the supervisor with a summary measure of market risk to which each pension portfolio is exposed. This single number summarizes the portfolio's exposure to market risk as well as the probability of an adverse move. The pension regulator (CONSAR) then checks whether the fund is in line with these regulatory limits. If the answer is no, the process that led to the computation of VaR can be used to decide where to trim risk. For instance, the riskiest securities can be sold, or derivatives such as futures and options can be added to hedge the undesirable risk. VaR also allows users to measure *incremental risk*, which measures the contribution of each security to total portfolio risk.

59. The main attractions of the VaR approach are that it provides a common measure of risk across different positions and risk factors and introduces an aspect of probability. However, it does not consider losses or gains when the bad state does not occur nor does it say anything about the expected loss when the bad state occurs. Hence, as Dowd and Blake (2006) point out, ignoring tail losses can lead to some perverse incentives (whereby high return, high risk investments may be favoured if they do not affect the VaR – regardless of the sizes of the higher expected return and possible higher losses).[38] VaR has several other drawbacks as a risk measure, including:[39]

- when measuring pension risk there are at least two important factors to consider: the investment horizon and the risk of annuitization. VaR models with a time horizon of one day, one month or even one year are not best suited to measure pension risk;

- critical events: it is not straightforward to predict critical episodes, and when they happen, it might be the case that following a VaR approach can be a potential sources of significant instability in the market;[40]

- VaR does not reflect downturns and involves inertia which leads to an over-representation of past volatility.

[37] Australian plans, however, seek to determine which investment option is most appropriate for members who have not made a choice by using information the members provide on their circumstances.

[38] Dowd and Blake (2006) also discuss other problems, such as subadditivity, which undermines VaR as a risk measure.

[39] See (Berstein and Chumacero 2008)

[40] Hence current regulation in Mexico considers waivers for the funds which risk excess is due to systemic risk. These waivers are granted to prevent unnecessary sales (consequence of the market downturns) which will turn into losses and create instability in the market as well.

60. CONSAR in Mexico have adapted their model to alleviate another key problem with the VaR system which is its pro-cyclicality. During the volatile markets of 2008/2009, pension funds in Mexico (all at the same time) found themselves forced to sell risky assets (i.e. equities) into falling markets in order to bring their portfolios back in line with VaR limits. A waiver to this rule did exist and was applied by CONSAR, and has since been formalized to reduce the pro-cyclicality during volatile markets in future. Benchmark portfolios have been set up and when volatile markets cause these portfolios to hit their maximum loss limits, the confidence intervals applied to the VaR model will be raised (though the absolute loss limits remain the same)[41] so that the number of adverse scenarios allowed will be increased in increments of 5 as necessary (i.e. from 26 under the 95% confidence interval, to 31, 35). Once market volatility returns to normal, the 95% confidence interval will be automatically restored.

61. *Given the limitations of standard VaR, variations on the approach which are more sensitive to the shape of the loss distribution and the tail of the distribution are being explored. Also known as Expected Shortfall,[42] Conditional Tail Expectation (CTE) is a statistical risk measure that provides enhanced information about the tail of a distribution above that provided by the traditional use of percentiles. Instead of only identifying a value at a particular percentile and thus ignoring the possibility of extremely large values in the tail, CTE recognizes a portion of the tail by providing the average over all values in the tail beyond the CTE percentile. Therefore, for distributions with "fat tails" from low probability, high impact events the use of CTE will provide a more revealing measure than use of a single percentile requirement.[43] However, the accuracy of all such measures needs to be treated with caution as they were designed for solvency assessments of banks – institutions with short-term horizons and exposed to potential liquidity scares. Whether they are appropriate for pension funds – which are long-term investment vehicles – needs to be considered.Guarantees*

62. An alternative way of controlling investment risk within a DC pension (i.e. preventing adverse return outcomes and consequently a low accumulated pension balance) is to require a guaranteed return on the fund. Only a few countries with mandatory DC systems require pension funds to meet minimum investment returns. In a few cases there are absolute guarantees of the capital invested - such as mandatory funds in Romania. A similar guarantee was introduced for conservative funds in Slovakia from 2009.[44] Switzerland provides a rare example of a mandated absolute rate of return guarantee,[45] although some Danish and Belgian plans provide such a guarantee in practice.

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[41] Ranging from 0.6% for the most conservative portfolio to 2% for the most risky.

[42] Terminology in this area is non-consistent with such measures also referred to as Expected Tail Loss, Tail Conditional Expectation, Conditional VaR, Tail Conditional VaR and Worst Conditional Expectation (Dowd and Blake 2006).

[43] See American Academy of Actuaries http://actuary.org/pdf/life/varwg_march07.pdf and (Dowd and Blake 2006).

[44] At the end of the monitoring period (6 months), conservative pension funds are required to have at least the same level of actual pension unit as at its beginning. Potential losses are covered with money in a guarantee account, and, if this is not enough, by the company's own capital. Growth and balanced funds, at the end of the monitoring period, compare only the composition of assets in the funds with composition of reference values stated in the funds´ statutes.

Along with management fee and account maintenance fee, the company can now charge a fee for out-performance of the respective fund. Exact calculation method is enacted.

[45] Pension funds must meet a minimum investment return of 2.75% in nominal terms. The guarantee must be applied both when an employee changes job and at retirement. Pension funds strive to pay returns above the minimum, but they do not have to and they usually only credit individuals' accounts with the guaranteed return, saving the rest as a reserve. Adverse market conditions led the government to reduce the guaranteed rate in recent years, and this may happen again in 2009.

63. In most cases, these minimum returns are "relative" as they are set in relation to the pension fund industry's average rate of return, or the return on government bonds, over a certain period, usually a few months. The guarantees usually apply to the accumulation period, but may apply to pension payments. For example, in Chile if the pension generated by the individual account is too low, a government subsidy is provided to make up a basic pension level (for the 60% of the population with lower incomes).

64. In Poland the mandatory minimum rate of return for open pension funds is equal to either 50% of the weighted average rate of return of all open pension funds or that weighted average rate of return minus 4%, whichever is lower. The weighted average rate of return must be calculated for a 36-month period twice a year (i.e. March and September) according to the methodology established by the supervisory authority. The calculation takes into account the return and the market share of each pension fund.

65. Minimum absolute return requirements are relatively rare in voluntary DC systems. For example, Belgium allows different levels of guarantee, whilst Italy requires a guarantee in the default fund. Many schemes in Denmark have a de facto requirement for a guarantee due to union involvement. [46]

66. Guaranteed minimum returns impact substantially on the nature of the supervision of the system, as the solvency of the provider becomes a major issue and some form of solvency supervision, as found in DB systems, is required.[47]

Target-based Risk-measures

67. New measurements of risk within DC pension funds are trying to move away from short-term investment returns as it is argued that these are not appropriate measures for a pension fund – the goal of which is to provide a stable retirement income over a long-term time horizon. [48] Indeed, Impavido et al (2009) state that investment risk is amplified by the lack of long-term targets for pension fund managers, compounded by the lack of connection between the accumulation and decumulation phases, exposing individuals to annuitization risk (see later discussion). The authors argue that again this problem stems from members poor understanding, allowing pension fund managers too much market power.

68. The academic research therefore suggests that government policy set long-term investment targets, such as replacement rates. [49] Once these have been set, optimal portfolios for achieving this target would be derived (using stochastic modelling techniques). The performance of the actual portfolio of a pension fund could then be assessed vs. this optimal portfolio which would be used as a benchmark.

69. It should be noted that this is a new area of research, as yet untested, and is consequently controversial. The challenge is devising the appropriate benchmark portfolios, which could be done by an expert commission consisting of regulators and supervisors, academics, industry representatives etc. Several defaults, based on a model set of life-cycle pension funds, would have to be derived - reflecting not only age but also so called 'human capital' issues, such as income levels and job stability etc. The World Bank publication (Hinz et al 2010) notes that these benchmarks should consider the following factors:

- The presence of other sources of retirement income, including the income from public pensions;

[46] Belgium allows different levels of guarantee, whilst Italy requires a guarantee in the default fund. Many schemes in Denmark have a de facto requirement for a guarantee due to union involvement.

[47] For a discussion on the costs of guarantees within DC systems see (Antolin 2009), (Munnell et al 2009).

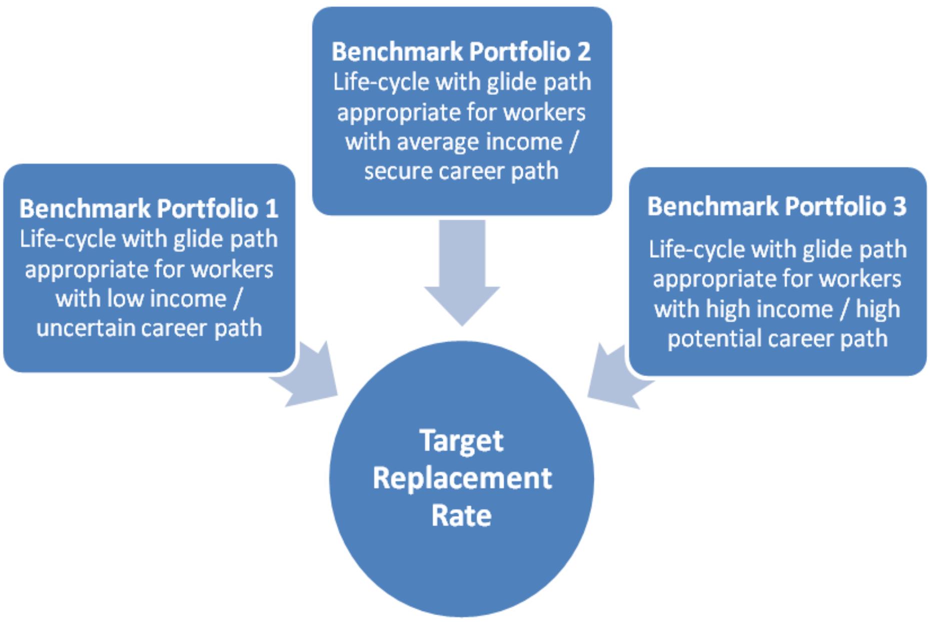
[48] For details see (Hinz et al 2010)

[49] The replacement rate is the ratio of pension income to pre-retirement earnings. Impavido et al (2009) argue that a cash balance target with specific investment rules aimed at smoothing the interest risk associated with the transformation of cash balances into annuities could probably be a valid alternative.

- The age of individuals;
- The rate of contributions;
- The target replacement rate and its downside tolerance;
- A matrix of correlations between labour income and equity returns;
- The expected density of contributions for different categories of workers;
- The type of retirement income in the payout phase, in particular the risk tolerance of pensioners in the payout phase (e.g. real fixed annuities, variable annuities, and phase withdrawal);
- A parameter that reflects the risk aversion of policy makers.

70. The regulator would define the number and structure of life-cycle funds to be offered, with their asset allocations and 'glide paths' (i.e. how rapidly risky assets are reduced) reflecting the objectives of the pension system (the larger the role of these DC funds in the overall pension system the more conservative they would need to be). These benchmarks would indicate different (more or less risky) routes to achieving the target replacement rate. Pension fund managers would offer funds in the same category as these benchmark funds, with their returns being measured accordingly.

Figure 1: Target-based Risk-Measures for DC Funds



Source: authors

71. The passive implementation of the benchmark (based on objective stock and fixed income indexes) would provide managers with a minimum performance that they might try to improve upon. In the World Bank publication (Hinz et al 2010), Viceira notes that regulators could limit the level of 'active bets' that managers could take by defining (measuring and verifying) maximum tracking errors, just as institutional investors do with the active managers they hire. This would enable the pension system to remain within the overall risk level that is deemed appropriate.

72. Alternatively, Viceira outlines that the benchmark could be made up of a portfolio of riskless assets which would generate the targeted replacement rate at the relevant investment horizon (i.e. a

portfolio of inflation-indexed bonds with a duration that properly reflects the investment horizon of the population of plan participants). The performance of the fund would be measured against the performance of such a benchmark – the problem being that in practice there is a lack of such long-dated, indexed bonds, not only in developing but also some developed economies.

73. Supervisors could then work this analysis into their overall risk assessment via a ‘traffic light’ system. For example a green light would indicate a pension fund with a portfolio structure aligned with the benchmark and a good risk management system.[50]

74. Blake (Blake et al 2008) discusses a similar idea, again arguing that DC pensions should be structured ‘from back to front’, i.e. from desired outcomes to required inputs (via ‘dynamic programming’), with the goal of delivering an adequate, targeted, pension with a high degree of probability. DC funds should in effect be made more like DB – but with a targeted rather than a guaranteed benefit (as guarantees over the long-term are expensive), and the accumulation and decumulation phases of DC pensions should be linked via targeted annuities. Currently fund managers have no ‘target fund’ to accumulate. The risk which fund managers take should be controlled not by quantitative investment rules, but rather through targeted annuitization funds which they need to replicate (designed via some form of life styling investment strategy during the accumulation phase). The role of regulators would be to set these target annuitization funds as default options.

Target Annuitization Funds

As described by Impavido et al (2009), target annuitization funds are DC products with a target maturity (e.g., the retirement date) and where the construction of the investment portfolio is driven by a long-term financial target. A retirement benefit is targeted within a confidence interval.

The optimal (strategic) asset allocation of these funds is not deterministic (i.e., it is not based on static rules), but derived from stochastic programming techniques that take into account the main risks faced by contributors during the accumulation phase, including labor income or human capital.

The authors also point out that by having a long-term financial target, policymakers or regulators can better track the performance of pension fund managers throughout the entire accumulation phase of participants. However, this also implies that contributions may become “endogenous”. That is, additional individual contribution rates may need to be made if it appears that the target will not be achieved.

The authors argue that a well functioning system of target annuitization funds implies:

(i) periodic estimations of the individuals’ funded positions;

(ii) a process for communicating to individuals the impact of market events on the probability of reaching their investment target;

(iii) a process for communicating to individuals the impact of market events on the level of contributions that is expected to reach their investment target; and

(iv) a close integration of the system of voluntary individual accounts, that many countries have also introduced, with the system of mandatory individual accounts.”

[50] The World Bank publication (Hinz et al 2010) notes that such a performance measurement approach is broadly consistent with the manner in which the control of investments is exercised in a hybrid DB system, such as in the Netherlands, in which asset allocations are regulated in consideration of the targeted, although not guaranteed, benefit stream

Table 3: Mechanisms used for Controlling Investment Risk in Selected Countries

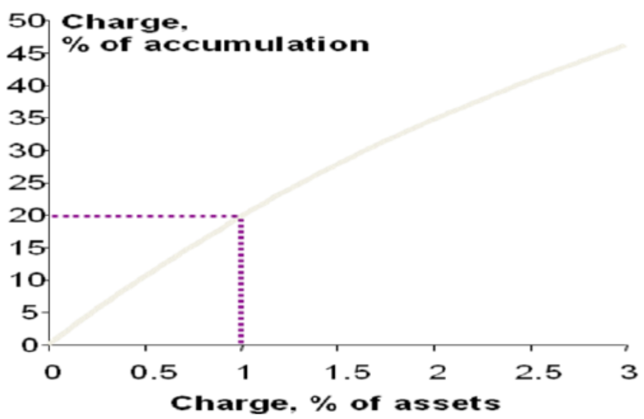
Country	Information Provision/ Transparency	Promote Good Practice	Quantitative Limits	Product Design	Guaranteed Returns	Control risk levels
Mandatory						
Chile	✓	✓	✓	✓	* [51]	
Mexico	✓	✓	✓	✓	✓	✓
E. Europe	✓		✓	Common		
Switzerland			✓		✓	
Australia	✓	✓				
Nigeria	✓	✓	✓			
Voluntary						
USA		✓		✓		
Denmark			✓			✓
Ireland	✓		PRSA			
Israel			✓			
Kenya		✓	✓			
South Africa		✓	✓			
Italy	✓	✓	✓	✓	✓	
UK	✓	✓				

[51] Although there are no absolute return guarantees in Chile, fund returns must not fall more than a prescribed amount below the average for all funds.

b. High Costs[52]

75. Costs and fees are particularly important for DC plans, as they reduce returns, the size of the accumulated balance and therefore the amount of retirement income which can be generated. With DB pensions, costs are – usually - ultimately born by the plan sponsor (given that costs reduce assets and if these are not sufficient to meet liabilities the plan sponsor must make higher contributions), and hence form an element within solvency risk. However, with DC plans costs are often born by the individual members (though in some occupational arrangements employers bear management costs). Given that an annual management charge of 1% of funds under management can reduce accumulated assets by as much as 20%, (over a 40 year period) the impact can be substantial. Seeking to ensure that costs are not excessive and are fully and transparently disclosed is therefore an important aspect of DC supervision.

Figure 2: Impact of Charges on Accumulated Asset Balance



Source: Whitehouse, E.R. (2001), "Administrative charges for funded pensions: comparison and assessment of 13 countries", in OECD, Private Pension Systems: Administrative Costs and Reforms, Private Pensions Series, Paris

76. Costs are particularly an issue when pension providers are commercial institutions (not-for-profit providers have no incentive to levy excessive fees). As discussed, even if these providers have a fiduciary duty towards members of the pension plan, they face an inherent conflict of interest between their commercial incentives and their fiduciary duty. Competition should, theoretically, drive down costs in such systems, but individuals' lack of financial education and engagement with pension issues means that market mechanisms do not always work and costs often remain stubbornly high. [53] Hence this is a particular challenge for DC supervisory authorities.

Improving Transparency

77. One approach is to improve the transparency of the fees charged to members and potential members, which can otherwise be opaque, confusing or hard to compare (see IOPS 2008b). For example, some regulators in Latin America now require that a single fee structure is charged and disclosed (e.g. charging a fee on assets in Mexico vs. a fee on contributions in Chile, El Salvador etc), unlike in Eastern Europe where a mix of fees can make comparisons and understanding more difficult. COVIP in Italy monitors the structure of costs in the licensing process, with only simple structures receiving approval, in order to avoid hidden costs. In the case of Mexico, specific regulation exists guaranteeing the clarity and transparency of the comparisons (especially costs and net returns comparisons). Australia, New Zealand

[52] A discussion of the pros and cons of various cost control measures can be found in (Impavido et al 2009).

[53] As discussed in (Impavido et al 2009)

and Chile (at least) also require schemes to include administrative (but not investment) charges in the annual statements to members in a standardised format. Supervisors can also require disclosure of costs in a standardized format alongside data returns (as outlined above).

78. Many supervisors, including Australia's conduct of business supervisor (ASIC), and the Hong Kong pension supervisor (MPFA), provide web-based systems for members to undertake comparisons. Other countries doing so include Hungary, Israel, Italy (where the use of a synthetic cost indicator is required), Spain and Mexico.

79. The Hong Kong supervisor has tried moral persuasion, based on the evidence it has gathered on high levels of fees, to persuade schemes to reduce fees. It also hoped that financial education, coupled with transparency of reporting and expanded member control would be effective in the medium term. Its current focus is on improved transparency coupled with member choice of pension scheme provider, which is soon to be introduced.

80. In any event – as discussed previously - there is only limited evidence of increased transparency being effective in reducing charges. Transparency and comparison have not resulted in the switch from active to (cheaper) passive investment of funds in Australia and Hong Kong that would have been expected were competition effective.[54] On the other hand, while the absence of transparency in the USA makes comparisons difficult, anecdotal evidence suggest that US charges may be higher than Australia's.

Not unreasonable tests etc.

81. The New Zealand supervisor has a particular focus on fees charged by specified service providers to mandatory Kiwisaver schemes (including the trustees and administrators) and hence the fees charged to members.[55] In this way the supervisor enforces a legislative requirement that fees not be 'unreasonable, leaving the final interpretation of this concept to the courts, having regard to any guidance published by the supervisor. The supervisor therefore checks annual accounts for reasonableness. Regulations specify that the supervisor may benchmark schemes against each other, taking account of specified factors that may affect the comparison.[56] As fees have to be allocated to five specified headings, this can enable benchmarking of the components of the overall fee. Schemes must also notify the supervisor about any increases in fees, although this can be done along with the annual report.

82. A less direct way of keeping charges low is to focus on minimising the costs that schemes incur. This is notable in the USA where there is considerable emphasis in the regulator's interpretation of the ERISA legislation[57] on schemes incurring expenditure only where necessary for running the scheme.

[54] The academic literature is fairly united in concluding that the additional returns are less than the costs. David Blake and associates has produced evidence to this effect (see Blake and Timmerman 2003), as has Keith Ambachsteer (papers available via ICPM http://www.rotman.utoronto.ca/ICPM/details.aspx?ContentID=79, including (Bauer et al 2007), and APRA (APRA 2008).

[55] Supervisory guidance indicates that miscellaneous fees not arising from charges from service providers (and presumably including any marketing cost) would not normally be deemed unreasonable if they totalled no more than 0.2% of the assets under management, in the first year of the scheme and lower amounts later on, although the figure can be higher where, as appears usual, the overall fee is below 1%.

[56] Kiwisaver Regulations 11 and 12

[57] The Employee Retirement Income Security Act 1974 (ERISA) is the corner-stone of the US regulatory approach. The Act establishes minimum standards for pension plans in private industry and provides for extensive rules on the federal income tax effects of transactions associated with employee benefit plans. ERISA was enacted to protect the interests of employee benefit plan participants and their beneficiaries by requiring the

Schemes with high costs could in principle be challenged when their regulatory returns are reviewed or during sample inspections. In practice, there is little evidence that these requirements have been any significant downward impact on charges.

Fee Caps

83. Where competition, transparency, unreasonable tests fail, some countries have felt it necessary to introduce a cap on fees. A simple response, found in Eastern Europe Israel and Spain, as well as UK stakeholder funds, is to cap the fees. This tends to be unpopular with the industry or ineffective, as it is hard to strike a balance between the cap being low enough to have a real effect and high enough to avoid throttling the market. For instance the caps in Spain of 2% for the fund manager and 0.5% for the custodian, compare with actual fees averaging 1.53% and 0.17% respectively, while actual fees charged for UK stakeholder funds sold through employers of around 0.8% are well below the cap of around 1.25%.

84. The caps in any case tend not to cover investment (hidden) dealing and transaction costs, which can tempt providers (such as insurers) who undertake their own investment management to increase income by over-trading. This risk can be addressed only by the supervisory authority or member monitoring of net returns, as part of the regulation of investment risk.[58]

Control Mechanisms

85. Another way to keep costs low is assigning members who do not choose a fund or investment option for themselves to the lowest cost provider or option. In the case of Chile new members will be assigned to the lowest cost provider for 24 months. This provider will be the one that wins in a bidding process.[59]

86. Other restrictions designed to reduce costs include limiting when or the number of times individuals can switch between providers – as is the case, for example, in Columbia, where individuals can switch AFP every six months, or in Bulgaria, Estonia or Mexico (with some exceptions), where members can switch annually.

87. Some authorities have deliberately set up a low cost system through licensing, whereby only a limited number of pension providers are allowed to operate, and the licenses are handed out to the lowest cost bidders (e.g. Bolivia, Macedonia). This is one way of lowering costs through economies of scale.

88. Other countries have structured their pension system in order to take advantage of economies of scale through collective and centralized services. Examples of centralized management systems include the PPM in Sweden, Denmark's ATP, Bolivian APFs, the Kosovo Pension Trust.[60] Hybrid systems where only some services are centralized include contribution collection in Colombia, Poland, Bulgaria, Hungary, Mexico, New Zealand, and account switching in Chile and Mexico.

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disclosure to them of financial and other information concerning the plan; by establishing standards of conduct for plan fiduciaries; and by providing for appropriate remedies and access to the federal courts.

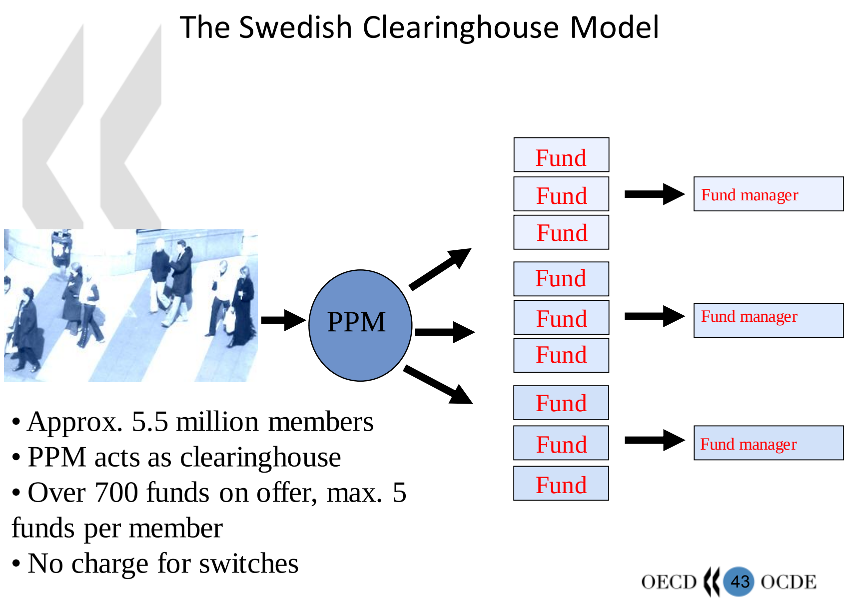
[58] For a discussion of the most efficient types of cost caps see (Impavido et al 2009).

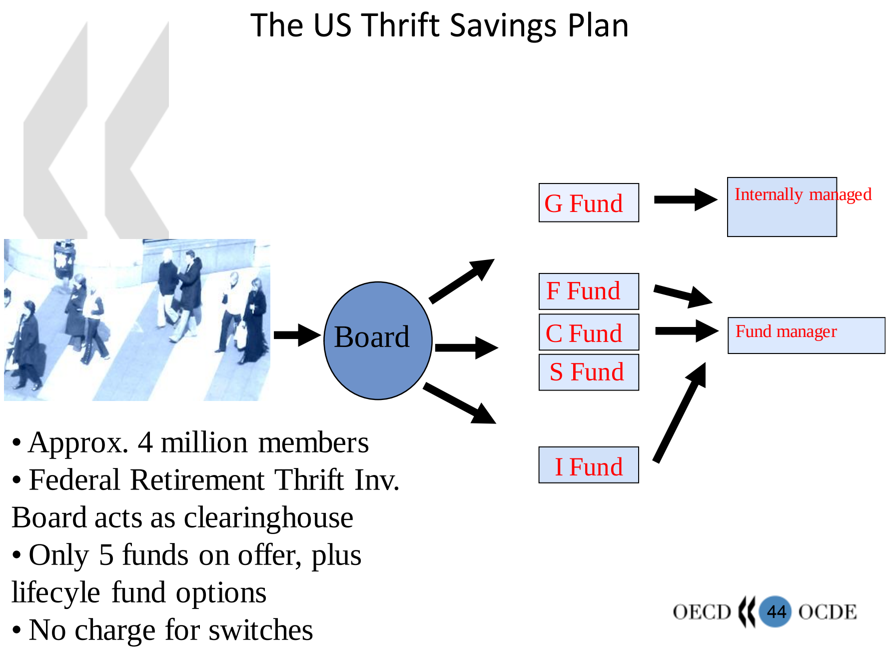
[59] This was previously the system used in Mexico, but since since 2008 the assignation process for those who have not elected a pension manager is based on net returns.

[60] From 2012 (to be confirmed) the UK's new individual account system will also have a centralized collection and allocation system.

89. In terms of centralized systems with investment choice, the Swedish PPM provides an example of a system where a central manager negotiates fees, but free choice of investment is offered to individuals (with a publicly managed default fund). One way to reduce costs even further would be by limiting the number of investment choices. By way of contrast, the US Thrift Savings Plan carries out open tender for a handful of balanced investment choices, some of which may be managed internally.

Figures 3 & 4: Centralized Investment Management Systems





Source: OECD

Table 4: Cost Control Mechanisms Applied in Different Countries

Transparent Fee Structure	Comparison	Not unreasonable tests	Fee Caps	Default allocation to low cost provider	Limit switching	Licensing	Centralized systems	Centralized fund management
Chile	Australia	New Zealand	Lat Am	Chile	Columbia	Bolivia	Sweden	Sweden
El Salvador	Hong Kong	USA	CEE		Bulgaria	Macedonia	Denmark	
Italy	Hungary		Israel		Estonia		Bolivia	
Mexico	Israel		Spain		Mexico		Kosovo	
Australia	Italy		UK				Colombia	
New Zealand	Spain						Poland	
	Mexico						Bulgaria	
							Hungary	
							Mexico	
							New Zealand	
							Chile	

c. Operational Risk

90. Operational risks include:

- risks associated with the security and accuracy of management information systems (including but not restricted to IT systems);
- business disruption due to such events as IT failure, power failure, flood, fire, terror attack or pandemic;
- risks relating to the management of beneficiary records, interests and entitlements;
- financial and resource management risks;
- out-sourcing risks ;
- failure to enforce timely employer contributions.

91. The efficient and effective operation of DC pension funds can pose greater challenges than that of DB pensions, as under most DC arrangements the fund holds individual accounts for each member and hence there is complexity involved in making sure that contributions are received and are allocated to the correct account and that returns are allocated correctly. Other aspects of operational risk may differ less from DB but it is more likely that the member will have to pick up the cost of operational failings, such as IT failures and poor out-sourcing practices. Operational risk therefore receives significant focus from pension supervisors overseeing DC systems – although this aspect of DC supervision tends to receive less academic attention.[61]

92. While most (if not all) DC supervisory authorities have some focus on operational risk, the emphasis varies. Examples receiving particular attention include:

- Some countries have been concerned about the commercial advantage that may be derived from delaying transfers between funds or schemes. The Israeli supervisor has recently undertaken a thematic review of the manner of transfers of capital and information between pension schemes when a customer moves to a different scheme after it issued new rules on the subject arising from risks it identified.
- The UK supervisor has placed particular attention on record keeping and has established advisory guidelines on the procedures plan administrators should adopt to maintain, and report on, the integrity of member records.
- Supervisory inspections often place particular attention on the integrity of IT systems (e.g. in Nigeria).
- The Australian supervisor has become particularly concerned about data integrity issues, given the potential that may arise for these to be fraudulently exploited and the impact of the high number of accounts that are lost to their owners due to inability to match to the correct member.

[61] For guidance on the supervisory oversight of pension funds' risk management systems see (IOPS 2009) and forthcoming good practices (IOPS 2010 – forthcoming).

- Supervisors in several countries, for instance Chile and Estonia, have become concerned about the potential impact of conflicts of interest on decisions about choice of investment funds or insider trading by fund managers.

- Another pre-occupation, especially for supervisors in developing countries, is with independent and secure custodianship arrangements.[62]

93. As a first line of defence against operating risks, supervisory authorities in many countries require pension funds to have risk-management systems in place (including management responsibilities and strategy, control systems – such as IT systems, checking systems and internal audits – and information and reporting requirements).[63] The risk-management systems which pension funds are required to operate can be laid out in detail by pension supervisors - as is the case in Mexico where the pension supervisory authority CONSAR requires a certain risk management structure including boards, a central risk management unit, compliance officer etc. to be in place. Likewise in Israel each scheme must appoint a risk manager whose role is to ensure that all risks are properly managed. In other countries (e.g. Hungary, Poland) the scheme must engage an internal control unit for similar purposes. Alternatively, the pension supervisory authority can provide guidance on what type of risk management system it would expect to see, leaving the details of the implementation to the pension fund itself (as is the case in the UK or Australia, for example).[64]

94. The assessment of these risk-management systems form an important part of both licensing and on-going supervision. Those authorities that undertake detailed supervision of pension schemes would expect to pick up serious operational issues as part of their routine on-site and off-site inspection functions. Inspections often place particular attention on the integrity of IT systems (e.g. Nigeria), but may also, as in Australia, take a risk management perspective. Inspections may place a particular focus on ensuring that risk management or internal control functions are working effectively. Other supervisory authorities might pick up operational issues through their complaints handling role where, as is often the case, this is a regulatory responsibility, (for instance Israel, New Zealand and the USA) or undertake thematic reviews focusing on an aspect of operational risk, examples of which are given above.

95. While operational risks are not readily susceptible to competitive pressures, being largely hidden, member decisions could, in principle, be influenced by adding quality of service measures to the other measures that pension funds publish. Hence, the Chilean supervisory authority publishes on its webpage an index that measures the quality of consumer services provided by AFPs and rank them accordingly (see country section).

Outsourcing Risk

96. Where pension schemes out-source administrative functions, the potential risk can increase as schemes may pay insufficient attention to quality of service or the providers' risk management

[62] Where custodians are responsible for pricing pension fund assets, and are independent from the investment fund managers, this can also provide an alternative control over investment by helping to ensure that the fund and the supervisor have an independent view of the performance of the investment manager.

[63] See (IOPS 2009) for further details.

[64] The Australian and UK guidance notes can be found via the following links. Examples of guidance provided by other IOPS members is available in (IOPS 2009).

http://www.apra.gov.au/Superannuation/upload/SGN-120-1-Risk-Management.pdf
http://www.thepensionsregulator.co.uk/pdf/codeInternalFinal.pd
http://www.thepensionsregulator.co.uk/pdf/InternalControlsGuidance.pdf

arrangements when selecting and monitoring providers. This may be a particular issue for DC plans which are more likely to undertake outsourcing than generally larger DB funds. In addition, the oversight of outsourcing arrangements may be weaker at DC funds because of their inherently weaker governance structures (as discussed in Box 1 on page 6). The oversight of external service providers should therefore be more rigorous.

97. Supervisory influence is variable over the contractor's processes to mitigate operational risk. The remit of some pension supervisory authorities extends to service providers. Supervisory authorities, for instance in Kenya and Ireland, separately register scheme administrators, regardless of whether they are in-house or out-sourced, which enables them to check on their fitness and propriety and require that they have appropriate processes. In registering with the Irish supervisor, administrators have to certify that they are responsible for and capable of preparing the scheme annual report and annual benefit statements (DB and DC), and that these functions are completed within the statutory timescales. The authority has powers to inspect administrators to check on the self-certification and plans inspections of administrators thought to be problematic. Jamaica and South Africa go further, as the supervisor licenses the administrators. Other supervisory authorities have to work with their counterparts covering other financial sectors to ensure suitable oversight.

98. Alternatively, pension supervisory authorities often require outsourcing arrangements and contracts to include a clause which allows the pension supervisory authority to obtain information or even visit the premises of the service provider. For example the supervisory authority in Thailand (SEC) requires the governing body of a pension fund to include in its contract with the service providers certain clauses which would enable the SEC to carry out inspections to the service providers as and when necessary. In Australia, the supervisory authority has developed a programme of on-site review of entities in the two major categories of service providers – i.e. administrators and custodians. In the absence of explicit powers, the supervisory authority has undertaken inspections of out-sourced administrators by agreement with the trustees and administrators themselves – it expects trustees to provide the supervisor with access through prescribed conditions of contract. The review showed that the governance of the providers needed to be improved, as did the trustees' risk management of the contracts, and has enabled the authority to focus its ongoing work at raising standards.

99. Another approach is to hold the pension scheme managers/ fiduciaries accountable for out-sourced operations and to focus supervisory effort on checking or even authorising the contractual relationships. [65] For example in Thailand the governing body of a pension fund is required to appoint proper professionals to carry out delegated functions. The governing body is expected to carefully select the parties suitable for the tasks to be delegated by conducting due diligence on them, including their internal control systems. The governing body also has to ensure that the service providers should maintain proper internal control system on an on-going basis. COVIP in Italy emphasise the attitude of fund directors and structures to monitor the quality of outsourced services as part of both off-site and on-site inspections.

100. Supervisory authorities often provide guidance to pension funds as to how to handle their outsourcing arrangements. The Australian supervisor, as with supervisors elsewhere places considerable emphasis on the quality of pension scheme out-sourcing arrangements, with detailed guidance on good practice provided.[66]

[65] See IOPS Working Paper No. 8 (IOPS 2008c)

[66] See (APRA 2004)

101. In its comprehensive review of outsourcing practices by Institutions for Occupational Retirement Provision (IORPs) in European Member states,[67] the CEIOPS found (amongst other conclusions – see report for further details) that in all countries IORPs retain final responsibility for any outsourced functions, and therefore IORPs are required to manage all possible problems arising from their outsourced functions and provide all the requested information to the supervisory authorities overseeing them. Most pension supervisory authorities have the power to carry out on-site inspections of third-party service providers and to obtain all necessary reports from them. Almost all countries require outsourcing to be subject to a written agreement (though the contents of this vary between states). Approximately half the states make the validity of this outsourcing agreement subject to prior approval of or notification to the supervisory authority overseeing the IORP.

Contribution Collection

102. Another aspect of operational risk receiving special attention in some countries is the timely collection of contributions. Late or defaulted sponsor contributions, where funds are responsible for ensuring the timely payment of contributions, can impact more immediately on member benefits in DC plans. It should be noted that most DC supervisory authorities have to address the non/late payment of contributions to plans.[68] Several supervisory authorities - notably in Hong Kong, Italy and the USA - see this as one of the biggest challenges they face. This is very important in a DC plan given that the incentives for the provider to make their best efforts are not as strong as in the case of a DB system. For the former, members do not pay sufficient attention because they do not understand or do not give sufficient importance to their accounts until they retire, and at that point it might be too late to take any action. In the case of the latter, there is a direct impact on the provider if they do not collect contributions. For this reason, in Chile providers are legally responsible for collecting contributions and have to sue employers if they do not pay. If providers do not take action, they are responsible for the unpaid contributions (see country section).

103. This is also a serious issue in the USA, where problems with the management of contributions can result in the fund being subject to a supervisory visit, and in Ireland which regularly takes errant employers to court. This necessitates extensive follow up action supported by a system of administrative surcharges on employers where cases are upheld. The UK supervisor has sought to overcome a similar problem of extensive reporting of late contributions by placing the onus squarely on pension funds to secure compliance, stepping in itself only in the most egregious cases. In Italy, where COVIP does not have any formal supervisory competence over employers, emphasis is placed on the capacity of funds to monitor employers' regular fulfilment of their obligations as an element of the sound and prudent management of the funds.

d. Managing transition from accumulation to decumulation[69]

104. Members of DC pension plans not only bear risks during the phase when their assets are being accumulated, but also are exposed to risks when in transition to and sometimes within the decumulation phase when they are drawing down their accumulated pension assets as retirement income. Whilst DB funds provide a guaranteed (usually inflation protected) income throughout an individual's retirement,

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[67] See (CEIOPS 2008)

[68] Few supervisors have any responsibility for employer compliance with legislation covering mandatory participation – this usually falls to the tax authority. This is the case in New Zealand, although the supervisor must register employers who are exempt from participation in the mandatory Kiwi-saver scheme because they are part of an alternative qualifying scheme.

[69] IOPS Working Paper No. 7 (IOPS 2008a), from which much of this section is drawn, provides further information on the subject.

members of DC funds - just as with investment and other risks during the accumulation phase – bear risks such as longevity and inflation themselves during their retirement.

105. One way of protecting against such risks is to require individual DC fund members to purchase certain types of retirement product – index linked, life annuities providing the ultimate level of protection.[70]

106. However, making an annuity purchase compulsory still leaves individuals open to timing risk – i.e. if individuals have to purchase an annuity at a particular point (i.e. their retirement date), they risk being forced to buy into a low annuity rate and thereby being locked into a low level of retirement income (meaning that two individuals with the same accumulation balance could potentially face the prospects of living on very different retirement incomes simply through having to annuitize at slightly different times).[71] Authorities in some countries therefore allow flexibility in the timing of the annuity purchase. For example, in the UK balances have to be annuitized by the age of 75, in Chile where participants may opt for a programmed withdrawal and choose to annuitize at a later time, whilst in Ireland a two year window was allowed during the volatile period of the financial and economic crisis.

107. Another mechanism for alleviating the risk of transitioning between the accumulation and decumulation phases is to link the two via the use of deferred annuities – as discussed in the previous section on target replacement rates.

108. Yet in many countries (see Table 4), individual members of DC schemes are able to choose their retirement product (whether a programmed withdrawal or an annuity or in some cases whether to withdraw their retirement savings as a lump sum). As with the decumulation phase, where choice is involved extra risks and challenges are born by individual DC fund members – given they frequently do not have sufficient knowledge or engagement to ensure that they make optimal choices between what can be complex products. Pension supervisory authorities can therefore play a role by providing comparative product information and advice on the suitability of products.[72]

[70] For a full discussion of the different types of retirement product and the risks which they cover, see (Antolin, Pugh, Stewart 2008), (Antolin 2008).

[71] Timing risk also occurs when individuals are forced to buy an annuity when their account balance has been hit by a market downturn (as occurred at the end of 2008, for example). This is commonly mitigated through life-styling or a move to a more conservative multi-fund account, described under investment risk above.

[72] For example via the TPAS system which has been introduce in the UK – see IOPS Working Paper No. 7 (IOPS 2008a).

Table 5: Choice of Retirement Product[73]

Lump sum only	Lump sum or PW	Lump sum or PW, or annuity	Lump sum or annuity	Partial lump sum or annuity	PW or annuity	Annuity only
Hong Kong (Mandatory Provident Fund) India (Mandatory Provident Fund) Luxembourg (SEPCAV) Philippines (Mandatory Provident Fund)	Indonesia China Malaysia	Australia Brazil (closed funds – if the plan rules so provide) Denmark Japan	Luxembourg Spain Greece Belgium Czech Republic Hungary (voluntary funds) Switzerland (voluntary funds) USA (NB lump sum dominates)	Ireland Italy Portugal South Africa UK	Argentina Canada Chile Costa Rica Mexico Norway Peru	Austria Belgium (mandatory funds) Colombia Croatia Hungary (mandatory funds – or lump sum if retire before 2013) Netherlands Poland Russia (mandatory) Sweden Switzerland (mandatory BVG/LPP pension) Uruguay

[73] Source OECD (Antolin, Pugh, Stewart 2008)

109. In systems where annuitizing the accumulated pension balance is encouraged or mandatory, an important challenge is how to ensure that individuals obtain the best price for annuity products where these are purchased individually.

110. The complicated nature of pension and annuity products means that their purchase is highly dependent on the information provided by the sellers of these products and the advice received. The problem in many countries is that the annuity provider is already involved in the pre-retirement accumulation phase, which can leave individuals open to abuse if ‘locked’ in and not able to ‘shop around’ to find a better annuity rate from an alternative provider so that they risk choosing a payout produce that represents poor value for money (and differences can be as large as 20%). However, making such comparisons is difficult and time consuming. The annuity purchase decision, which is the most common mechanism consumers use to convert a DC fund into an income stream in retirement, therefore needs to be handled carefully. This risk has not attracted that much regulatory attention as the majority of DC systems are sufficiently new that there have as yet been few retirements from the system.[74]

111. Pension supervisory authorities have a role to play in supervising the transition between these phases and how pension income is received. As with the accumulation phase, pension supervisory authorities have to oversee how information is provided and how competition is working during this transition. Supervisory authorities in some countries have consequently been working on providing a centralized system to help individuals chose between retirement products and to compare annuity prices. Consumer understanding of annuities is very low and people do not fully comprehend the risks of the decisions they are taking. Such a centralized system can help to increase knowledge and understanding, particularly when coupled with some product explanation or advice, in addition to comparative quotations between standardized products. Furthermore, such systems may deliver cost savings and efficiencies (via potentially lower marketing and distribution costs for providers) which may be reflected in more competitive annuity pricing. Providing competitive quotations may also assist with the timing of an annuity purchases. The centralized quotation systems in Chile and the UK are considered in IOPS Working Paper No. 7 (IOPS 2008a), and are outlined in the country sections below.

[74] This is especially the case as the countries that over the last decade or so have set up mandatory workplace pension systems have placed an upper age bound (45 or 50) on membership to minimise the number of eligible employees who would be better off not joining.

IV. Supervisory tools and approaches used in Practice

Nature of pension system determines choice of control mechanism

112. Which of the control mechanisms for managing the different risks outlined above are used in practice depends on the nature of the DC system in place. As discussed in Section II, the role which competition plays in DC pension systems varies. Mandatory systems which require higher levels of protection often employ a type of 'managed competition' with a limited number of players and strictly controlled investment products etc. By way of contrast, voluntary systems in more developed market economies rely more on transparency and disclosure, as well as the risk management of the pension funds themselves. Product design, such as portfolio choice and default options tend to be less regulated in these voluntary DC systems. [75]

113. Where levels of financial understanding and knowledge are considered to be particularly low, or capital markets are under-developed, supervisory authorities may restrict the types of investment or level of investment choice which individuals are allowed or apply tighter quantitative investment rules. The key choice is whether supervisors seek to improve member understanding (through enhanced transparency) or whether choices are imposed on members (paternalism). The choice is as much about culture and ideology as it is about evidence-based supervision. The move towards mandation suggests that politicians, at least, may be relying less on member understanding. For instance, in Israel a form of mandatory life-cycling is being introduced because of concerns that the market is not providing such protection by itself. On the other hand, in societies which are more comfortable with the idea that investment in pension plans involves risks and investing in equities, participants can tolerate greater volatility in retirement income outcomes.

114. The nature of the pension promise can also affect which control mechanisms are used. Framing a DC pension plan as "providing security in old age" instead of as a "source of extra money to complement State-provided retirement income" influences the severity of the consequences of failure and hence the regulatory regime. For countries where participation is voluntary and people can effectively choose between spending now or saving for retirement, there may be little use in providing a low risk environment if the potential for upward gains in retirement income are not attractive relative to the time preference of money. Hence, more investment choice and less quantitative rules tend to be used.

Control mechanisms used determine supervisory approach

115. The extent to which the supervisor uses or expects market mechanisms to control risks will in turn dictate the nature of the supervisory oversight. This is becoming more transparent as supervisory authorities adopt a risk-based approach to supervision - which involves directing their limited resources to where they see the greatest risks to their objectives, rather than allocating their resources equally between supervised entities up front and then dealing with problems as they occur.[76] The key for any risk-based supervisor is to identify the main risks to the DC pension system which they are overseeing and to check that the mechanisms in place to manage these risks are working properly.

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[75] English speaking countries tend to have a much less *dirigiste* approach to investment risks placing reliance on the fiduciary responsibilities of those running the scheme, the expertise of advisers and the choices made by members. The main exceptions to this rule are the near universal restrictions on investment in the employer sponsor (except in the USA) and requirements for life-styling of default funds found in the UK. Other exceptions include restrictions on assets not traded on a regulated market - for instance the Kenyan regulator requires a scheme to obtain prior approval for this type of investment. Otherwise, regulatory intervention tends to focus on guidance for fiduciaries or exploiting the fear that fiduciaries may be sued for poor investment performance.

[76] Risk-based supervision is examined in detail in the IOPS Toolkit (www.iopstoolkit.org)

116. The degree of competition within DC pension systems - and whether it is seen to be working effectively - will shape the risk focus of the supervisory authority (and hence its approach to risk-based supervision). Where competition is strictly controlled (though structured investment choices, caps on fees etc.) checking for compliance with the regulations imposed will be a major supervisory task. However, if the market is operating more openly, transparency issues, conflict of interest, misselling problems, information provision and cost control will be major issues on the supervisor's radar.[77]

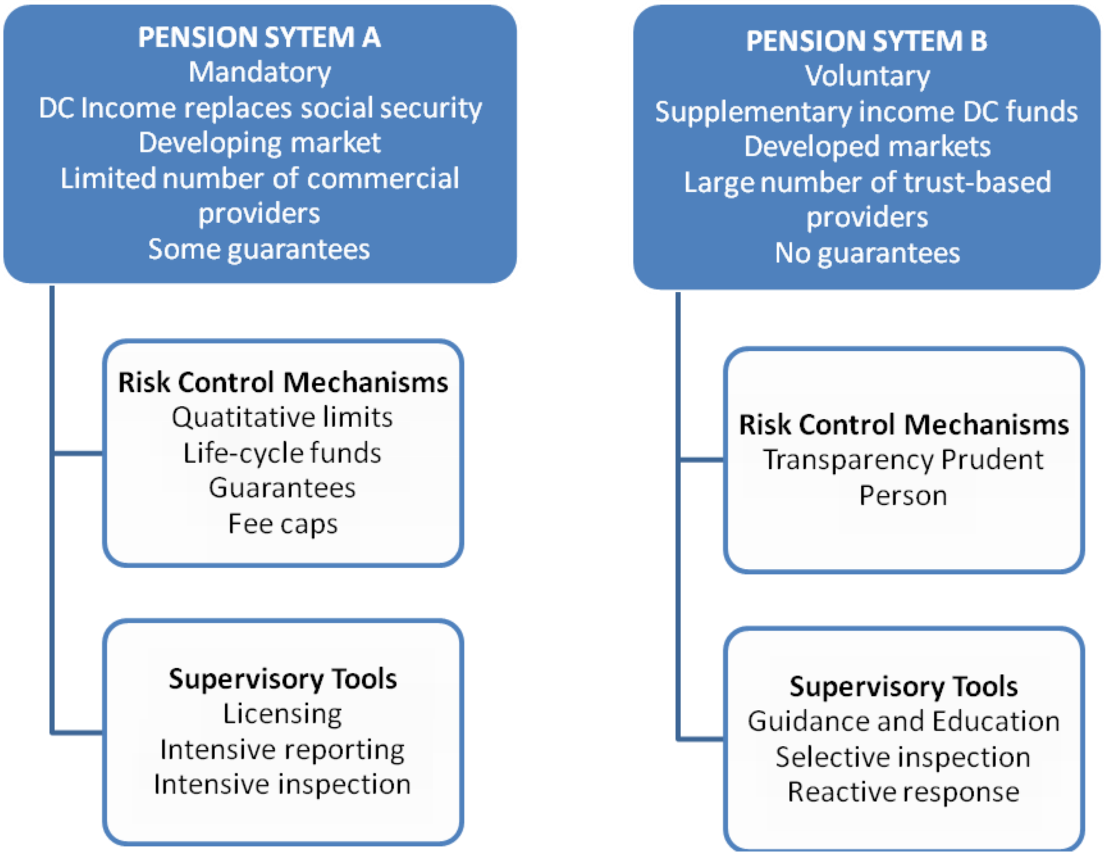
117. The number of providers also shapes the supervisory focus. For example, the goal of APRA's risk-based supervision is to identify risky institutions amongst the thousands of entities which it oversees, whilst the pension supervisor in Chile focuses on finding problem areas within the limited number of pension funds which operate within their systems. In Ireland where there is a large number of pension funds, the supervisor has switched its focus on operational risk to the much smaller number of pension fund administrators.

118. The approach taken to investment risk provides a good generic case study. Supervision of investment risk relying on the prudent person rule necessitates a different approach from enforcing quantified limits – with a focus on investment processes and risk management rather than checking for breaches of the limits. Where quantitative investment limits are applied, compliance with these regulations can be built into the overall risk analysis - as is the case, for example, in Kenya. Meanwhile in Australia, where APRA mainly rely on the risk-management systems of the pension funds themselves, the supervisory focus is on checking that these systems are robust and being operated effectively, and on providing guidance to ensure that this is the case. By way of comparison, in Mexico, where quantitative VaR limits are used by the supervisory authority, CONSAR, to control investment risk, the results of these stress tests are the backbone of the risk-based approach.

119. Although the tools used by different supervisory authorities are the same (from guidance and education, to licensing, on and off-site inspections, prudential requirement and enforcement actions), the weighting and focus of which tools are used will differ (according to the nature of the DC system, the risk control mechanisms in place and the subsequent supervisory approach). Two varying systems and therefore approaches are contrasted in Figure 5 below. These descriptions outline two types of system at either end of the spectrum:

[77] It should be noted that some countries, such as Australia, operate a 'twin peaks' model of supervision, with prudential regulation and market conduct issues being handled by different supervisory agencies.

Figure 5: Use of Supervisory Tools



120. The different supervisory tools and which are used in range of IOPS member countries are outlined below and in Table 6:

- **Licensing**: enables supervisors to check that the basic structure of member protection and risk management is in place before pension funds start, or with re-licensing continue, to take contributions. Furthermore, regulators or supervisors can use licensing to restrict the plan designs (or default funds) that pension funds can offer, hence reducing investment risk. It also can enable the supervisor to raise the standards required of licensed entities by imposing or modifying licence conditions, without having to seek new legislation. In principle, this approach can address all of the risks covered in this paper.

- **Issuing guidance on good governance and risk management**: this is conceptually an alternative to licensing although in several jurisdictions it supplements licensing. Supervisory guidance, which in some countries has legal status, recommends the types of practices that the supervisory authority considers should reduce risks to members or ensure that they are managed effectively. This approach may be used as a substitute for more intense supervision, leaving pension fund fiduciaries responsible for checking that risks are mitigated, or as a reinforcement to an inspection regime, and is most likely to be found where there are large numbers of funds.

- **Detailed off-site inspection**: enables supervisors to check transactions in detail to ensure that rules (most commonly on investment limits) are being complied with and payments from and to members are properly handled. This is targeted at investment and operational risks and is associated with very frequent (even daily) transaction reporting and, hence, systems with a relatively small number of pension funds.

- **Targeted checking of annual returns**: this is a common approach to handling data that supervisory authorities receive from pension funds where there are too many for detailed checking to be practicable or the supervisor is focusing on specific risks, for instance checking the external auditor's opinion or any statements made on risk management or internal control.

- **Routine on-site inspection**: this enables supervisors to verify information received off-site as well as check for compliance with regulations or check on the quality of governance. It could potentially cover any DC risk, although supervisors tend to focus on a sub-set of risks.

- **Reactive response**: adopted as a major supervisory approach mostly by authorities supervising large numbers of pension funds where routine inspection can only cover a small part of the market. Pension fund fiduciaries or their advisers and suppliers may be required to report breaches of legislation, and supervision can also be driven by member complaints. By definition, these reports only relate to visible failings or legislative breaches and hence do not cover all risks.

- **Thematic reviews**: these enable supervisors to focus on a specific risk of particular importance or concern, and can involve information collection, inspection and action to oblige or encourage pension funds to correct the types of problems found. The paper, above, gives some examples of such reviews, e.g. of the transfer process.

- **Solvency Reviews**: required where pension funds give guarantees or provide insured benefits.

- **Promoting transparency/understanding**: this involves mandating pension fund disclosures directly to current or potential members or indirectly though the supervisory authority's website, and checking that information disclosed is accurate and not miss-leading. It is generally aimed at investment and charging risk, although several jurisdictions use it for the transition to the retirement phase or quality of service.

Table 6: Supervisory Tools used in Different Countries

	Licensing	Guidance on governance/ risk management	Detailed off-site inspection	Targeted checking of annual returns	Routine on-site inspection	Reactive Respons e	Thematic reviews	Solvency Reviews	Promoting transparency/ understanding
Australia	✓	✓			100%		✓		✓
Chile	✓		✓		100%			✓	✓
Denmark	✓		✓		100%			✓	
E. Europe	✓		✓		100%				
Hong Kong	✓	✓	✓	✓	100%		✓		✓
Ireland		✓		✓		✓			✓
Israel							✓		✓
Italy	✓		✓					✓	✓
Kenya		✓		✓	sample	✓			
Mexico	✓		✓		100%			✓	✓
Netherland s		✓							✓
NZ	✓			✓	100%	✓			✓
Nigeria	✓		✓		✓			✓	
S.Africa		✓		✓	sample	✓			
UK		✓				✓	√		√ (retirement options)
USA		✓		✓		✓			✓

Country Case Studies

121. As outlined, supervisors overseeing DC pension systems face similar challenges, but also have their own context to deal with. This section provides a number of case studies of how supervisory authorities in some of the countries in Table 5 apply the different regulatory mechanisms and supervisory tools.

1. Australia

122. Australia started off with the trust-based DB model similar to other Anglo-Saxon countries, except that payout has generally taken the form of a 100% lump sum at retirement, often reinvested in the scheme or rolled over to a separate fund for purchase of a pension. By the 1980s employers were already starting to make trust-based DC provision available. From 1992, Australia introduced mandatory employer contributions. All employees have to be enrolled into a trust-based superannuation plan. These were traditionally company or industry wide schemes limited to employees of the company or industry concerned. DC arrangements can be offered by 'public offer' plans which are either employer or industry schemes that have decided to expand their membership base, or schemes offered under a master trust by commercial providers. Trustees can be corporate trustees or a group of individual trustees. Because 'public offer' funds and any fund that pays lump sum benefits must have a corporate trustee, there are very few prudentially regulated funds whose trustee is a group of individuals. While DC schemes can be pooled DC, most now offer investment choice. Since 2005 employers have had to offer a choice of schemes.[78]

123. Open superannuation plans are now nearly all DC, with only a few 'legacy' DB plans remaining. Since 1997 employers and employees have had the option of contributing to commercially provided contract-based Retirement Savings Accounts (RSAs) instead of to a superannuation fund. RSAs provide a guaranteed minimum return (hence with returns usually much less than a superannuation fund) and are targeted at low earners who are intrinsically less attractive to public offer pension funds. All DC schemes with more than 4 members must ensure that member balances under $Aus 1,000 are not eroded by administration charges that exceed investment returns.

124. Since 2006 the trustees of all superannuation plans with five or more members have had to be licensed by the supervisor, the Australian Prudential Regulation Authority, which also supervises the providers of RSAs.[79] This has been accompanied by a substantial reduction in the number of trustees that APRA supervises, with some 300 in June 2009.[80]

125. The private pension system in Australia is subject to regulation and supervision by three main authorities, i.e. the Australian Prudential Regulation Authority (APRA), the Australian Securities and Investments Commission (ASIC), and the Australian Taxation Office (ATO). The Australian financial supervisory structure adopts the so called "twin peaks" model, with APRA, the prudential regulator, mainly covering issues which affect the financial health of supervised financial services institutions, while ASIC, as the conduct and disclosure regulator, is mainly concerned with market integrity, business conduct

[78] Except in some cases where scheme membership is a condition of a collective bargaining agreement

[79] APRA also licenses and supervises a small number of professional, independent trustees that are trustees for several thousand small funds with fewer than five members.

[80] APRA also regulates approved deposit funds and eligible rollover funds, the latter established to accept mainly small or lost member superannuation accounts rolled over by trustees of other regulated funds.

and consumer protection issues. The ATO also plays an important role in the Australian pension system in that it is the main regulator of the self-managed superannuation funds (SMSF)[81].

126. The core mission of APRA is "to establish and enforce prudential standards and practices designed to ensure that, under all reasonable circumstances, financial promises made by institutions APRA supervises are met with a stable, efficient and competitive financial system". APRA's supervisory approach aims to be forward-looking, primarily risk-based, consultative, consistent and in line with international best practice. It is forward looking in that APRA actively monitors and assesses the performance and situation of the supervised entities against pre-specified standards and requirements on an on-going process, then forms an opinion on the likelihood of the entity defaulting on its promises made to superannuation members, and what actions APRA needs to take. APRA's approach also recognizes that management and boards of supervised institutions are primarily responsible for financial soundness.

127. APRA has its in-house risk-based supervisory tools, i.e. the Probability and Impact Rating System (PAIRS) and the Supervisory Oversight and Response System (SOARS).[82] The PAIRS system is used to assess the likelihood that a particular supervised entity (e.g. pension trustee) will fail to honour its promises (probability rating), and the extent to which such potential failure will impact on the financial system (impact rating). APRA's PAIRS assessment begins with the overall risk level of the entity, and then the entity's ability to control or reduce the risk. The two assessments then lead to a net risk level, which ranges from "low", to "medium", "high", and further to "extreme".

Table 7: Summary of PAIRS Scoring

PAIRS Category	Inherent Risk	Management and Control	Net Risk	Significance Weight
Board			(0-4)	%
Management			(0-4)	%
Risk Governance			(0-4)	%
Strategy and Planning	(0-4)	(0-4)	(0-4)	%
Liquidity Risk	(0-4)	(0-4)	(0-4)	%
Operational Risk	(0-4)	(0-4)	(0-4)	%
Credit Risk	(0-4)	(0-4)	(0-4)	%
Market and Investment Risk	(0-4)	(0-4)	(0-4)	%
Insurance Risk	(0-4)	(0-4)	(0-4)	%
Net Risk Total			(0-4)	100%
Coverage/ Surplus			(0-4)	%
Earnings			(0-4)	%
Access to Additional Capital			(0-4)	%
Capital Support Total			(0-4)	100%
Overall Risk of Failure			(0-4)	

81 SMSFs are funds with up to 4 members, all of whom must be involved in the operation and management of the fund as trustees or directors of a corporate trustee, and none of whom may be an arms-length employee of another member. The SMSF sector accounts for almost one third of all superannuation savings in Australia. APRA also supervises some 4000 small funds that do not meet the SMSF criteria and have appointed an APRA-licensed trustee.

82 For detailed descriptions of the PAIRS and SOARS systems see APRA's 2008 papers:

http://www.apra.gov.au/PAIRS/upload/PAIRS_Final_May_2008_External_Version.pdf
http://www.apra.gov.au/PAIRS/upload/SOARS_Final_May_2008_External_Version.pdf

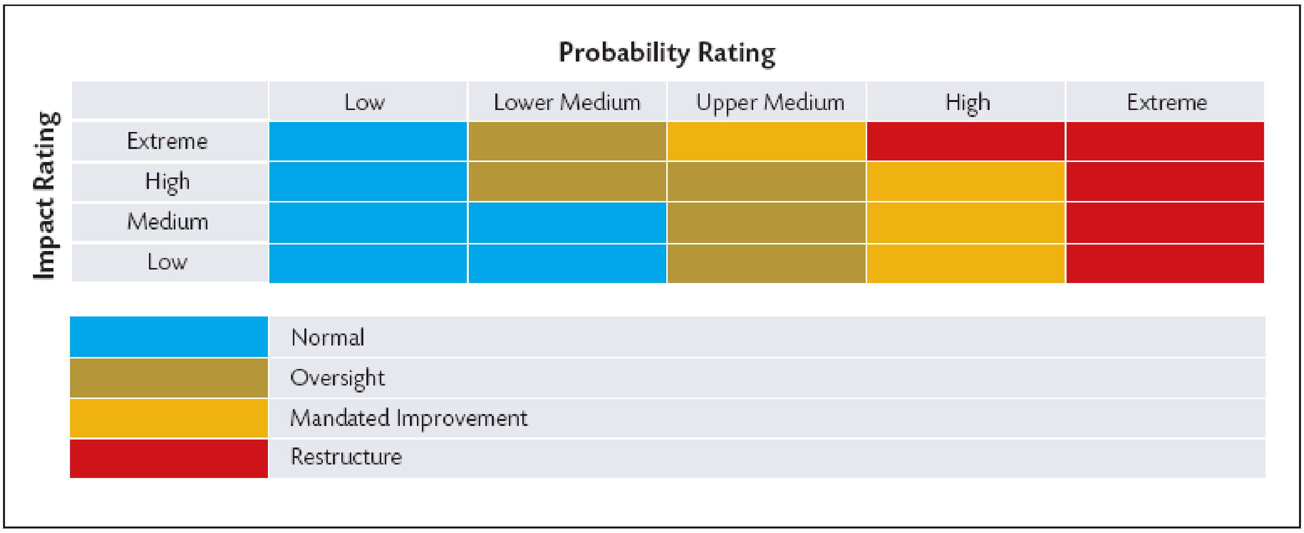
Table 8: PAIRS ORF[83] and Probability Index against Indicative External Ratings

Overall Risk of Failure		Probability Index	Indicative External Rating
Very Low	0.25	1	AAA
	0.5	1	AA+
Low	0.75	1	AA
	1.0	1	AA-
Lower Medium	1.17	2	A+
	1.33	3	A
	1.5	5	A-
Upper Medium	1.67	8	BBB+
	1.83	11	BBB
	2.0	16	BBB-
High	2.25	26	BB+
	2.5	39	BB
	2.75	57	BB-
	3.0	81	B+
Extreme	3.33	123	B
	3.67	181	B-
	4.0	256	CCC

Source: APRA

128. APRA then employs the SOARS tool to assist in responding to the above-mentioned risk assessments. Depending on the risk level, supervisory stances vary. SOARS results in supervised entities being allocated one of four supervisory stances (Normal, Oversight, Mandated Improvement or Restructure).

Figure 6: Supervision Stance



Source: APRA

Information to Members

129. APRA's supervisory approach can be seen as coming from the 'Anglo-Saxon' model – i.e. operating more via communication and deterrent rather than intensive, daily interaction with supervised entities (as is the case with Latin American supervisory institutions). Such an approach is consistent with a

[83] Overall Risk of Failure

country such as Australia which has a developed economy and capital markets and a competitive pension system operating under a trustee structure.[84]

130. The Australian approach to information provision is clearly principles based, rather than being highly prescriptive and standardized. Requirements are set out in the Corporations legislation, rather than in the specific legislation covering superannuation, and broadly apply across a range of financial products.

131. Comparative information on costs and fees, and return on assets, on an industry sector basis, is published by APRA. APRA has recently commenced publication of fund-level rates of return. ASIC's website supplies information at the consumer level, offering a general description of the pension system and the kinds of plans available, and then providing in-depth analysis on specific themes

Investment Risks

132. In terms of investment regulation, the legislation which is administered by APRA adopts an open, prudent person approach rather than imposing quantitative investment limits. For example, pension funds in Australia may freely invest in shares, bonds, property and foreign assets as long as the trustees have sound reason to believe the investments are to the benefit of members and beneficiaries and are consistent with the fund investment strategy. However, some regulatory restrictions do still exist, including a limit of 5% of total fund assets that may be self-invested,[85] and the general prohibition on borrowing which the Australian government has relaxed slightly. Changes to the existing Australian regulations in 2007 allowed superannuation fund trustees to invest in limited recourse instalment warrants over any asset a fund could invest indirectly (e.g. real property or listed securities).

133. Trustees must develop investment strategies in the context of risk and return, diversification, liquidity and cash flow requirements. The risk management plan for the fund must encompass relevant investment risks.

Controlling Costs

134. Regulatory caps on expenses, fees or charges are not applied in Australia.[86] Some degree of transparency is obtained by the requirement for the rate of fees and charges to be disclosed prior to a person joining a fund, and for amounts actually charged to a member's account to be disclosed in the annual member information statements. However, as noted, it is difficult to identify certain costs, such as those attributable to investment transactions and remuneration arrangements. Costs should be looked at in the context of performance. APRA recently commenced publication of fund level performance data for the 200 largest funds on a 3 and 5 year annualised basis, covering 95% of members and 92% of assets in the sector regulated by APRA. Data collection to obtain details of performance at the investment option level (as opposed to the fund level) is under consideration.

135. The superannuation system review[87] announced by the Government in May 2009 examined in detail the structure of fees and charges in the Australian superannuation system. It is expected that the Government will respond to the recommendations arising from the review during the second half of 2010.

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[84] For a discussion of the different approaches to pension supervision see (Hinz and Mataoanu 2005), (IOPS 2007b)

[85] Termed 'in-house assets' in the Australian system

[86] The small account protection rule described above is an exception, although there are also exceptions to the rule itself.

[87] Review into the Governance, Efficiency, Structure and Operation of Australia's Superannuation System

Operational Risk

136. One of the features of the Australian superannuation system is the high degree of outsourcing of major business functions including fund administration. APRA, as the prudential regulator, does not have direct jurisdiction over service providers to trustees of superannuation funds. Instead, it has indirect access via prescribed conditions in the contracts between trustee and service provider. Those conditions provide for provision of information and documents to APRA and conduct by APRA of on-site visits in relation to the conduct of the affairs of the fund in question, and for independent audit of the activities which are the subject of the contract.

137. APRA sees data integrity as a major administrative risk with availability of reliable data a necessary pre-condition to funds working out member entitlements such as tax, investment earnings, insurance and other costs.

138. APRA provides extensive risk management guidance,[88] including guidance on outsourcing.[89] The administration services sector in Australia is extremely concentrated, adding another dimension to administrative risk in the Australian system. APRA has been conducting a review of major service providers over the past year to gauge the extent and significance of the risk.

Transition to Decumulation Phase

139. DC pension assets may be taken as a lump sum, as an account based pension designed to be extinguished over the pensioner's lifetime, or as a non-commutable lifetime pension, or a combination of these. Recent changes to tax treatment of benefits taken at retirement on or after age 60, and greater flexibility as to when benefits are taken (compulsory cashing triggered at a particular age or by employment status no longer applies), are expected to ease the pressure of the decumulation phase for individual members. Most funds now offer an account based pension product for the retirement phase, so that members are not compelled to (but may) transfer their benefit to another provider on retirement. Non-commutable pensions or annuities are not popular in Australia, mainly due to pricing. However, the recent review of the Australian taxation system recommended that the Government should support the development of a longevity insurance market within the private sector.[90]

140. A feature of the decumulation phase in the Australian system is the ability to commence taking a limited pension benefit after reaching preservation age but prior to full retirement. These are called "transition to retirement income streams', are limited in the amount of benefits that may be paid annually, and may not be commuted except to revert to the accumulation phase or to switch to another similar product. They are designed to facilitate a phased withdrawal from full-time employment.

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[88] For example Superannuation Guidance NOTE SGN120.2: Risk Management' http://www.apra.gov.au/Superannuation/upload/SGN-120-1-Risk-Management.pdf

[89] For example, Superannuation Guidance Note SGN130.1 Outsourcing http://www.apra.gov.au/Superannuation/upload/SGN-130-1-Outsourcing.pdf

[90] See recommendation 21 in the report: 'Part 1: Overview – Chapter 12: List of recommendations – Australia's Future Tax System: Final Report' http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/publications/papers/Final_Report_Part_1/chapter_12.htm

2. Chile[91]

141. The Chilean pension system has three components: a redistributive first pillar, a mandatory individual account second pillar and a voluntary third pillar. The second pillar, the main component of the Chilean system, is a fully funded defined contribution (DC) scheme in which an individual's pension is the result of his own savings and the return of those savings throughout the life cycle[92]. Employees can choose from one of five commercially provided schemes. They have to buy a life annuity or regulated income drawdown product with their fund at retirement, although this date has some flexibility. Within each scheme there is fund choice between funds of different levels of investment conservatism. The coverage provided by the system, measured as the proportion of contributors to total employment is around 60%.

142. Reforms have been introduced over the years, including a major reform in 2008 (Law N° 20.255) which deepened and widened the redistributive first pillar in terms of coverage. While individuals not eligible for a pension from the mandatory second pillar[93] will get the Basic Solidarity Pension (PBS)[94], those whose pension benefit is lower than the Maximum Welfare Pension (PMaS)[95] threshold will get a pension top up, the Basic Solidarity Supplement (APS)[96]. The maximum APS is the PBS when the self financed pension is zero and is then decreasing in the latter to become zero when the APS plus the self-financed pension reach the PMaS. The first pillar will cover the 60% poorest old age population. Eligibility conditions also include to be 65 years old, to have lived in the country for at least 20 years and at least 4 of the last 5 years up to the time of claiming the benefit. These programs apply to both old age and disability benefits.

143. Additional measures aimed to improve gender equity were implemented. A bonus for women for each child was introduced. This benefit is equivalent to 18 months of contributions at the minimum-wage level, plus the return earned by the system between the moment of birth and the legal retirement age. The new law also allows redistributing the balance in the individuals saving accounts as means of economic compensation between the members of a legal marriage in case of divorce; and equal treatment for survivors' pensions. For the provision of the survivors and disability insurance, cross subsidies among genders were eliminated, establishing a mechanism for separating insurance costs between men and women.

144. The low level of financial understanding, particularly related to pension systems, is an important issue for supervisors, particularly for those supervising DC plans. In this regard, the pension reform also included the implementation of a Pension Education Fund. This fund has the objective of giving financial support to projects, programs, and other activities to promote education about the pension system. This fund is managed by the Undersecretariat of Social Security at the Ministry of Labor. The resources of the

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[91] For further information on the Chilean approach to DC pensions see Solange Berstein's presentation at IOPS Workshop on Pension Supervision for CIS, Kaukas and Central Asian Region, 25-26 February, Istanbul, Turkey http://www.iopsweb.org/dataoecd/29/56/44660537.pdf

[92] The fully funded defined contribution second pillar was introduced in 1981, replacing the old PAYG scheme. Individuals members of the pension system at the time of the reform could choose whether to stay in the old system or to opt-out to the DC system, where the opting-out decision was irrevocable While no new entrants were allowed in the old system, the eligibility rules and pension formulas were maintained for those who chose to stay. About 2% of workers who contributed to the pension system are still in the PAYG scheme.

[93] Neither from the old PAYG or from the DC scheme.

[94] PBS is the acronym for its name in Spanish.

[95] PMaS is the acronym for its name in Spanish.

[96] APS is the acronym for its name in Spanish.

fund are assigned by the Undersecretariat through a public tender. The Superintendence of Pensions is part of the committee that selects the projects. The selection committee for this fund has been already constituted and the first public tender assigned US$ 2,7 millions to 34 projects on May, 2009. There is a new call for projects in 2010, with a fund of approximately US$2.9million to be assigned. The adjudication date should be by the end of April 2010.

145. Furthermore, under law N° 20.255, individuals and companies will be able to act as “pension advisers”, guiding affiliates in taking informed decisions such as the selection of funds, voluntary pension savings, the type of pension to be drawn, etc. Before, such advice was only provided by pension annuity brokers who received compensation only when the affiliate chose this type of pension, which was not necessarily in the affiliate’s best interests. By contrast, this new “pension advisers” will be paid independently of the pension type selected and will also be able to offer advice at earlier stages of participation in the system. The secondary regulation regarding pension advisers was issued on August 2008, and there is a certified and registered list of about 480 pension advisors, validated jointly by the Superintendence of Pensions and the Securities and Insurance Supervisor (SVS).

146. Regarding governance of the entities supervised, each AFP has named in its board two autonomous members in the Investment committee. Also, the pension reform introduced the establishment of a Users Committee, in charge of monitoring the pension system as a whole and the performance of pension fund managers. The members of this committee are representatives of workers, pensioners, private and public pension providers; and the expert to chair the committee is named by the government.

147. To improve efficiency and competition in the AFP industry, as part of the pension reform, the government introduced a bidding process for the administration of the accounts of new members to the system, and a centralized auction mechanism to provide the disability and survivors insurance.

148. Given the significant changes to the pension system, the new Law N°20.255 reorganizes the pension system institutional framework by creating new institutions such as the *Instituto de Previsión Social* (former *Instituto de Normalización Previsional*), in charge of administrating the new solidarity pillar; and the Superintendence of Pensions -which replaced the former Superintendence of Pension Fund Managers (SAFP)- in charge of supervising and regulating the private and public institutions participating in the pension system. In this regard, the Superintendence of Pensions (SP) has a broader supervisory role that includes the non-contributory benefits, benefits from the old pay as you go system, and unemployment benefits from the unemployment insurance fund.

149. The Superintendence of Pensions, as a public agency, is in charge of supervising AFPs, e.g. granting licenses, issuing directives, and levying fines for any misconduct. The agency also has primary legislative responsibilities – including applying strict licensing requirements to AFPs.[97] It has also the role of supervising and regulating the public solidarity pillar and the old pay as you go system that will eventually disappear.

150. As a specialized pension supervisor, the central mission of the SP is to monitor and oversee the Chilean pension system, and particularly is responsible for ensuring a smooth running and reliable operation of the AFPs. Generally speaking the Chilean pension market is subject to relatively strict

[97] Among others, such requirements include capitalization, insurance protection and fit and proper tests for management personnel. Any merger and acquisition of existing AFPs need to be approved by the SP. Meanwhile, if the SP notices any irregularities occurring in an AFP, which it believes is not of compliance with the relevant legislations, the SP is empowered to request the AFP to undertake corrective actions. If the severity of the problem is significant, the SP is also authorized to revoke the license, thus stopping further operation of this entity in the Chilean pension market.

regulation. In this regard the SP closely monitors the operation and performance of each AFP, in order to ensure compliance with the existing rules and regulations. For example, SP collects information and data related to AFPs on both a regular basis (including daily) and on ad hoc basis – which typically becomes necessary when the SP notices a market irregular behaviour related to an AFP. Moreover, the SP is even directly involved with investment issues relating to each AFP, for example is in charge of approving what types of investment products can be included in the pension portfolio, and what the investment limit is, particularly related to the high risk asset classes.

151. Oversight of the pension providers is intensive, with information being submitted to the supervisory authority on a daily basis. Given the system in Chile operates via commercial providers, supervisory oversight has to focus on conflicts of interest (e.g. restrictions on carrying out pension business in relation with other financial products have recently been introduced).

152. It has been argued that such a level of intensity of supervision is feasible for the Chilean system, given that there are only a few supervised entities (currently five AFPs are operated in Chile). For countries where there are hundreds (even more) market participants, such intensive supervision is not practically workable, largely due to constraints on administrative and supervisory capabilities. The Chilean system is also mandatory, requiring greater protection and the less developed capital and financial markets in the country (certainly when the pension system started to operate) also imply a greater level of supervisory oversight (see Hinz et al., 2005).

153. Since 2006, following an initial assessment by the World Bank and the FIRST Initiative, the Superintendence of Pensions has been working to introduce a risk-based approach to supervision with risk scoring features. The main motivations include the agency's desire to be forward looking, to investigate the root as well as the consequence of problems, and to adapt to the increasing complexity of the financial markets.

154. This approach, which seeks to improve prevention of failures in the system, is already being used internationally by the banking industry and, more recently, the insurance industry. However, there is still little experience of its use in pension systems. At present, supervision in Chile is 100% compliance-based and the pension law (Decree Law DL 3.500) and its secondary norms are very specific as to what an AFP must do in a wide range of situations, in accordance with Chilean civil law. The new risk-based approach involves a shift in the focus of supervision to the process used by AFPs for risk management and the controls they have in place. This will permit the implementation of the prudential person principle. A risk-based supervision (RBS) pilot plan was implemented during the first quarter of 2010. A RBS plan roll-out will take place between May and December of 2010.

Information for Members

155. Given the personal nature of the system in Chile, and the fact that individuals have a choice of provider and portfolio, overseeing information disclosure is an important part of the SP's work. Information is highly standardized, with detailed regulation describing the format of information documents (which are then checked by the authority). The impact of high fees has been one criticism of the Chilean arrangements, though the SP has managed to reduce these through increased transparency. The SP provide other information to aid market competition and help individuals chose between funds – including performance data and quality of service measures (ranking providers according to timeliness of contribution allocation and payment of benefits etc.).

156. To clarify the information given to affiliates, a name according to risk were assigned to the pension funds: Fund A – Riskiest, Fund B – Risky, Fund C – Moderate, Fund D – Conservative, and Fund E – Most Conservative.

157. Also, more detailed information is given through the account statement received by affiliates, including relevant information to create awareness about the effect on their pensions of changing funds or being assigned one by default.

158. Once a year, AFPs must provide members with a personalized pension projection (PPP), which is included in the account statement, according to the instructions given by the Superintendence of Pensions. The PPP is specific to the affiliates' age, and the goal is to provide understanding and make affiliates conscious of the importance of contributions and the impact on the monthly pension of postponing retirement. In the case of young members projections are not possible and therefore it is sent a figure that shows the importance of early contributions on the final pension.

Figure 7: Information sent to young members[98]

[98] Translation: If this coin represents all your wealth at retirement, contributions made at different points in your life are shown in each segment. Assumptions are a constant wage growth of 2% and a rate of return of 5%.

Figure 8: Information sent to members with ten of more years to retirement age[99]

¿Qué pasaría con su pensión si usted...

	Recibiría una Pensión Estimada de
…no cotiza nunca más y se pensiona a los **65** años?	**$113.018**
…sigue cotizando todos los meses por una remuneración de **$ 317.419** hasta pensionarse a los **65** años?	**$176.054**

Para el cálculo de la Pensión Estimada se considera una ganancia de sus ahorros del 5% al año y como beneficiario una esposa 2 años menor.

Investment Risk

159. In terms of investment regulation, quantitative investment regulations still apply to mandatory provident funds in Chile. This includes the existence of an investment policy for each fund, authorisation for the investment of a significant part of pension funds abroad and the valuation of their assets at market prices using a transparent methodology.

160. Additional aspects are covered by Law N° 20.255, which introduced a more flexible investment-portfolio regulation and the adoption of a risk-based approach (which is on its way for implementation) to supervision as regards the role of the board of directors and the implementation of the prudent person principle.

161. Under Law N° 20.255, many of the limits on portfolio composition are no longer defined by law itself, but contained in secondary norms, broadening the AFPs' options and providing greater regulatory flexibility. This secondary regulation, known as the Investment Regime, is issued by the Superintendence of Pensions following technical analysis and approval by the Technical Investment Council, formed by members with recognised financial expertise, one appointed by the President of the Republic, one by the Board of the Central Bank, one by the AFPs and two by the deans of the Economic and Business Faculties of accredited universities. The Investment Regime also makes it possible to establish specific methodologies for the measurement and control of investment risk.

162. Since 2007, AFPs have been obliged to draw up and publish investment policies in accordance with Circular 1.438 issued by the Superintendence, and Law N° 20.255 gives the Superintendence greater powers to ensure compliance.

163. Since August 2002 when Law N° 19.795 came into effect, each AFP must offer four different types of fund -known as B, C, D and E Funds- which are differentiated by the proportion of their portfolio invested in equities and fixed income securities. AFPs may, in addition, offer an A Fund. The maximum

[99] Translation: What would happen to your pension if:

- you made no more contributions and retired at 65?

- you continue to contribute each month on a salary of $317.419 and retire at 65?

To compute the estimated pension, an annual rate of return of 5% is assumed, and as a beneficiary a wife 2 years younger.

percentage of variable-income assets that these funds may contain ranges from 0-5% for E Funds to 80% for A Funds. The names of the funds have recently been changed from A – E to Riskiest – Most Conservative in an attempt to make the choices individuals have clearer.

164. Chile's pension system allows affiliates to distribute their savings freely among the different types of fund. The only restrictions are for pensioners and for the group of members within ten years of reaching the legal retirement age, i.e. all men over 55 and women over 50. Pensioners may only choose C, D and E Funds which have a relatively lower level of risk and affiliates within ten years of reaching the legal pension age may only choose B, C, D and E Funds.

165. Given the large percentage of affiliates not choosing voluntarily the destination fund for their savings, the regulation considers a default option consistent with the individual life-cycle, i.e. the investment allocation becomes more conservative with age with shifts in portfolios smoothed over a 5 year period. Table 5 shows how the default option and other age-related restrictions operated; and Figure 2 presents the age compositions by fund type.

166. The regulatory regime in Chile has been subject to gradual liberalization since the beginning of the new pension system in 1980. For example, investment in foreign assets was initially not allowed, but now the limit on an AFP's investments abroad, after successive increases over time, currently stands at 60% of its assets under management but can increase up to 80% under Law N° 20.255. Meanwhile, there are also detailed and strict rules on investment in single issuer and/or issue and self investment.

Table 9: Life-cycle Investment Restrictions in Chile

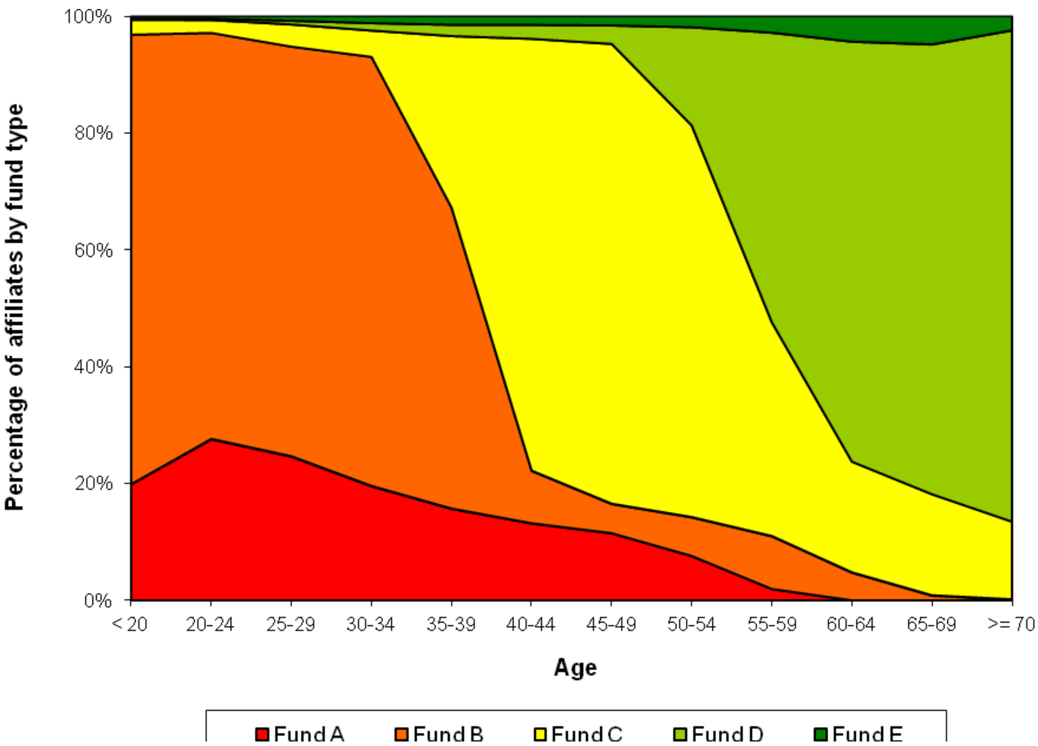
Men		35 or less	36 to 55	56 and older	Retiress
Women		35 or less	33 to 50	51 and older	Retirees
Investment Options	A Fund	O	O	X	X
	B Fund	O Default	O	O	X
	C Fund	O	O Default	O	O
	D Fund	O	O	O Default	O Default
	E Fund	O	O	O	O

X	Not available
O	Allowed to choose
O Default	Assigned automatically

Note: Retirees in the case of Programmed Withdrawal.

Source: Superintendence of Pensions

Figure 9: Default and Affiliate Choices in



Chile

Source: Administrative data, December 2009. Pension Supervisor.

Controlling Costs

167. High costs have been the central criticism of the Chilean system. Fees are charged as a percentage of salary, before October 2008 there was also a fixed fee which was eliminated by the law 20.255. Therefore, the fee structure is now much simpler and it is easier to compare between providers. Other major change on that same law was that the fee included the cost of the disability and survivor insurance. This implied that companies tried to select clients according to risk and that fees were not transparent. As of today this insurance is provided by insurance companies that won a bidding process and the cost is clearly separated from administration fees of pension providers. The administration fee as percentage of contribution is 1.49% of salary and there are important differences between administrators, the lowest is 1.36% and the highest 2.36%.

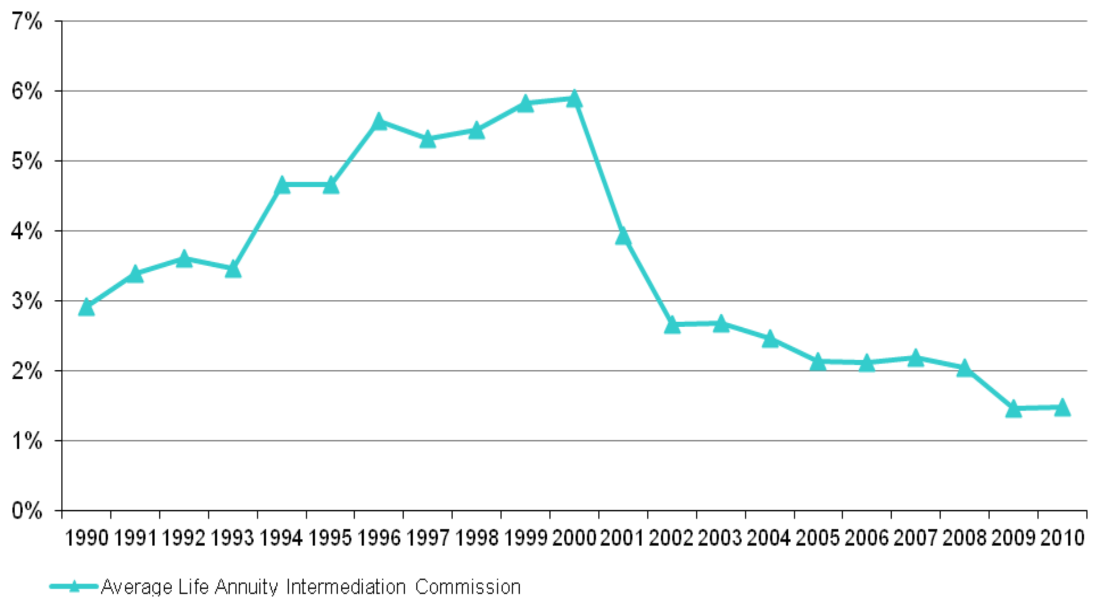
168. The law 20.255 also established a bidding process for new affiliates, an important element of the reform to contribute to a more efficient and competitive market. The bidding process took place on February 2010. A new entrant (AFP Modelo) won the process offering the lowest administrative cost (1.14%, which compares to 1.36% the lowest actual commission) among 4 participants (three of them were existing AFPs).The incorporation of new affiliates will begin in August 2010. The new members will be assigned to AFP Modelo for a period of 24 months, after that a new bidding process will take place.

169. On the transition from the accumulation to the retirement phase members pay also a fee for the intermediation process. These fees were taken out from the fund and extremely large before 2004. On that year, a cap on these fees was therefore introduced. The following figure shows the evolution of this commission. At the beginning of the 90s average commission reached 3%, increasing constantly to

reaching 6% at the end of 1999. In 2000, the government submitted a draft of the new pension's law to Congress.

170. Almost immediately, a strong reduction in the commission can be observed. The new law set a cap on the intermediation fee at 2.5% of the individual account balance. Therefore, after its approval, the average intermediation fee has remained below that amount.

Figure 10: Evolution of Pension Charges in Chile



Source: Securities and Insurance Supervisor (SVS)

Administration Risk

171. An important issue regarding administration risk, particularly relevant in DC pension systems, is the non/late payment of contributions by employers to affiliates members. Beginning in October 2008, as part of the pension reform, if employers do not comply with the obligation of reporting to the AFP the cessation of employment, leave of absence or sick leave of their employees; and this situation is not corrected promptly, the AFP automatically will consider this to be a "Declaration and No Payment of Contributions" (*declaración de no pago or DNP*), starting efforts immediately to obtain the collection of payments. If this is not possible within the first 180 days, a litigation process follows.

172. Beginning in July 2006, the Superintendence of Pensions publishes in its webpage an index that measures the quality of consumer services provided by AFPs and rank them accordingly. Some of the main factors considered in the index are the promptness of information given to the affiliates, AFPs response to inquiries, individual account management, timeliness of contribution allocation and payment of benefits etc.

Transition to Decumulation Phase

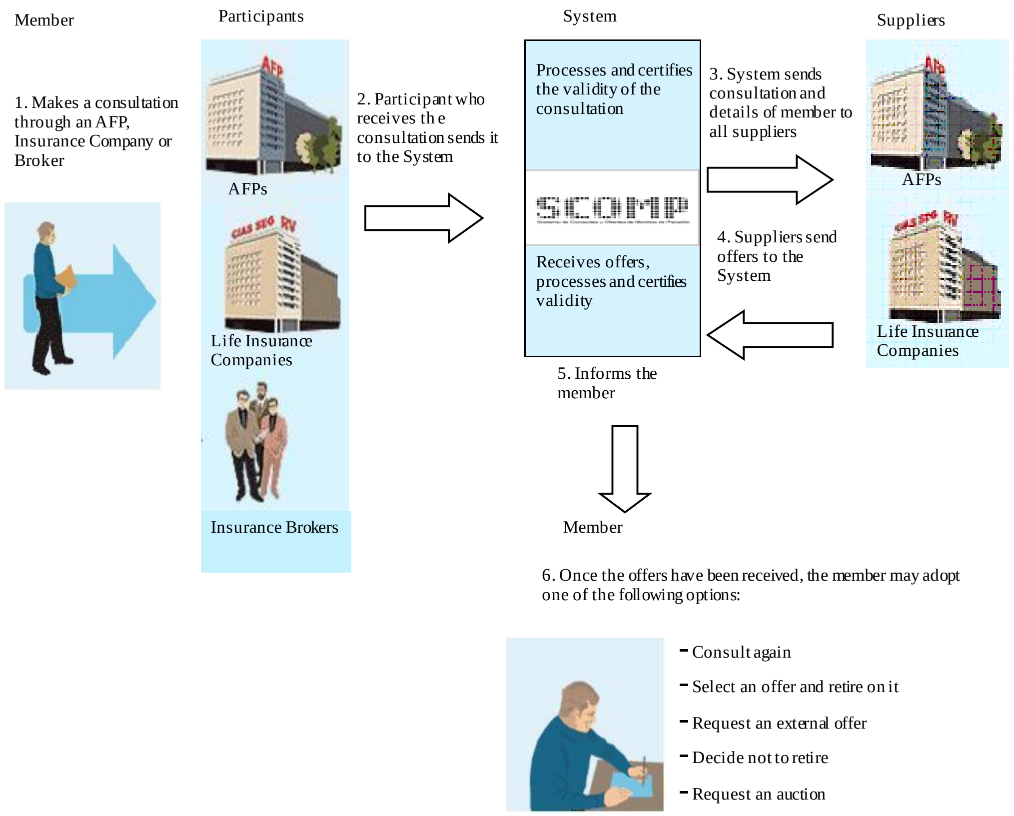
173. The Superintendence also has an innovative approach to overseeing the transition to the pay-out phase of pensions. Pensions must be paid either as annuities or programmed withdrawals. In order to help

individuals decide between their options, the supervisory authority has set up an automated quotation system, providing comparable quotes to individuals (see IOPS 2008a for further details).

174. In particular, pensioners may choose among different pension types: programmed withdrawal, life annuity, programmed withdrawal with immediate life annuity and, temporary income with deferred life annuity. On August 2004 a pension reform (Law N° 19,934) modified the procedure for selecting pension types for pensioners. Considering the definitive nature of the choice in the case of life annuities and the magnitude of the amounts involved, this law aims to achieve more competition and transparency in the market, reducing conflict of interests and high commission charges.

175. The main modification introduced by the law refers to the creation of an Electronic System of Pension Consultations and Offers (SCOMP). This System allows both the members and the suppliers and intermediaries of pension products – i.e. the Insurance Companies, Insurance Brokers and Pension Fund Administrators – to have access to more and better information when taking decisions, which will result in greater transparency. In this way, pensioners receive all the available offers for retirement in a simultaneous and comparable manner. Figure 4 explains the operation of the system.

Figure 11: SCOMP Quotation System in Chile



Source: Superintendence of Pensions

3. Hong Kong China

176. Hong Kong has had a system of mandatory participation in workplace pensions since 2000 which was closely modelled on Australia and Chile. It has grown rapidly and now (30 June 2009) has 38 schemes, 2 million members and assets of HKD 260 billion. Schemes are DC with fund choice and no guarantees except for provider based guarantees in some fund types. All schemes must be trust-based with trustees approved by the MPFA.[100] Schemes are commercially provided (including two industry specific schemes and one employer sponsored scheme). Members have choice of fund within schemes but cannot currently choose the scheme for mandatory contributions. This is set to change with legislation expected to be effective from 2011 to allow members to move the benefits from their own mandatory contributions to the scheme of their own choice once per year.

177. The Hong Kong private pension supervisory structure features a separate agency, i.e. the Hong Kong Mandatory Provident Fund Schemes Authority (MPFA), which is responsible for regulating and supervising the mandatory provident pension system and the occupational retirement schemes ordinance (ORSO). However, the MPFA also maintains close working relationship with other Hong Kong financial regulators, e.g. Hong Kong Monetary Authority, Insurance Authority, and Securities and Futures Commission on cross industry issues. The other regulators also have roles in approving schemes, funds and underlying insurance policies and in supervising sales and marketing activities of MPF schemes.

178. The MPFA adopts a risk-based approach when supervising the pension trustees. Given this supervisory framework, the MPFA allocates its resources (e.g. finance, staff) appropriate to the risk imposed by trustees to the scheme members and the market in general. In other words, trustees and schemes which have demonstrated the most significant risks will receive greatest attention from the MPFA, e.g. via more information gathering and analysis, frequent communication between the MPFA and trustees.

179. The MPFA undertakes proactive investigation of trustees, which is achieved through routine on-site visits and off-site monitoring. Trustees are required to submit to the MPFA regular returns relating to trustees' and schemes' information as well as audited annual financial statements of both trustees and schemes. The MPFA follows up proactively with trustees on issues (whether relating to customer service or non-compliance) identified in complaints by scheme participants against trustees and breaches committed by trustees and/or their service providers. Emphasis is placed on the adequacy and effectiveness of control measures put in place by trustees to ensure compliance with various regulatory requirements. The MPFA staff meet regularly with individual trustees and the industry body to address issues and developments of interest. The supervisory approach is more interactive than some countries (i.e. data is collected more regularly and inspections undertaken more frequently), largely driven by the fact that the MPFA has fewer entities to oversee, and the system being mandatory.

Information to Members

180. Ex-ante authorization of documents produced by plan providers is undertaken by the MPFA and the Securities and Futures Commission. Documents that must be provided to members and potential

[100] Trustees can be corporate trustees or a group of individual trustees (though none of the latter operate, largely due to the strict requirements). According to the current legislation, in order to have an application for trusteeship approved, the corporate type applicant must meet certain capital adequacy requirements (e.g. a paid-up share capital of at least HKD 150 million), it should have at least five (individual) directors, and satisfy the MPFA that the directors collectively have the adequate expertise, knowledge and experience to conduct MPF scheme related issues. As of June 2009there were 19 approved trustees.

scheme members include scheme offering documents, half yearly fund fact sheets and annual benefit statements. Scheme annual reports must be available to scheme members on request.

181. Information on the mandatory provident fund systems as whole, individual providers and general financial education material (such as a pension's calculator) is provided on the MPFA's website and through individual providers.

Investment Risks

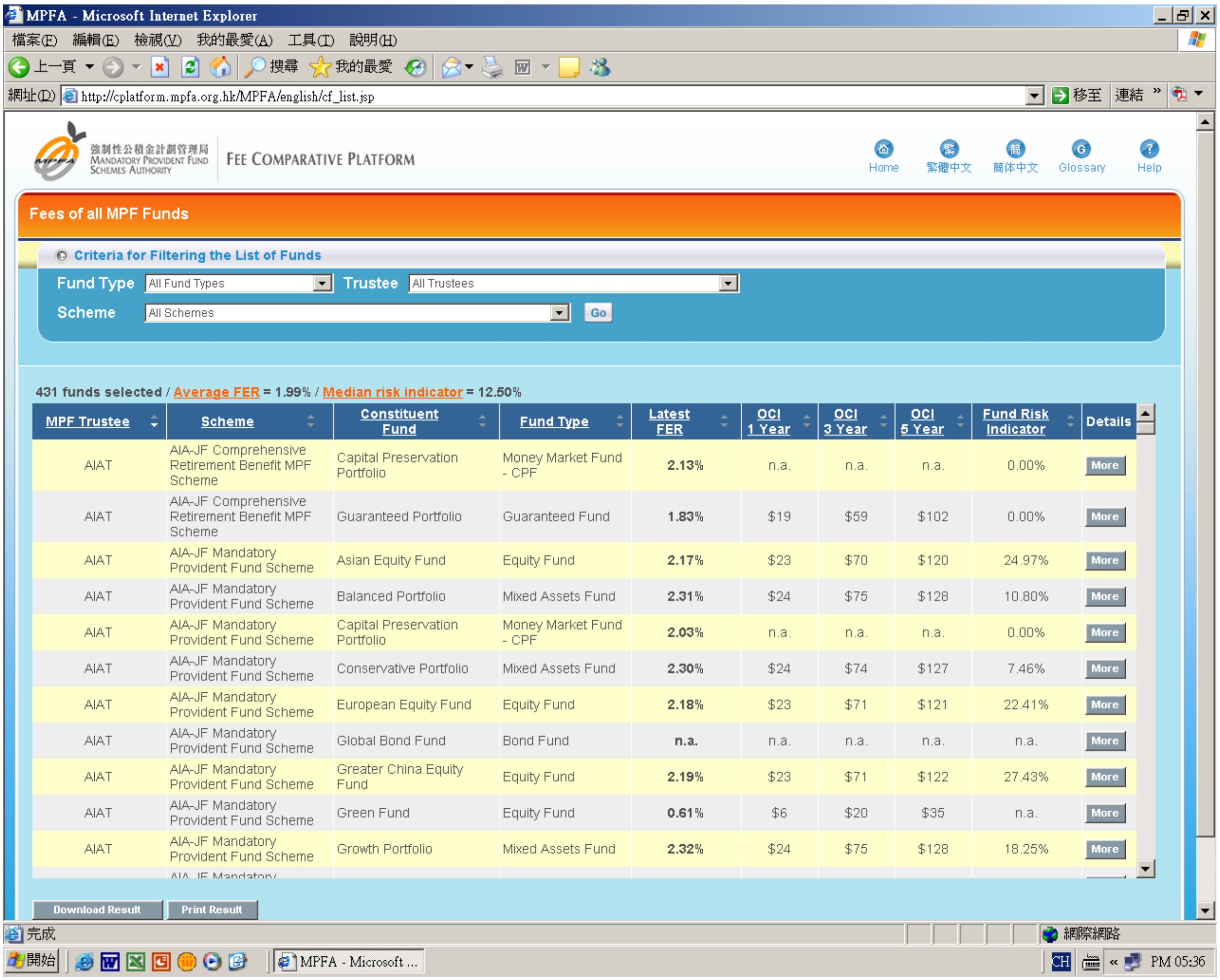
182. In terms of investment regulation, limited quantitative investment regulations apply to mandatory provident funds in Hong Kong China. For example, the total amount invested in securities and permissible investment products issued by any one company should not exceed 10% of the total assets of an MPF fund, shares can be acquired if listed in exchanges approved by the MPFA and debt securities may be acquired only if they meet a minimum credit rating set by the MPFA. The funds of an MPF scheme may be deposited with eligible banks subject to the spread of investments as specified in the relevant legislation, and an MPF scheme must maintain an exposure to the Hong Kong dollar of no less that 30% of its total assets (MPFA 2008).

Controlling Costs

183. Costs are controlled via market forces rather than regulatory caps at this stage. On the demand side, fee disclosure has been standardised and simplified in recent years and an interactive fee comparative platform – and user guide - is available on the MPFA's website.[101]. Legislation (to commence 2011) to allow members to move mandatory contributions between providers is intended to improve market forces. On the supply side, focus remains on reducing administrative complexity, rationalising products and increasing scale benefits.

[101] http://cplatform.mpfa.org.hk/MPFA/english/index.jsp

Figure 12: MPFA Comparative Fees Information



MPF Trustee	Scheme	Constituent Fund	Fund Type	Latest FER	OCI 1 Year	OCI 3 Year	OCI 5 Year	Fund Risk Indicator	Details
AIAT	AIA-JF Comprehensive Retirement Benefit MPF Scheme	Capital Preservation Portfolio	Money Market Fund - CPF	2.13%	n.a.	n.a.	n.a.	0.00%	More
AIAT	AIA-JF Comprehensive Retirement Benefit MPF Scheme	Guaranteed Portfolio	Guaranteed Fund	1.83%	$19	$59	$102	0.00%	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	Asian Equity Fund	Equity Fund	2.17%	$23	$70	$120	24.97%	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	Balanced Portfolio	Mixed Assets Fund	2.31%	$24	$75	$128	10.80%	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	Capital Preservation Portfolio	Money Market Fund - CPF	2.03%	n.a.	n.a.	n.a.	0.00%	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	Conservative Portfolio	Mixed Assets Fund	2.30%	$24	$74	$127	7.46%	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	European Equity Fund	Equity Fund	2.18%	$23	$71	$121	22.41%	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	Global Bond Fund	Bond Fund	n.a.	n.a.	n.a.	n.a.	n.a.	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	Greater China Equity Fund	Equity Fund	2.19%	$23	$71	$122	27.43%	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	Green Fund	Equity Fund	0.61%	$6	$20	$35	n.a.	More
AIAT	AIA-JF Mandatory Provident Fund Scheme	Growth Portfolio	Mixed Assets Fund	2.32%	$24	$75	$128	18.25%	More

Administrative Risk

184. The MPFA reviews internal control reports submitted by trustees and periodically conducts on-site inspections to check the adequacy of these controls.

Transition to Decumulation Phase

185. DC pension assets are paid as a lump sum upon retirement.

4. Italy

186. The architecture of the Italian private pension system was designed in the years 1992-95, when a major reform of the public pensions was put in place, in order to make them sustainable in the long term. Before that, supplementary pensions plans were common only for employees and managers in the banking and insurance sector, and between large industrial firms (about 3% of the working population was covered). The new system is, in principle, directed to all sectors of the economy. Industry-wide contractual pension funds, set up on a parity basis by employers' associations and trade unions, play a major role. So called "open" pension funds, instituted by financial and insurance firms, are also available, and host both occupational and individual plans. From 2001, the same fiscal benefits available for pension funds are granted also to the so-called PIPs, individual pension plans made in the form of insurance policies. All the new schemes available are set up in the defined contribution regime; the older schemes (so called "*fondi pensione preesistenti*") had to close their defined benefit schemes to new members (some of them still operate for the old members, although there is a continued trend to transformation or liquidation).

187. As membership of the new schemes was increasing too slowly, a new reform was introduced in 2004-2005, introducing a sort of automatic enrolment for all employees of the private sector, through the transfer to the pension funds of the annual flow of money financing the so-called TFR (*trattamento di fine rapporto* – a sort of severance pay). The reform was implemented in 2007 and so far has been only partly effective in increasing membership (at end-2008 still standing at about 26 % of employed workers in the private sector). So called "silent" members have to be enrolled in sub-funds offering a guaranteed rate of return (to be set close to the revaluation rate ensured by employers on the stock of accumulated TFR, set at 1.5 per cent plus 75% of inflation).

188. With the establishment of the new system a specialized supervisory authority was created (*COVIP – Commissione di Vigilanza sui Fondi Pensione*). According to the law, "*COVIP is instituted in order to pursue transparency, correct conduct, and sound and prudent management of supplementary pension forms, looking at the protection of members and beneficiaries and the good functioning of the system of supplementary pension provision*". In practice, regarding all pension funds, COVIP is responsible for the supervision both of prudential aspects and of information to members and conduct of business. However, the supervision on financial and insurance intermediaries, that have a role in managing pension funds and plans and in selling personal (individual) pension plans to the public, is entrusted with other supervisory authorities (Banca d'Italia, CONSOB, ISVAP).

189. The reform introduced in 2004-05 and implemented from 2007 increased significantly the level of competition in the system, removing several limitations for open pension funds to collect members in sectors where contractual pension funds are in place. As individuals, workers are now allowed to transfer the flow of their TFR (equal to about 7% of earnings) to the pension plan that they wish. As a consequence, much emphasis is put by law on the issue of comparability between the plans, and of transparency and information to members. The supervisory approach is consistent with this emphasis, although it also pays attention to the prudential issues and, in particular, to appropriate governance.

Information to Members

190. For all forms of supplementary pensions, a standardized information document has to be produced and delivered to members at enrolment (as well as made available, and updated on a regular basis, on the funds' website and by mail). The information document contains detailed information on all aspects of the functioning of the pension plan; there is also a more summarized (three-four pages) note, containing only the main information. Emphasis is given to costs (including a cost indicator which must

be calculated with a standard methodology easing comparisons between plans). Annual returns, investment policies and current asset allocation are also included.

191. Information on his/her individual account is sent annually to each member (the format of this document is under revision). It includes the contributions paid, split in three parts (employer's, employee's and the flow of TFR). The balance accumulated so far is given specific emphasis. Starting in March 2010, members will also receive individualized pension projections, with the pension they may expect to receive when they retire. The projections have to be calculated using standardized methodology and assumptions, set by COVIP. An interesting feature of the methodology to be followed is that expected future returns are set as a function of the "strategic" asset allocation that characterizes the fund in which the balance of the individual member is invested. (with a risk premium for equities set prudentially at 2%). Ways to communicate long-tem risk are currently being explored.

Investment Risks

192. In Italy, the regulation of pension fund investments is careful in setting a fine balance between ensuring the application of prudential principles and the need to allow the funds to access to a wide range of investment opportunities. First of all, contractual funds are responsible for the strategic asset allocation, but must appoint professional external managers for actual management. There is emphasis on the need to diversify investment, although in principle there is no limit to investing in equity and/or abroad, apart from limits to investments in emerging markets (possibly to be reviewed in the near future). Derivatives are allowed, but they cannot be used to create leverage. In terms of supervisory activity, there is emphasis on the attitude of the administrators of contractual pension funds to select the external asset managers and to monitor their performance. Attention is also paid to the appropriate management of conflicts of interests.

193. Members of contractual funds are enrolled mostly in quite conservative investment options. The enrolment in guaranteed lines is on the rise, also due to the fact that these are the default option for automatic enrolment. Members of open pension funds and PIPs (the insurance-based pension plans) are more often enrolled in more aggressive investment options. Life-cycle investing options (automatically shifting investments as the age of the individual member rises) are not common in Italy, although they are starting to being introduced.

Controlling Costs

194. COVIP puts a lot of emphasis on controlling costs, mainly through comparability, transparency and disclosure. First of all, the structure of costs is monitored in the authorization process, and only simple structures are allowed, aiming to avoid hidden costs. Second, the use of a synthetic cost indicator is required, to be calculated following uniform methodology and assumptions. This indicator has to be included in the mandatory information documents (see above). Moreover, in order to favour comparability, COVIP maintains on its website an updated table of the cost indicator for all funds.

Administration risk

195. Italian pension funds (in particular, contractual pension funds) outsource most of the administration tasks. Therefore, fund organizations are usually very light, and this contributes to controlling costs. As a consequence, the attitude of fund directors and structures to monitor the quality of the administrative services that are outsourced is a crucial element of the sound and prudent management of the fund itself. COVIP's supervision puts emphasis on this profile, both off-site and through on-site inspections.

196. The regular payment of contributions by employers (that are in charge of the payment to the funds not only of their own contributions, but also of employees' contributions and of the TFR) is a crucial

issue for the regular growth of individual balances. However, COVIP does not have any formal supervisory competence over employers; therefore, emphasis is put on the capacity of funds to monitor the employers' regular fulfilment of their obligations, as an element of the sound and prudent management of the funds. Care is also put on the information to members, in order to allow them to check whether the contributions have been paid regularly. There are discussions in place with the competent Ministry of Labour in order to identify ways to make the controls over employers more effective.

197. An additional area of attention is the correct management of instructions that funds receive from members, regarding the transfer of their balance to other funds or the request for early withdrawals (allowed by the Italian law in cases as serious illness, or the purchasing of one's home, or long-term unemployment). Many complaints are received by COVIP on this matter, claiming incorrect or inert behaviour by funds. Supervision is paying an increasing attention to the ability of funds to fulfil their tasks correctly; guidelines to funds on the management of complaints they receive from members is also being prepared.

Transition to decumulation phase

198. The Italian law requires pension funds to pay at least half of the balance accrued at retirement as an annuity. However, when the annuity that would result is lower that a certain threshold (set equal to the so called "social" pension, currently at about 500 euro per month), a 100% lump-sum payment is allowed. As pension funds in Italy are still quite young, very few people have already qualified for an annuity and have chosen to receive it. Moreover, (almost) all pension funds have already defined the terms and conditions under which an annuity would be paid to members: in general, transferring the obligation to do so to an insurance company (although in principle they might choose to offer the annuities themselves – in this case being subject to solvency requirements). An important feature of the system is the right of the member to transfer his/her balance to another fund just before transforming it in an annuity; this is aimed at ensuring a sufficient degree of competition in the market for annuities. Information to members on the terms and conditions of the annuities is included in the compulsory information documents; COVIP is planning to introduce a specialized information document dedicated to the conversion at retirement of the individual balance into an annuity.

5. Romania

199. A three pillar pension system has been established in Romania in recent years:

- ***Pillar I*** – public, PAYG. 20.8% employer and 10.5% employee contributions, managed by National Pension House (CNPAS). The retirement age is to increase to 60 for women and 65 for men by 2015 from 58.9 for women and 63.9 for men at the moment.

- ***Pillar II*** – mandatory, individual accounts of hybrid nature (i.e. DC + guarantees). Contributions from employees are currently 2.5%, increasing to 6% by 2016 (0,5% annual increase) . Benefits are received at the legal retirement age.

200. The mandatory pillar was established in 2007 and the payment of contributions started in May 2008. The second pillar is open to all employees or self employed persons aged between 16 and 45 years, being mandatory for those aged between 16 and 35 years and voluntary for those aged between 35 and 45 years. The participants can chose only one fund but they can transfer from a fund to another at any time. Funds are managed by private pension companies, with 9 funds currently operating (8 medium risk and 1 high risk fund).The system currently has around 5 million members and € 725 million in terms of assets under management, as of March 31st, 2010.

- ***Pillar III*** – voluntary, individual accounts. Contributions of up to 15% of gross wage. Tax incentives of up to €400 p.a. are offered to both the employer and employee. The voluntary pillar was established in 2006 and the payment of the contributions started in June 2007. The third pillar is open to all employees or self employed persons, with no upper age limit. Members can chose one or more voluntary funds and can whenever transfer their assets from a fund to another.

201. Voluntary pensions are received at age 60 both for men and women. Insurance companies (currently 3) and asset management companies (currently 1), in addition to pension companies (currently 6), can offer voluntary funds. There are 14 funds currently operating (3 low risk, 9 medium risk and 2 high risk). As of March 31st, 2010, there are 195,000 members of voluntary funds with € 60 million assets under management.

202. The pension system is supervised by an independent authority – Private Pension Supervisory Commission (CSSPP), which is an autonomous administrative authority, with legal personality, dedicated to supervise and regulate the functioning of the private pension system, under control of Romanian Parliament. The CSSPP's activity aims to protect the interests of members and beneficiaries by ensuring the safe and efficient functioning of the private pension system and the provision of accurate and timely information to members.

203. The Supervisory authority's responsibilities, according to law provisions are:

- to ensure protection of members and beneficiaries,
- to grant or withdraw licenses to pension funds, pension fund managers and marketing agents,
- to issue regulations regarding private pension system,
- to provide general information on the private pension system to the public,
- to ensure the efficient functioning of the private pension system,
- to ensure the stability and the security of the financial system in general,
- to require any information from supervised entities for supervision purposes,
- to enforce remedial actions and to take any administrative or financial measures against supervised entities, if case be.

204. The Supervisor is empowered by law to investigate potential problems, to conduct on-site and off-site supervision and to enforce remedial actions, if necessary.

205. At the current stage of development of the private pension system the focus has been on compliance with regulation. As a medium term goal, the Supervisor intends to implement the prudent person principle with the use of quantitative limitation as a first step and then to slowly shift towards risk based supervision.

Information to Members

206. Pension funds are required to provide the following information to their members:

- Annual written information regarding the individual account (assets), free of charge

- Supplementary information upon request
- Information published on web page:
  - Pension fund prospectus
  - Annual and half year financial statements
  - Rate of return, quarterly
  - Investment report, monthly
  - Total and net assets and number of members

207. The CSSPP provides monthly following information on pension system on its webpage:

- Rate of return for each fund (for 24 months) and minimum rate of return
- Investment structure
- Total and net assets and number of members

Investment Risks

208. Investment risk is controlled via quantitative investment limits, as primary law provisions.

209. Mandatory and voluntary pension fund managers may offer the following three types of fund.

- low risk – 85-100% invested in low risk instruments
- medium risk – 65%-85% invested in low risk instruments
- high risk -50%-65% invested in low risk instruments

210. The supervisory authority is considering introducing life-cycle funds to the mandatory system. Other quantitative investment restrictions also apply:

- *Financial instruments*
  - Money market instruments, cash and cash equivalents – up to 20%
  - Government bonds issued by Romania, EU, EEA – up to 70%
  - Government bonds issued by USA, Canada and Japan – up to 15%
  - Municipal bonds issued by Romania, EU, EEA- up to 30%
  - Municipal bonds issued by USA, Canada and Japan and traded on regulated market – up to 10%
  - Shares and corporate bonds traded on regulated markets in Romania, EU, EEA- up to 50%

- Bonds issued by EBRD, EIB, IBRD 0- up to 15%
- UCITS – up to 5%

- *Restrictions*
  - Up to 5% in one company
  - Up to 10% in one group of companies

211. In addition, the funds are required to provide guarantees. For mandatory funds, an absolute guarantee (sum of contributions minus administration and audit fees) and a minimum rate of return (based on the market average rate of return, evaluated quarterly and based on annualized rate of return over 24 months) are required. If the quarterly rate of return is lower than the minimum rate of return for 4 consecutive quarters, the fund manager's license will be withdrawn. As a result, technical provisions are to be set up (i.e. holding a risk-based reserve). Voluntary funds have to ensure only the minimum rate of return guarantee.

212. A final guarantee of the system is represented by the guarantee fund for the private pension system. The law regarding the Guarantee Fund is to be passed this year by the Parliament.

Controlling Costs

213. Fees charged for managing mandatory funds are currently capped at 2.5% of contributions for up-front fee, and 0.05% of the AUM/month.

214. For voluntary funds, the up-front fee is limited to 5% of contributions and the asset management fee is limited to 0.2% of the AUM/month. The audit fee is paid by funds in both pillars, while the depository fee and transaction costs are charged to the fund only in the third pillar.

215. All the fees paid by the fund are mentioned in the prospectus which is subject to the Supervisor's approval.

Administrative risk

216. Given the low liquidity in local markets, how to value fixed income instruments holdings is a major concern of the supervisory authority.

Transition to decumulation phase

217. As the system in Romania has only been launched in recent years, no benefits have been distributed yet and the legislation for the pay-out phase is to be drafted. No fall-back from the private pension system is allowed until retirement from public system (Pillar II) or age of 60 (Pillar III). In case of early retirement for disability reasons or death, personal assets can be received as a lump sum.

6. Slovak Republic

218. The private pension system in Slovakia is comprised of mandatory and voluntary pension pillar, both of which are based on DC principles. The mandatory pillar was established in 2005 as a product of a pension reform launched with the aim of alleviating the negative effects of demographic development on the state PAYG system in future. Half of members' retirement contributions are channelled to the newly created system (contribution rates amount to 9% of salary), which now covers around 62% of workforce. This suggests that the mandatory pillar has a considerable weight in the state social system.

219. The voluntary pillar was founded in 1996 in order to provide members with sources of extra money to complement their retirement benefits. Even though it now covers around 35% of workforce, its relative importance to PAYG system is very small, since the average amount of benefits paid from the system represents less than 10% of benefits paid by state pillar. Individuals are motivated to join the system mostly by tax advantages and employers' contributions paid on the top of their employees' contributions.

220. Pension assets in both pillars are managed on behalf of members by the single purpose private pension companies, which collect contributions from their members and direct them into pension funds with different risk profiles (multi-portfolio system). Pension funds are segregated and ring-fenced pools of assets legally and physically separate from the pension company's own funds.

221. The National bank of Slovakia (NBS) is the main supervisory authority responsible for the oversight of the private pension companies. NBS, together with other European Union central banks and the European Central Bank, participates in activities covering stable monetary development and economic growth in the euro area. Since 1 January 2006 it also acts as an integrated supervisor of all financial market intermediaries established in Slovakia. Moreover, NBS drafts secondary legislation and advises the Ministry of Finance and Ministry of Labour on primary legislation in the field of financial market. Finally, NBS issues licences, grants prior approvals and decides on sanctions and corrective measures. Before authorisation for operation is given by NBS to a pension company, it must demonstrate that its initial capital amounts to at least approximately €10 million for a mandatory pension company and €1.17 million for a voluntary pension company, which deliberately creates significant barrier for entry into the market and ensures that only large investors with the necessary know-how operate in the pension business in Slovakia.

222. In exercising its supervisory duties over pension companies, NBS conducts off-site supervision and on-site inspections. The off-site supervision analyses and evaluates quantitative indicators of the supervised entities on the basis of regular and ad-hoc reports, statements, and other information submitted by financial intermediaries via dedicated IT data collection system 'STATUS DFT'. The outcomes of off-site supervision are utilised by on-site inspectors that examine the supervised entities through on-site visits. Since the regulation in the field of private pensions is mostly rules based, the supervision of these institutions follows this approach.

Information to Members

223. NBS puts emphasis on overseeing the marketing of mandatory pensions as well as pre- and post-contractual disclosure. Relevant laws prescribe rules regarding the marketing of mandatory pensions to the general public. They include inter alia a duty to act honestly and not to use misleading information in the advertisement and an obligation of pension companies to include relevant disclaimer in marketing communication materials (that past performance is not necessarily indicative of future results).

224. Regulation for the mandatory and voluntary pension pillars lays down detailed requirements regarding disclosure of relevant information to members and to the NBS. This includes preparing an annual report and statement on investment policy principles that have to be made available to members on the webpage of the pension company. The precise content and format of all disclosure documents is prescribed in primary and secondary legislation. Pension companies are required to maintain individual accounts for their members and regularly sent statements on an annual basis to members summarising all the transactions made on the accounts over the past year.

Investment Risks

225. It is a regulatory requirement for the lead portfolio managers, internal auditors and risk managers to be "fit and proper" in order to be eligible to hold their positions. Pension companies must also have in place reliable systems of internal control and risk management. All these elements are subject to supervision carried out by NBS.

226. Regulation covers more than 20 qualitative and quantitative rules on the types of investment in which the pension companies may invest and the transparency to members of the investment policy adopted. There are ranges for the percentage of each type of pension fund which may be invested in particular types of assets. The law also prescribes a limited number of permitted categories of assets, restrictions on the use of derivatives, restrictions to avoid concentrations of investment in particular types of assets, geographic areas and counter-parties.

227. Regulation covers more than 20 qualitative and quantitative rules on the types of investment in which the pension companies may invest. There are within the mandatory pension pillar there different caps on asset classes for different funds depending on their risk profile. The law also limits the categories of assets that may be bought by pension funds, restrictions on the use of derivatives, rules to avoid concentrations of investment in particular asset classes, geographic areas and counterparties.

228. Compliance with the rules is monitored by NBS regularly, since mandatory pension companies have an obligation to report the composition of their portfolios together with all transactions on a daily basis and voluntary pension companies on a monthly basis. Moreover, pension companies must regularly provide NBS with audited accounts. These detailed prescriptive rules on disclosure to the supervisory authority are coupled with risk-based regulation elements such as the "prudent person" rule, setting out requirements to invest pension funds' assets in the best interest of members. A pension company also has a general 'duty of care'. Self-investment is completely banned and the law provides for quite elaborate conflict of interest rules.

229. As concerns transparency towards members, voluntary pension companies are required to formulate and publish on its website a monthly review of investment performance with general information on composition of portfolio and investment risk. Both voluntary and mandatory pension companies must also produce, publish and update on their websites statements on investment policy principles disclosing the investment strategy adopted and risks attached to it, semi-annual and annual reports with detailed information on composition of portfolio. Detailed content of all of these disclosures is prescribed by law.

230. To reduce the risk of malpractice, pension companies are required to appoint an independent custodian to hold the title to the investment. Assets in pension funds may be bought or sold only by custodian acting on the basis of an order given by a pension company. The custodian has a whistle blowing obligation towards NBS.

231. Last but not least, mandatory pension companies are required to guarantee a minimum return relative to the performance of synthetic benchmark composed individually for each pension fund by a

pension company in accordance with secondary legislation. In case of underperformance, NBS may impose on a pension company an obligation to transfer assets from its own funds to underperforming pension fund. For this purpose each pension company must maintain prescribed level of capital which is subject to NBS supervision.

Controlling Costs

232. Slovakia has caps on charges pension managers may levy on pension funds. In September 2009 the caps were as follows:

Table 10: Maximum fees in the Slovak private pension system

	mandatory pillar	**voluntary pillar**
fee on assets under management	0,3%/Y	3%/Y
up-front fee	1%	-
performance fee	0,0093%*/M	-
lump-sum fee	-	20%
fee for switching to other PC	-	5%/1%**

* of positive yield measured over 6 months

** the lower rate applies if member leaves the PC after 3 years of membership

233. In the mandatory pillar, pension companies are not allowed to charge their members any costs other than fees. In the voluntary pillar, pension companies can charge their members all expenses specified in law, e.g. brokerage and custodian fees. All costs and fees must be disclosed on an individual account statement that is distributed to members annually.

Administrative Risk

234. In the case of the mandatory pension pillar, Slovakia has a single clearing house for collection, record-keeping and transferring of contributions to members' funds of choice. This responsibility is vested with the Social insurance agency (SIA) - the state run first pillar institution collecting all social security contributions. SIA is under the supervision of Ministry of Labour. The vast majority of contributions are transferred to pension funds within the statutory prescribed period of 10 days. If this requirement is not met, SIA must pay a penalty fee to the individual account of the respective member which acts as natural incentive for SIA to avoid any delays. In the voluntary pension pillar, the collection of contributions is decentralised: with respect to employees who are members of a pension fund, employers are required to deduct contributions from their employees' payrolls and send them via bank to respective pension company.

Transition to Decumulation Phase

235. In mandatory pillar, benefits cannot be taken from a pension fund before achieving retirement age. Proceeds may be taken in form of annuities paid by insurance companies or a programmed withdrawal payable by pension company. Currently there are no detailed rules on the transition to decumulation phase, since the first members will start to retire in 2020 and no political decision on the general concept of the transition has been made.

236. In the voluntary pillar it is possible to take a lump-sum even before achieving the retirement age, however, members are discouraged in doing so by imposing up to 20% charge on withdrawn money by pension company.

7. Spain

237. The Spanish Social Provision System corresponds to a “three pillar” model. The First Pillar is public, compulsory and covers all of the Spanish population. Supplementary social provision is linked to the individual’s situation. The Second (occupational) and Third (personal and associated) Pillars are private, voluntary and the benefits provided do not, in any way, substitute for those under the social security system.

238. As pension funds in Spain have no legal personality of their own, they must be managed by an administrator -Entidad Gestora de Fondos de Pensiones, EGFP. The Spanish model is completed by the custodian.

239. In occupational pillars there is a control commission – i.e. a body comprising of sponsor and members (usually trade union) representatives, linked to collective bargaining- whose main function is monitoring the activities of the EGFP and custodian activities.

240. La Dirección General de Seguros y Fondos de Pensiones – DGSFP- is the supervising body of, among others, the insurance and pension fund sectors. The DGSFP is part of the Ministry of Economy and Finance. The DGSFP’s role is based on two main objectives - protecting pension fund members and fostering the development of the sector. To this end, it is empowered to regulate, issue related instructions and supervise the institutions that compose the sector, thus guaranteeing proper operation in accordance with current legislation. The DGSFP is also in charge of authorising new institutions wishing to work in the sector and monitoring the business operations undertaken thereby.

241. General speaking, the Spanish supervisory system is based on risk supervision, taking into account two different items; on the one hand, legislation in force according to the legality principle; and on the other hand, several practical aspects that must be developed by the pension funds themselves (via the collective bargaining agreement – in the case of occupational schemes- the decisions from which are then expressed in the plan/fund specifications and rules).

242. Supervisory coverage is extended to the manager and depositary entities and the plans and funds and their control commission, whilst both auditors and actuaries are submitted to prudential supervision. The supervisory authority can also obtain information from companies that have accepted outsourced functions.

243. Supervisory oversight takes place at various points:

- before starting the activity (conditions for the authorisation);
- during the exercise (operational conditions);
- finally, in case of cessation of business.

244. Supervision activity takes into account different aspects including financial supervision, fit & proper considerations (expertise and suitability of human and material resources), corporate governance codes and internal control procedures, administrative, accountability procedures, etc.

245. There are two main forms of supervisory oversight: regularly reporting (quarterly) and on-site inspections. The main items to supervise are the modifications of initial conditions, financial supervision, disclosure of information, corporate governance rules and internal control mechanisms.

246. Annually - or every three years - plans must evaluate the correlation between assets and liabilities (reporting requirements differ between DC and DB plans). These reports must be sent to the DGSFP.

247. From a territorial scope, in theory, supervision must be executed in a national context or in case of cross border activity (though no cases exist at the moment). Supervisory functions differ depending the role played by DGSFP.[102]

Information to members

248. The Spanish legislation in this area, takes into account efficiency, playing two contradictory aspects off against each other: cost and usefulness of the information.

249. The Information regime depends on the pension plan type. In occupational pension schemes, the control commission plays an essential role when it comes to regular information. EGFP and the custodian produce information (via internal control mechanisms) and the control commission revises it (i.e. has a monitoring function).

250. In personal pension plans, the control commission is substituted by the plan's sponsor, so it is necessary to adapt information requirements to these circumstances. Legislation increases the periodicity and quantity of information required.

251. According to the general regime, members receive information yearly, half yearly and quarterly (at request). Additionally, in personal plans, members receive information before joining the plan and when any relevant fact affecting the plan's developing occurs. For instance, in the case of governing rules, specifications or investment guideline modifications, members have the right during one month to leave the plan before the modification is applied.

252. Information disclosure covers different aspects, including vested rights, profitability or historical yield (15, 10, 5, 3 and last year), expenses and costs (broken down by categories), fees (administration and custodian), portfolio and investment performance, contributions, benefits (if any) etc.

Investment risk

253. The legislation in force takes into account both qualitative and quantitative approaches – i.e. the so called *prudent man approach* coexists with quantitative rules.

254. Investment decisions within control commissions require special majorities, depending on the DB or DC nature of the scheme. Apart from these rules, legislation does not distinguish between DC and DB schemes - in fact, the investment policy is an internal decision.

255. Asset allocation is governed by dispersion, diversification, consistency and congruency requirements across OECD countries. Assets must be valued at market values.

256. Investment conditions depend on assets characteristics – listed or non-listed, limitations of free transmissibility, counterparty rating or scoring, etc.

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[102] In case of cross border activity across European Union, if the IORP (Institutions) is located in Spain (i.e. a Spanish IORP is managing a foreign pension plan) the supervision rules are from Spain except those linked with relevant social and labour law (i.e. the competent authority is where the plan is located). When a foreign institution –IORP- manages a Spanish pension plan, according European Union's IORP Directive supervision rules which apply are those where the institution is located, except for social and labour laws, as Spanish legislation must apply.

257. Derivative investments require special expertise and procedures (projections, performance, purposes, type of derivatives, limits, risks exposure, etc.), and must be authorised by the EGFP board of directors. Moreover, it is necessary to implement a special internal reporting for these purposes and investments in structured assets depend on underlying assets and if they include credit derivatives or not.

Controlling cost

258. Fees and commissions to be paid to manager and custodian entities are limited by law. No more than 2% of assets can be received by the EGFP whilst custodian fees are limited to no more than 0.5% of assets. Limits are applicable simultaneously in relation to members, plans and funds.

259. The average fee charged in 2007 figures was 0.17 % for occupational plans (closed plans) and 1.53 % for personal plans (open plans where extra costs of commercialization and distribution exist). The DGSFP publishes management and custodian fees.

Administrative risk

260. The Spanish system includes cross controls between the manager and custodian, as well as monitoring by the control commission.

261. In 2007 Spanish legislation was reformed to introduce an internal control requirement. Each manager must define an internal control mechanism applicable to itself as well as to its administrated funds. Yearly, the DGSFP receives an internal control report from the pension fund manager's board.

262. To avoid conflicts of interest, Spanish legislation banned managers and custodians belong to the same group, except if they comply with some requirements (human, material, locations and computing separation).

Transition to decumulation phase

263. According to Spanish legislation, beneficiaries can receive benefits in form of lump sum, annuities, programmed withdrawals or a combination of the above. In the past (until 2007) there was a fiscal benefit in case of money withdrawal in lump sum (NB the compulsory first pillar pays an annuity). For this reason, for contributions made before 2007, members mainly choose the lump sum form. In some cases, pension plan benefits are insured by a life insurance company, whereby the insurance company pays the benefits directly.

8. Turkey

264. Reform of the Turkish pension system started in 2001, when it was decided to introduce voluntary and defined contribution based private pensions under the Individual Retirement Law. This personal private pension system is aimed to complement the state run pay as you go public pensions which were viewed as unsustainable in the long run. In this regard, pension companies were created to administer private pension assets.

265. The main regulator of private pensions in Turkey is the Undersecretariat of Treasury (Treasury), which covers the regulation and supervision of both insurance and private pensions, in addition to other relevant regulatory responsibilities. *The General Directorate of Insurance (GDI)* is empowered with both regulatory and supervisory responsibilities in terms of the private pension market. In this regard, one of their most important supervisory activities is to approve the establishment of and grant licenses to pension companies, which are the only eligible institutions to operate private pension businesses after the 2001

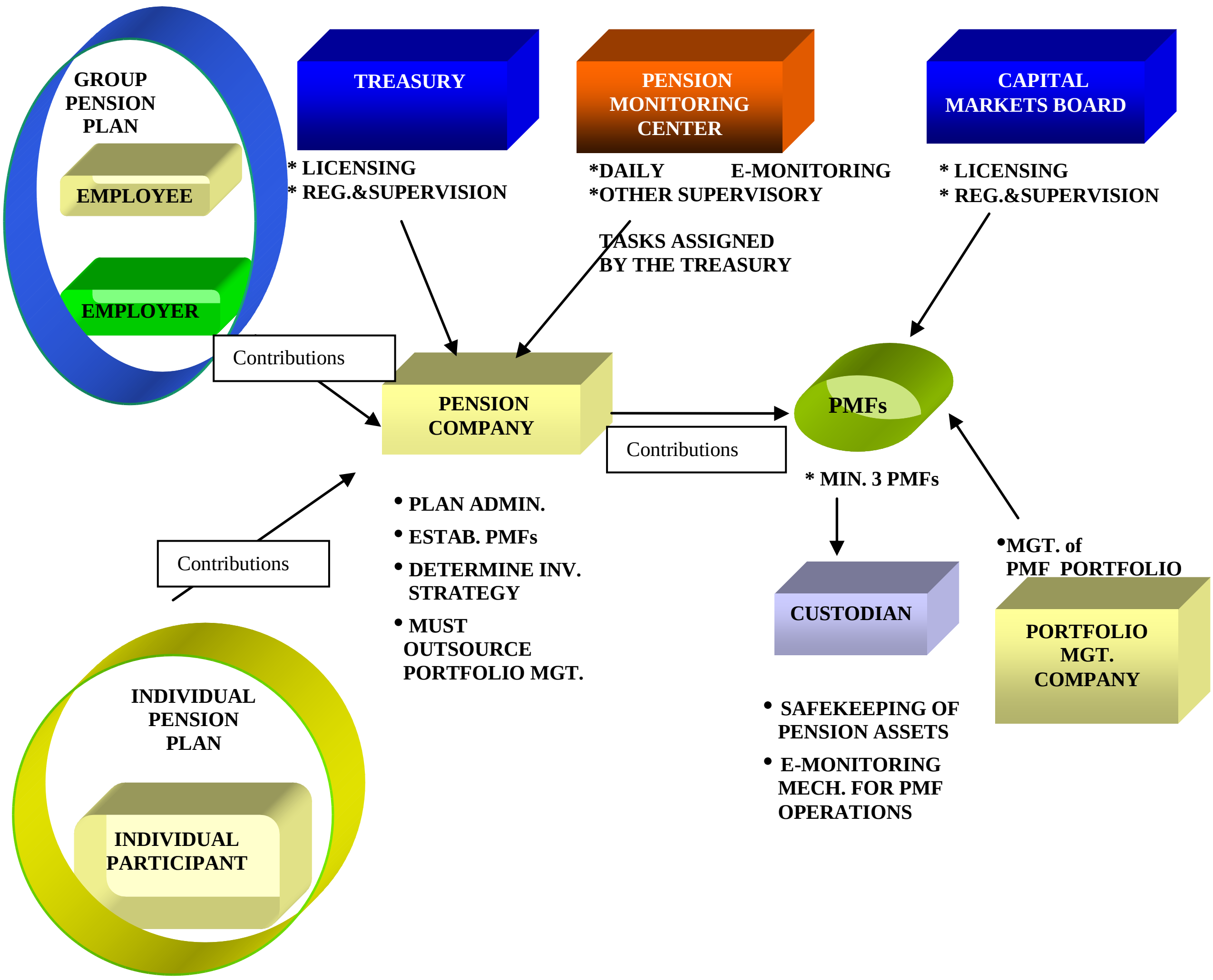
reform.[103] Each pension company has to offer at least three different types of pension mutual funds to their pension plan participants. The pension mutual funds should be designed in a way which reflects different risk and return profiles in order to meet varying risk preferences of participants. The GDI, assisted by inspection reports carried out and submitted by the Insurance Supervisory Board, conducts off-site supervision as well as on-site visits. The main purpose of on-site visits are to ensure the company meets the requirements stipulated in the relevant legislation, has sufficient capital and resources to cover its liabilities, directors and managers are fit and proper, etc. To enforce implementation of the relevant legislation, Treasury is authorized to issue directives, to change the composition of the Board of the pension fund companies, and to issue fines, etc.

266. *The Pension Monitoring Center (in Turkish Emeklilik Gözetim Merkezi* EGM) is a purpose built monitoring agency. It is de facto a central database which stores all relevant and standardized pension information in a national and centralized system. Given the availability of electronic information, the EGM conducts daily monitoring of all pension companies and the entire private pension system. Whenever market irregularities occur, they will either report to GDI or intervene themselves, subject to delegated supervisory authorities.

267. Meanwhile, the Capital Markets Board (CMB) of Turkey also plays an important role in supervising private pension funds, in that as the regulator of securities markets, CMB oversees the operation of pension mutual funds to which pension assets are required to be contributed (a feature of the 2001 pension reform). The following illustration provides an overview of the functioning and the supervisory structure of the Turkish personal private pension system.

[103] Currently, there are 12 pension companies in Turkey. In order to receive a license in Turkey, pension companies are required to meet strict criteria, including capital adequacy, staff capability, and internal auditing and risk management mechanisms, etc.

Figure 13: Turkish Private Pension System



Source: Undersecretariat of Treasury

268. The legislative and supervisory approach in Turkey can be seen as fairly intensive, given the strict licensing requirements and daily monitoring. Few quantitative investment restrictions are also still in place. Though not overseeing mandatory arrangements, this would seem consistent with the development of a new pension system in a country with developing pension markets.

Information to Members

269. There is a set of detailed regulations covering the type and manner of information to be disclosed to the private pension plan participants. Specific types of information forms should be provided (min. content and form specified in the regulation) at various stages such as entry, change of company, early exit and pay-out phase. These forms are easy to read and aim to ensure that the participants are adequately informed when taking critical decisions.

270. Also, the regulations set forth general rules to ensure that pension intermediaries provide the best advice to the plan members and that their rights are protected properly. Failure to do so may lead to fines or even revocation of the pension sales license for the intermediaries.

271. Pension plan members have the right to cancel the pension contract without penalty within a period of 1 month following the signing of the preliminary pension contract. Most of the pension companies make “welcome calls” to ensure proper selling prior to the date that the contract comes into effect.

272. In order to help the members make informed decisions during the payout phase, the EGM has set up a web site which enables the comparison of different phased withdrawal and annuity products.

Investment Risks

273. Though a few quantitative investment restrictions are still in place (see OECD 2008b), the prudent person rule now applies to the investment of pension assets.

Controlling Costs

274. Limits are applied to fees. Savers may pay the pension company an entrance fee up to half of the gross monthly minimum wage for each pension account, an annual management fee of up to 3.65% and a contribution fee up to 8%. Employer-sponsored plans are liable to lower management fees. Other than the max limits, fees are unregulated but dropping due to the intense competition in the pension market. By the end of 2008, the average contribution fee was 4.1% and average annual fund management fee about 2.26%.

Administrative Risk

275. Supervisory Controls: the Treasury monitors administrative risks via the reports produced by EGM. In addition to the occasional reports sent upon the Treasury’s request, EGM sends monthly and quarterly reports to the Treasury, and conducts surveys on various issues. Moreover, all major issues are scrutinized during the annual on-site inspections.

276. Internal Controls Required by Regulation: companies are required to have in place a risk management framework and a written risk management procedure. Companies should have an internal auditing unit and a legal compliance officer should be identified. The risk management officer reports directly to the board of directors. Any inconsistencies within the company should be reported to the Treasury and the board of directors. On the other hand, the pension mutual funds should also have a written risk management procedure. The adherence to this procedure is monitored by the Capital Markets Board.

Transition to Decumulation Phase

277. DC pension assets may be taken as a lump sum or through a phased withdrawal programme. Also, annuities are offered. However, the annuity is not a part of the private pension contract and thus should be purchased separately with the lump sum withdrawn from the pension account.

9. UK[104]

278. The private pension system in the UK has for many years been an important component of overall retirement provision. The typical form is the occupational pension plan, but personal pension arrangements provided through employers have also witnessed rapid growth in recent years. As of 31 March 2010, there were some 47,500 occupational DC schemes (as well as 8,000 hybrid schemes with both a DC and DB section) registered with TPR[105] .. DC members of occupational schemes (1.5 million members) are out-numbered by the almost 3 million members of contract-based DC arrangements. While DB schemes still have the vast majority of the assets and members (14.4 million) of occupational schemes, DC schemes represent the main growth area. Nearly all new plans being set up are DC based, and many of the DB plans are now closed to new entrants (77% as of March 2010). In other words, the UK supervisory authority will increasingly have to oversee a DC based pension system in future.[106]

279. The private pension system in the UK is subject to regulation of two authorities, the Pensions Regulator (TPR) and the Financial Services Authorities (FSA). TPR – an independent agency established in 2004 - is mainly responsible for the supervision of work-based pension schemes, with a focus on employers and trustees. Upon its foundation, TPR was given extended powers to allow it adopt a specifically risk-based supervisory approach. The FSA's supervision is mainly focused on the financial services providers for occupational and personal pensions.[107]

280. Given the voluntary nature of the pension system and the number of funds operating, the approach to TPR to supervising DC pensions is very different to an authority such as the Superintendencia in Chile (see earlier section). The level of economic and market development are also different. Consequently supervision is less intensive with TPR operating a registration rather than a licensing regime, and applying a prudent person approach to investment rather than quantitative investment restrictions.[108] TPR operates risk-based supervision focusing the application of its tools and powers to *'educate, enable, enforce'* according to the evident level of risk rather than seeking blanket compliance, and with enforcement as a last resort. This approach is consistent with the highly competitive and developed pensions market in the UK, which also relies heavily on trustees.[109]

281. Given the number of funds which it overseas, TPR's risk-based approach to supervision, directs resources towards the funds which pose the greatest risks to the authority's objectives.[110] The approach is

[104] For further information on the UK approach to DC pensions see John Ashcroft's presentation to the EFRP's CEEC Conference, March 2009, John Ashcroft, *'The Supervision of DC Pensions from First Principles'* http://www.efrp.org/Events/EFRPLibrary.aspx

[105] The figures in this section are taken from TPR's Annual Report 2009/2010 . http://www.thepensionsregulator.gov.uk/press/pn10-15.aspx

[106] This is reflected by the fact that one of The Pension Regulator's three objectives (upon which the organisation is measured) is addressing the risks to DC members (along with objectives covering DB and governance).

[107] As a fully integrated financial regulator, the FSA is responsible for regulation and supervision of the UK financial markets, including banks, asset managers, insurance companies, etc.

[108] There, however restrictions on investment in the sponsoring employer and the use of derivatives.

[109] For a discussion of the different approaches to pension supervision see Hinz and Mataoanu (2005), IOPS (2007b)

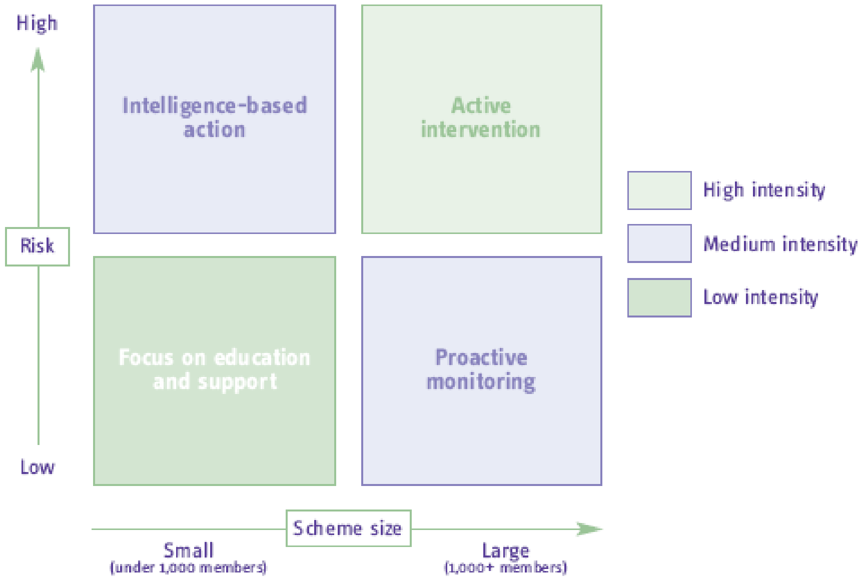
[110] The main objectives of the Regulator in exercising its functions are:

1) to protect the benefits under occupational pension schemes of, or in respect of, members of such schemes;

2) to protect the benefits under personal pension schemes of, or in respect of, members of such schemes;

designed along two dimensions, i.e. level of risk and scheme size. According to the current 'risk and intervention' model, schemes are considered as "small" if there are less than 1,000 participating members, while they are considered as "large" if the number of members is greater than 1,000. Meanwhile, "risk" is defined as the negative impact of the failure of a scheme on the member and the market. As shown in the chart below, an intervention matrix is presented, which comprises four scenarios (of three different levels of risk intensity). It is used by TPR to prioritize and allocate resources according to risk.

Figure 14: TRP Risk and Intervention Model



Source: TPR (IOPS 2007a)

282. TPR has recognised that DC scheme members bear different types of risk than those in DB schemes. In 2006 it embarked upon extensive research and analysis of the risks inherent in DC schemes. This led to the publication of the consultation report *how the regulator will regulate defined contribution schemes in relation to members' risks*. In this report TPR identified 5 key risks to members of DC pension funds upon which it focuses: administration; investment; fees; pay-out phase and; member understanding.

283. Since then TPR has worked closely with the FSA and the pensions industry to address these risks, supported by an industry consultative working group. It has published, jointly with the FSA, a guide on the regulation of workplace contract-based pensions, followed by guidance and case examples on employer engagement in workplace contract-based pension schemes, and in 2009 an information leaflet for employers –TPR has also published question and answer (Q/A) format material for trustees and employers with DC schemes covering all five risks. In addition TPR's actions to improve scheme governance more generally, such as through improving trustee knowledge and understanding, have a particular impact on

3) to reduce the risk of situations arising which may lead to compensation being payable from the Pension Protection Fund;

4) to promote, and to improve understanding of, the good administration of work-based pension schemes; and

5) to maximise employer compliance with the employer duties introduced through the Pensions Act 2008 and with the safeguards against prohibited recruitment conduct and inducements to opt out of pension saving (objective added by the Pensions Act 2008).

smaller schemes, which mostly offer DC benefits. In particular, TPR runs an innovative on-line training tool for trustees - the 'Trustee Toolkit', which includes a specific DC module.[111]

284. The following sections outline TPR's supervisory actions in relation to each of the five risks it has identified. It should be noted that the focus to date has been to effect change mainly through education and enabling.

Information to Members

285. TPR has stressed the importance of ensuring that members have sufficient understanding of their DC scheme in order to make informed decisions. Poor decision making could result in members not getting the income they expect in retirement. Members face complex choices and therefore need good information to assist them. Making sure they save enough and make the right choices pre-retirement is a key challenge.

286. TPR (jointly with the FSA) is running a campaign focused on addressing the risks facing DC scheme members, focused on improving standards in pre-retirement literature, improving member communications and encouraging employer engagement to help trustees ensure high standards in pre-retirement literature, TPR published a leaflet describing the range of options available to a member approaching retirement, including annuity types and other alternatives. In addition to this, to encourage employer engagement, the regulator published a leaflet setting out questions that employers may be asked by their employees about pensions and suggesting answers and other sources of information that employees can refer to. It followed this up with an information leaflet for employers published jointly with the FSA (hence covering contract and trust based arrangements *'Guide for employers: talking to your employees about pensions'*.[112] This leaflet sets out questions that employers may be asked by their employees about pensions and suggests answers and other sources of information that employees can refer to. The leaflet does not increase the responsibilities on employers but encourages them to look at the activities they can do voluntarily, at little or no cost, to help their employees to get greater value from the scheme.

Investment Risk

287. As in other the other English speaking countries, the UK adopts an open, prudent person approach to investment regulation rather than imposing quantitative investment limits. Pension trustees in the UK can invest pension assets in almost all asset classes and financial instruments as long as they believe such investment is conducted in the best interest of scheme members and beneficiaries, they apply the level of skill of a 'prudent person', prepare a statement of investment principles and diversify assets so as to avoid accumulations or risk in the portfolio as a whole. In this regard, it is the decision making process or investment procedure which is more important than investment outcomes.

288. TPR has highlighted areas where poor investment practices could have an impact on members' benefits, in particular the need for regular review of the pension scheme's investment fund to ensure that it continued to be appropriate for the membership. TPR also stressed the importance of an appropriate range of funds, including the default fund. Many members of DC funds have been described as 'reluctant investors',[113] who are unwilling and do not have the skills or the interest to make their own investment decisions. Fiduciaries often end up making them on their behalf. TPR therefore focuses on the role of trustees and indeed employers in choosing the default fund and in monitoring performance, hence focusing

[111] http://www.trusteetoolkit.com/arena/index.cfm

[112] http://www.thepensionsregulator.co.uk/pdf/TPRFSAGuideForEmployers.pdf

[113] See (Byrne et al 2007).

on the processes to reduce risk. The Q/A material mentioned above includes considerable detail on investment issues, while the template leaflet on fund choices, referred to under member understanding has particular relevance to helping trustees to help members manage investment risk.

Controlling Costs

289. Fees are a big risk for DC pensions, given they can massively erode benefits. This is a sensitive issue in the UK, where there needs to be a balance between protecting members and interfering in markets TPR has emphasised that it is not proposing that all pension schemes should reduce their costs, but rather that pension schemes should provide value for money. One particular area for TPR focus has been on the transparency of charges and how they should be proportionate to the benefits that members receive. The Q/A material mentioned above includes considerable detail on issues relating to charges and value for money, setting out TPR's policy position that:

- charges should be taken into account, for example when investment managers are selected and when the range of fund choices is determined;
- members should receive an explanation of charges that may affect decisions that they need to make; and
- charges should be kept under review.

Administration Risk

290. Administration can be more complex under a DC system and it is often an under-appreciated fact that record keeping is harder for DC schemes (there can also be complications where DB plans are wound up and a DC launched, transfers into DC schemes, older schemes which have changed provider, or where providers have merged, there may be plans where the wrong amount is shown and – given low financial education levels – individuals do not notice). TPR has recognised that there could be a risk to members' benefits if a pension scheme were poorly administered: for example, if reconciliation processes were not carried out accurately this could impact on members' pension funds at retirement. TPR has acknowledged that many pension schemes are already well run, but believes that there are many less well run schemes. Hence TPR published a guidance note in January 2009, which sets out common data which plans are required to hold. Take up of the initial guidance fell below the levels expected, and as a result, TPR set out more precise standards for member records and, where credible plans are not put in place to address poor record keeping, indicated that it would require improvement .

291. Administration has therefore been identified as one of the key DC risks by TPR, with its annual governance survey, for example, taking account of how such risks are controlled (see TPR 2008). Following the publication of its guidance on *record keeping* in January 2009 it is working on a process to establish some clear benchmarks against which progress in record keeping standards can be measured and it is expected that the regulator will begin compliance against these standards in 2010. The longer-term outcomes the regulator is seeking in respect of DC schemes is to secure good standards, including accurate and timely payment of contributions, regular reconciliation, accurate and timely payment of benefits (annuities and transfers) and accurate and timely disclosure of information.

292. Considering operational risk more generally, TPR has published best practice guidance on pension scheme relations with advisers[114] which covers the appointment and monitoring of a range of

[114] http://www.thepensionsregulator.gov.uk/pdf/RelationsWithAdvisers.pdf

service providers including scheme administrators. And it has issued a code of practice (and accompanying guidance) on risk management and internal controls.[115]

Transition to Decumulation Phase

293. TPR has emphasised the importance of members making the right decisions at the point of retirement to ensure that they receive the best retirement income they can. Most DC retirees in the UK buy a life annuity with at least 75% of their accumulated pension savings.[116] To ensure a more competitive annuities market the UK, a legislative requirement was passed in 2002 pensioners must be informed that they had the right to purchase their annuities from suppliers other than their current pension provider – i.e. to exercise an open market option (OMO). Trustees and providers are required to offer the open market option giving members the right to buy their annuity from the provider of their choice. A government review concluded that after several years of operation the OMO system was only partial successful (given only around 1 in 3 individuals switch to a different annuity provider, despite the fact that the differential income offered by the existing pension provider and the top OMO rate can be as much as 30%).[117]

294. TPR has therefore been focusing on the process for helping members to choose. It has published good practice guidance for trustees, employers and others on considering the process by which member retirement options are offered under a DC scheme. It has followed this up by examining a sample of Material sent to members as they approach retirement from 97 trust-based DC schemes. for adherence with legislative requirements, good practice in areas such as the description and prominence of the Open Market Option, and the use of clear language. The review provided valuable insight into practice in this area and highlighted that levels of compliance and practice varied widely, with 57% falling short of good practice and 30% being potentially in breach of legislation. In several cases the breaches were of such significance as to warrant referral to supervisory staff for specific enforcement action. . Following the publication of a report on the review, TPR has written to 4,500 schemes, highlighting the findings of the review and encouraging trustees to review the pre-retirement literature sent out to their members.

295. The UK has also introduced some more innovative arrangements.[118] Centralized, comparative annuity prices are provided by the FSA - see figure 4.[119] Individuals are asked a set of standard questions regarding the type of annuity they would like and comparative quotations from the providers are then given. Though providers take part on a voluntary basis (given that if their involvement was mandatory there would be restrictions in how the data was published), all the main insurance companies who are active in the annuities market are represented.

[115] http://www.thepensionsregulator.gov.uk/pdf/InternalControlsGuidance.pdf

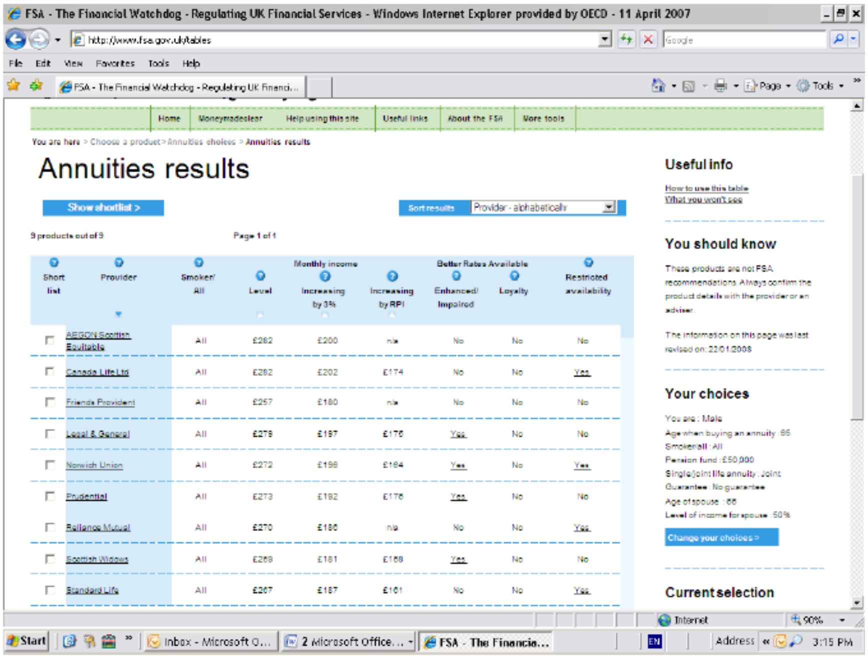
[116] Retirees do have the option of buying a regulated income drawdown product instead, but these are aimed at those with sufficient savings to afford regulated advice on their choice. Retirees with very small balances are allowed to take the whole amount as cash.

[117] See Harrison et al 2006. This should not discount the possibility that many people may choose the default annuity because it is good value for money.

[118] This section is taken from IOPS Working Paper No. 7 (IOPS 2008a)

[119] See *http://www.fsa.gov.uk/tables*

Figure 15: FSA Comparative Quotations



Source: FSA

296. However, the UK government decided that ensuring that individuals obtain competitive prices for annuities may not be sufficient as evidence suggests that they are also not necessarily choosing the right product.[120] Experts have suggested that for the OMO process to operate efficiently the annuity selection must involve two distinct stages, of which securing a competitive rate is the second. The first is to ensure that individuals select the right type of annuity product and features.

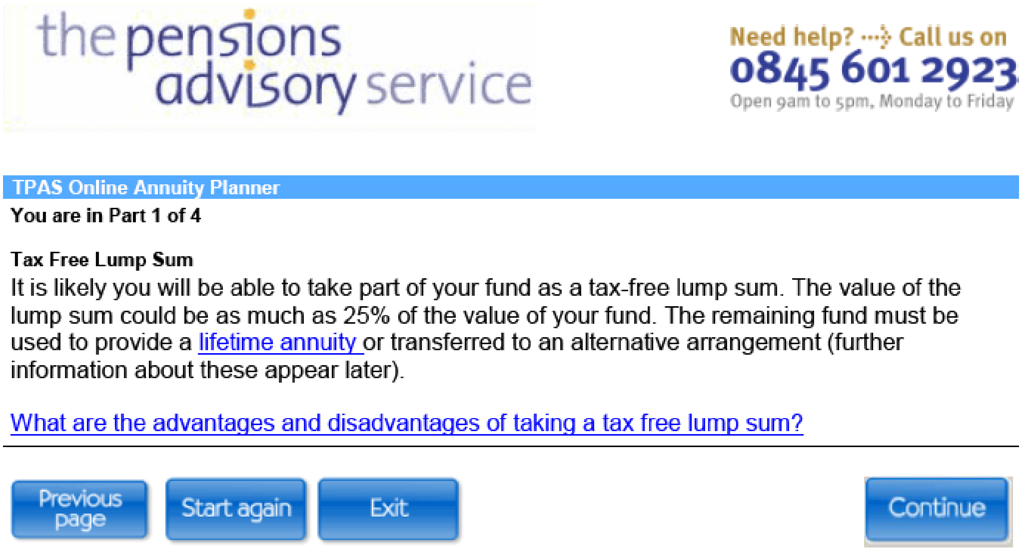
297. The UK government has therefore developed such as two stage system, with the involvement of the Pensions Advisory Service (TPAS) – an independent voluntary organisation providing pension advice that is funded by a UK grant. TPAS have developed an online system to help individuals choose what type of annuity is right for them – see Figure 5.[121] Individuals are guided through a series of questions which will lead to a tailored answer as to what type of annuity would suit their circumstance. For example, when being asked to identify whether married or single, information will be provided on single vs. joint life annuities and in what circumstances the latter may be valuable. Information of alternatives to less standard products and other options (such as alternative secured pensions and the tax implication of these) is also provided. The respondent will then be guided to the FSA's comparative tables to find the best price for the product they have selected, or will be armed with a better understanding when consulting with a financial advisor.[122]

[120] See (Harrison et al 2006)

[121] See www.pensionsadvisoryservice.org.uk

[122] The UK Pensions Regulator also has a role to play in the process – in promoting the use of personal financial advice from appropriately authorized advisers to help members with the OMO make properly informed retirement choices. The Regulator also encourages scheme trustees to facilitate a level of support to members that enables them to make properly informed decisions on their retirement and annuity options.

Figure 16: Pension Advisory Service Annuity Information System



Source: TPAS

Developments in DC provision and supervision from 2012

298. The Pensions Act 2008 introduced a number of changes to the UK pension system. These changes will, from 2012, require employers to automatically enrol eligible staff into a qualifying pension scheme and establish a new multi-employer occupational DC pension scheme called Personal Accounts, which will run alongside existing provision (so long as arrangements meet minimum standards relating to auto-enrolment and contributions) but act as the default scheme for employers. Employers and employees will both have to contribute, unless the employee opts out. The changes are expected to have a substantial impact on the UK pension's landscape. The introduction of automatic enrolment is expected to increase the number of people saving in (DC) private pensions by around six to nine million once these changes are introduced from 2012.

299. The Personal Accounts pension scheme is expected fairly quickly to become the largest pension scheme in the UK with several million members and hundreds of thousands of sponsoring employers. It will be a multi-employer occupational (i.e. trust-based) DC scheme with individual accounts. TPR will regulate it as it would any other scheme and will also supervise employer compliance with their new duties under the Pensions Act 2008.

300. The 2012 reforms are expected to have a major impact across the pensions landscape. Many pension schemes are likely to see an increase in membership and the level of savings, and many new DC pensions are likely to be set up. The extension of automatic enrolment as a joining mechanism is likely to mean that many more people save into DC pensions. This will present challenges of scale and complexity in the regulators core regulatory processes and it is working to ensure it works to understand them. As part of this work to understand the challenges TPR is undertaking a review of its regulation of DC schemes in

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TPR has recently published good practice guidance on member retirement options and the Open Market Option (OMO) which sets out the trustee's responsibilities in providing retirement options advance of the 2012 implementation**.** TPR is considering how risks to members might change in shape and severity, and how these risks could potentially be mitigated. The objective is to deliver an authoritative strategic framework for how the regulation of DC risk can be enhanced in the changing DC marketplace. This will build on their existing framework.

The impact of the financial crisis on supervision

301. TPR's focus on DC in the downturn has been on member understanding and processes. In October 2008 and February 2009 TPR set out their general position to trustees and employers facing depleted asset values and increased pension scheme deficits in the current economic climate. For DC schemes, review of investments, contributions and target retirement dates were encouraged. TPR also highlighted that trustees should have clear and appropriate processes for members approaching retirement and should refer to our guidance on member communication. The choice of retirement options has been complicated by members being allowed to defer annuity purchase during the financial crisis.

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