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The Regulation of Funded Pensions

A case study of the United Kingdom

E Philip Davis
Brunel University

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Authors wishing to contribute to this series should contact Clive Briault or Sarah Smith at:

The Financial Services Authority
25 The North Colonnade
Canary Wharf
London
E14 5HS

Telephone: (0)20 7676 3100

e-mail: clive.briault@fsa.gov.uk sarah.smith@fsa.gov.uk

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THE REGULATION OF FUNDED
PENSIONS - A CASE STUDY
OF THE UNITED KINGDOM

E PHILIP DAVIS
BRUNEL UNIVERSITY

FSA Occasional Paper

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Biographical note

The author is Professor of Economics and Finance, Brunel University, Uxbridge, Middlesex UB3 4PH (E-mail 'e_philip_davis@msn.com', website www.geocities.com/e_philip_davis). He is also a Visiting Fellow at the National Institute of Social and Economic Research, an Associate Member of the Financial Markets Group at LSE, Associate Fellow of the Royal Institute of International Affairs and Research Fellow of the Pensions Institute at Birkbeck College, London. Views expressed are those of the author and not necessarily those of the institutions to which he is affiliated. He thanks Isaac Alfon, Philip Booth, Chris Daykin and Emma Jackson, as well as participants in a seminar at the FSA, for helpful advice.

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Executive summary

This paper seeks to evaluate pension regulation in the UK against the background of economic and financial theory, as well as ‘best practice’ as seen from the standpoint of global experience. The UK pension system is worthy of attention internationally given the success of funded pensions (both occupational and personal) in terms of high coverage of the labour force on a voluntary basis, large asset size and good investment performance, combined with the low level of unfunded social security pension. Indeed, it is suggested that the UK can offer some positive lessons to other countries wishing to undertake pension reforms boosting the role of funding. But equally, some of the well-known failures of the UK regime may give some warnings about the pitfalls that can arise from inadequacies in regulation. This applies particularly to the Maxwell fraud scandal as well as high commission levels, low levels of contributions and mis-selling of personal pensions by insurance companies.

Regulation of pension funds in the UK is undertaken by the occupational pensions regulatory body (OPRA), the Financial Services Authority (FSA) and the Government. The Government sets the overall framework for operation of pension funds via legislation, tax policy and social security regulations. Generally, the division in financial regulation of pension funds is between occupational funds (OPRA) and personal pensions (FSA) although the FSA also regulates asset managers acting on behalf of all types of funds. The evolution of UK pension regulation is an ongoing process. Accordingly, it must be emphasised that this paper provides a snapshot at the time of writing, and the picture is likely to change further in coming years.

There are important economic justifications for the regulation of pension funds, notably protection of consumers against exploitation due to superior information on the part of pension providers and against monopoly power that providers may exert. Certain other reasons, such as ensuring tax subsidies are directed to retirement income provision, may also play an important role.

A significant proportion of UK pension regulation may be viewed as appropriate in the light of economic and financial theory, as well as international ‘best practice’. (A list of such judgements is provided in the conclusion.) For example, I would highlight as

appropriate the 'prudent person' regulation of portfolio composition, which enjoins diversification rather than setting out detailed guidelines on portfolio composition (see Davis 2001a). In addition, insurance of pension funds solely against losses due to fraud seems a sensible way to avoid adverse incentive problems that wider insurance may generate.

There are also a number of critical observations to be made. For example, the regulatory structure remains unwieldy, with several statutory bodies jointly responsible for regulation. The frequency of change in pension regulations is another weakness.

As regards occupational defined benefit funds in the UK, regulations historically tended to provide a rough balance between costs for the sponsor and protection of the beneficiary. But costs to sponsors arising from regulation have risen sharply in recent years, owing in particular to the minimum funding requirement as well as compulsory indexation of pensions. This is one of the factors leading companies to abandon or wind up defined benefit funds, which may not be a desirable outcome. Outstanding regulatory issues for occupational defined benefit funds include controls on internal transfers, as well as the incentive to early retirement arising from increased accruals as retirement approaches, which may distort the labour market. Also, it would be desirable for 'portability' losses arising when individuals shift between funds to be further reduced.

On the defined contribution side, in my view there remain inadequacies in the regulatory regime for personal pensions. Information for holders remains inadequate, not least given the complex choices they are faced with (such as choice of types of annuity at retirement) and their total dependence on fund managers' performance. To some extent, holders need understanding and education and not merely information. A problem that has not been addressed by regulation is the low level of contributions to such plans, which threatens retirement-income security of those concerned. Again, the commission charges on personal pensions have historically been high, and costs of transfer between providers prohibitive; the jury is out on whether Stakeholder Pensions can remedy these problems. There is a more general underlying issue, whether personal pensions are by nature unsuitable for the low paid who would otherwise be in SERPS (or the State Second Pension (S2P) from 2003).

Overall, I suggest that the UK offers both positive and negative lessons for policy makers in other countries. Furthermore, I would argue that the main economic arguments for the superiority of certain types of regulation given in this paper have a general validity. Nevertheless, I caution that the details of regulation - and a fortiori the overall structure of pension provision - may need to be tuned in the light of contrasting domestic economic, financial, fiscal, legal and demographic features (see Davis 1998b).

1 Introduction

This paper seeks to evaluate pension regulation in the UK against the background of economic and financial theory as well as 'best practice' as seen from the standpoint of global experience. The UK is a suitable case study given the success of funded pensions (both occupational and personal) in terms of coverage of the labour force on a voluntary basis (attaining 75%), asset size (over 80% of GDP) and investment performance (with returns averaging 6% per annum in real terms over 1970-95, and 10% over 1980-95).¹ These features suggest that the UK can offer some positive lessons to other countries wishing to set up funded pension schemes,² and close examination presented in this paper suggests that this is indeed the case. But equally, some of the well-known failures of the UK regime may give some warnings about the pitfalls that can arise from inadequacies in regulation. This applies particularly to the Maxwell fraud scandal as well as high commissions, low contributions and mis-selling of personal pensions by insurance companies. Given the UK features both a sizeable occupational and a personal pension sector, we seek to cover regulatory issues relating to both. There are also important distinctions between regulation of defined benefit and defined contribution funds, which we seek to clarify in the light of UK experience.

A key background feature to the UK pension system is the low level of unfunded social security pension compared to other countries. This comprises two parts, the flat-rate Basic State Pension which is indexed to prices and worth around 14% of average earnings, and the earnings-related SERPS (to be replaced by the State Second Pension (S2P) from 2003), which is also price indexed and currently worth around 20% of average earnings. These are set to decline to 10% and 17% of earnings, respectively,³ by 2020 - although many pensioners already rely on means tested benefits to keep them out of poverty. Besides generating a demand for funded pensions via their low level per se, the system of social security benefits offers an additional spur to private pensions via the system of contracting out,⁴ whereby employees opt out of

1 See Davis and Steil (2001).

2 A broader international comparison of pension fund regulation can be found in Davis (1995), while the benefits of funding are set out in Davis (1997a) and economic issues in pension finance are covered in Bodie and Davis (2000).

3 The underlying assumptions are a continuation of indexation to prices, and real earnings growth averaging 1.5% per annum.

4 For further detail see Davis (1997b).

SERPS/S2P, gaining thereby a reduction in national insurance contributions that goes instead to an occupational or personal pension fund meeting certain minimum standards.⁵ A further stimulus to growth of funded pensions has been the tax advantages offered to funded pensions. This features exemption of contributions and asset returns from tax, up to quite generous levels, with pension income taxed only when it is disbursed after retirement.

Regulation of pension funds in the UK is undertaken by the Occupational Pensions Regulatory Authority (OPRA), the Financial Services Authority (FSA) and the Government. The Government sets the overall framework for operation of pension funds via legislation, tax policy and social security regulations. Generally, the division in financial regulation is between occupational funds (OPRA) and personal pensions (FSA) although the FSA also regulates asset managers acting on behalf of all types of funds. Note that the evolution of pension regulation is an ongoing process, with the latest initiatives including the changes to pension regulation introduced or proposed in the Stakeholder Pensions initiative and the Myners Report on Institutional Investment (Myners 2001).⁶ Accordingly, it must be emphasised that this paper provides a snapshot at the time of writing, and the picture is likely to change further in coming years, not least due to ongoing issues such as the Equitable Life guaranteed annuities case.

5 The funded scheme must provide a pension at least equivalent to that provided by the S2P. Defined benefit funds must meet a 'Requisite Benefits Test'. The regulation as introduced stated that the minimum pension should be based on that of a 'reference scheme' accruing 1/80th per year of service applied to an earnings definition based on 90% of the member's earnings which would qualify for the S2P averaged over the last three years of service. A defined contribution scheme or 'appropriate personal pension' must provide for a 'protected rights pension' equivalent to the S2P, funded by rebates of National Insurance contributions, and the remainder, the so-called 'personal fund' financed by voluntary contributions. Regulations state that the so-called 'protected rights' element of UK personal pensions must be taken at 60 at the earliest and indexed up to a 3% inflation rate.

6 To see this point, compare earlier assessments of UK regulation in Dilnot et al (1994), Davis (1997b) and Davis (2000).

2 Economic issues

It is useful to begin by defining some terms. Pension schemes may be either defined benefit or defined contribution. In defined benefit pension schemes, the benefits are defined in advance by the sponsor, independently of the contributions and asset returns from the point of view of the individual. In a defined contribution pension scheme, benefits depend on contributions, the returns on the assets of the fund and annuity rates. A further distinction is between occupational and personal schemes. Occupational pension is a term used in the UK to cover funded company-based⁷ schemes (either defined benefit or defined contribution). Although most UK occupational pension scheme coverage is defined benefit, new schemes tend to be defined contribution, and some firms are switching from defined benefit to defined contribution, especially for new members. Personal pensions are individual defined contribution pension contracts, usually arranged with a life insurance company. As noted, these have grown rapidly in the UK, and cover around 25% of the labour force.

One may distinguish a pension plan and a pension fund. A pension plan is a contract setting out the rights and obligations of members and sponsor of a pension scheme. A pension fund is comprised of the assets accumulated to pay retirement incomes (either directly as in defined benefit, or via purchase of an annuity as in defined contribution). For defined contribution, the fund is the same as the plan, for defined benefit, it is the means to back up or collateralise the employer's promises set out in the plan. Hence, there can be underfunded or overfunded defined benefit schemes. Pension provision can be mandatory or voluntary. In the UK, the latter route has been preferred, with growth of pensions depending on self-interest on the part of employers and workers (on issues related to mandatory funding, see Davis (1998a)).

The UK has introduced a new form of defined contribution plan in 2001, known as the Stakeholder Pension. It is designed for those of low-to-middle income not currently covered by private pensions. It may be provided either on an occupational or a personal basis, or by a trades union. It is mandated to have low charges and flexibility and may cause considerable shifts in the pensions market, reinforcing the ongoing

7 Besides private company-based schemes, the term 'occupational' is also used to describe funded plans sponsored by local authorities and public corporations. Sometimes it is also used more loosely to include schemes such as those in the Civil Service, which are not funded.

shift away from traditional occupational schemes, as well as dominating the market for personal pensions.

Before discussion of the details of pension fund regulation, and their application to the UK, it is also appropriate to set out the general case for regulation of pension funds. Given that voluntary pension funds offer benefits both to employers and employees, why does a free market solution not suffice to ensure security of retirement incomes? Abstracting from issues of redistribution, a case for public intervention in the operation of markets arises when there is a market failure, i.e. when a set of market prices fails to reach a Pareto optimal outcome.⁸ When competitive markets achieve efficient outcomes, there is no case for regulation. There are three key types of market failure in finance, namely those relating to information asymmetry, externality and monopoly. Moral hazard and adverse selection may also play a role.

As regards information asymmetry, if it is difficult or costly for the purchaser of a financial service to obtain sufficient information on the quality of the service in question, they may be vulnerable to exploitation. This may entail fraudulent, negligent, incompetent or unfair treatment as well as failure of the relevant institution *per se*. Such phenomena are of particular importance for retail users of financial services such as those provided by personal pensions, because clients are seeking investment of a sizeable proportion of their wealth and making a commitment over as much as 40 years. Equally, such consumers are unlikely to find it economic or even feasible to make a full assessment of the risks to which pension plans are exposed - including the solvency of the sponsor in the case of occupational funds. Such asymmetries are clearly less important for wholesale users of financial markets (such as pension funds themselves in their dealings with investment banks), who have better information, considerable countervailing power and carry out repeated transactions with each other. However, a partial protection against exploitation, even for retail consumers, is likely to arise from desire of financial institutions such as life insurers offering personal pensions to maintain reputation, or equally for non-financial companies to retain a good reputation in the labour market - a capital asset that would depreciate if customers or employees were to be exploited.

8 A Pareto optimum is a situation where no individual can be made better off without others becoming worse off.

Externalities arise when the actions of one individual or firm in the economy have a consequence for other individuals or firms that are not taken into account by the price mechanism.⁹ The most obvious type of potential externality in financial markets relates to the risk of contagious bank runs, when failure of one bank leads to a heightened risk of failure by others.¹⁰ But given the matching of long run liabilities and long run assets, such externalities are less likely for pension funds. There remain some possible externalities from failure of pension funds, notably to the state, whether as direct guarantor or as provider of pensions to those lacking them. Equally, positive externalities may give reasons for governments to encourage pension funds, such as desire to economise on the costs of social security or foster the development of capital markets.

A third form of market failure may arise when there is a degree of market power. This may be of particular relevance for occupational pension, notably when membership is compulsory; hence regulatory attention to the interests of members is of particular importance in such cases, whether or not there is also asymmetric information. As argued by Altman (1992), employers in an unregulated environment offering a pension fund effectively on a monopoly basis may structure plans to take care of their own interests and concerns, so for example may institute onerous vesting rules¹¹ and better terms for management than workers. They will also want freedom to fund or not as they wish and to maintain pension assets for their own use, regardless of the risk of bankruptcy. They will not take care of retirement needs of some groups in society such as those changing job frequently, young workers and women with broken careers due to childbearing. Absent an appropriate regulatory framework, union pressure may ameliorate some of these problems for employees, but not for the most peripheral groups.

Justifications for regulation may also include attempts to overcome problems of adverse selection - a situation common in insurance markets such as for annuities in which a pricing policy induces a low average quality of sellers in a market, while asymmetric information prevents the buyer from distinguishing quality. For example,

9 A classic example is the benefit to the owner of an orchard from a bee-keeper close by, for which the bee-keeper is not remunerated

10 This may be due either to direct financial linkages (e.g. interbank claims) or shifts in perceptions on the part of depositors as to the creditworthiness of certain banks in the light of failure of others.

11 It is of interest that unregulated funds in developing countries do indeed institute such rules.

if take-up of annuities is voluntary, then only individuals knowing they will live a long time will purchase annuities, which makes the average longevity of purchasers higher than the population average. When adverse selection is sufficiently severe, the market may cease to exist. On the other hand, making annuities compulsory reduces adverse selection in that market.¹² Also there can be moral hazard - where there is an incentive to a beneficiary of a fixed-value contract, in the presence of asymmetric information and incomplete contracts, to change her behaviour after the contract has been agreed, in order to maximise her wealth, to the detriment of the provider of the contract. This may, for example, lead sponsors of defined benefit funds whose assets are insured by the government to adopt risky investment strategies.

Some would argue that pension funds should be regulated independently of these standard justifications, for example to ensure tax benefits are not misused, and that the goals of equity, adequacy and security of retirement income are achieved. Regulation may also be based on the desire for economic efficiency, for example removing barriers to labour mobility. Indeed Altman (1992) goes further in suggesting that the term 'private pension' is itself a misnomer as the distinction between private and public programmes is increasingly blurred. Terms and conditions are often prescribed by the government; private pensions are publicly supported by tax subsidies; there is compulsory provision in several countries; and in countries such as the UK, private funds may take over part of the earnings related social security provision.

Regulations are of course not costless, and excessive regulatory burdens may discourage provision of private pensions when it is voluntary, and reduce competitiveness of companies when occupational pensions are compulsory. Regulations may be divided into those of pension fund assets/inflows, liabilities/outflows and broader structural regulations. There is a sharp division between regulations for defined benefit and defined contribution plans. The reason is that the former have guarantee features akin to insurance companies (albeit provided by the sponsor, and not the scheme itself), whereas the latter have no such features and resemble mutual funds. For example, funding and surplus regulations apply only to defined benefit, while indexation and portability regulations are more complex for

12 Finkelstein and Poterba (2000) show that owing to compulsory annuities, problems of adverse selection in the UK are less severe than in the US, where purchase is voluntary. However, as discussed in Section 4.4, adverse selection is not absent in the UK, since participation in a pension plan is itself voluntary, even if annuity purchase for members is compulsory.

defined benefit. Contributions and commissions regulations apply mainly¹³ to defined contribution, while information issues are more important for them. The issues which pension regulation seeks to address are shown in Table 1, together with the type of regulation that addresses it. There are also contrasts in regulation between occupational and personal funds, with a greater focus on consumer protection for the latter. The main lines of current UK regulations, as reflected notably in the 1995 UK Pension Act, are summarised in Table 2.

Table 1: Pension fund regulations

Section: Issue	Regulation	Type of fund	Main economic issue
3.1: Are portfolios adequately diversified?	Portfolio distributions	Both	Monopoly/asymmetric information
3.2: Are there adequate funds to pay pension promises?	Funding	Defined benefit	Monopoly/asymmetric information
3.3: Who should benefit from assets accumulated in excess of benefit promises?	Surpluses	Defined benefit	Fiscal/equity
3.4: Are contributions net of charges actually being made and sufficient for adequate pensions?	Contributions and commissions	Defined contribution	Monopoly/fiscal
4.1: Should individuals and companies be obliged to have private pension schemes?	Membership	Both	Moral hazard/fiscal
4.2: Should pensions be inflation-indexed?	Indexation	Both	Monopoly

13 The former deferred annuity schemes sold by life insurers were partly defined benefit plans in the sense that annuity rates were fixed, and were subject to commission regulations.

Table 1 continued: Pension fund regulations

Section: Issue	Regulation	Type of fund	Main economic issue
4.3: Should private pensions be an addition or partly a substitute for social security?	Integration	Both	Fiscal
4.4: Should individuals be forced to take annuities, or are lump sums acceptable?	Annuities	Largely defined contribution	Adverse selection
4.5: Should benefits be insured?	Insurance	Largely defined benefit	Monopoly/asymmetric information
4.6: Can losses be avoided when individuals change job?	Portability	Largely defined benefit	Monopoly/economic efficiency
4.7: How fair is the distribution of costs and benefits from pension schemes?	Benefits	Largely defined benefit	Monopoly/equity/efficiency
5.1: How can one organise oversight of investment and member representation?	Trustees	Both	Asymmetric information/monopoly
5.2: What information is essential for members to judge the soundness of plans?	Information	Largely defined contribution	Asymmetric information
5.3: How best to organise these various regulatory tasks?	Regulatory structures	Both	Economic efficiency

One appropriate reaction to the cost and inflexibility of regulation is to set out codes of good practice which funds are expected to follow, without statutory backing. The Myners Report proposes a number of such codes, focusing in particular on skills of trustees, relations with fund managers and consultants and investment practices.

Table 2: Principal regulations of assets and liabilities in the UK

Regulation	Detail
Portfolio distributions	Prudent man concept; 5% self investment limit, concentration limit for defined contribution plans
Funding	Schemes must be funded to gain tax privileges. Maximum 5% overfund of PBO or IBO. Minimum funding rule based on the ABO for an ongoing on scheme, discounted by bond or equity return depending on maturity.
Surpluses	Contribution holidays permitted. Tax on asset reversions. Terminations must provide for indexed benefits.
Contributions and commissions	Low level of contributions obligatory for defined contribution plans (4.6%). No regulation of commissions until "Stakeholder pension" introduced.
Membership	Pension scheme membership is currently voluntary for employer and employee.
Benefits insurance	Mutual insurance against losses due to fraud.
Integration	Pension plan members may opt of earnings related social security
Annuities	Members of pension plans must annuitise, subject to sizeable tax free lump sum. Staggered annuities permitted up to age 75 for defined contribution plans.
Indexation of benefits	Obligatory up to 5% for occupational plans. Largely optional for personal pensions.
Portability	Vesting in 2 years. Indexation of accrued benefits up to 5%. Transfers must be made to other pension plans.
Benefits	Limit on tax free earnings, and proposed increase in early retirement age
Trustees	1/3 member trustees in defined benefit schemes and 2/3 in defined contribution. Obligations of trustees defined in statute
Information	Extensive information requirements, especially for defined contribution, and obligation of salesmen to give "best advice"
Regulatory structures	Bodies responsible include Inland Revenue, OPRA and the FSA

3 Regulation of pension assets and contributions

3.1 Portfolio regulations

Quantitative regulation of portfolio distributions is imposed in a number of countries,¹⁴ with the ostensible aim of protecting pension fund beneficiaries, or benefit insurers, although motives such as ensuring a steady demand for government bonds may also play a part. Limits are often imposed on holdings of assets with relatively volatile returns, such as equities and property, as well as foreign assets, even if their mean return is relatively high. There are also often limits on self-investment, to protect against the associated concentration of risk regarding insolvency of the sponsor.

Apart from the control of self-investment, which is clearly necessary to ensure funds are not vulnerable to bankruptcy of the sponsor, the degree to which such regulations actually contribute to benefit security is open to doubt. This is because pension funds, unlike insurance companies, face the risk of increasing liabilities as well as the risk of holding assets, and hence need to trade volatility with return. Moreover, appropriate diversification of assets can eliminate any idiosyncratic risk from holding an individual security (such as an equity), thus minimising the increase in risk. Also, if national cycles and markets are imperfectly correlated, international investment will actually reduce otherwise undiversifiable or 'systematic' risk. Such limits may be particularly inappropriate for defined benefit pensions, given the addition 'buffer' of the guarantee on the part of the company to the worker.

In fact, unlike a number of European countries (Davis (1996, 2001a), European Commission (2000)) there are no quantitative portfolio restrictions on UK pension funds; United Kingdom pension funds are subject to trust law, with trustees required to act in the 'best interests' of beneficiaries. As long as trust deeds are appropriately structured, funds are not constrained by regulation in their portfolio distribution except for limits on self-investment (5%) for occupational funds.¹⁵

14 For a discussion of the economic issues raised by the choice between prudent man rules and quantitative restrictions for life insurers and pension funds, illustrated by data for nine OECD countries, see Davis (2001a).

15 Note that defined contribution '401(k)' plans in the US often have high levels of self investment in the sponsor's own equity.

A clarification of the legal requirement for trustees' direction of portfolio strategies was made in the context of the so-called Megarry judgement of 1984, which followed a dispute between the National Coal Board and the National Union of Mineworkers over the investment strategy of the Mineworkers Pension Fund portfolio. The union wished to disinvest in overseas securities and also sell shares invested in alternative energy sources to coal, such as oil. When this was not accepted, it refused to endorse the investment proposals of the fund manager for 1982. Judge Megarry clarified that 'When the purpose of the trust is to provide financial benefits for the beneficiaries, as is usually the case, the best interests of the beneficiaries are usually their best financial interests. In the case of a power of investment, as in the present case, the power must be exercised so as to yield the best return for the beneficiaries, judged in relation to the risks of the investment in question...' He also argued quite explicitly that it was the duty of the trustees in the interests of the beneficiaries to use the full range of investments authorised by the terms of the trust to enhance the funds' return or reduce its risk. Background for his judgement included the much older case of *Re Whiteley* from 1886, when it was stated that trustees must 'take such care as an ordinary prudent man would take if he were minded to make an investment for the benefit of other people for whom he felt morally obliged to provide'.

The 1995 Pensions Act explicitly gives trustees powers to invest as if they were absolutely entitled to the assets of the scheme, and requires them to have regard to the need for diversification of investments and to the suitability of investments, as well as taking proper advice. Hence although there is no explicit prudent person rule¹⁶ in the UK, the duty of prudence to trustees can be interpreted as requiring prudent diversification, which may amount to the same thing. The actual investment aims of a fund are to be set out in a regular statement of investment principles (SIP). Note that trust deeds and SIPs may legally limit the investment choices of funds, e.g. by banning use of derivatives or private equity investment. Myners recommended that such limitations should only be imposed when strictly justified.

An issue that has not been addressed is regulation or guidance for members of personal defined contribution plans. There is a risk that some individuals may invest in excessively low risk assets early in life, thus failing to accumulate an adequate

16 A 'prudent person' rule, which is an important component of pension fund regulations in countries such as the USA, requires fund managers to invest as a prudent person would on his own behalf, in particular, with appropriate diversification.

pension, while others may continue with high risk assets close to retirement, thus making their retirement incomes vulnerable to market volatility.¹⁷ But these problems may best be addressed by information and advisory requirements for providers rather than portfolio regulations per se.

Related to portfolio regulation is the issue of whether pension funds are or should be obliged to take a position on issues on which they have a right to vote as shareholders. This has historically not been regulated in the UK, while in the US, the Department of Labor has set out guidelines making it obligatory for pension funds to vote so-called proxy motions and hence exert 'voice' in the affairs of the companies they own. Myners proposes similar legislation on corporate governance in the UK. A survey of the literature on the effects of 'corporate governance activity' on equity returns (Davis and Steil 2001) suggest that the effects, if positive, are not large. There may, of course, be wider economic benefits.

3.2 Funding regulations

Regulation of the funding of benefits is a key aspect of the regulatory framework for defined benefit pension. Calculation of appropriate funding levels requires a number of actuarial assumptions, in particular the assumed return on assets, projected future wage growth (for final salary schemes) and future inflation (if there is indexing of pensions). It also requires estimates of death rates and the expected evolution of the relative number of contributors and beneficiaries over time.

Minimum funding limits seek to protect security of benefits against default risk by the company. This is essential given unfunded benefits are liabilities on the books of the firm, and therefore risk is concentrated and individuals with pension claims may have no better claim in the case of bankruptcy than any other creditor. There are usually also upper limits on funding, to prevent abuse of tax privileges (overfunding). Adequate provision of unfunded pensions is likely to be particularly difficult for declining industries, as the worker/pensioner ratio falls.¹⁸ James (1993) suggests that even in stable industries, a firm with unfunded pensions and a significant number of retirees

17 Booth and Yakubov (2000) cast doubt on the need for 'lifestyle investment', switching to bonds before retirement to avoid this problem.

18 Andrews (1993) points to the US railroad fund as an example of the plight a pay-as-you-go fund can get into in a declining industry.

will be at a competitive disadvantage to one with young workers, for example in emerging market economies. As the firm life cycle is an ineluctable process, private pension promises based on pay-as-you-go may be inherently not credible.

Funding offers a diversified and hence less risky alternative backup for the benefit promise, as well as offering the possibility of unplanned benefit increases if the plan is in surplus. Extra protection against creditors of a bankrupt firm is afforded when the pension fund is an independent trust (as in the UK) rather than part of the balance sheet (as for reserve funding in Germany). Bodie (1990) suggests that the three main reasons why firms fund, besides regulations per se, are the tax incentives, provision of financial slack (when there is a surplus) that can be used in case of financial difficulty, and because pension benefit insurance may not cover the highest-paid employees. In practice, since surpluses may in the UK only be captured tax free via contribution holidays and since there is no benefit insurance (except against fraud), tax incentives are the main reason.

Meanwhile Blake (2000b) points out that balance between assets and liabilities is best maintained (i.e. surpluses and deficits are minimised) by choice of assets with similar return and risk characteristics to liabilities. He notes that equities are a natural long-term matching asset when liabilities grow at the same pace as real wages, as is typical in an ongoing pension fund aiming for a certain replacement ratio at retirement, because the labour and capital shares of GDP are roughly constant, and equities constitute capital income. Bonds are not a good match for real-wage based liabilities although they do match annuities for pensions.

Some preliminary definitions are needed to discuss funding. The level at which the fund can meet all its current obligations subject to legal guarantees¹⁹ is known as the accumulated benefit obligation (ABO).²⁰ The assumption that rights will be indexed to earnings rises up to retirement, even if they are not legally guaranteed as is normal in a final salary scheme, gives the projected benefit obligation (PBO). The indexed benefit obligation (IBO) assumes indexation after retirement as well as indexation to earnings up to retirement. (See Bodie (1991) for a further discussion of these concepts.) An important argument in favour of the PBO/IBO over the ABO is that it

19 The ABO need not exclude an element of indexation of certain accrued benefits (such as those of early leavers) if law guarantees this, as is the case in the UK.

20 The ABO need not be the level that guarantees solvency in the case of winding up, as this has to also reflect the cost of buying deferred annuities.

ensures advance provision for the burden of maturity of the plan, when there are many pensioners and fewer workers, by spreading costs over the life of the plan (Frijns and Petersen (1992)).

Funding and accounting rules can affect the investment behaviour of pension fund management since they determine the incidence of shortfall risk (Bodie 1991), whereby owing to assets being below liabilities there is a need to inject funds on an emergency basis. If rules are excessively strict they can lead to conflicts with asset and liability matching by forcing a fund to hold bonds to avoid a short-term liability when equities are more appropriate for long-term balance.

A first essential point in the UK is that the tax system discourages unfunded occupational pensions by disallowing tax relief on unfunded plans – thus ensuring a degree of protection to members in terms of assets. As discussed in the previous section, complementary limits on self-investment in occupational funds ensure the assets are also external to the sponsor.

Second, there are minimum funding requirements in the UK, as set out in the 1995 Pension Act. The calculations are made on the assumption of ensuring sufficient assets are available if the scheme is wound-up, to buy out pensioners benefits with an insurance company and provide non-pensioners with a fair actuarial value of their accrued rights that may be transferred to an alternative pension vehicle (it may still fall short of the full cost of buying deferred annuities to cover obligations). Valuations are made every three years, and liabilities are valued by reference to a 'benchmark portfolio' of UK government bonds and equities, with the proportion of government bonds in the benchmark increasing as the scheme matures. When the regulation is fully operative, a 90% level of funding will need to be returned to 100% in five years, and a shortfall below 90% is to be remedied in 12 months, although the latter will not lead to immediate windup. There is some controversy about inclusion of government bonds only in the benchmark, as their yields have fallen sharply recently, partly due to the budget surplus but also reflecting high demand by pension funds as a consequence of the minimum funding requirement (MFR) itself.

Third, there is also a fiscally enforced limit of overfunding of 5% of projected obligations. Although this may appear strict, the Inland Revenue (tax authority) gives five years to remove surpluses before the remainder is taxed, and apply generous calculation methods in defining the liabilities and assets, thus making it hard for even well-funded schemes to become liable to tax. Since UK pension funds have to index

pensions up to 5% inflation (Section 4.5), the IBO is the appropriate measure of projected obligations.

Fourth, there is an impact of accounting rules. At present the operative standard SSAP24 bases fund valuation on actuarial valuations and long run smoothing.²¹ This is partly consistent with the approach of the minimum funding requirement, as well as the earlier system without such rules, as discussed below. The accounting bodies have now proposed a new standard, FRS17, which will radically change the position by mandating market value accounting and the use of corporate bond yields to discount liabilities. This could lead to a radical shift away from equities.

Pension liabilities have been affected by other regulations, for example those enforcing a degree of indexation (up to 5%) of pensions up to retirement for early leavers; obligations to index after retirement, limits to tax-free contributions and benefits; enforced transferability of assets between schemes and enforced equal pension ages between men and women.

This system has to be viewed in the light of the previous regulations, whereby until the Act was implemented in 1997, there were no minimum funding rules (except in respect of the 'contracted-out' obligation which replaced the benefits of SERPS) or legal obligation to remedy an underfund. Also no standard method of calculating funding was imposed. This meant volatile assets such as equities could be heavily used by UK pension funds. Funds could also focus solely on the PBO/IBO and not also on the ABO.²² On the other hand, trustees were bound by their duty of care to ensure funding is in place and contracted out funds were under close supervision in respect of the resources available to provide their obligations

21 The introduction of the standard also was the first time that UK firms were obliged to include the true cost of providing pensions (the growth in assets and liabilities on the basis of standard actuarial assumptions) and not merely the contributions to funding pensions in the profit and loss account. They still did need not put deficits in the balance sheet, as is the case in other countries such as the USA.

22 The ease with which UK funds in declining industry such as coal mining and railways coped with sudden switches in the balance of workers and pensioners is a good example of the benefits of using the PBO/IBO instead of the ABO. More generally, taking account of future obligations instead of purely focusing on current liabilities is likely to permit smoother levels of contributions as the fund matures, which may be better for the financial stability of the sponsor. Historically, use of a returns as opposed to market value basis for funding has not conflicted with the need to cover obligations if the fund were wound up, since the PBO has tended to exceed the ABO, so funds have had ample assets in the case of bankruptcy. But compulsory indexation (discussed below), as well as increasing maturity, increased the ABO and meant the former system was no longer viable (Riley (1992b)).

Sponsors of defined benefit funds consider that the minimum funding requirement adds to the costs of maintaining a defined benefit scheme and is one factor inducing a switch to defined contribution. Asset compositions are shifting, as funds seek to match their benchmark portfolios and avoid the risk of underfunding. Whereas in 1995 the equity share was 76% and bonds 14%, by end-1998, the figures were 72% and 19% (WM 2000). There is widespread discussion of whether the enforced demand for bonds by pension funds to fulfil obligations is distorting the government bond market. On the other hand, it must be acknowledged that the growing maturity of pension schemes (as the proportion of members close to retirement increases) will in any case lead plans to increase their bond holdings. So will the ongoing shift towards defined contribution, where risks are borne solely by the worker. The increased taxation of dividends for pension funds (they are no longer able to reclaim Advanced Corporation Tax) has also tilted them towards bonds. And pension funds are not precisely matching their benchmark, which is estimated at present to be 55% equities and 45% bonds on average (and around 50-50 for mature schemes). This suggests that the distortionary effect of the regulations should not be exaggerated.

The Myners Review proposes abolition of the MFR, arguing that it focuses attention on the current asset/liability ratio rather than on future investment returns and the investment strategy, which are more relevant for ability to pay pensions. The proposed replacement is to be a long-term scheme-specific approach based on transparency and disclosure, with no reference assets. Funds will have to disclose the value of assets, portfolio distributions, planned future contributions and asset allocation, assumptions on asset returns and valuation of assets, and justification of asset allocation and investment return assumptions in the light of sponsors and the funds' situation. There will also need to be explanation of implications of volatility of assets for risks of underfunding, justifying why this is acceptable.

On the other hand, the accounting regulation FRS17 could restore the distortion, by insisting that pension liabilities be given market values judged on the yield of corporate bonds and that deficits be included in accounts. Under it, there will be three separate and potentially inconsistent bases for calculating pension funding - the solvency, tax based and the accounting basis. Considerable distortions to investment could result. Moreover, the EU proposes a Directive on Occupational Funds, which incorporates a minimum funding aspect, albeit a more flexible one than the UK's (see European Commission (2001), Davis (2001b)).

3.3 Ownership of surpluses

Ownership of surpluses in defined benefit pension funds is a key issue, particularly because predator firms may seek to strip surpluses after taking over another firm, although also because the firm may seek to recoup the funds for its own use. On the one hand, this may be seen both as an abuse of tax privileges and (more contestably) as seizing assets held for the benefit of members. On the other, it can be argued that if the fund is only a backup for the firm's promise of pensions, and if the firm is equally responsible for making good any deficit, then the surplus should belong to the firm. It is important to note that the funding rules outlined above define the surplus. In addition, such issues only arise for defined benefit funds; in defined contribution funds there is no surplus to strip, as assets equal liabilities by definition.

In the UK, this issue came to the fore in the 1980s as high returns in capital markets increased assets while widespread redundancies tended to restrain liabilities.²³ The surplus is generally held to belong to the sponsoring company, which can recover it at the discretion of the tax authorities by direct withdrawal (subject to a 40% tax) or by a contribution holiday. However, court judgements have severely restricted ability of predators to extract surpluses from take-over targets' funds via so-called winding-up²⁴ or spin-off²⁵ termination of schemes - although such strategies have been extremely common in the United States. The two key judgements, the Browne Wilkinson judgement and the Millet judgement were both against Hanson PLC. They set out two important principles, respectively that no management committee had the power to state in advance that it would veto all proposed future pension rises, and that pension schemes can change their trust deeds to prevent predatory take-overs designed to extract pension fund surpluses.

Moreover, the 1990 Social Security Act states that when a plan is terminated, it shall be assumed to provide for indexation of pensions for up to 5% inflation, thus reducing the potential surplus to be extracted - by raising the ABO. And there is increasing

23 A redundant worker's pension is frozen in real terms rather than rising in line with average earnings, as would be the case for a worker continuing in service.

24 By winding up a scheme, accrued liabilities are frozen in real terms while assets continue to grow at the rate of return in the capital market, increasing the surplus further (assuming there are positive real returns).

25 The attempt is made to capture the surplus in the pension fund of a subsidiary when it is sold to another company.

support for arguments on the employee's side, namely that pension rights are not gratuities but part of a remuneration package earned by service. This point of view has been supported by recent rulings of the European Court that suggest that for the purposes of equal treatment pensions are to be considered as deferred pay (Goode (1992)). The logical conclusion - not adopted in the UK - would be to outlaw even contribution holidays and make employers much more restrained in funding. The 1995 Pensions Act has restricted the amendment power of trust deeds so that members must consent before their accrued rights are adversely affected. Myners recommended a reduction of the tax penalty for recovery of surpluses and greater clarity in the ownership of surpluses by the firm.

3.4 Contributions and commissions regulation

As noted, funding regulations cannot apply to defined contribution funds, since there is no promised level of benefits to be funded. Ensuring the security of income in old age instead requires the authorities to ensure that contributions are maintained and that they are sufficient to accumulate a pension. Adequacy of pensions will also be better ensured if expenses, which reduce returns, are not excessive.

Under the 1995 Act, there is a regulation for occupational defined contribution funds that are contracted out, which seeks to ensure contribution obligations are fulfilled. A payments schedule has to be agreed, setting out employers' and employees' contributions and the due dates. If arrears build up, the Occupational Pensions Regulatory Authority will take measures to enforce payment. There remain problems with the level of contributions. Whereas contracted-out Appropriate Personal Pensions and Stakeholder Pensions, have a minimum contribution of around²⁶ 4.6% of earnings,²⁷ this provides a fairly low pension on retirement. Although occupational funds generally benefit from contribution rates far higher than this (9%-18%) many personal pension holders only contribute the minimum - which as discussed below may be eroded also by high charges. Stakeholder pensions for the low paid, introduced in 2001, also have a low minimum contribution level (£20 per month if not contracted out).

26 The actual minimum is scaled by age and sex.

27 Equal to the rebate from social security contributions payable when individuals opt out of earnings related social security, linked in turn to the alternative contribution to the S2P.

Wider issues are raised by contribution policies. There is no obligation on employers to make contributions for individuals who opt out of company schemes into personal pensions, which means that such schemes are often inferior to occupational pensions. There are also asymmetries between occupational defined contribution and defined benefit schemes, with contributions to the latter (typically 6% from the employee and 12% from the employer) far exceeding contributions to the former (typically 6% from the employee and 3% from the employer). Moreover, there is the broader issue of whether mandatory contributions to private pensions should be enforced more generally. As discussed in Section 4.1, this approach has not been adopted in the UK.

A major problem with personal defined contribution pensions run by insurance companies has been the very high level of charges. Personal pensions have charged around 2.5% of contributions in administrative charges and up to 1.5% of assets in fund management charges (Blake 1995). Although charges have been falling, as economies of scale, competition and consumer awareness have increased and as a consequence of stakeholder pensions and RU64, they are partly fundamental to the nature of personal pensions, whereby individual contracts are more costly than collective ones.²⁸ As noted by Blake (2000b) the average personal pension over a 25-year period takes 19% of contributions in charges and the worst schemes take 28%. Some of the charges may be hidden, also raising issues of information (see Section 5.2). They are also front-loaded (to compensate salesmen) and hence mean there are particularly low returns for those who cease contributions at an early stage. In contrast, occupational schemes' costs are much lower by a factor of three or four.

Stakeholder pensions seek to overcome these difficulties with a charging structure set to have charges of 1% of fund value, compared to 2-3% typical of current personal pensions, and no front loading. These are expected to ameliorate the current situation considerably.²⁹

Another type of commission relevant to pension funds is commissions paid to brokers by asset managers acting on behalf of pension funds. 'Bundling' of commissions with payment for research, so called soft commissions, is common in the UK and is also rife in the US (Davis and Steil 2001). Myners claims these may distort investment decision-making and impair performance. He recommends that the practice be discontinued – albeit without proposing legislation. This proposal has aroused fierce opposition.

28 For a discussion of personal pension charges elsewhere see Davis (1998a).

29 They will also lead to an increase in portfolio-indexation of pension assets, which given the lower charges and poor performance of active managers (Blake 2000b) will be of benefit to beneficiaries.

4 Regulation of pension fund liabilities and disbursements

4.1 Regulation of membership

Compulsion is a fundamental issue in pension provision; should firms be obliged to provide pensions and should non-members of company schemes be obliged to have personal pensions? A separate issue, where provision is voluntary for firms, is whether they be allowed to insist on participation of all employees.

Arguments in favour of compulsion across the economy as a whole include the fact that individuals who are free not to contribute may be myopic (not looking ahead to retirement) and subject to moral hazard (assuming the state will provide a safety net). Positive externalities may accrue to the government in terms of savings in social security expenditures. In this context, one may note the potential relief to government expenditure provided by coverage of all workers who would otherwise rely on social security. Coverage of low-income workers may have a more powerful effect on national saving than voluntary coverage, which leaves them out (see Bernheim and Scholz (1992)). Tax advantages are more evenly spread, and can be reduced. Portability and vesting conditions can be standardised, enhancing labour mobility. Market failures in annuities markets may be more readily overcome (Section 4.4). On the other hand, competitiveness may be adversely affected if firms face unavoidable costs. Also low-income workers, who would not otherwise have saved, may lose out due to lower consumption over their working lives.

Unlike countries such as Switzerland and Australia³⁰ (Davis 1998a) the UK has chosen not to make provision of complementary schemes compulsory for employers. Nor has the UK, unlike Chile and other Latin American countries, mandated membership of personal pension schemes. On the other hand, all employees not in contracted out schemes are obliged to contribute to an earnings-related unfunded social security pension under the SERPS/S2P, so there is an element of compulsion in respect of second pensions generally.

30 These countries have compulsory funded pensions – France has supplementary schemes that are also compulsory, but which are not funded.

The consequences of not mandating occupational funding in the UK include aggregate coverage of occupational schemes being only around 50%, and occupational coverage being higher for men, trade union members, white-collar workers, workers in large firms etc. Considerable expansions in coverage of private pensions have been achieved by means of voluntary personal pensions. But Blake (2000a) notes that lapse rates on personal pensions are extremely high, with persistency rates after four years of membership of personal plans being as low as 57-68%. Whereas some of these individuals may have joined superior occupational funds, many will simply have ceased accumulating pensions. Projected forwards, these data imply that very few members of personal pension schemes will obtain adequate pensions (Blake estimates around 16%). Mandatory membership of funded schemes with higher minimum contributions would obviate these problems. A proposed move towards wider coverage will be that Stakeholder Pensions will have to be offered³¹ by all firms with over 5 employees (although the number of employees in firms with under 5 employees is large).

Even if firms are not obliged to provide a pension, there remains an issue whether they may compel their own employees to take part in them. The right of employers to insist on compulsory membership of occupational schemes for their employees was made illegal in 1988. In this respect, the UK is somewhat exceptional; membership of occupational schemes at an industry or firm level can be made compulsory, often via collective agreement with trades unions, in most other countries. The arguments made at the time of abolition largely related to the benefits of free choice. There may be a reduction in potential transfers from early leavers to long stayers (Section 4.7), if the former can opt out from the start, either directly or via amendments of deeds and rules to make such transfers less onerous. More generally, it ensures a degree of 'contestability'³² on firms, ensuring they avoid excessively burdensome regulations on members, as otherwise employees will leave the plan. The ready availability of personal pensions made the choice a feasible one; and a significant proportion of those eligible failed to join their occupational schemes. As discussed below, many were misled by commission-motivated insurance salesmen.

31 In the sense that they will have to designate a particular provider and make contributions on behalf of their staff.

32 Contestable markets are markets where the potential for new entry ensures competitive behaviour, despite a seemingly uncompetitive market structure (Baumol (1982)).

Despite the benefits in terms of individual choice, some economic arguments can be proposed which suggest compulsory membership may be desirable, at least if the regulatory framework provides sufficient safeguards for all members of schemes. One difficulty is that if only those likely to live longest remain in occupational schemes, they can dilute the risk pool for annuity purchase,³³ thus potentially increasing their cost. Equally, if there is widespread opt-outs by young workers, this may also reduce risk-sharing between young and older workers, that can otherwise reduce the cost of the benefit promise by allowing larger proportions of equities to be held. Third, as discussed below, those opting out may be mis-sold personal pensions with lesser benefits than the occupational schemes they replace. This is the case not only in money terms but also due to the loss of additional insurance often included with defined benefit such as widows' and ill health retirement benefits. And indeed, there has been some discussion of reintroducing compulsory membership.

4.2 Benefit insurance

In a number of countries, notably the US, there is public insurance of pension benefits in the case where there is both insolvency of the sponsor and inadequate assets in the fund. Any system of guarantees, including deposit insurance as well as pension insurance, faces the difficulty of moral hazard, i.e. that it may create incentive structures leading honest recipients to undertake excessively risky investments, which in turn give the risk of large shortfall losses to the insurer. In other words, losses may not arise merely from fraud or incompetence but the incentive structure itself - a problem often thought to arise in the US, where a major crisis of underfunding with large government liabilities was foreseen in the early 1990s similar to that for Savings and Loans associations (Bodie 1992). What is needed are means to control risk, which could (Bodie and Merton (1992)) include an appropriate mixture of monitoring, asset restrictions and risk-based guarantee premia.

In the case of pension funds, controls could include, first, monitoring of the market value of pension assets, with the right to seize and liquidate them if they fall below a certain minimum funding level. It is hence essential that the insurer have access to the assets, the assets have a defined market value, they be liquid and that there be agreed

33 Note that the case for compulsory annuitisation is separate from that for compulsory pensions. One could have compulsory pensions and voluntary annuitisation, whereas in the UK there are voluntary (funded) pensions but compulsory annuities.

standards for determining minimum funding levels. A second approach is restricting the asset choice of pension funds to ensure an upper bound on the risk of the assets serving as collateral for the promised benefits, for example, via portfolio restrictions or by insisting on immunisation of assets equal to the guaranteed benefits. A third is setting the premium rate for the guarantee in line with the risk, which depends in turn on the variance of the value of the collateral and the time between audits (which allow the fund to change its risk exposure adversely).³⁴

In the UK, the Goode Committee, noted above, recommended the setting up of a guarantee scheme to cover losses from fraud and misappropriation only,³⁵ with the guarantees taking schemes back to a funding level of 90%, to be funded by a post event levy on all occupational schemes. This followed the Robert Maxwell case. Large quantities of his companies' pension fund assets were lent to private companies owned by Maxwell against poor security, or were invested directly in them. When the companies became insolvent, with liabilities of up to £1 billion, the assets were lost.³⁶

This suggestion was accepted in the 1995 Pensions Act. The 90% funding level is to be calculated using the ABO on the same basis as the minimum funding rule for ongoing schemes. This is arguably a weakness, as a scheme that is 90% funded on an ongoing basis (and thus anticipating the future returns on its assets) may be unable to buy much costlier annuities covering 90% of the obligations. And indeed Myners recommends that compensation be increased to cover the cost of securing accrued rights. On the other hand, the limitation to fraud should minimise moral hazard problems.

Defined contribution schemes run by insurance companies are covered by (mutual) insurance compensation arrangements, covering 90% of the investment in the case of bankruptcy of the insurance company.

34 Given the speed with which pension funds can change their risk exposure, it could be argued that anything short of continuous monitoring could lead to this hazard.

35 The application is where 'there are reasonable grounds for believing that the reduction (in assets) was attributable to an act or omission constituting a prescribed offence'.

36 However, as noted by Daykin (1995), the pensions continued to be paid, and even accrued rights seem likely to be fulfilled (i.e. the scale of the loss should not be exaggerated).

4.3 Integration with social security

Certain regulatory issues are raised by the treatment of the relation between private pensions and social security. On the one hand, such so called integration rules may in some countries be important to ensure that workers gain an adequate pension, even if social security provisions are changed; on the other, well-designed integration is essential to ensure that savings anticipated for social security via the development of private pensions can be realised.

In the UK, integration rules are largely based on the objective of saving public money by ensuring there is no double provision. Accordingly, pension funds may substitute for earnings related social security, but tend not to³⁷ take flat rate social security into account. The substitution for SEPRS/S2P reduces future social security costs, at the expense of paying rebates upfront. The structure ensures a falling replacement ratio over the earnings scale, other things being equal. About half of UK private funds and most personal pensions integrate in this manner. On the one hand this may be seen as a form of insurance against social security changes as noted above. On the other hand it may in some cases be highly regressive, offering disproportionate pension benefits for those on high earnings.

4.4 Annuities

Whether to encourage annuities or lump sum withdrawals on returns is a key issue for all funded pension systems; assets are available for the retired person, why should they not realise them? Economically, lump sums are less desirable for a number of reasons, such as the fact they may be dissipated and not used for pensions, leaving people dependent on means-tested benefits;³⁸ they undercut protection for survivors; and may require a more liquid and hence costlier asset portfolio, reducing overall benefits; for defined contribution funds they have an adverse effect on the cost of annuities, as those buying annuities will be assumed to be bad risks for the insurance company, as they may expect to live a long time. There are also some arguments against compulsory annuitisation, although I consider them weaker. These include possible redistribution

37 Whereas integration with the 'Basic State Pension' is permitted, it has become very unpopular and is regarded as a form of 'claw back' by the trades unions, depriving the worker of rights.

38 This argument only applies to annuitisation of a minimum amount, and not necessarily the full sum available at retirement.

from short lived to long lived individuals, greater investment flexibility and the possibility of higher returns.

In the UK there is tax exemption for sizeable lump sums (up to 25% of the assets for personal pensions and other defined contribution funds, and up to a comparable fixed sum for defined benefit). This is undesirable for the reasons noted above.

On the other hand, compulsory annuity purchase for defined contribution funds on the day of retirement exposes the retiree to considerable market risk and interest rate risk. Such risks can be reduced by staggered purchase (delay in final purchase is possible up to age 75) or variable annuities invested in equities. At the time of writing, low yields on government bonds - partly themselves driven by the minimum funding requirement - raise this issue particularly acutely. Annuity rates in 2000 are half those available in 1995. More generally, the fact that membership of pension plans is voluntary even though annuitisation is compulsory means that providers of annuities to personal and other defined contribution plans face adverse selection (those individuals seeking annuities will be those expecting to live long), which raises their cost, with loadings of the order of 2-4% (although some studies quote figures as high as 10-14%) relative to the fair cost of annuities.³⁹ These issues do not arise for the beneficiaries of defined benefit funds, where the annuity is paid out of the fund itself - although the sponsor will face an implicit cost.

Blake (2000a) argues that for defined contribution funds, the allocation of risk bearing is not efficient, and would be aided by mandatory membership and 'survivor bonds', whose returns are based on the rate at which the cohort of retirees alive when the bond is issued dies out.

4.5 Inflation-indexation

Inflation indexation of defined benefit pensions after retirement has been a controversial issue since rapid inflation began in the 1970s. The move from career average to final salary defined benefit pension plans in the 1970s can be seen as an attempt to correct for effects of inflation prior to retirement (leaving open potential

³⁹ It may be added that insurance companies have tended to underestimate the rate at which life expectancy increases in the population as a whole, imposing major costs upon themselves.

difficulties for early leavers, and the issue of indexing after retirement). Compulsory indexation is generally seen as both costly and risky for the sponsor, as it increases sharply the level of benefit that it is contractually required to provide. Even where such indexation is customary, there is clearly a crucial legal difference in such a case. In terms of the funding concepts discussed in Section 3.2 above, it raises the ABO sharply. Conceptually discretion to index offers a form of risk-sharing between employer and employee in a defined benefit fund. Thus policy makers in most countries have tended historically to avoid legal provisions enforcing indexation.

Moreover, the data suggest that indexation after retirement was prevalent for occupational pensions in the UK even without regulation. Nevertheless, indexation has become a legal obligation in the UK. The 1995 Pension Act enforces indexation of pensions in payment for up to 5% inflation, at an estimated cost to schemes of £165 million per year. This applies to all occupational pension funds, whether defined benefit or defined contribution, although with the exception of contracted-out benefits accruing under earlier legislation, only for benefits accruing after the Act comes into force.

Meanwhile, personal pension holders only have to index the value of their 'protected rights' rebate from social security contributions. Beyond that,⁴⁰ it is largely a matter of choice whether the pensioner chooses a normal or indexed annuity. Since most individuals are subject to 'money illusion', they tend to choose level annuities, exposing them to inflation risks if they live for a relatively long time.

4.6 Eligibility and Portability

The main disadvantage of defined benefit funds, both in terms of equity and economic efficiency, relates to their effect on early leavers and hence labour mobility. Even in well-regulated defined benefit schemes, early leavers are subject to so-called portability losses, because earnings growth on which benefits would be based if remaining in the fund tends to exceed inflation indexation, which is typically the most an early leaver can expect. Women may be particularly vulnerable to such losses, as they change jobs more frequently and spend fewer years in one job. This issue does not

40 In fact, protected rights constitute a high proportion of most personal pension entitlements.

arise for defined contribution funds. However, an issue that may arise for both types of funds is the vesting of benefits, i.e. how long an employee needs to be a member before having a right to benefits for which they have contributed. In the absence of appropriate safeguards, workers may even be sacked by unscrupulous employers just before their benefits vest.

Such issues are of increasing importance in the context of the widely-reported decline in lifetime employment in the 1980s and 1990s, since they imply that early leavers will become much more common, and the employee staying with the same firm will become an exception. The reasons for such a decline reported in the UK include increased use of information technology, labour market deregulation which made redundancies less costly, increased competition with the EU Single Market, and so-called delayering resulting in flat or horizontal management structures, see Dickson et al (1994), Coyle (1993). Only 5% of workers stay with one firm for the full career, and the average worker changes jobs six times.

Such tendencies should not, however, be exaggerated; according to Burgess and Rees (1994), average completed job tenure in 1990 was estimated⁴¹ to be 18 years for men and 12 years for women. But this concealed major differences, with around 30 per cent of men having tenures of less than 5 years and 24 per cent over 30 years. They calculated that around 45% of the workforce could expect tenures of over 20 years, consistent with continuing 'lifetime employment'. Average tenure rises sharply with age (i.e. young people have the shortest tenures). There had been little change in these patterns since 1972, except for a slight decline in average tenure for men, which may link to the patterns highlighted above.

As regards the size of portability losses, Blake and Orszag (1997) show that changing jobs an average number of times leads to a loss of 25-30% relative to the pension of an individual earning the same wages but staying with one firm. Even one job change can cost 16%. Of course, the offset is the likely increase in salary that the employee gains from changing jobs.

Eligibility is important both in itself and in ensuring portability, since accrued rights are essential for a pension to be portable. Accordingly, in the UK vesting periods have

41 This was based on actual tenure data of 9.5 years for men and 6.3 years for women in 1992, multiplied by estimated chances of them continuing in their jobs.

been reduced to a maximum of two years, which ensure that benefits are non-forfeitable on retirement. In 1995, the European Court ruled that barring part time workers from pension funds was a form of discrimination against women and was hence illegal. The ruling was backdated to a previous 1976 judgement which had come to the same conclusion, but had been disregarded.⁴²

The authorities in the UK have also been active in ensuring portability for defined benefit funds. Cash transfers to another company scheme, a personal pension, an annuity or rights in the SERPS/S2P⁴³ are permitted for an early leaver with full allowance for benefits accrued, with present day value of acquired pension rights in defined benefit schemes being standardised under actuarial standard of practice GN11, combined with the minimum imposed on cash equivalents by the MFR.

Service credits in the case of final-salary based schemes are indexed by up to 5% until retirement. Note however that even with full indexation to prices of accrued benefits in final-salary plans, the early leaver loses out, because his real wage would probably have been higher at retirement; real wage indexation is required to ensure no losses occur, and this is only maintained where there are transfer circuits as in the Netherlands providing full transferability in line with years of service rather than cash equivalents. There is such a circuit in the public sector, but difficulties arise outside such circuits from the lack of standardisation of the actuarial valuation methods for liabilities. Employers will also only wish to join circuits when there is a fairly balanced two way flow of job changers. Industry wide schemes or a revalued career-average earnings basis are other solutions.

The promotion of defined contribution and personal pensions can be seen as linked to the difficulties of early leavers, since it gives the option of a pension which is not tied to an employer and is hence exempt from the related difficulties, although subject to problems such as lower contributions as noted elsewhere. Besides being portable between employers, holders of personal pensions are entitled in principle to change schemes, taking

42 Initial estimates suggested costs for UK funds could be as much as £7 billion. However, the likelihood that all those eligible would take up their full-backdated rights was limited, because they would have to raise all the employee contributions that they would have made over the period since 1976. Also, so-called 'objective justifications for barring part timers' were still to be allowed.

43 This has been restricted since 1997 to situations where a scheme is being wound up and the scheme is not fully funded under the MFR.

accumulated funds with them, or allow funds to accumulate in the old scheme at the same investment yield as funds of those remaining in the scheme. But costs of transfer between personal pension providers are severe and can be as high as 25-33% of assets (Blake 2000b). They arise from up-front costs that penalise early leavers, as well as exit charges per se.

These costs are of particular importance in the light of the wide variance between returns from different providers. Blake (2000b) shows that there is for example a 4.1 percentage point difference in the UK equity growth sector between the top and bottom quartiles, and 5.9 percentage points for smaller companies. If sustained for 40 years, such performance could lead to accumulated funds 3.2 and 5.3 times larger for choosing the top rather than the bottom quartile. Moreover, the process of an underperforming fund being wound-up or taken over is extremely protracted - an average of 16 years.⁴⁴ The new stakeholder pensions will seek to address this by requiring there to be no penalties if the fund is transferred to another provider.

4.7 Benefit distribution issues

Difficulties of early leavers, who implicitly subsidise those remaining until retirement, are not the only case of potentially inequitable internal transfers within defined benefit funds. As noted by Riley (1992a), in the UK the structure of most defined benefit schemes, which base pensions on final salary, gives incentives for managers to award themselves large salary increases in their last year of employment, thus benefiting particularly at the expense of early leavers and those workers (such as manual workers) whose real earnings often peak in mid career.

More generally, if contribution rates are based on expected average increases in salaries across the workforce, total contribution rates may fall short of costs for those whose salaries rise faster than the average, and vice versa for slow climbers. Besides direct transfers between employees, shortfalls are often compensated by highly unequal employer contribution rates. Dilnot et al (1994) suggest that in many UK firms contribution rates may be 10-20% for the bulk of staff, 30% for senior executives and 50% for directors.⁴⁵ Understanding of these issues by members may be hindered by the

44 Whereas the literature on asset manager performance shows that it is very rare for a fund to persistently outperform the market (Davis and Steil 2001), consistent underperformance is much more common.

45 Note that employee contributions in excess of 15% of salary (17.5% scaled for age in personal pensions) are not tax exempt. Employer contributions are not limited by tax exemption rules.

complex rules of a defined benefit plan, and regulation has made little progress in dealing with them.

Finally, given that the cost of providing a given rate of benefit accrual typically rises in a defined benefit funds (so-called 'backloading') as the worker nears retirement, there are strong incentives for firms to retire workers early, which may not be economically efficient. This will be particularly the case if unions force companies to treat workers as a group and not as individuals with varying productivity, thus forcing them to offer early retirement to the group based on its average productivity. Although firms may find it easy to use early retirement as a painless way of cutting the labour force, it may also unbalance the pension fund, especially if early retirees get more than what is actuarially fair, as an incentive. In this context, current tax regulations permit private pensions to commence at any time between the ages of 50 and 75.⁴⁶

One regulatory response to these issues has been to set a cap on the level of earnings on which contributions to and benefits from tax-approved pension funds are based - thus limiting the size of the pension, which avoids abusive transfers to highly-paid board members. Another issue under discussion is to raise the minimum age at which a tax advantageous pension may be drawn from 50 to 55, to reduce the incentive to lay off workers as early as possible.

46 Traditionally the standard retirement ages have followed those of the state pension, 60 for women and 65 for men until they are equalised at 65 in 2020. Since the Barber judgement in the European Court in 1990, which clarified the practical application of EC Directives on equal treatment, UK occupational pension funds have been obliged to equalise retirement ages and pension rights for men and women for all rights accrued since 1990; costs of this have been estimated to be £2 billion. These costs were, however, thought to have been reduced by a clarificatory judgement by the European Court in 1994, which allows employers to downgrade conditions for women workers in a way to equalise retirement ages at that of men, that is 65.

5 Structural aspects

5.1 Trustees

In common with other Anglo-American countries, the basis of occupational pension funds in the UK is in Trust Law, which was originally a means of ensuring endowments for widows and orphans were correctly managed. Trustees have fiduciary duties to hold the assets in trust for members, act impartially, keep accounts, check funding is in place, and seek expert advice when necessary. Under common law, in doing so they must 'act in the best interests of the beneficiaries'. The wide bounds offered by the funding rules give considerable responsibility to them to stand up to employers in insisting a scheme be funded. An essential support is provided by actuaries, who must check funding every three years.

There are perceived to be difficulties where trustees are not independent of the employer. Lack of independence may arise through a variety of channels, since employers as well as employees and pensioners are beneficiaries of the trust⁴⁷ - as they need to meet the balance of cost, which is in turn dependent on how well the assets are invested (Noble (1992)). In the case of Maxwell, fraud was partly concealed from fund trustees by the fund manager or stock custodian - both again controlled by Maxwell - but was partly legitimate self investment carried out with the knowledge of the (pliant) trustees, among whom were Maxwell himself and two of his sons. In other words, it partly revealed the inadequacy of legal provisions, as well as vulnerability of pension funds to fraud. The case has cast doubt on the use of trust law as applied in the UK, as the means of redress - civil action against trustees by members once things go wrong - were seen as inadequate. This is especially as members lack objective standards against which to monitor the fund and the trustees, and may find it difficult to interpret performance measurement data. Also, except in cases of theft and fraud, there has until now usually an indemnity clause in case of court action against trustees for breach of fiduciary rules. This left the sponsoring company to resolve the problem - and it may be insolvent. The 1995 Pensions Act introduces fines of up to £5000 for rule breaches by trustees, and eventual disqualification. A further bulwark against

47 Note that whereas they obtain the assets in the case of winding up, they are also responsible for making good shortfalls.

fraud would be independent custody of assets. This is not currently obligatory, unlike in the US; Myners recommends that it be made so.

The Goode Committee, which concluded that trust law remained a sensible basis for pension funds in the UK, recommended 1/3 of trustees should be elected by employees in defined benefit funds, and 2/3 in defined contribution funds; the 1995 Pensions Act only imposed 1/3 for each, despite the greater need for oversight by members of defined contribution schemes. Schemes with over 100 members must have a minimum of two employee trustees, under 100 they must have one.⁴⁸

Besides such problems, there may be conflicts of interest between scheme members and employer, or pensioners and working members that trustees may find it difficult to resolve (see Clark 2000). For example, when a mature scheme is underfunded, pensioners may prefer it to be wound up (since the ABO gives them all they wish), while the employees may prefer to take the risk that the employer will fund the shortfall later on. Such inequities in the case of winding up were resolved in the 1995 Pensions Act, which proposed that schemes whose assets were insufficient to pay all promised benefits should limit indexation for existing pensioners until there are enough assets to cover basic pension promises to deferred pensioners.

Some of trustees' responsibilities were also clarified in the 1995 Pensions Act. They are obliged to check self investment limits are followed, they have the duty to set the investment principles for fund managers to follow (in writing), are responsible for appointing auditors and actuaries; and some breaches of rules may lead to fines. Trustees may not indemnify themselves out of the fund for any fines imposed. A person convicted of an offence of dishonesty and deception, who has been bankrupt, or disqualified as a director, may not be a trustee. Actuaries and auditors of the scheme in question may not be trustees of it.

Myners pointed to the lack of investment skills among trustees of most pension funds, which was seen as contrary to satisfactory scheme governance. Notably, taking advice without ability to evaluate it was seen as contrary to effective decision making by trustees. Myners recommended that trustees should be paid and should acquire appropriate investment skills – albeit without proposing legislation at this stage.

48 There are provisions for employers to opt out of this provision if employees agree in a ballot.

5.2 Information

Standards of information for members are clearly a crucial complement to regulation, if rarely a substitute. For defined benefit schemes, members need to be aware of vesting and portability regulations as well as the state of funding, in order to know at a most basic level what the total remuneration of their employment is worth. Personal and defined contribution pension plans may require better information for members than defined benefit, given the direct dependence of pensions on the performance of the portfolio. Members need to be able to judge whether contributions are adequate, whether fund managers are performing well and whether investments are not too risky.

In the UK, under the 1986 Pension Schemes Regulation, trustees are required to disclose trust deeds and rules on request to members, prospective members, dependants and trades unions. New members must receive information within 13 weeks of entry to the fund, and retiring members must be informed of their options.

Annual reports must be provided to members of all occupational pension funds free of charge. They must provide information such as the names of trustees, actuaries and fund managers, number of beneficiaries, contributions, increase in benefits to current pensioners, distribution of assets across 13 types, and solvency. An actuarial certificate must be included stating to what extent that the scheme is financially viable⁴⁹ in percentage terms. Also the report must present results of performance measurement of fund managers and detail how fund managers are remunerated. Every three years a more detailed valuation report must be included, giving a view of long term viability.

The Maxwell case (above) has brought information further to the fore. Note, however, that published accounts did not hide the high level of self investment by the Maxwell funds. The problem for members was of understanding the associated risk - and the difficulty of redress. The lack of understanding is further illustrated by a 1987 survey of 1000 employees in 27 firms reported in Blake (1992), which showed 80% had never read pension information, 30% did not know what their retirement benefit would be and 20% did not know how much they paid in contributions. Furthermore, leverage of members in pension funds varies greatly. In defined benefit funds in unionised firms there may be a great deal of countervailing power, but this may be much less for defined contribution funds, and a fortiori personal pensions.

49 That is, in terms of the extent to which assets are available to pay obligations.

Information is a major problem for personal pensions, given it is difficult or costly for the purchaser of such pensions to obtain sufficient information on the quality of the service in question, and they are seeking investment of a sizeable proportion of their wealth, contracts are one-off and involve a commitment over time. Investor protection rules on paper were consequently tough from the outset, as required by the 1986 Financial Services Act. Product disclosure, best advice for the circumstances of the individual and cooling off periods are required under this Act for pensions as for other investment products. Also all companies providing such products had to be registered with the regulator.

The weakness of these rules was shown when, precisely in line with the theoretical concern, the UK securities regulator SIB (the predecessor of the FSA) found in 1993 that there was a potentially huge problem with misleading advice to leave company pension schemes, contrary to individuals' financial interests. Many others had been wrongly advised to leave the state earnings related pension.⁵⁰ Insurance salesmen, operating on a commission basis which gives a considerable sum for each pension contract, had evidently failed to offer 'best advice' on many occasions (Smith (1993), Blake (1995)).⁵¹ As noted, a key problem is that employers need not - and generally do not - contribute to personal pensions of their staff and commission rates for personal pensions are high. Loss of guarantees from defined benefit pensions were another loss to some individuals.

Full compensation was required for those who opted out of occupational pensions, transferred assets from them and lost out as a result of bad advice. The scale of the problem was not quantified precisely until the guidelines for an industry-wide review were published in October 1994. In the priority review, (for older consumers at or near retirement), more than 400,000 people were paid redress totalling £3.8 billion. In Phase 2 (for younger consumers, typically in their 30s and 40s), 900,000 policyholders have requested reviews. The overall cost of the review is estimated to be £13.8 billion.

50 Data from the Department of Social Security for 1991-2, released in 1994, gave the first comprehensive demographic breakdown of personal pension holders. As noted by Cohen (1994), it showed that large swathes of the 5 million holders in that year had evidently been ill-advised, since they included 1 million women who earned too little to benefit from the tax incentives which make contracting out of SERPS worthwhile, and also included many people over 45 years of age, who would have been better off remaining in SERPS. 18% of personal pensions had been sold to individuals with no income and 7% to those below the lower earnings limit who did not have to pay NI contributions.

51 Blake (1995) mentions the case of a miner who took a personal pension in 1989 and retired in 1994 aged 60. He received a pension of £734 pa and a lump sum of £2576. If he had stayed in the Miners Pension Fund, he would have had a pension of £1791 pa and a lump sum of £5125.

Following this scandal, new rules were introduced governing transfers out of occupational funds. There had to be an explanation in writing of why the shift was best advice; the same assumptions must be used in projecting the returns on the occupational and personal fund; all calculations must be done using a computerised transfer value analysis to increase the degree of objectivity; only specially trained individuals may conduct such analysis; and all such advice must be double checked within the insurance company. Equally, there are tougher disclosure rules for commissions. Since 1990, providers have had to declare surrender values for the first five years and commissions earned by salespeople, as a proportion of contributions. Since 1995, commissions have had to be declared in cash terms as well as full information about the cost of early surrender.

No doubt partly owing to these tighter rules, but also due to a loss of reputation by insurance companies, personal pension sales were hit severely. Meanwhile a purported weakness of 'Stakeholder Pensions' is that with commissions limited to 1%, it will not be economical to provide advice.

5.3 Regulatory structures

Effectiveness of pension fund regulation is influenced by regulatory structures and procedures and their link to organisational structure, which in the UK was historically somewhat unwieldy. The 1995 Pension Act, which followed the Goode Report, partly centralised regulation. A seven member Occupational Pensions Regulatory Authority was set up. Members are appointed by the government but at least one is suggested by life insurers, one by employers' groups, one by trades unions, and one by pensions professionals. A further two are experts in the pension field. The authority is able to appoint and remove trustees, set civil penalties, wind up schemes, impose fines on employers and trustees, and order restitution. It has the power to require documents from advisors, trustees and sponsors and to inspect premises. From its foundation in 1997 it had a staff of 200, financed by a levy on the pension fund sector. However, the regulator relies on 'whistle blowing' by professional advisors and scheme members to discover misdemeanours. This weakens (on grounds of cost) the suggestion of the Goode Committee that the regulator should routinely examine scheme financial statements.

An ombudsman provides redress for individual complaints against funds. Although a pension ombudsman already existed prior to the above mentioned Act, powers to investigate complaints of unfair treatment and adjudicate on disputes is being

increased. Fiscal aspects of regulation are dealt with separately by the Inland Revenue. Finally, it is the FSA which regulates life insurers offering personal pensions, and investment managers. So some fragmentation remains.

6 Conclusions

The main economic reasons for pension fund regulation are asymmetric information, monopoly power and certain non-market failure based reasons (such as ensuring tax subsidies are directed to retirement income provision). Moral hazard and adverse selection also underlie some types of regulation. Externality is less important than for banks. It has been shown that although there are a number of common themes, the types of regulation differ between defined benefit and defined contribution. An important determinant of this are the insurance features of defined benefit, absent in defined contribution, and the risk bearing by households for defined contribution. Reflecting this, the appropriateness of UK pension regulation in itself and as an illustration of best practice or pitfalls is best dealt with separately for occupational and personal pensions. Some general points apply however, such as the fact that the regulatory structure remains unwieldy, with several statutory bodies jointly responsible for regulation. The frequency of change in pension regulations is another weakness.

Historically the rules adopted for occupational funds in the UK tended to provide an appropriate balance between costs for the sponsor and protection of the beneficiary; for example:

- no effective minimum funding rules (apart from the element of contracted out schemes that replaced the state earnings related pension);
- asset and liability values calculated on an actuarial basis;
- associated tax laws which allow funding on a projected benefits basis;
- accounting rules which focus on income rather than market values, and which also encourage equity holdings;

- implicit prudent man rules on asset allocation, with a low level of permitted self investment;
- limits on ability of predators to extract surpluses;
- discretionary indexation of accrued benefits for early leavers, and of pensions in payment;
- transferability of accrued assets and vesting periods of two years;
- and independence of the fund from the employer.

But some would argue that costs have risen unduly in recent years. This links inter alia to the minimum funding requirement, which is felt to be a burden on companies with defined benefit funds, as well as compulsory indexation of pensions and the proposed introduction of market value based accounting for pensions. These are among the factors leading a range of firms to shift away from provision of defined benefit pensions.

Outstanding regulatory issues for occupational defined benefit funds include controls on internal transfers within defined benefit funds. The incentive to early retirement may distort the labour market. Also it would be desirable for 'transfer circuits' as in the Netherlands minimising losses to early leavers in defined benefit funds to be available more widely - perhaps helped⁵² by the government mandating a common set of actuarial assumptions, thus facilitating mutual recognition of years of service at other firms.

There remain inadequacies in the regulatory regime for personal pensions. Information for holders remains inadequate, not least given the complex choices they are faced with (such as choice of annuities at retirement) and their total dependence on fund managers' performance. To some extent, holders need understanding and education and not merely information. An issue which has not been addressed by regulation is contributions to such plans, the low level of which may threaten the retirement-income security of those concerned. This raises the question as to whether employers should be obliged to contribute to personal pensions of their employees (in the author's view, they should not, if they are already offering an adequate occupational fund). Again, the charges on personal pensions have been high, and only recently has an attempt has been made to reduce them by regulatory means. There is a more general

52 Common assumptions alone may not be sufficient to make transfer circuits attractive. Firms need to be confident of an even flow of workers in and out of the fund.

underlying issue, namely whether personal pensions are by nature unsuitable for the low paid who would otherwise be in SERPS/S2P. The jury is out on whether stakeholder pensions can remedy these problems.

Besides these general aspects, the paper incorporates implicit evaluations of the main aspects of UK pension regulation. These are as follows:

- the prudent man rule in the UK is a sensible approach to investment in line with finance theory.
- the introduction of the minimum funding requirement has led to a reduction of investment efficiency. Although the abolition of MFR is mooted by Myners, the new accounting standard FRS17 and the EU Directive could restore the related distortions.
- the logic of defined benefit funds is that any surplus of assets over liabilities should be available to the sponsor as a corporate asset, but some protection for members against abuse of this also are appropriate. The UK regulations appear to strike a fair balance – there is an issue whether Myners’ suggestions would tip the balance too far towards employers.
- the UK should arguably set higher minimum contribution levels to avoid widespread poverty in old age for holders of personal pensions. Commissions regulation for personal pensions is a gap which is only belatedly being addressed by Stakeholder Pensions.
- arguments for mandatory membership are strong both at the level of the fund and at a national level. The UK’s experiment with optional membership of occupational funds has led to some undesirable outcomes; lack of mandatory private pension provision more generally combined with low contributions to personal pensions may yet lead either to a burden on the state via means tested benefits or to widespread old-age poverty in coming decades.
- benefit insurance can lead to market distortion, as US experience has shown. In the light of Maxwell, the UK approach based solely on fraud avoids adverse incentives, while offering protection to pensioners.
- opting out of earnings related social security is the key to ensuring a low level of social security obligations in the UK. Only Japan among OECD countries has a similar approach. Allowing such opting out makes adequate regulation of pension funds even more important.

- the logic of pension funds is to have compulsory annuity payments. Whereas this is straightforward for defined benefit plans, the low level of government bond yields causes difficulties for defined contribution plans, which may require further regulatory adaptation. The case for mandatory pension provision is further underlined by 'adverse selection' difficulties in the annuities market.
- inflation indexation of pensions is essential to avoid widespread poverty in old age, particularly in the light of the low level of social security in the UK. Hence, it would seem appropriate for occupational funds. The regime for personal pensions would seem to be inadequate in this respect.
- portability has traditionally been the Achilles Heel of defined benefit plans. UK regulations have addressed these issues to a considerable extent, at the cost of reducing the attraction to sponsors - but without taking the step of introducing transfer circuits that would really solve the problem. The problem of costs of transfer between personal pension providers is belatedly being addressed by the Stakeholder initiative.
- although recent moves to improve portability are in the right direction, more radical shifts against final salary structures would be needed to eliminate the incentive to dismiss elderly workers. For example, the Dutch have discussed making career-average based defined benefit pensions mandatory.
- the trustee system links to the Anglo-Saxon legal tradition. Whereas it works well in the UK (subject to critiques such as Myners), it might not be appropriate in countries other legal traditions. The Dutch system of foundations or the German approach of captive insurance companies are alternatives.
- the low level of understanding of pension schemes by individuals has meant that information alone is not enough. The UK concluded at an early stage that both 'best advice' obligations and legal sanctions are needed to avoid abuses, despite which, the mis-selling scandal occurred, necessitating further tightening of regulation.

Overall, I suggest that the UK offers both positive and negative lessons for policy makers in other countries. Furthermore, I would argue that the main economic arguments for the superiority of certain types of regulation given in this paper have a general validity. Nevertheless, I caution that the details of regulation - and a fortiori the overall structure of pension provision - may need to be tuned in the light of contrasting domestic economic, financial, fiscal, legal and demographic features (see Davis 1998b).

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