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The economic basis for the regulation of pensions

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A report of research carried out by Imperial College Business School, Imperial College, London and Warwick Business School, University of Warwick on behalf of the Department for Work and Pensions

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Summary

The economics of pension provision

The regulation of pensions must start from an understanding of why occupational pensions exist, and the nature of the public interest in them. Occupational pensions provide a more efficient savings vehicle than the retail market: they have lower transaction costs than personal pensions, and individuals who join them are protected from mis-selling by the presence of the employer, lessening the need for financial advice. Remunerating employees through occupational pensions rather than through higher wages may be efficient, and that is why employers provide them voluntarily.

Employers can also use their pension plans to achieve human resource objectives, such as recruiting and retaining staff, and ensuring that staff retire at the right time. Defined Benefit (DB) pensions, whose finances usually depend on the continuing viability of the employer, may also align workers' interests with those of the employer and give the employer increased financial flexibility.

The employers' interests in providing pensions are not necessarily aligned with those of the public or with those of individual pension scheme members, leading to potential conflicts that may require regulation.

The economics of risk sharing

Pension schemes such as trust-based DB pensions, which allow risks to be shared between employees and employers, and between different generations and classes of employees, offer potential advantages over contract-based pensions such as Defined Contribution (DC) pensions or personal pensions.

Inter-generational risk-smoothing, in particular, could enhance individual welfare by allowing different generations of employees to pool their risks across time. But it is difficult to implement in practice: private schemes which share risks between generations are inherently unstable, because at some point the inherited deficit will eventually become unsustainable; they are vulnerable to adverse selection, because potential employees will shun under-funded arrangements,

and are subject to moral hazard, because future generations are not represented in decision-making.

Another possible advantage of trust-based DB pensions is that they are more flexible in dealing with unforeseen situations because they leave ownership rights and obligations less clearly defined than contractual systems. But this, too, poses challenges: lack of precision in defining entitlements and benefits leaves parties vulnerable to unforeseen changes in bargaining power, and may allow them to develop incompatible views about their entitlements, leading to inefficiencies. We believe that incompatible views of pension entitlements underlie much of the recent regulation of DB pensions in the UK.

From a regulatory perspective, there is no need to take a stand in favour or against particular arrangements like DB or DC. What is necessary is to have a clear view of the role of regulation and understand the particular regulatory challenges inherent in different arrangements.

The economics of pension regulation

We identify three broad areas of regulation: information, prudential regulation, and product design. We examine how these apply to pensions.

Markets cannot function efficiently unless participants are properly informed, but the recent history of pensions policy in the UK suggests that this is far from the case in our pension system.

Prudential regulation in DB schemes is necessary because individuals are not able to evaluate the security of their pensions on their own. Since the costs of providing pension security are high, this means that an unregulated market will provide an inefficiently low level of benefit security to individuals.

Product regulation has serious disadvantages: it prevents employers and employees from reaching their own arrangements, and it is hard to change, even when changed circumstances make regulated product features inappropriate.

The fact that pensions are voluntary should not, in our view, lead to lighter regulation of pension promises: pensions are part of compensation, paid for by the employee indirectly through their labour.

The regulation of retail financial products

There are a number of similarities between pensions and retail financial products (as well as some important differences), so it is useful to see how the latter are regulated. The Financial Services Authority (FSA) places heavy emphasis on ensuring that financial products that are recommended to purchasers are suitable for the client, and on ensuring that the client is suitably informed about the costs and benefits of purchasing the product. The FSA appears reluctant to regulate product design.

Prudential regulation of insurance companies is almost universal. There are good reasons for this: the cost of establishing the value of insurance contracts relative to their size is high; the liabilities of insurance companies are held by individuals with no competence in assessing whether they will be honoured; there are no market prices for insurance company liabilities, and insurance companies can be massively insolvent and yet not display any obvious signs of it. The arguments justifying the regulation of insurance companies apply equally to pension plans.

Principles of pension regulation

We develop the following principles which we believe should underlie the regulation of pensions:

1. Any pension design should be simple enough so that it can be easily understood by employees.
2. Members must be informed in objective terms about the benefits and risks of the scheme when they enrol.
3. Joining an occupational pension scheme should be financially beneficial for almost all employees so that they can be safely enrolled without financial advice.
4. Employers must have no direct commercial interest in the employee's participation.
5. The scheme must meet high solvency standards so that promised benefits can be paid with a high degree of probability even if the sponsor fails and the scheme closes. These standards should be at least as strong as those offered by insurance companies.

Regulating our current pension system

We now make proposals for changing our existing system of pension regulation, taking into account our analysis and the principles we have proposed.

In DC pension plans, we see few issues. Pensions, in our view, are justifiably exempt from many of the regulations governing the marketing of other financial products, provided they are made suitable for the vast majority of enrolees, which something like the stakeholder guidelines (limited charges; low minimum contributions; flexible contributions; penalty-free transfers; suitable defaults) should be sufficient to achieve. Prudential regulation of these products should not be different to that of similar products sold by insurance companies as the issues raised are substantially the same.

In DB pension plans, the issues are complex. If employees are to be enrolled without financial advice, joining must be in the financial interests of virtually all employees, and the risks of joining must be readily understood. The product design regulations imposed on pensions – in particular, the indexation provisions – are not necessary

for this criterion to be met. Rather, these are a response to the moral hazard and governance problems caused by the imprecise definition of ownership claims of DB pension assets. The regulator should only ensure that the benefit design is clearly defined, simple enough to be understood without expert financial advice, and on terms that are sufficiently favourable to individual members so that they do not need personalised advice.

The best way forward for the prudential regulation of DB pension schemes is to bring them more in line with other financial products. This would involve a substantial strengthening of the prudential regulation.

We recognise that this view is directly counter to that of the Department for Work and Pensions (DWP), and to UK Government policy in this area which does not support the extension of the European Solvency II insurance regulations to occupational pension plans.

As a partial solution, we suggest that the technical provisions of DB pension schemes be redefined to equal a certain percentage of the buy-out value of liabilities; this percentage should be significantly above the Pension Protection Fund (PPF) level of benefits. This would place trustees in a much more favourable position to negotiate improvements in security over and above the PPF level. We also suggest that the Government use the powers of the regulator and the PPF to ensure full funding to at least PPF levels among those schemes where the sponsor has the financial capability to provide it. In addition, we recommend that the regulator use its existing powers to prevent very underfunded schemes, or those with weak sponsors, from accruing new benefits. We believe that these changes will enhance both the security of current benefits, and the transparency of the system.

Regulating a new pension system

We apply our analytical framework to two proposed new scheme designs, 'Conditional Indexation' and 'Collective DC' pension plans.

We believe that 'Conditional Indexation' schemes fit well with all but the first two of our principles. In the UK single-employer pension system, the nature of the contract, and the risks to which it will expose members, are probably too difficult to explain to allow members to enrol without requiring them to seek financial advice.

Similarly, the main issue with Collective DC plans will be explaining the nature of the intergenerational contract to prospective members. In the UK context, the Collective DC model is probably too opaque to permit prospective employees to join without financial advice, and too unstable to permit it to transfer resources between different generations. Any regulatory interventions which try to rectify these issues will also remove the advantages of Collective DC over individual DC.

1 Introduction

Pension regulation has grown piecemeal, driven by diverse objectives: protection of the individual worker, improving the operation of the labour market, protecting tax revenues, reducing demands on social security, improving coordination between the private and State Pension systems, and altering the balance between public and private provision. The purpose of this paper is to set out a coherent rationale for the regulation of occupational pensions, and to review the main features of the current regime. We also provide suggestions for the regulation of various proposed pension designs.

The regulatory system must take account of the nature of the economic activity being regulated; we start by looking at why employers provide pensions. We go on to look at the public interest in the provision of private pensions, and proceed to examine the rationale for regulating the activity. We compare the regulation of occupational pensions with the regulation of retail financial products. On the basis of this analysis, we draw conclusions, highlighting the key policy issues and setting out the principles that should guide regulation in the area of pensions.

We look at occupational rather than personal pensions, and do not analyse the general features that apply to all types of pension, whether personal or occupational: their tax treatment, the restrictions on withdrawal before retirement, compulsory annuitisation. In the Appendix we describe the main regulatory features of the different types of occupational pension.

2 The economics of pensions

Sensible regulation must start from an understanding of the activity that is being regulated. It is not immediately obvious why occupational pensions exist at all. Employers do not need to contribute to their employees' pensions; while they are legally required to offer a pension scheme to their employees, they are not currently required to pay any money into them. Why not pay employees entirely in cash, and let them decide how much of their income to devote to pensions? Paying employees through pensions that they would not choose to buy for themselves appears to be inefficient.

Tax provides only a limited answer. Many of the tax provisions that apply to occupational pensions (tax-free contributions, tax-free accumulation, tax-free lump sum on retirement) apply also to personal pensions. Occupational pensions get better treatment under National Insurance, but this could also be obtained by the employer agreeing with individual employees that some part of the wage be paid as a contribution to the employee's pension fund. It certainly provides no explanation for the type of occupational pension scheme we see where employees who join the company pension scheme get a contribution from the employer, and those who do not get nothing. It also does not explain why companies not only contribute to their employees' pensions, but also provide the pension through a trust set up for the purpose.

One important reason for the existence of occupational pension funds is transaction costs. Retail financial products (apart from deposit accounts) typically involve high marketing and administration costs. There are many suppliers of pensions, selling products that are hard to distinguish from each other. There is no obvious age or other point at which to start a pension plan, so it is hard to target marketing resources. With the variety of products available and the opacity of charges, advice is generally required before purchase, and that is costly. The costs have to be recovered through charges and these severely reduce returns to savers, particularly those saving small amounts.

Occupational pensions provide a channel for long-term saving for retirement that is more efficient than the retail market; the cost of marketing, sales and account management are reduced by selling through the workplace. Marketing costs are reduced by tying the savings decision to employment, and by offering a single product or suite of products. Administration costs are kept low by integration of contributions with payroll. The need for individual advice is reduced because the individual is no longer dealing directly with a commercial provider and is protected from potential mis-selling by the presence of the employer (who has no direct interest in the sale of high margin financial products) and, in some cases, by the scheme's trustees. The choice in an occupational pension scheme is between joining the scheme, and benefiting from the employer's contribution, or making other arrangements oneself and losing the employer contribution; for most people joining the pension scheme is the right choice.

Although empirical evidence on these points is equivocal, there are also reasons why the employer might want to pay the employee in the form of deferred wages rather than current wages. They may want to attract the type of employee who has a preference for deferred wages. It may also be costly to the employer if their employees, nearing the age at which they wish to retire, have inadequate pensions.¹

2.1 Pension schemes as an instrument of human resources

The DC pension has little effect on incentives. The employer's contribution is limited to the actual contribution put into what is effectively an individual pot, a pot which is under the control of the employee and which the employee is free to take with him when he goes. The traditional final salary scheme, on the other hand, does not give the member ownership of a precisely defined set of marketable assets, but rather gives certain rights over a trust. The pension plan can be designed to have powerful incentive effects, and can be used as an important instrument of human resources policy.

A DB plan tends to give preference to certain categories of employee (those with long life expectation, those with dependents, those who experience substantial wage growth over their working lives, and those who stay long with the firm). In part, at least, this has been quite intentional and helps explain why employers have set up and financed such schemes. For instance, schemes traditionally granted poor deferred pensions or transfer values to early leavers, effectively using their pensions to subsidise the pensions of long stayers, and to encourage staff retention. This may reduce the labour costs of the firm in the long run; it does so at the expense of increasing the riskiness of the pension benefit for some classes of employees. The ability to discriminate against early leavers has been

¹ For instance, the employee may defer retirement, possibly resulting in harm to the employer or others, or may retire with an inadequate pension and thereby pose a reputational risk to the employer.

severely constrained by regulation requiring revaluation of deferred pensions, and by regulation on transfer rights.

DB schemes are generally designed so as to provide a strong financial incentive to retire at a particular age. This can be useful to employers in helping manage the orderly exit of employees from the labour force, although it may have the unintended consequence of lowering labour force participation at older ages.²

The finances of DB schemes usually depend on a continuing employer contribution, and this has important implications:

- **incentive effects:** in a DB pension scheme, the size of the final pension and the security of it are tied to the fortunes of the company. This may provide incentives for workers which would not exist in a third party scheme;
- **provision of financial flexibility to the sponsoring company:** a firm with an underfunded pension scheme and restricted access to capital markets may face a choice between making contributions to its pension scheme and improving pension security, or using funds for investment so protecting job security. Current workers have an interest in both job security and pension security. Under the trust structure, it is possible to trade off between these alternatives. If pensions were bought (and paid for) from a third party, it would be possible to trade future pension accruals against the current funding needs of the company, but it would not be possible to bring past accruals into the equation because the company would already have paid for these in full.

It is striking that, however important these advantages of a DB scheme may have been, the regulatory changes that have taken place over the past 30 years have served to limit them severely. With the employer precluded from walking away from an underfunded scheme, with stricter funding requirements, and with greater accounting transparency revealing the mismatch between pension assets and liabilities, the flexibility of financing has been severely diminished; one could even argue that the scheme has become a source of financial instability. The establishment of the PPF, which has given pensions greater protection than previously, has also weakened the link between the workers' pension and the fortunes of the employer.

² For more information on this point, see McCarthy and Neuberger (2004), who summarise the academic literature on the labour market effects of pensions, Zissimopoulos *et al.* (2007), who analyse the impact of pension design on retirement, and find that DB plans delay retirement, and Gruber and Wise (1999), who document the enormous disincentives for continued work at older ages created by (mainly DB) social security systems around the world.

3 Risk-sharing in Defined Benefit pensions

The standard DB pension scheme offers the scope for extensive risk-sharing – sharing between employer (or shareholders) and employees, between classes of workers such as current workers and those who are retired, and younger and older workers and between individual workers. Before we can discuss how to regulate such schemes, we need to understand the merits of this form of risk-sharing.

The market provides a satisfactory mechanism for trading many kinds of risk, so in a DC scheme, individuals can, for example, decide whether to take equity risk, or whether to protect themselves against living too long. Insurance markets pool idiosyncratic risks between different people at the same point in time, or even over relatively long periods of time. Motor insurance, travel insurance, group life insurance and life annuities all collect premiums from everyone as a condition of membership and redistribute most of them to those members of the group who suffer some kind of pre-defined loss during a particular time period. The entitlements of members are specified precisely, and the residual risk is reduced to such an extent by diversification that it can be borne by a small cushion of equity which can be provided by a third party.

But where risks are not traded on markets, the DB structure offers the possibility of sharing risk that is not available with DC. Risks may not be traded on markets because asymmetric information problems leading to moral hazard or adverse selection may make trading them impossible or very expensive. For instance, over the long horizons that are relevant to pensions, uncertainties about one's future earning capacity, about financial needs in old age, and about the viability of one's employer cannot be insured against or hedged by trading in markets. The long-term uncertainties in pensions may make it very difficult to write a contract today which will be desirable, or even enforceable, in a world which might look very different to the one in which it was written. Finally, future generations, which are the natural party to bear many long-term risks, have not yet been born and therefore, do not trade in financial markets today, which severely constrains the ability of financial markets to deal with long-term risks.

Trust-based systems, where individuals have no direct contractual entitlement to benefits, but instead agree to abide by the decisions of a system of governance, offer a natural solution to some of these difficulties. The best examples are state benefits such as welfare systems, social security, and, in the UK, the National Health Service. This type of arrangement has a crucial advantage: it gives greater resilience in a world where we cannot specify exactly what events may even occur, let alone place probabilities on them. DB pension schemes are one other example of such an arrangement.

3.1 Inter-generational smoothing

To see the potential advantages of inter-generational smoothing, consider an overlapping generations model, where each generation works for one period and retires for one period.³ If individuals are constrained to trade only when they are alive, they are limited in the investment strategies they can follow: they must invest cash contributions when they are earned, and disinvest when they retire. But if we create an institution – such as a DB pension plan – which can trade on behalf of individuals long before they are born, a much wider set of investment strategies become feasible. For instance, the pension plan could borrow money long before an individual is born, invest it, use the individual's contributions when they arrive to repay the debt, and the proceeds of the investments to pay benefits.

By being prepared to take a long view, investing future contributions in advance of their receipt, the member of a DB pension scheme can benefit by getting several generations worth of risk adjusted return in a way that is not open to a DC scheme member.

There is a snag, however. When individuals arrive in the scheme, they will find that their contributions will already have been invested for many periods. In principle, they will welcome this because it will have enabled them to benefit from the market risk premium in preceding generations. However, if the market has done badly, the value of the portfolio they will inherit will be less than the value of their contribution. Or to put the point another way, the scheme at the point they enter it will have a deficit as its financial assets are lower than its borrowing. If employees are free to refuse to join the pension scheme and invest their contributions in a DC scheme, they will wish to do so.

The scheme could follow an investment strategy such that the value of the fund held for all future individuals does not have a deficit at the time each enters the labour market. This would avoid the problem of non-participation because the scheme could, if necessary, repay the entire loan by liquidating the portfolio.

³ This section is an abridgement of Allen and Gale (1997). Other authors who have considered inter-generational risk-sharing strategies of this type, specifically in pension funds, include Gollier (2008), van Hemert (2005) and Cui, *et al.* (2009). The issue is also discussed in the context of state pension schemes by Shiller (1999) and by Kruger and Kubler (2006).

But the only investment strategy that would achieve this objective would be to invest in risk-free securities. In effect the DB scheme avoids the danger of future employees not joining the scheme by not taking on any risk until it receives their contributions. But that would then put the DB scheme in the same position as a DC scheme.

The employer could step in and guarantee the investment strategy of the fund if it is running a deficit. But the lifespan of the average employer is probably not much longer than that of employees, making the credibility of the promise doubtful. It also destroys the point of the exercise, because when current shareholders bear the risk of the investment strategy, they render any time diversification moot.

The only other party who could guarantee the scheme's debt if the contributions of future generations are insufficient to pay off any deficit are members of the current generation. But there is a problem in creating a sustainable chain of cross-generational guarantees. Any such scheme requires a minimum solvency level in order to protect future generations. As the scheme's funding level approaches this minimum, the scheme must do two things to avoid a breach: it must cut back the level of pensions paid, and reduce the riskiness of its investment strategy.

It can be shown that any sufficiently long lived scheme will hit a period when the pay-out policy is so mean and the investment strategy so risk averse that workers would be better off leaving the scheme and setting up a separate DC scheme. When this happens, the scheme must liquidate, and the current generation of pensioners get the amount of money in the scheme.

For this reason, these types of risk-sharing schemes are inherently unstable if participation is voluntary. This introduces a credibility problem, which the presence of the employer reduces, but cannot entirely overcome.

But there are other problems. Firstly, the fact that pensions are associated with an employment contract does not ameliorate the problem of adverse selection. Employees will require a higher wage to join a firm with an under-capitalised pension than an over-capitalised one, effectively eliminating any inter-generational risk sharing (because shareholders must make up any anticipated deficit or surplus to each generation).

Secondly, there is a serious moral hazard problem. Even if the current employees and pensioners could agree to pool risk, there is no way of representing the interests of future generations of workers, which could therefore be vulnerable to exploitation. Bohn (2003), for instance, finds evidence that governments systematically pass risk on to unborn generations at unfavourable terms. Van Bommel (2007) shows theoretically that inter-generational risk-smoothing vehicles are unstable if particular generations can raid the surplus when it has arisen.

3.2 Benefit flexibility

Besides inter-generational risk sharing, the flexibility inherent in DB schemes is beneficial, because it could allow the parties to respond to unforeseen events. In principle, given the large uncertainties that arise over the time span of a working life, this is very attractive. Radical changes in longevity, the consequent ability of individuals to work longer, and significant increases in capital market efficiency were all unforeseen and have had a profound impact on pension schemes. But flexibility is only useful if the governance of the scheme does lead to an optimal allocation of resources rather than simply giving more to the party with the greatest power. For instance, current pooling of cohort longevity risk in DB schemes requires generations which have a short life-span – presumably because of disease, war, poverty, or other hardship – to subsidise the retirement income of generations which have the good fortune to live longer. This is far from a fair allocation of risk which we argue would transfer resources the other way.

Pension schemes where pension upratings and the corresponding contribution from the employer are left fluid do allow the parties to take account of unforeseen changes in the needs and assets of the parties, but they also make them subject to unforeseen changes in bargaining power that may well be undesirable.

Another challenge caused by a lack of clear ownership rights is the potential for the parties to develop views about their rights and entitlements – the right of the employer to walk away, the right of the beneficiary to a full pension – that are incompatible. These views, when they become apparent, generate strong pressures for regulation limiting the extent of risk sharing, as we have seen in DB schemes in the UK. This is inefficient. Employees who placed excessive trust in the reliability of the pension promise may make less provision for alternatives; shareholders who find that the commitments they made were more generous than they had intended may reduce investment in otherwise profitable projects as a consequence.

Collective DB schemes have some particular problems apart from the difficulty of realising the benefits of risk-sharing. First, it is hard to combine a risk-sharing scheme with giving the individual member significant choice over risk profile or form of benefit. Second, if a scheme is underfunded or the sponsor is financially weak, joining the scheme may not be in the interests of an individual employee. This raises the prospect of requiring employees to have access to independent advice before joining – something that would gravely undermine the economics of the occupational pension scheme.

Overall, while trust-based occupational pension schemes do offer unusual opportunities for risk-sharing, we are sceptical of their ability to provide robust protection against unquantifiable risks or to diversify risks across different generations, with or without the presence of an employer.

4 The public interest in pensions

Before looking in detail at the regulation of pensions, it is important to understand the ways in which private arrangements between employer and employee become the subject of public interest.

There is a public interest in encouraging pension savings as a way of reducing old age poverty. A good pension system both reduces poverty and leads to lower demands on the social security budget. Company pension schemes have provided an important mechanism for building up pension savings; in their absence, some people would surely have made alternative arrangements for themselves, but it seems probable that the scale of saving would have been lower, and the degree of poverty would have been higher.

At various times, most notably with the State Earnings Related Pension Scheme (SERPS) government has shown an interest in pensions not merely as a means of avoiding poverty in old age, but also as a means of enabling people to maintain their previous living standard in retirement. Occupational pensions provide just such a mechanism for income replacement.

Furthermore, governments would be bound to take an interest in pensions because of their significance in household finances. Surveys indicate that even though occupational pension plan membership has been dropping, pensions are still the most important asset for many households besides residential housing.

The importance of pensions, and the general public interest in supporting pensions has led governments over many years to encourage pension savings in ways that they have not done for life insurance or other forms of savings, and may explain why the tax reliefs granted to pension savings have survived so long. It also underlines the importance of setting a sound regulatory framework for pensions, one that allows people to build up confidence in the pensions system.

The interaction of private pensions with the operation of the labour market is also of potential public interest. As we have seen, the traditional design of final salary schemes meant that job changers ended up with far lower pensions than people who stayed with the same employer. This has largely been remedied by mandatory revaluation of accrued benefits. While the perceived unfairness of the treatment of early leavers was undoubtedly a factor, so too was the Government's interest in having a flexible labour market where people were not locked into jobs by their pensions. Also, occupational DB pensions may, as discussed, have contributed to lower labour force participation at older ages, a pressing policy issue in an ageing society.

5 The economics of pension regulation

The economist's perspective on regulation is fundamentally conservative. It starts from the premise that the market provides a mechanism for revealing preferences and arriving at outcomes that balance costs and benefits in the most efficient manner. Regulation, by precluding certain outcomes, is generally costly. It may be necessary to correct for market failure. But, if regulation is to improve matters, the nature of the market failure needs to be carefully identified, and the regulatory response needs to be the minimum necessary to overcome that failure. We consider three different areas of regulation: information, solvency and product design.

5.1 Information

Of all forms of regulation, requiring that certain information be provided to employees seems relatively modest. The costs of information provision are not zero, but they tend to be relatively small. Provided the information is accurate and not misleading, it is difficult to see how it can do harm, and it may do a great deal of good.

The market cannot operate efficiently unless people are properly informed. Employees need to know and understand the risks they are likely to face in old age. In particular, they need to understand what they are entitled to under any pension plan they join, and they should know the risks that their pensions are exposed to. They need to understand their occupational pension because it is likely to be a major component of their remuneration. Decisions about saving, working or retirement, and other major long-term personal financial decisions will be heavily affected by beliefs about pension arrangements. If pension arrangements are unclear or misunderstood, the costs for the individual are potentially large.

The recent history of pensions policy in the UK suggests that employees are far from fully informed about the benefits and risks in their pension plan. This lack of information has been damaging. Pension experts understand that funding rules for DB pension schemes do not, and never have, guaranteed accrued rights. There

is no obligation to fully fund the obligations of the pension scheme. Underfunding is substantial and persistent; the 2008 Purple Book shows that private sector DB schemes had assets equal to only 62 per cent of the buy-out value of their liabilities in March 2007.⁴ The underfunding, together with the priority rules meant that, before the PPF came into existence, a current employee or a deferred pensioner ran the risk of getting only a small proportion of their accrued rights if their employer failed. It seems doubtful whether many scheme members understood the degree to which their future pensions depended on the continuing viability of their employer.

Had members fully understood the risks they bore, it would have been reasonable to argue that they had no more grounds for compensation from the taxpayer for the loss of their pensions when their employers went into liquidation than they had for compensation for the loss of their future earnings, which are also dependent on the future viability of the employer. There would have been little justification for the Financial Assistance Scheme under which the taxpayer has picked up the cost of compensating scheme members when schemes failed between 1997 – 2005, prior to the establishment of the PPF.

Had members understood more clearly what pension schemes were offering, it is at least arguable that they would have pressed employers to make different arrangements. Quite what changes there would have been – better scheme funding, a change in promised benefits – is uncertain. But one major objective of regulation is to minimise the danger of people entering into financial arrangements that they would not have done had they understood them fully.

5.2 Prudential regulation

All pension schemes, whether DB or DC, involve large sums of money, and are subject to regulation that is intended to ensure that the scheme's responsibilities with regard to contributions and benefits are executed correctly, that the assets are protected and so on. But this form of regulation is largely uncontroversial, and need not detain us here. The most difficult and important issues of prudential regulation occur with DB plans where the assets of the scheme (the financial assets, the employer's covenant) and the liabilities (the accrued pension rights) are not matched, and pensions are not completely secure.

The difficulty of devising a prudential regime is not hard to understand. Prudential regulation is potentially a very costly form of intervention. To give some idea of the magnitudes involved, if all DB pension schemes were required to be fully funded in aggregate on a buy-out basis, they would as at March 2008 have needed to have had an additional £520 billion of assets. The PPF levy, which pays for the

⁴ The buy-out cost is used because it represents the cost of replacing the benefits from a third party, even though this cost might include expenses, risk loadings and profit that the pension fund sponsor may be willing to forgo.

cost of providing only partial protection for members of underfunded DB pension schemes that fail, runs at £700 million per year.

Providing security to pension promises is costly, but the benefits of security are also considerable. In principle, one could leave the decision on the trade off between security and cost to the parties to the pension scheme – the employer and the employees – who could jointly make decisions taking account of the particular circumstances facing the company. That in fact was pretty much the case in the UK until the Minimum Funding Requirement was introduced in the 1995 Pensions Act. But there are severe problems with this approach. Individual members do not have the information to understand the risk to their own pensions, and even had they got the factual information, they could not reasonably be expected to understand it and turn it into a useful measure of risk.

If scheme members do not understand the level of security behind their pensions, there is little incentive on employers to devote financial resources to make them more secure. Schemes will fail, and because members of other schemes have no better information, they will naturally assume that their own schemes are at risk, and will lose confidence in them. The result of an unregulated market is a lower level of security (and lower level of cost) than an efficient market would deliver.

If this argument is accepted, it is hard to see how prudential regulation could have a lesser aim than ensuring that company pension schemes do have the resources to meet the obligations they have made to their employees. Any lesser degree of security would be hard to explain in a way that members could understand. And it is difficult to see how this can be done without requiring that pension schemes are fully funded in the sense that they have assets in place (including contingent assets such as guarantees) that can be confidently predicted to meet their accrued liabilities should the sponsor default and the benefits need to be purchased from a third party.

5.3 Product design

Product regulation has always been an important feature of pensions. The economic case for product regulation is less clear than for prudential regulation. Pension entitlements of early leavers, or the degree to which pensions are protected against inflation can be described in reasonably simple terms. Different schemes could offer different benefits, and members could appreciate what level of benefits their own scheme provides.

Historically, there have been a number of forces encouraging product design regulation (the protection of public revenues, labour market policy, integration of state and private pension system) that we will review below. But we focus in the first place on the case for product regulation to protect the interests of individual members.

One line of argument is that people are myopic and poorly informed, and need protection. The function of the regulator is to require that pensions have those features that would be agreed in an efficient market had scheme members been far-sighted and well-informed. People may not understand the degree to which inflation could undermine the value of their pension, they may overestimate the probability that they will stay with their current employer, and so the regulator should mandate that pensions be protected against inflation and people who change jobs should not end up with significantly worse pensions than those who stay with one employer.

The regulatory process does not operate in a vacuum, and is itself subject to a number of short-term pressures. But even if we grant that the regulator is wiser and more far-sighted than the scheme member, there are serious drawbacks to product regulation. In general, regulation adds features whose perceived value is less than their cost (otherwise they would presumably have agreed them without regulation). If employees undervalue indexation, then paying employees through an indexed pension is an inefficient way of recruiting and retaining them. The more such features are required, the more likely employers and employees are to agree that less of the overall remuneration should be provided as pension, and more as pay.

Product regulation is inflexible, and inhibits employers and employees from reaching their own arrangements that may be suited to their particular circumstances. It is not irrational for employees to prefer higher pensions that are not inflation protected to lower pensions that are inflation protected. Indeed, it seems unlikely that rational, far-sighted employees would have opted for the type of pension promise found in many DB schemes that combines extremely high protection against some risks (longevity, equity return) and concentrated exposure to others (credit exposure to employer, exposure to high inflation).⁵

Regulation is also inflexible in the sense that it is hard to change. In the 1980s and 1990s, when protection for accrued rights was greatly improved, it might have been reasonable to judge that with pension funds in surplus, and with the considerable tax advantages to running a company pension plan, the improvement in benefits would not be offset to any significant extent by plan closures. But circumstances change. With schemes in deficit, and with the tax benefits of pension plans declining sharply as nominal interest rates and tax rates both fell, the case for running a company scheme look much less obvious. Yet it is very hard to change regulation to reduce the level of benefits provided.

It is noteworthy that there is little direct regulation of product design in the case either of DC pensions or, as we will see, of other retail savings products. The pressure to regulate product design seems to be more of a response to problems caused by the fluidity of ownership rights in a DB pension plan than it does to the need to protect members in general from their own myopia.

⁵ The first implies that individuals are extremely risk averse; the second not.

5.4 The voluntary nature of pensions

As we have seen, pensions are essentially voluntary arrangements between employer and employee. But they are arrangements that the Government has an interest in fostering and encouraging. It is tempting to infer that regulation of pensions should, therefore, be much lighter than for commercial arrangements where the beneficiary is paying for the provision directly. Regulation that increases costs for the employer will lead to pension provision being cut back. Tighter regulation that is aimed at protecting the employee will end up harming those it is meant to protect.

We do not accept this argument. Regulation of any service, whether provided commercially or voluntarily, will tend to preclude arrangements that would otherwise have gone ahead and will therefore tend to reduce the level of provision. It is important that regulations address a well-defined market failure and are proportionate to that failure, taking full account of the unintended consequences. But the voluntary nature of pension provision is not relevant.

The pension promise is not a gift; it is part of the remuneration package that induces employees to join a firm or stay with it. Employers provide pensions because it makes commercial sense for them to do so. While empirical evidence that employees in pension schemes sacrifice pay for pensions is mixed, the main reasons that employers establish pension schemes are to help in the recruitment and retention of staff, and to manage their orderly exit from the labour market.

Even if employees do not pay the full costs of their pensions directly, they are an important factor in deciding whether to join one employer rather than another, or whether and when to leave one employer for another. The legal characterization of pensions as deferred wages encapsulates the point: pension rights are part of compensation and as such are paid for by the employee indirectly through their labour. Whether pensions are voluntary or not does not alter this fact.

6 The regulation of retail financial products

Pensions are financial products. It is useful therefore to consider the theory and practice governing the regulation of retail financial products. In this section, we focus specifically on their marketing, product design and solvency.

6.1 The marketing of financial products

The sale and marketing of financial products is subject to comprehensive regulation by the FSA. In 'A Review of Retail Distribution' (FSA, 2007), the FSA explains the need for regulation of retail financial markets in terms of the complexity and opacity of the products, the infrequency of purchase, the inexperience of purchasers, the cost, quality and honesty of advice. In short, the prime problem from an economic perspective is that people buying financial products are poorly positioned to assess the costs and benefits of the decisions they take, and need to be protected from their own bad decisions.

Financial products are not unique in this; other financial decisions taken by individuals with major financial implications – house purchase, marriage, career choice – are taken infrequently, and have financial ramifications that go well beyond the initially quoted price, and take a long time to become apparent. But what distinguishes financial products is the asymmetry of power and information between buyer and seller, and it is this that justifies the extensive regulation of the sales process.

The FSA Handbook (FSA, 2008) sets out the fundamental obligations of the firms it regulates through eleven principles. Four of them, 'Customers' Interests', 'Communications with clients', 'Conflicts of Interest' and 'Customers: relationships of trust' are particularly relevant to the sales and marketing of financial products. They place heavy emphasis on the firm recommending only products that are suitable to the client, and ensuring that the client is properly informed.

6.2 Design of financial products

The UK regulatory regime for retail financial products concentrates very largely on the sales and marketing process, and does not tend to prescribe product design. When the FSA dealt with abuses associated with Precipice Bonds and Split Capital Investment Trusts, for example, regulatory interventions were concerned with the information provided to the buyer, public disclosure of the nature of the products and the regulation of conflicts of interest. No attempt was made to argue that the products themselves were not fit to be sold. The reluctance to regulate product design presumably reflects an unwillingness to hinder innovation and competition; provided customers fully understand what they are purchasing, it is not seen as the job of the regulator to proscribe particular types of contract.

There are two significant exceptions to this. Sandler (2002) in his review of the savings market recommended the introduction of a suite of simple regulated products, with capped charges, restrictions on investment profile and the ability to exit on reasonable terms designed for the medium and long-term savings market, with the intention that they could be sold with minimum advice. There is now a limited range of so-called stakeholder products (stakeholder pensions, Child Trust Funds, deposit accounts and mutual funds) which are subject to rather less onerous regulatory requirements, the 'basic advice' regime.

Outside the pension area, there are broad design specifications that financial products must meet in order to be eligible for sale in certain wrappers – such as Individual Savings Accounts (ISAs) and annuities. These restrictions generally appear to be aimed at preventing the misuse of tax privileges granted to different types of business, rather than protecting consumers.

6.3 Prudential regulation

Insurance companies are subject to prudential regulation in the UK as elsewhere. It is tempting to argue that occupational pensions, which in many cases promise flows of income in retirement that closely resemble insurance products, should be subject to similar regulation. But before accepting this conclusion too readily, it is worth understanding why insurance companies' solvency is of such concern to the regulatory authorities, and whether the analogy with pension schemes is apposite. Our analysis draws substantially on Plantin and Rochet (2007).

In an insurance contract, the purchaser pays a lump sum or commits to a series of payments over time, and is promised in return some future flow of income. The purchaser will need to satisfy himself about the insurer's ability to pay what has been promised. Investigating an insurer's solvency is not straightforward. Analysing public information requires a sophisticated understanding of the insurance market and of actuarial practices. Furthermore, public information may not give a complete picture; relevant information may be costly or difficult to obtain. It would be wasteful for each purchaser to devote the resources needed to assess the insurer's solvency.

That by itself does not provide a complete justification for the prudential regulation of insurance companies. Corporations and other entities regularly issue debt liabilities that are hard to value, yet there is little regulatory oversight of their solvency. One important difference between the debt of corporations and retail insurance contracts is that corporate debt is held by large specialised institutions (banks, insurance companies) which are skilled at assessing solvency, and the size of exposure to each credit is large relative to the cost of investigation. Furthermore, in cases where a corporation's debt is held by less specialised investors, as in the case of Eurobonds, it is normally in the form of traded securities where the price in the market aggregates information about the issuer's ability to repay.

There is one other feature of most corporations that distinguishes them sharply from insurers, and that is the nature of their balance sheets. A typical corporation will hold illiquid assets (plant, inventory) financed in large part by liquid liabilities (bank loans, trade credit). For such a corporation, a liquidity crisis is likely to precede a solvency crisis as short term, generally unsecured, lenders withdraw funding. By contrast, the liabilities issued by an insurance company are typically highly illiquid – where policies have a surrender value, it is generally far lower than the value of the promised pay-out if held to maturity – while the company's assets are highly liquid. This means that an unregulated insurance company could continue to write new policies after it had become insolvent without risk of running out of liquidity.

These factors – the cost of establishing the value of individual contracts relative to their average size, the fact that the contracts or insurance company liabilities are held by individuals with no competence in assessing whether they will be honoured, the lack of market prices for the liabilities that would aggregate information about the probability that the contracts will be honoured and make it visible at low cost, the possibility for an insurance company to be massively insolvent without there being obvious signs – together explain the need for prudential regulation, and why it is almost universal. It is efficient for policyholders to delegate to a central regulatory authority the task of investigating and verifying the insurer's solvency.

The arguments for the regulation of commercial insurance companies apply equally to pension plans. Indeed, as we will see, there are additional arguments which suggest that the case for pension plan regulation is even stronger than for insurance companies.

7 Principles of pension regulation

We now use our analysis to develop a set of principles that we believe should govern any system of pension regulation.

At the risk of recapitulating our arguments, we view the combination of loose prudential regulation and discretion about benefits in any scheme design as toxic. Most financial products are difficult for individuals to understand, even with individual financial advice. Individuals who are enrolled into schemes without financial advice can hardly be expected to anticipate changes in the financial condition of the sponsoring employer of the scheme, and the precise effect that this will have on their pension benefits. The difficulty of predicting who will get what when a scheme fails is compounded if the benefits are discretionary. Loose prudential regulation makes the problem worse, by increasing the likelihood of failure and the likely size of any shortfall. There are also moral hazard problems when sponsoring employers are responsible for the financial condition of the scheme and have, at the very least, a large role in the determination of benefits. We think that any plan design which combines discretionary benefits and loose prudential regulation will ultimately be forced to follow the same route that DB plans have already followed: tighter product regulation leading to potentially sub-optimal risk sharing. Discretion about benefits should only be permitted if prudential regulation is strong.

Although we are sceptical about the ability of pension trusts to smooth risk between different generations in a credible way, we would not rule out any pension arrangement agreed between employers and employees provided that it passed some tough tests.

Firstly, a prospective member of a scheme would need to be able to understand the costs and benefits of joining the scheme **without** being required to obtain expert financial advice. Designing any flexible system of benefits which can be described clearly and simply enough to meet this test would be difficult. A failure to describe these risks clearly could result in incompatible expectations

between different parties to the scheme and increased regulation. Secondly, we see no argument which justifies weaker prudential regulation of such promises than the regulation of comparable products offered by insurance companies. In a subsequent section, we will lay out reasons why the prudential regulation of pensions should be, if anything, stronger than the regulation of similar insurance policies. Thirdly, arrangements would need to be put in place to ensure generational equity: to prevent the dominance of any particular generation, and to protect the 'unborn'. This is particularly important with 'Collective DC' schemes where there is no employer covenant and all risks are borne by current – and potentially future – members.

This suggests some principles that should underlie the regulation of pensions:

1. Any pension design should be simple enough so that it can be easily understood by employees.
2. Members must be informed in objective terms about the benefits and risks of the scheme when they enrol.
3. Joining an occupational pension scheme should be financially beneficial for almost all employees so that they can be safely enrolled without financial advice.
4. Employers must have no direct commercial interest in the employee's participation.
5. The scheme must meet high solvency standards so that promised benefits can be paid with a high degree of probability even if the sponsor fails and the scheme closes. These standards should be at least as strong as those offered by insurance companies.

We now apply these principles to the current system of UK pension regulation and to two proposed new pension scheme designs that have been put forward (see, for instance, the DWP's Risk Sharing Consultation, DWP, 2008).

8 Implications for regulating our current pension system

8.1 Defined Contribution pension plans

8.1.1 The marketing of pensions

Group personal pensions and DC schemes are, in many respects, very similar to long-term savings plans. Yet in our view there are good reasons why the regulation of the sales process should be different. With the employer acting on the employee's behalf in choosing the range of products and the provider, the extreme asymmetry that characterises the relationship between the retail customer and the financial services company is largely mitigated. Provided that the employer has no commercial interest in employees joining the scheme, the employer can protect the interests of the employee. The presence of tax relief, the presence of the employer contribution and the cost savings resulting from an employment-based scheme rather than one that is sold through retail channels, should help ensure that the decision to participate is one that is likely to be beneficial for most employees.

We therefore see good reason why employers with both trust-based and contract-based schemes should not be treated in the same way as firms marketing financial products.

8.1.2 Pension scheme design

If occupational pensions are to be marketed without individualized advice, it is essential that the product be suitable for the great majority of people. The stakeholder guidelines (limited charges; low minimum contributions; flexible contributions; penalty-free transfers; a suitable default investment fund) are broadly what would be required to achieve this. The simple design of a DC scheme means that conflicts of interest between employer and employee, and between

different employees are negligible, so no heavy regulation should be needed to ensure this is done.

There seems no need to regulate the form of the employer's contribution. The nature of a DC scheme forces such arrangements to be explicit and hence easily valued by employees. For instance, differential contribution rates for workers at different pay grades or of different ages, matching contributions up to different thresholds or various integration schemes for social security schemes present no particular problems from the perspective of transparency and hence should all be permitted.

8.1.3 Prudential regulation

Solvency is not a major issue since, by definition, the claims are equal to the assets of the scheme. While there remain issues of protecting the pension assets against fraud, theft and incompetence, there is no economic justification for a different prudential regulatory regime for marketable pension plans and other types of long-term savings products, as the issues raised are substantially the same.

8.2 Defined Benefit pension plans

8.2.1 The marketing of pensions

The justification for pension schemes to be exempt from the FSA rules on the marketing of financial products, rests on the ability of the employer (or of the trustees) to represent the interests of the individual employees, and for the decision to join a scheme to be in the interests of the great majority of employees. Also, the fact that employees are getting a substantial part of their remuneration in the form of a claim on a pension scheme and are not getting professional advice makes it important that they get clear and simple information about the benefits and costs of membership.

A DB scheme is far more complex than a DC scheme. An individual who has no dependents, has low life expectancy, who does not expect rapid salary growth, and who has a higher effective tax rate in retirement than when working (e.g. because he is not well paid, and in retirement will be eligible for means-tested benefits) may get a rather low return from a DB pension scheme, particularly if the scheme itself is underfunded and the employer is financially weak.

If employees are to be encouraged to join an occupational pension scheme without advice, the decision has to be one that is in the financial interests of virtually all employees, and the risks of joining have to be readily understood. This has important implications for the design of pension schemes and their prudential regulation. If these conditions do not hold, there should be a responsibility on the trustees or the employer to make it clear that participation may not be in the individual employee's interests.

8.2.2 Pension scheme design

In regulating financial products, the FSA has been unwilling to constrain product design, preferring instead to insist that customers are properly informed when they make decisions. Sweeney and Lewin (2007) may be right in saying that *'the current system retains more flexibility than is often suggested'*, but as we have seen, the design of DB pensions (though not of DC pensions) is much more heavily constrained than of other financial products.

The most significant regulation is on indexation of benefits after retirement and the revaluation of benefits in deferment. We see no reason from an investor protection perspective for requiring indexation, and do not believe that the regulations were introduced to protect employees from their lack of information or myopia. Had that been the reason, it would have been logical to apply similar rules to DC pensions. Furthermore, it is hard to believe the rules whereby the employer bears the risks of low levels of inflation and the employee bears the risks of high rates of inflation really represents the likely outcome the parties would have reached had they been well-informed and far-sighted. However, in order to ensure that individuals can be safely enrolled in pension plans without requiring financial advice, it may be necessary to regulate the extent of transfers between those who leave pension schemes early and those who remain members for a long period. This would suggest that regulation regarding revaluation of benefits in deferment is appropriate, although we would question the current LPI-based arrangement for similar reasons to those we have presented above.

We believe that the product design regulations imposed on DB pensions are a response to the moral hazard and governance problems caused by the imprecise definition of ownership claims on the pool of DB pension assets. Arrangements that allowed the employer to reduce contributions rather than uprate pensions were widely seen as unfair, and led the Government to intervene to determine how far pensions should be uprated. But, as we have seen, resorting to product design regulation to remedy governance problems and enforce fair risk sharing can result in substantially sub-optimal outcomes that are inflexible and unresponsive to changing economic conditions.

If companies want to offer their employees DB pensions, they should be encouraged to do so. The regulator's involvement in the definition of the benefit should be limited to requiring that the promised benefit is clearly defined, simple enough to be understood without expert financial advice, and on terms that are sufficiently favourable to individual members that they do not need personalised advice.

8.2.3 Prudential regulation

The current system of regulation, even with recent reforms, allows DB pension schemes to build up substantial deficits, allows them to maintain their deficits over many years, allows them to mismatch assets and liabilities, and allows them to write new business while insolvent. It is a long way from the regime governing insurance companies.

The benefits promised under most DB schemes are now (as a result of regulation) rather precise. While benefits may be further increased beyond what the scheme is currently obliged to pay (and historically have been: before mandatory inflation linking was introduced, most schemes did adjust benefits for inflation, but only on a voluntary basis) there is little expectation now that they will be. Promised and expected benefits are largely identical, and the critical issue for the member of the scheme is not what their pension entitlement will be, but whether it will be paid.

Scheme funding arrangements expose beneficiaries to financial risks, risks which are difficult for most individuals to understand, potentially severe, and impossible to protect against. These are schemes into which members have been enrolled without financial advice. This is unsatisfactory. One way forward could be to strengthen the governance framework of DB pensions and simultaneously allow more flexible risk sharing. We reject this approach as being impractical. Given that pension schemes by their nature are only a small part of the employment contract, we see no possible governance system of pensions which is able to prevent the dominance of the most powerful party at the table, the sponsoring employer.

The existence of the Pension Protection Fund does provide additional security to scheme members, in some ways analogous to the protection provided by the Financial Services Compensation Scheme, which covers policyholders of failed insurance companies and banks. But this does not weaken the argument for strict solvency requirements. The cost of an underfunded scheme failing is not affected by the existence of the PPF; all the PPF does is spread the cost across schemes. The fact that the employees would be partially protected from a failure of their own scheme reduces the incentive of employee trustees to insist on adequate solvency and hence increases the need for regulation. The PPF also does not guarantee benefits in full; in monetary value terms it protects 80-90 per cent of typical liabilities, which might even be reduced if the PPF reduces benefits, as it has the ability to do.

In our opinion, the best way forward would be a substantial tightening of the prudential regulation of DB pensions to bring them more in line with other financial products. We recognise that this view is directly counter to the views of the DWP, and to UK Government Policy, which does not support the extension of the European Solvency II insurance regulations to occupational pension schemes.

We, therefore, suggest other changes which the DWP might implement in the current environment. Our proposals increase the transparency of pensions, allowing members to assess the security of their benefits more easily, and increase the security of pensions for those companies which can afford to pay now.

Firstly, we propose changing the basis underlying the calculation of the technical provisions of DB pension plans. We see little value in providing valuations for funding purposes which differ from valuations provided on a buy-out basis. This is especially true given that, in the absence of benefit flexibility, assets are only held in the pension fund to collateralise the pension promise made to members against the risk of sponsor default. If employers are to be permitted to fund obligations

to lower than buy-out on an ongoing basis, we see it as only fair that employees are made aware of this in the most direct and unambiguous way possible. The presence of two measures of funding is misleading and unnecessary.

One justification provided for the existence of the funding valuation is that it allows the employer covenant to be taken into account. However, in our view, allowing trustees of pension plans with financially stronger sponsors to set lower funding targets (see, for instance, The Pensions Regulator, 2006) is flawed. It allows strong sponsors to defer making contributions. The justification for this is that the benefit of improved funding for the employees, in some sense, is out-weighed by the additional cost for the company. While the benefit of improved funding from a strong sponsor is likely to be smaller, strong sponsors are much more able to make contributions to their pension plans than weak sponsors are, and so the cost to the sponsor is likely to be smaller, too. Setting lower funding targets for stronger employers requires trustees to ask for contributions at precisely the time that employers are struggling, and only makes it more difficult for trustees to ensure adequate funding for pensions on default.

We recognise that these changes might increase the difficulties facing employers, especially at what is a difficult time. One way of dealing with this problem might be to redefine the technical provisions of DB pension schemes to be the buy-out value of the liabilities, but to explicitly allow employers to target a funding level in their Statement of Funding Principles which is less than 100 per cent of this value. Provided that this level is sufficiently above the PPF level of coverage, we think this would be an improvement on the current situation because the fact that pension promises are not fully collateralised would be made unambiguous. Pension fund solvency, not the ability or willingness of sponsors to pay, would be made the primary driver of pension contributions, and pension fund trustees would be placed in a much better position to negotiate benefit security with their employers over and above the PPF level.

Secondly, we recommend that the government use the PPF and the powers of the regulator to ensure full funding of liabilities to at least PPF levels among those schemes where the sponsor has the financial capability of providing it. For instance, the risk-based levy might be altered to create a strong incentive for financially strong companies to fund to above PPF levels. The PPF's proposals to take account of long-term risk can be seen as a useful step in this direction.

Thirdly, we recommend that the regulator use its existing powers to prohibit schemes with weak sponsors, or which are sufficiently underfunded, from accruing new benefits. It is difficult to see how the public interest could be served by allowing employers to reduce worker salaries by promising benefits which have little chance of being paid.

In combination, we believe that these changes improve the security of the PPF, and put members in a much better position to negotiate improvements in benefit security above this level with their employers.

9 Implications for designing a new regulatory regime for pensions

Two proposed new pension scheme designs that have been put forward (see, for instance, the DWP's Risk Sharing Consultation, DWP, 2008) are conditional indexation-type DB pensions, and Collective DC pensions. We now apply our principles of pension regulation to these designs.

9.1 Conditional indexation-type pensions

Conditional-indexation-type pension plans, described in the Dutch context by Ponds and Van Riel (2008), are DB pension plans where the volatility of the scheme's cost to the sponsor is reduced by altering member's benefits in response to the financial condition of the scheme. In particular, the revaluation rate or indexation of benefits in deferment and in payment – which in the UK is fixed – is reduced when the scheme is in financial difficulty and increased again when it is not. In combination with employer and employee contribution rates, which increase when the scheme is in financial difficulties, this is intended to share plan risks between employers and employees. Overall, we believe that the conditional indexation design fits well with all but the first two of our principles. The prudential regulation of these plans requires them to maintain the probability that the market value of assets falls below the market value of liabilities over one year at less than 2.5 per cent. Bikker and Vlaar (2006) state that this implies a funding ratio for typical plans of around 130 per cent of guaranteed liabilities. Although this rule was modified due to employer complaints when it was first introduced in 2002 (Ponds and Van Riel (2008)), and again in the current financial crisis, it would probably be fair to say that this regulation of guaranteed benefits is stronger than the current prudential regulatory basis for DB plans in the United Kingdom, probably even allowing for the value of the sponsor covenant. We see little chance that promised benefits fail to be paid in the Netherlands, although this is partly because the benefit promise explicitly excludes indexation on accrued benefits.

It is also clear that employers have little direct commercial interest in the participation of their employees in the plans in the Netherlands. In fact, most employees in the Netherlands are members of industry-wide plans, with contribution rates set by committees of employers and unions. This gives the employer much less control over the plan than an individual employer in the UK would have over their pension plan, which, as we shall see, has had some consequences for the success of the plan design.

In notional terms, pension contributions in the Netherlands are shared between employees and employers, with the majority paid by the employer, so in most cases it would probably be difficult to argue that more than a small minority of employees would be better off outside the plan.

The main difficulties we see with the conditional indexation plan design are with our first two principles. Although plans in the Netherlands are required to explain clearly to members what the planned level of indexation is and how the plan expects to achieve this, the contract to which employees are subject when they join the plan is complex – and they do not appear to have the right to opt out of the employer's chosen plan (although the employer can choose to leave the plan in certain circumstances). This contract is both with the employer, and with previous and future generations of plan members. For instance, like all DB plans, these plans have already transferred resources to the first generation of members who participated, and thereby have created an implicit debt. This debt is currently held by existing members, who will need to pass it on to a future generation if their benefit expectations are to be met.

So an individual worker is unlikely to be able to assess the implications for his pension if economic conditions or the age structure of the pension system changes significantly, although, like DB plans in the UK, the presence of the employer reduces this risk somewhat. Furthermore, at the discretion of the trustees – usually exercised when the fund's financial situation is precarious – members may also be prevented from transferring their accumulated balance out of the fund and into another pension plan when they change jobs. Employees therefore appear to have little possibility of understanding the nature of the risks to which they are exposed in their pension plan, and little or no ability to change their risk exposure, especially when things go wrong.

The centralised bargaining model of industrial relations in the Netherlands is reflected in their pension system. Most employees are members of industry-wide pension funds, and contribution rates and investment policy are set centrally by a joint committee with both employee and employer representatives. While this does make the pension system easier to understand from the point of view of members – because it removes employer-specific risks – it also gives employers much less flexibility.

Ponds and Van Riel (2008) note that a consequence of this lack of flexibility has been too much contribution volatility from the point of view of sponsoring

employers. The problem is familiar to us in the UK: when pension assets perform poorly, employers are typically facing difficulties, too, and will struggle to increase contributions. For this reason, Ponds and Van Riel (2008) expect the pension system in the Netherlands to move away from conditional indexation-type plans towards Collective DC-type plans, where all risks are borne by current and future generations of members, and the employer contribution is fixed. Absent any changes in the employment contract, employer contribution volatility is completely eliminated in Collective DC plans.

9.2 Collective Defined Contribution plans

Collective DC plans are best viewed as a special case of conditionally-indexed plans, where the employees bear all the costs of fluctuations in the financial situation of the scheme through changes in their benefit entitlements, and the employer contribution is constant. Although in this respect they look a lot like DC plans, the similarity is misleading. The crucial distinction is that the assets in Collective DC plans are not apportioned between members; this allows these plans to transfer resources between generations in much the same way as conventional DB plans. This has the consequence that, unlike in individual DC plans, benefits in Collective DC plans could be calculated either as pension benefit entitlements, such as in DB plans, or as fund balances, such as in individual DC plans.

The main difficulties in regulating Collective DC plans will lie in ensuring that the pension design is simple enough to be understood by employees, informing them in objective terms about the costs and benefits of plan membership, and ensuring that all employees can be enrolled without financial advice.

Communicating the nature of the intergenerational contract will be the biggest challenge. As we have discussed, by sharing risks across generations, members can earn higher risk-adjusted rates of return by committing future generations to participate in the arrangement. But this commitment can be reneged upon, and, with certainty, some future generations will find it preferable to renege rather than continue to participate in the risk-sharing arrangement. In the absence of coercion, these arrangements are therefore potentially quite unstable. The fact that the UK pension system is based on individual employers rather than on collective schemes – meaning that future generations of plan members cannot be counted on to arrive – only exacerbates this problem. This potential instability makes it essential to communicate the inter-generational transfers in the scheme to prospective members, because the final generation in the scheme will bear the risk that the scheme stops. Ensuring that prospective members understand the nature of this risk will be difficult, whichever method is chosen to calculate scheme benefits.

For instance, allowing benefits to be presented as pensions rather than account balances will probably increase the pressure on regulators to allow the scheme to underfund when times are bad, exacerbating the consequences of demographic

instability. This will also make transfers between different classes of members difficult to understand, and hence easy to engineer. A change as simple – and as technical – as altering the assumptions used to value the liabilities could significantly alter the extent of systematic intergenerational transfers in the scheme. For instance, valuing the liabilities using a rate of return which reflects the expected rate of return to be earned on scheme assets – included in the original Collective DC proposal in the DWP's consultation document – silently transfers scheme resources to older workers from younger workers. Of course, such transfers are already commonplace in DB pension plans and conditionally-indexed plans. But in Collective DC plans, there is no employer covenant, so these systematic transfers will cause the scheme to rely on future generations of new members in order to meet the benefit expectations of current members. In DB plans, and to a lesser extent in conditionally-indexed plans, this is one function served by the employer's covenant.

On the other hand, if the scheme presents benefits to members as account balances, then the formula needed to determine the 'investment returns' on the accounts become crucial in determining intergenerational equity. But which prospective member, by looking at a formula and a set of intentions expressed by trustees, can assess the fairness of the intergenerational contract in a Collective DC plan without relying on financial advice?

None of the alternatives the regulator has to deal with these problems is terribly attractive. Any governance framework, however strong, will struggle to represent unborn generations. Banning intergenerational transfers altogether, while removing some of the disadvantages of Collective DC over individual DC, also removes all of its relative advantages. Requiring that the plans be fully funded at all times will not be sufficient to ensure that a debt to past generations is not created and passed on from generation to generation, ultimately depositing all the accumulated risk onto the unlucky final generation.

Overall, ensuring that the Collective DC plan is transparent and easy for members to understand will be very difficult. The Collective DC model is probably too opaque to permit prospective employees to join without financial advice, and too unstable to permit it to transfer resources between different generations in the employer-dominated UK pension context.

10 Conclusion

There is a strong public interest in encouraging people to save for their old age. But there are substantial costs and frictions that inhibit saving. Selling and marketing costs are high. Pensions are complex products; advice is costly, but the lack of advice may result in people taking bad decisions. People are myopic and may defer saving for pensions to a degree they will later regret.

Occupational pensions help mitigate these costs and frictions. Marketing and administration costs are greatly reduced by offering a standardised product to large numbers of employees. Employers, or pension fund trustees, can act as informed buyers on behalf of their employees, verifying that the pensions are good value and appropriate for the great majority of members. The workplace provides a good channel for advice. By treating pension choice as part of the employment contract, advice and information can be targeted at the individual at the point where he is ready to make decisions, so greatly reducing marketing costs. Encouraging people to commit to a pension scheme at the point of starting a new job discourages the procrastination that takes place with personal pension schemes where there is no natural date for savers to start contributing to a pension.

In the traditional DB pension scheme, the employer is not only the channel through which pensions are distributed, but is also the provider of the pension. As the provider, they have an incentive to make the pension look attractive (so as to attract and retain employees) while keeping its cost low. The employer will design a scheme that gives relatively generous pensions to retiring workers when times are good and the need to recruit and retain is strong; there will be much less concern to ensure that early leavers get good pensions, or that pensions continue to be paid even if the firm fails.

In the absence of regulation, with employees not understanding the risks to which their pensions are subject, there is great scope for misunderstanding and disappointment. People join schemes believing that they are earning a secure pension, unaware of the risks and limitations. If the scheme fails to deliver, they feel misled. There is a public interest in ensuring that people are fully informed before taking decisions. The failure of pension schemes to deliver what members believe they are entitled to leads to pressure on government to make good. It also damages faith in occupational pensions, and reduces pension provision overall.

There is, therefore, good reason for the Government to take steps, through regulation or other means, to reduce the gap between the benefits members get from a pension scheme, and those they believe that they are getting. Much pension regulation was designed to bring pension benefits closer to what many scheme members thought they were, firstly in the area of benefit design (mandatory indexation, protection of early leavers) and later in the area of solvency (minimum funding requirement, PPF, strengthening of the pension fund claim on the employer).

Proceeding in this way, bringing reality closer into line with perceptions, had a number of advantages. It was popular with scheme members. With employers focusing on contributions to their pension schemes rather than on changes in liabilities, the extra costs of improving benefits, though very substantial, were not immediately visible, particularly at a time when high investment returns meant that pension schemes were over-funded. The changes in private pension design also helped ensure better and more uniform national pension coverage in the sense that someone who had a full employment history would end up with a pension that was a reasonable fraction of their earnings whether they had worked for one employer or several, and whether in the public or private sectors or both (coverage did not extend nearly as well to people – many of them women – with incomplete employment histories, the self-employed, and employees of firms – many of them small – who did not have a DB scheme).

But there were two important disadvantages. First, in the areas of inflation and solvency, the process of bringing perception and reality into line has not been completed. In the event of sustained, high (well over 2.5 per cent per annum) inflation, the real benefits of pensions would be severely reduced. In the event of widespread scheme insolvencies, the PPF is unlikely to be able to rely solely on increasing the levy it charges schemes to meet its obligations and may be forced to reduce protected benefits (or even seek support from the taxpayer). But more importantly, by mandating product design in this way, the Government is specifying a pension product that costs more than the beneficiaries are prepared to pay for. The consequences were inevitable. With pensions being provided on a voluntary basis, the majority of employers who had schemes have simply terminated them. They have replaced them with types of pension scheme where the Government has largely avoided product design regulation.

In this paper, we have argued that regulation should indeed seek to narrow the gap between perceptions of scheme members and reality, but by ensuring that perceptions are aligned with reality rather than the other way round. We have translated this argument into a number of principles that should underlie the regulation of pensions:

1. Any pension design should be simple enough so that it can be easily understood by employees.
2. Members must be informed in objective terms about the benefits and risks of the scheme when they enrol.
3. Joining an occupational pension scheme should be financially beneficial for almost all employees so that they can be safely enrolled without financial advice.
4. Employers must have no direct commercial interest in the employee's participation.
5. The scheme must meet high solvency standards so that promised benefits can be paid with a high degree of probability even if the sponsor fails and the scheme closes. These standards should be at least as strong as those offered by insurance companies.

Appendix

Current regulation of pensions

We discuss the current regulatory regime for different types of pensions in the UK. All types of pension are subject to a broadly similar regime, whereby they are granted tax relief in return for constraints on liquidity. Pension contributions are exempt from employers' National Insurance, and income taxes, and investment returns accrue largely tax-free inside pension funds. With the exception of the 25 per cent tax-free lump sum, pension benefits are subject to income tax when they are paid out, although income tax allowances are higher for over-65's. No withdrawals are permitted under normal conditions before the age of 50 (55 from 2010), and 75 per cent of the benefit must be paid as an annuity – although this requirement was recently relaxed in the case of money purchase arrangements to permit deferral of annuitisation to age 75.

But regulatory regimes differ substantially in other respects, which we now examine, looking first at those arrangements where employers have a minimal role.

Individual personal pensions

This is essentially a long-term savings vehicle in a pension wrapper. The only regulatory significance of it being a pension is that it is subject to normal pension rules. The loss of liquidity makes the decision on whether to invest or not somewhat more difficult than in a standard long-term investment and substantially harder to reverse. This adds to complexity, opacity and the general difficulty of making an optimal decision, but does not raise substantially new issues.

Stakeholder pensions are a more regulated version of individual personal pensions, with restrictions on charges (limited to an annual percentage of funds under management, no entry and exit charges), contributions (must permit flexible

contributions), and investments (must permit a lifestyle investment strategy). The intention of the restrictions is to reduce the complexity of the choices faced by the individual, in order to reduce the potential for abuse by intermediaries and providers and to lessen the risk that employees make poor decisions.

These products are regulated in much the same way as other long-term savings products, and there seems little reason to do otherwise.

Group Personal Pensions

These differ from the individual personal pension through the involvement of the employer. The employer picks the provider and determines the choice of products; the employer provides the employee with information; the employer normally makes a contribution to the plan; the employer deducts the money and transmits it to the fund operator. Any employer with more than five employees who does not provide alternative arrangements is required by law to provide access to a stakeholder pension for their employees, although they are not required to contribute to it. This is the only form of mandatory pension coverage for employers in the UK currently, though all employers without an adequate pension scheme will be required to enrol their employees into Personal Accounts when these are established. Special provisions have been put in place to protect employers against any legal claim from employees about the choice or performance of stakeholder pension providers.

Group Personal Pensions (GPPs) do raise some new issues. In particular, in promoting the pension plan, employers do not need to be authorised by the FSA like sellers and providers of other financial products and the promotional material they use does not need to be signed off by an FSA-authorized individual. Employers are not expected to be acquainted with the detail of employees' financial circumstances or their expectations for the future, and are not required or expected to give employees personalised advice. They are required to provide employees with a 'Key Features Document', outlining the essential information employees need to know about the plan, and are recommended to point their employees towards publicly available help or professional financial advisors.

Occupational Defined Contribution pensions

The essential difference between these and the contract-based pensions examined up to this point is that the occupational DC pension is trust-based rather than contract-based. Trust-based plans are authorised in a different way from GPPs in terms of Inland Revenue Rules, which has few implications for either permitted contributions, benefit restrictions or the plan promotion exemptions described above. In terms of trust law, trustees do have some discretion that would not be permitted under contract-based arrangements – such as in the payment of death and survivor benefits to beneficiaries and the choice of annuitisation options by members. Further, the investment regulations underlying trust-based plans are

different to the investment regulations in contract-based plans, as contract-based plans are regulated by the FSA while trust-based plans are regulated under trust law.

The underlying economics are the same as for a contract-based DC plan, provided that the scheme is designed in such a way that the liabilities of the plan to members equal the assets under management at all points in time. This is the case of most DC occupational plans in the UK. Where this is not the case – as in cash balance plans, or possibly Collective DC plans – it raises issues that we consider in the following section on DB pension plans.

Occupational Defined Benefit pension plans

A DB pension claim differs from the claim in contract-based arrangements in both being less secure and in being less tightly defined. It is less secure because the pensions trust, and the trustees who have legal responsibility for its affairs, are not constrained by existing regulation from continuing to take on new liabilities even if its ability to honour its existing liabilities is questionable, and existing investment regulation does not require the assets and liabilities to be matched. In contrast to the liabilities of insurance companies, the ability of the trust to honour its existing obligations depends on the sponsor covenant: the willingness and ability of the sponsor to pay for both existing benefits and for new liabilities.

The claim is less tightly defined in that, when schemes are in surplus, the typical DB pensions trust has considerable flexibility in determining how to use the surplus. The benefits are determined by the Trustees within the rules of the Scheme, and the Trustees are required to consider both the interests of members and the sponsor in discharging their duties. So surpluses can be used to reduce future contributions, or to increase pensions in payment, or to increase accrual rates or to fund early retirement schemes – each of which will affect different members in very different ways.

It is striking that recent regulation has tended to reduce the difference between DB and DC schemes by improving the security and reducing the flexibility of DB schemes. In terms of security:

- solvent employers can no longer walk away from underfunded schemes;
- schemes are required to abide by scheme-specific funding requirements;
- schemes must insure the pension benefits they promise to employees by participating in the PPF;
- the regulator can halt or reverse corporate transactions which adversely affect the interests of members; and
- actuaries, auditors and trustees have been given whistle-blowing powers.

In benefit flexibility:

- early leaver benefits must be revalued in line with inflation (subject to a cap);
- benefits must be fully vested after two years;
- new benefits accruing must receive inflation protection;
- the sponsor cannot reclaim surplus unless the scheme is funded to full buy-out;
- disclosure requirements have been strengthened, so members joining the scheme must receive a scheme booklet containing essential information about the scheme and must receive a description of their entitlements and options when they leave;
- accrued benefits cannot be altered without member approval or the certification of an actuary that the value of the accrued rights after the change is equivalent to the value before.

Despite these changes, DB pensions are less secure than comparable financial products. The starkest illustration of this is the comparison between pension buyout companies and DB pension trusts. Pension buyout companies are typically regulated as insurance companies by the FSA. As such, they are required to meet stiff capital adequacy requirements, and be subject to the FSA's conduct of business rules. Although the DB trust can call on the employer covenant, the covenant is worthless when the sponsor has defaulted, and may be positively correlated with asset returns and hence a poor protection against these.

The PPF mitigates the risk of a weakly capitalised pension plan defaulting on its obligations, but does not make the pension entitlement completely secure. First, the PPF does not pay the full pension entitlement; it covers only 90 per cent of the entitlement of current workers and deferred pensioners, indexation is limited, and payments are capped. Second, there is no certainty that these rates of compensation will be in force in future; the legislation allows for Ministers to reduce the rate of compensation in extreme circumstances.

The disclosure requirements on trustees are rather less than those faced by other financial providers. Although trustees are required to disclose to members the current financial status of the scheme on an ongoing basis as well as on a discontinuance basis, this occurs only every three years after each actuarial valuation. Active members of DB schemes do not automatically receive a statement of the benefits they have accrued under the scheme, but may receive one on request.

As in the case of money purchase plans which we described above, trustees are not expected to know their customers or to provide access to individual advice about whether to join a pension scheme or not, possibly because individual members of DB pension plans typically have little choice over the form of their benefits. Beyond choosing whether to leave (or join) the plan, choice is typically limited to

the proportion of pension taken as a lump sum (but tax advantages usually mean that most members take the maximum cash value) and some flexibility over the start of pension drawdown. There is typically no choice as to risk-reward profile in either accumulation or drawdown, no choice as to type of pension (single or joint life, level or indexed). The case of protected rights aside, this is in marked contrast to all contractual arrangements and most trust-based DC pensions.

Trust-based pension funds – both DB and DC – are subject to relatively few investment restrictions other than ensuring that the investments are suitable for the scheme, and that they are suitably diversified, in line with ‘prudent-man’ investment principles. One exception is that investment in the stock of the sponsoring company is limited to five per cent of the total. They are required to produce a ‘Statement of Investment Principles’ setting out the approach the trustees take to the investment of the scheme’s assets.

Considering pensions as part of compensation – and therefore, governed by employment law – reveals some other interesting features. Pensions do not appear to be subject to non-discrimination rules which specify equal pay for equal work – even though they are more valuable to older workers, to women, to married individuals, and to workers with steep earnings profiles, and are exempt from age discrimination rules in many respects. Of course, some of the rules restricting benefit design do serve to reduce the extent of the transfers along some dimensions, most notably transfers between early leavers and long stayers.

Share option schemes

Pensions are not the only financial securities that employers use to compensate workers. Some employers pay employees with shares or share options and, like companies which pay pensions, are exempt from many FSA provisions when doing so, presumably on similar grounds. Some share or share option schemes also attract favourable tax treatment and some, like pensions, involve holding the shares in trust before they are transferred to employees. Share schemes and share options schemes are often limited to senior managers who can be expected to be more informed and astute than regular employees, and so presumably require less protection.

But the holder of company stock is better protected than the holder of a claim on the company pension scheme. The holder of company stock is free to sell the stock (sometimes after a vesting period) and so can choose to liquidate at any time at something approximating a fair value, whereas the holder of pension fund accrued rights only has limited, and generally rather unattractive transfer rights. Second, since the equity is normally traded on a market, the holder of company stock can observe a valuation of his asset that reflects the combined assessment of many investors who do devote substantial resources to valuation. By contrast, the individual’s accrued pension rights are not only intrinsically hard to value, but are neither traded nor tradable.

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